

GENERAL NOTES

- Subject property Zoned "R-SC" per 02/02/04 Comprehensive Zoning Plan and per the "Comp Lite" Zoning Regulations Amendments effective 7/28/06.
- The coordinates shown herein are based upon Howard County Geodetic Control, which is based upon the Maryland State Plane Coordinate System, Howard County Monument Nos. 43EB and 43G6 were used for this project.
- This subdivision is subject to Section 16.122B of the Howard County Code. Public water and/or sewer service has been granted under their terms and provisions, thereof.
- This site is located within the metropolitan district.
- Soils map no. 30.
- Gross area of site: 8,241 ac.±
- Net area of Site= 8,241 Ac.-0.037 Ac. of Steep Slopes= 8,254 Ac.
- Number of proposed buildable lots= 33.
Area of proposed buildable lots: 5,894 ac.±
- Number of proposed open space lots: 2
Area of proposed open space lots: 1.067ac.±
- Open space requirements:
a.) Open Space required (25% of total area of parcels 492, 493, 494 & 622 that were added to the original area of lot 143 as recorded on plat #11760 Pleasant Chase, Section I, Phases 3 & 4.):
1.747 ac.± x 0.25=0.437 ac.±
b.) Open Space provided:
1.067 ac.± (Gross Open Space area)
1.067 ac.± (Credited Open Space area)
c.) Open Space obligations for Phase IV have been met under Phases I, II and III recorded under plat #11757.
d.) Recreational open space obligation have been met under phases I, II and III.
e.) Area of right of way to be dedicated to Howard County Maryland: 1.330 ac.±
- Existing 2 foot topography shown was prepared by Walker Land Surveys, LLC dated February 2007. Boundary survey prepared by FSH Associates in May, 2009.
- Stormwater Management for this project is provided as follows:
CIV by a Micro-Pool Extended Detention Facility
MOP by a Surface Sand Filter and Micro-Pool Extended Detention Facility
Rev by additional stone storage beneath the Surface Sand Filter.
The SMI facility on Open Space Lot 142 (Plat 11758) shall be privately owned & jointly maintained with Howard County. The SMI facility on Open Space Lot 178 shall be privately owned and maintained.
- The traffic study for this project was approved under S-08-03. Based on an investigation prepared by Street Traffic Studies Ltd., in November 2006. It was determined that the project was exempt from an APFO Traffic Study because the nearest required investigation intersections US 1 & MD 175 (P-152) and US 1 & Patuxent Range Road (P-105) were beyond the 1.5 mile study limit.
- The Wetland Letter and report and the Forest Stand Delineation and report were prepared by Exploration Research Inc. Approved under Sketch Plan S-08-03.
- There are no floodplains, streams, historic structures or cemeteries on-site or within the limits of the disturbed area to the best of our knowledge.
- In accordance with section 16.1202.(b)(1)(iii) of the Subdivision Regulations, existing Lot 143, Pleasant Chase Phase IV, has a Preliminary Plan approved prior to 12/31/1992. Therefore, only Parcels 492, 493, 494 & 622 are subject to Forest Conservation obligations. These parcels total 1.75 acres. The 0.26 acres of afforestation required shall be satisfied with a fee-in-lieu payment of \$8,494.20 (11,325.60 SF x 0.75).
- Landscaping for Lots 144-177 is provided in accordance with a certified Landscape Plan included with this Road Construction Plan set in accordance with section 16.124 of the Howard County Code and the Landscape Manual. Financial surety for the required landscaping will be posted as part of the Developer's Agreement in the amount of \$27,000.00 (62 shade trees @ \$300.00 each, and 56 evergreen trees @ \$150.00 each).
- This project is in conformance with the latest Howard County standards unless waivers have been approved.
- Proposed Lot 170 is a reconfiguration of existing lot 112 plot # 10687. This lot will continue to Derive access onto Hicks Road.
- Density Calculations:
a. Net area of property= 8,254 ac.±
b. Maximum number of units allowed= 8,254 ac. x 4 units/ac. = 33 units.
- Grading, removal of vegetative cover or trees, paving and new structures shall not be permitted within the limits of wetlands, stream(s), or their required buffers, floodplain and forest conservation easement areas. The breach of the existing dam is considered a necessary disturbance.
- This plan is subject to the Fifth Edition of the Subdivision and Land Development Regulations. Development or construction on these lots must comply with setback and buffer regulations in effect at the time of submission of the site development plan, waiver petition, or building and grading permits.
- The following DPZ file(s) apply to this plan: S-09-01-08-272, FB-272, WP-91-55, KP-92-185, KP-93-03, KP-90-74, F-92-146, F-94-93, F-95-05, F-95-32, F-95-158, F-03-10, F-04-09, SDP-93-103, SDP-94-06, SDP-95-50, SDP-95-110, SDP-95-59, SDP-00-177, SDP-02-29, SDP-03-16, SDP-03-145, KP-04-070, F-09-03, and F-09-025.
- The existing dwellings and accessory structures located on Parcels 492, 493, 494 and 622 are to be removed.
- The existing 20' ingress/egress easement per liber 1757, folio 594 located within this property is being abandoned.
- On December 9, 2008 the planning director approved waiver petition WP-09-070 from the following sections in the Subdivision and Land Development Regulations.
a. Section 16.132(a)(2)(i) & (j) - not require the construction of the road frontage improvements up to one-half of the full designated pavement width for the property frontage on Hicks Road and Lincoln Drive, and not to contribute the necessary funds to perform the road frontage improvements along both roads.
b. Section 16.134(a)(1)(i) - not require the construction of sidewalks on one side of local streets for single family detached subdivisions for Hicks Road and Lincoln Drive.
c. Section 16.135(a) - not require the installation of street lighting along public roads for the property frontage, in accordance with the Design Manual, for Hicks Road and Lincoln Drive.
d. Section 16.136 - not require the installation of street trees along public roads for the property frontage, in accordance with the Landscape Manual, for Hicks Road and Lincoln Drive.
- The noise study for this project was prepared by Polysonics Acoustics and Technology Consulting, dated July 13, 2009 and was approved on July 20, 2009.
- Existing utilities are based on contract drawings and field locations.
- The Geotechnical Report for this project was prepared by Hillis-Carnes Engineering Associates, Inc. dated 3/31/2009.
- Existing 40' wide water, sewer, and utility easement located in the bed of the paper street known as Piedmont Drive has been terminated by the Department of Public Works on 6/4/2009.
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least (5) working days prior to the start of work.
- 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).
- Street light placement and the type of fixtures and poles shall be in accordance with the Howard County Design Manual, Volume III (2008), Section 5.5.A. A minimum of 20' shall be maintained between any street light and any tree. See this sheet for location chart and sheet 2 for street light plan locations.
- All sign posts used for traffic control signs installed in the County right-of-way shall be mounted on a 2" galvanized steel, perforated, square tube post (14 gauge) inserted into a 2-1/2" galvanized steel, perforated, square tube sleeve (12 gauge) - 3' long. A galvanized steel pole cap shall be mounted on top of each post. See sheet 2 for approximate sign locations.
- For flag or pipestem lots, refuse collection, snow removal and road maintenance are provided to the junction of the flag or pipe stem and road right-of-way line and not onto the pipe stem lot driveway.
- Driveway(s) shall be provided prior to issuance of a use and occupancy permit to ensure safe access for fire and emergency vehicles per the following requirements:
A) Width - 12 feet (16 feet serving more than one residence);
B) Surface - six (6") inches of compacted crusher run base with tar and chip coating (1-1/2" Minimum);
C) Geometry - Maximum 1% grade, Maximum 10% grade change and 45-foot turning radius;
D) Structures (culverts/bridges) - capable of supporting 25 gross tons (H25-loading);
E) Drainage elements - capable of safely passing 100 year flood with no more than 1 foot depth over surface;
F) Structure clearances - minimum 12 Feet; G) Maintenance - sufficient to ensure all weather use.
- Safe, adequate and uninterrupted vehicular access must be provided to the existing developer properties along Hicks Road at all times during the removal of any existing driveways that cross within this subdivision and for the duration of construction activity occurring on this project until such a time construction activity is completed.

FINAL ROAD CONSTRUCTION PLANS

PLEASANT CHASE PHASE IV

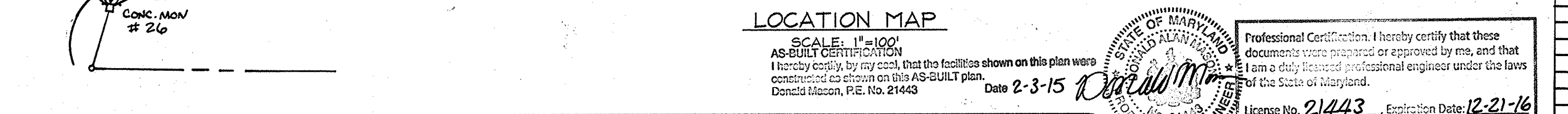
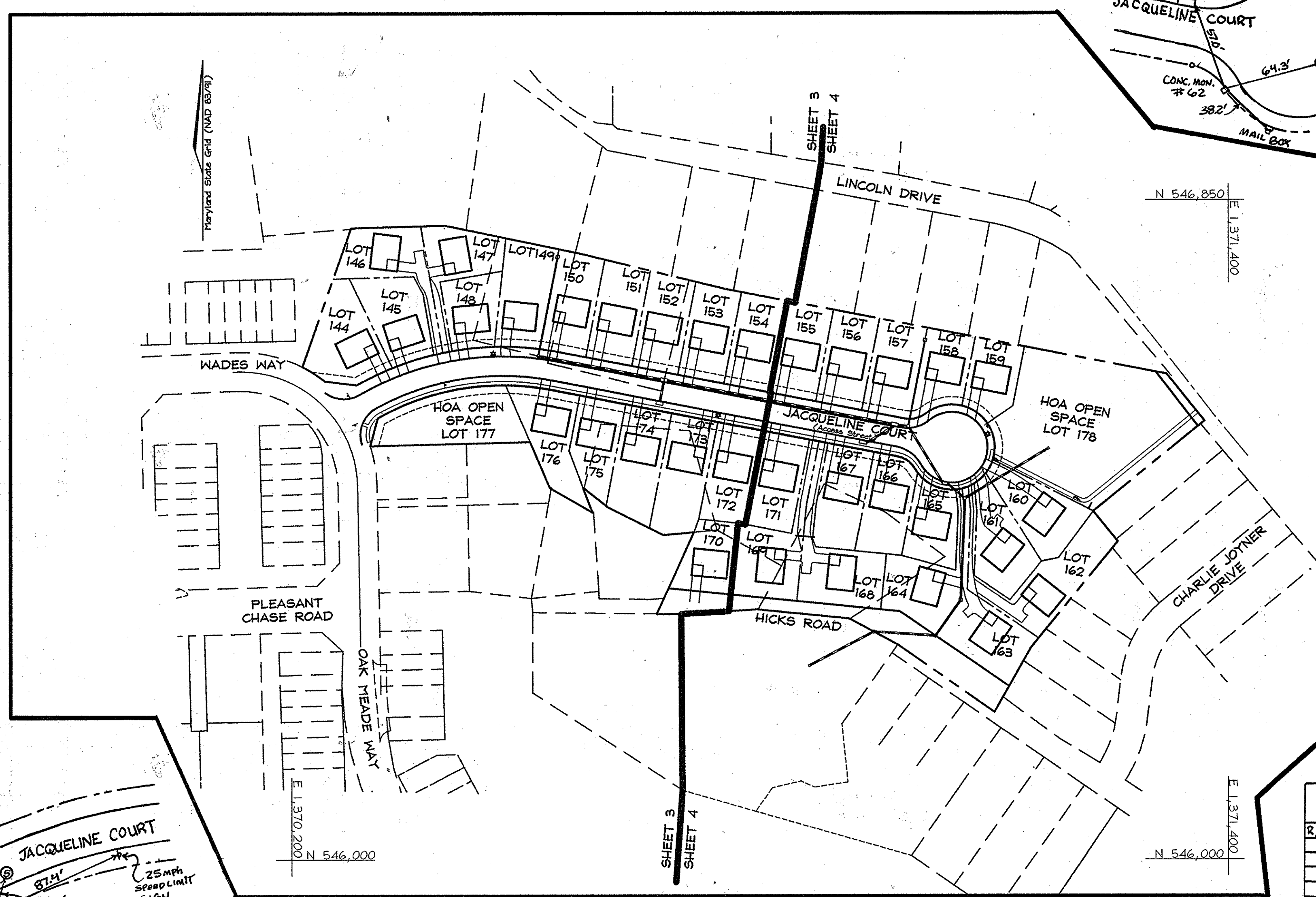
LOT 144 THRU 176 AND OPEN SPACE LOTS 177 AND 178

A RESUBDIVISION OF

PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4,

LOT 143 AND LOTS 9 - 12 & 14 OF ONE SPOT HEIGHTS

HOWARD COUNTY, MARYLAND

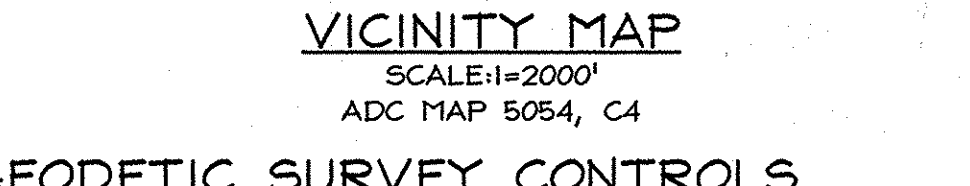
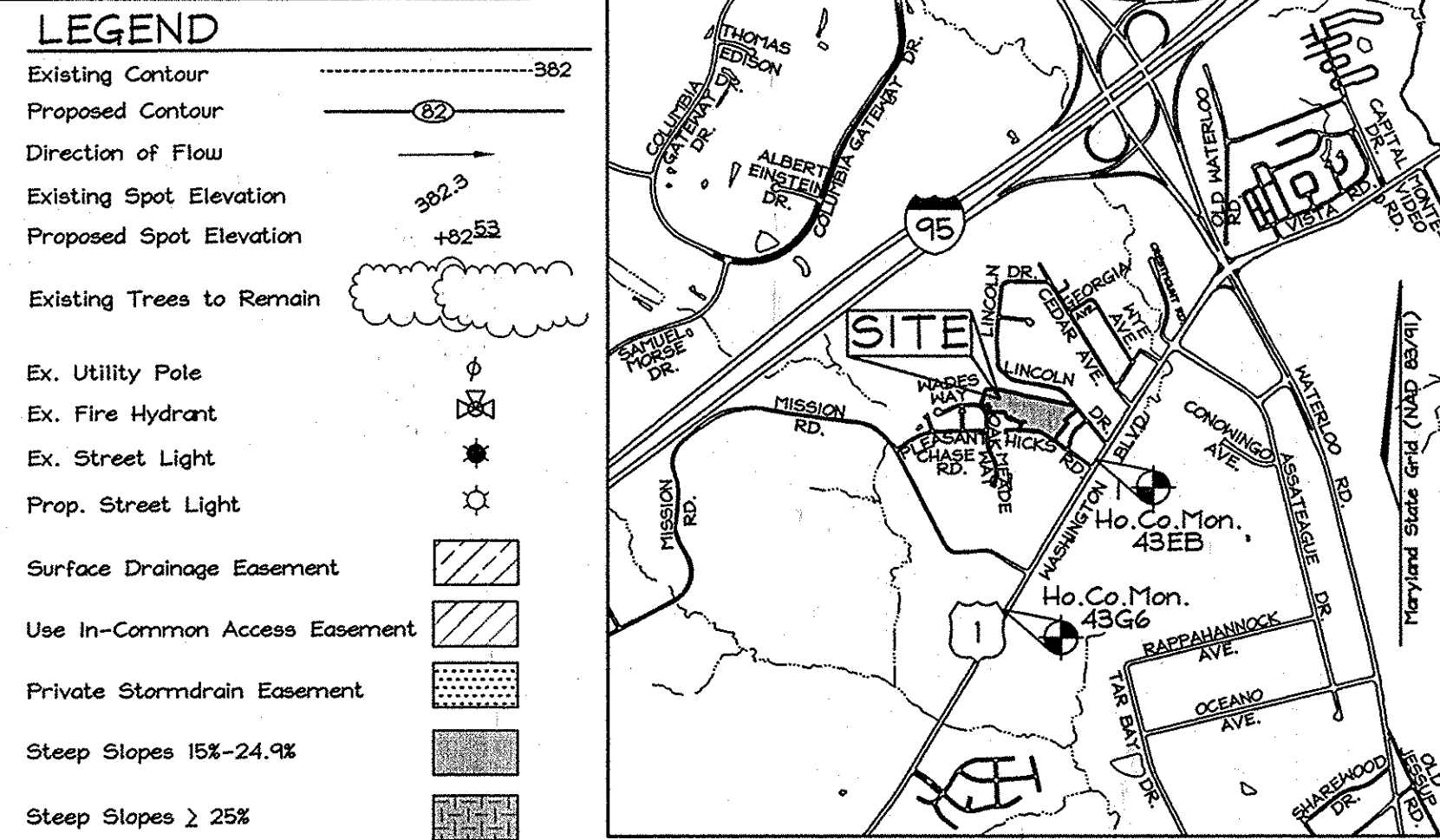


RSC DENSITY TABULATION

	GROSS AREA	FLOODPLAIN AND STEEP SLOPES	NET AREA	# OF UNITS ALLOWED	# OF UNITS PROPOSED	OPEN SPACE REQUIRED	OPEN SPACE PROVIDED	DRY REC. OPEN SPACE REQUIRED	DRY REC. OPEN SPACE PROVIDED	DENSITY PER NET ACRE
PHASE 1	7,1607 AC.	0	7,1607 AC.	28.6	20	1.4321 AC.	1.2537 AC.	0.7161 AC.	0.1293 AC.	2.79
PHASE 2	5,6071 AC.	0	5,6071 AC.	22.4	39	1.1214 AC.	2.8652 AC.	0.5607 AC.	2.8652 AC.	6.96
PHASE 3	15,3010 AC.	0.1322 AC.	15,1688 AC.	60.7	51	3.0602 AC.	10.5744 AC.	1.5301 AC.	4.3274 AC.	3.36
PHASE 4	8,240 AC.	0.0368 AC.	8,2532 AC.	33	33	1.2617+0.4370* 1.6987 AC. *	1.0673 AC.	0.6308+0.2204* 0.8512 AC.	**	4.00
TOTAL	36,3588 AC.	0.1690 AC.	36,1898 AC.	144.70	143	7.3124 AC.	15.7606 AC.	3.4651 AC.	7.3221 AC.	3.95

* Open Space obligations for Lot 143, 1,2617 AC., have been met under Phases I, II & III. Parcels 492, 493, 494 & 622 were added to Lot 143. Therefore, the remaining obligation of Open Space is only for Parcels 492, 493, 494 & 622 for an additional 0.4370 AC. and is fulfilled in Open Space Lots 177 & 178, which provide 1.0673 AC. of open space.

** Recreational Open Space obligations have been met under Phases I, II & III.



GEODETIC SURVEY CONTROLS
 Howard County Monument 43EB
 N 545,963.6476 E 1,371,573.8400 El.: 216.33
 Howard County Monument 43G6
 N 544,117.5286 E 1,370,550.8447 El.: 219.48

AS-BUILT NOTES:
 1) HORIZONTAL DATUM FOR THIS AS-BUILT IS BASED ON THE MARYLAND STATE REFERENCE SYSTEM NAD 83/AD 91 AS PROTECTED FROM HO. CO. GEODETIC CONTROL STATIONS 43EB AND 43G6. VERTICAL DATUM FOR THIS AS-BUILT IS NORTH AMERICAN VERTICAL DATUM NAVD83 AS PROTECTED FROM THE ABOVE MENTIONED HOWARD COUNTY GEODETIC CONTROL STATIONS.
 2) THE INSTRUMENTS USED IN PERFORMING THE AS-BUILT WERE A B/TOTAL STATION AND PRISM AND RTK GPS.
 3) THIS AS-BUILT WAS PERFORMED BY BENCHMARK ENGINEERING, INC.

SHEET INDEX

COVER SHEET	DESCRIPTION	SHEET No.
ROAD PLAN, PROFILE AND DETAILS		1 of 12
GRADING, SOILS AND SEDIMENT & EROSION CONTROL PLAN		2 of 12
GRADING, SOILS AND SEDIMENT & EROSION CONTROL PLAN		3 of 12
SEDIMENT TRAP PLAN & SEDIMENT & EROSION CONTROL NOTES AND DETAILS		4 of 12
STORM DRAIN DRAINAGE AREA MAP		5 of 12
STORM DRAIN PROFILES		6 of 12
STORMWATER MANAGEMENT MICRO-POOL EXTENDED DETENTION FACILITY PLAN & PROFILES		7 of 12
STORMWATER MANAGEMENT MICRO-POOL EXTENDED DETENTION FACILITY NOTES & DETAILS		8 of 12
STORMWATER MANAGEMENT SURFACE SAND FILTER FACILITY PLAN, PROFILES, NOTES & DETAILS		9 of 12
FINAL FOREST CONSERVATION AND LANDSCAPE PLAN		10 of 12
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FINAL FOREST CONSERVATION AND LANDSCAPE PLAN		12 of 12

ROAD CLASSIFICATION

ROAD NAME	CLASSIFICATION	R/W
JACQUELINE COURT	PUBLIC ACCESS STREET	50'

MINIMUM LOT SIZE CHART

LOT NUMBER	GROSS AREA (SF)	PIPESTEM AREA (SF)	MINIMUM LOT SIZE (SF)
146	8,163±	1,334±	6,829±
147	7,182±	1,085±	6,097±
162	11,206±	2,086±	9,120±
163	9,174±	1,106±	8,068±
164	8,255±	835±	7,420±
165	9,485±	1,446±	7,839±
169	9,124±	1,536±	7,588±

RIGHT OF WAY ELEVATION CHART NAD. 83

R/W PT. NO.	DESCRIPTION	ELEVATION
26	CONC. MON.	290.181
31	REBAR # CAP	291.671
60	REBAR # CAP	291.831
61	REBAR # CAP	292.681
62	CONC. MON.	293.971
63	REBAR # CAP	292.071
64	REBAR # CAP	293.371
65	X-CUT	281.71
226	REBAR # CAP	290.191
901	REBAR # CAP	290.361
902	MAG NAIL	290.491
903	X-CUT	289.581

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. #34689, Expiration Date: 7/08/11.

OWNER/DEVELOPER
 J L N Development, LLC.
 46 Poplar Point Road
 Edgewater, Maryland 21037
 (410) 224-7575 Fax (410) 224-4774

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 21443, Expiration Date: 12-21-16

CENTERLINE ROAD CURVE DATA

CURVE #	STATIONS	DELTA	RADIUS	ARC LENGTH	TANGENT	CHORD B/D
CI	PC=+0+53.85; PT=+2+94.64	39°25'05"	350.00'	240.79'	125.58'	S61°17'19" N 236.07'

STREET LIGHT LOCATION CHART

Station	Offset	Lamp Size and Fixture
* @ Sta. 0+12.09	26.45'± Left	Existing Street Light, To Be Relocated to 0+27.30 right, 26.64' offset.
** @ Sta. 2+17	15' Left	100 Watt HPS - Post Top Premier Fixture
** @ Sta. 5+12	15' Right	100 Watt HPS - Post Top Premier Fixture
** L.P. Sta. 1+75	3' Offset	100 Watt HPS - Post Top Premier Fixture

* Denotes Existing Street Light To Be Relocated. Existing Light Located at Jacqueline Court Intersection with Wade's Road, see Stationing above. See plan sheet 2 for location plan.
 ** Denotes Street Light. Use 1' black fiberglass high pole with a Premier or Acorn Post-top Fixture and a 100W HPS or a 150W HPS lamp size. See plan sheet 2 for location.

APPROVED: DEPARTMENT OF PUBLIC WORKS.
 [Signature] 6-7-10
 Chief, Bureau of Highways and Planning

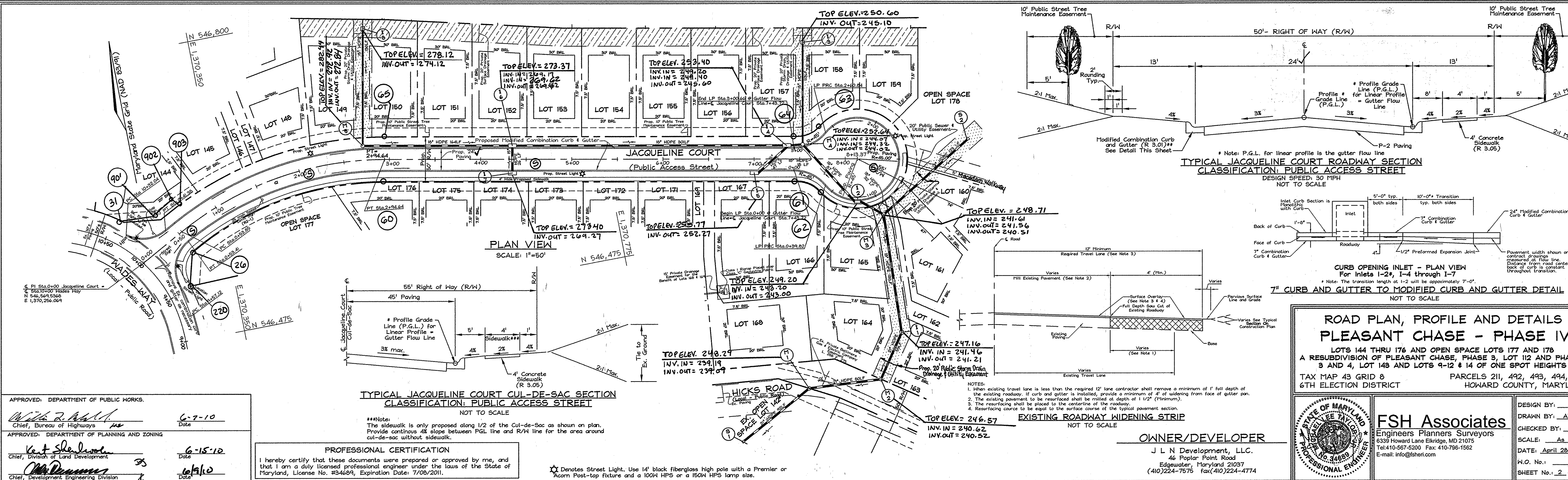
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 [Signature] 6-15-10
 Chief, Division of Land Development

[Signature] 6/9/10
 Chief, Development Engineering Division

FINAL ROAD CONSTRUCTION PLANS
PLEASANT CHASE - PHASE IV
 LOTS 144 THRU 176 AND OPEN SPACE LOTS 177 AND 178
 A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 143 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS
 TAX MAP 43 GRID B PARCELS 211, 492, 493, 494, 622
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FSH Associates
 Engineers Planners Surveyors
 6339 Howard Lane, Elkridge, MD 21075
 Tel: 410-567-5200 Fax: 410-796-1562
 E-mail: info@fsher.com

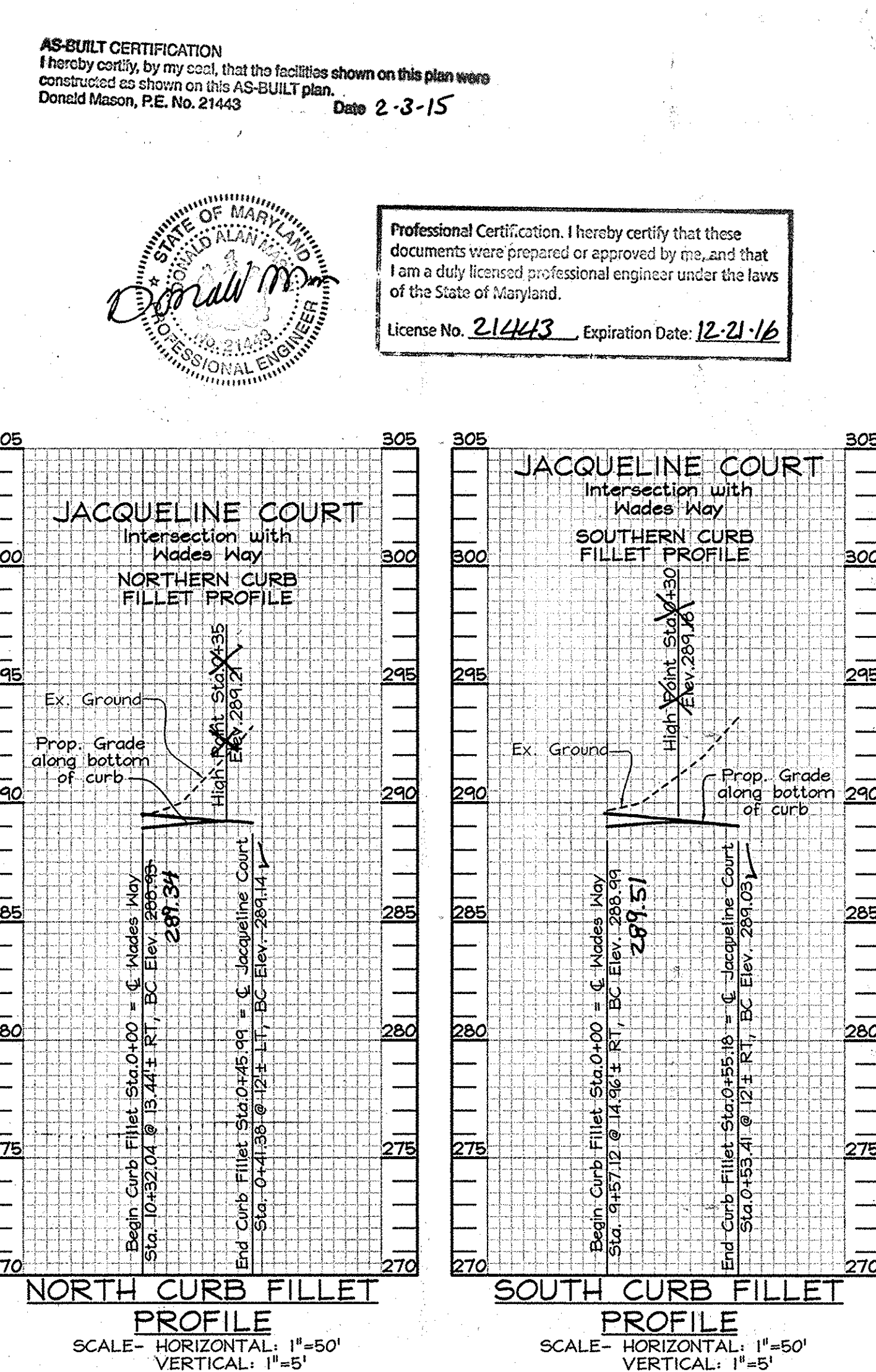
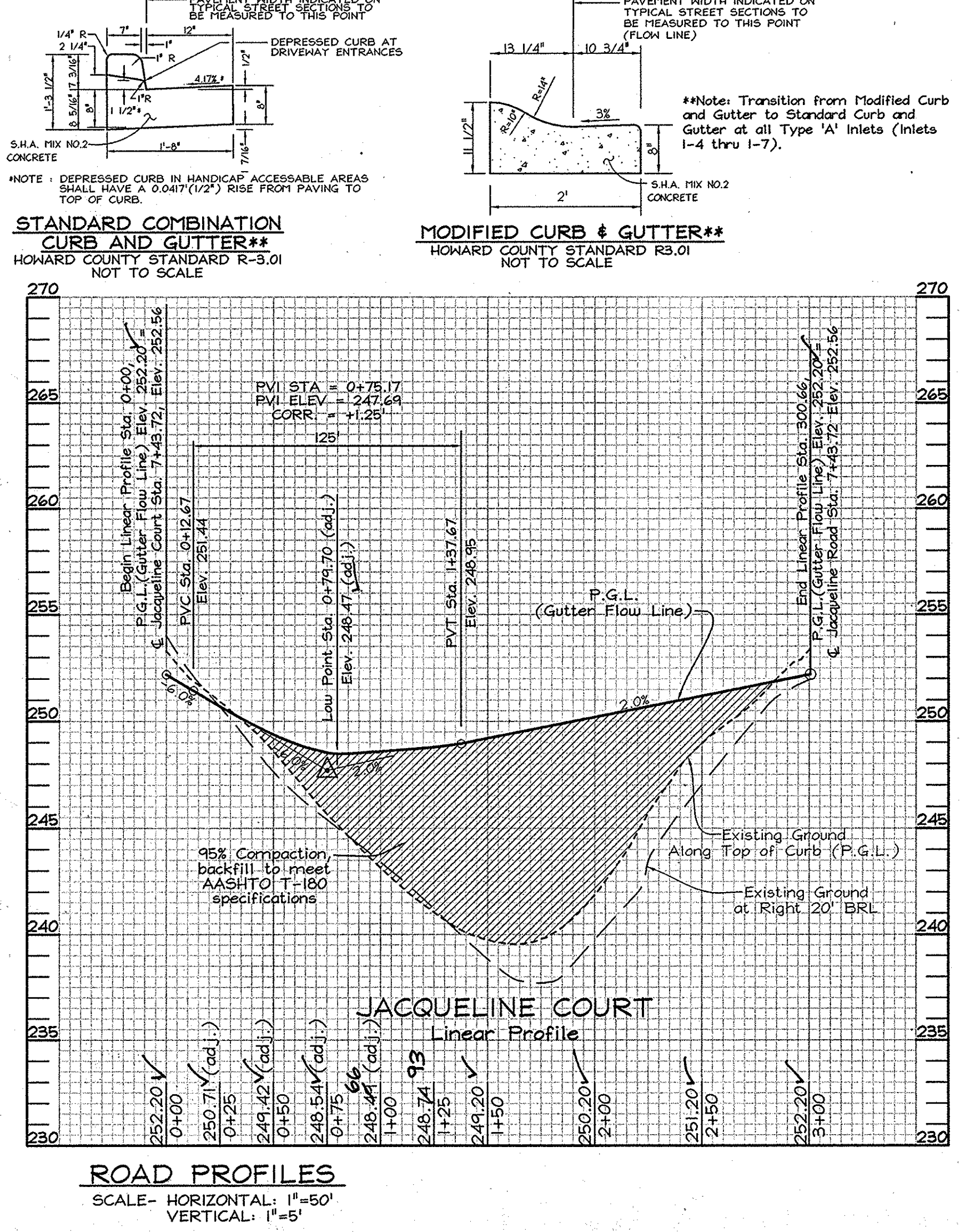
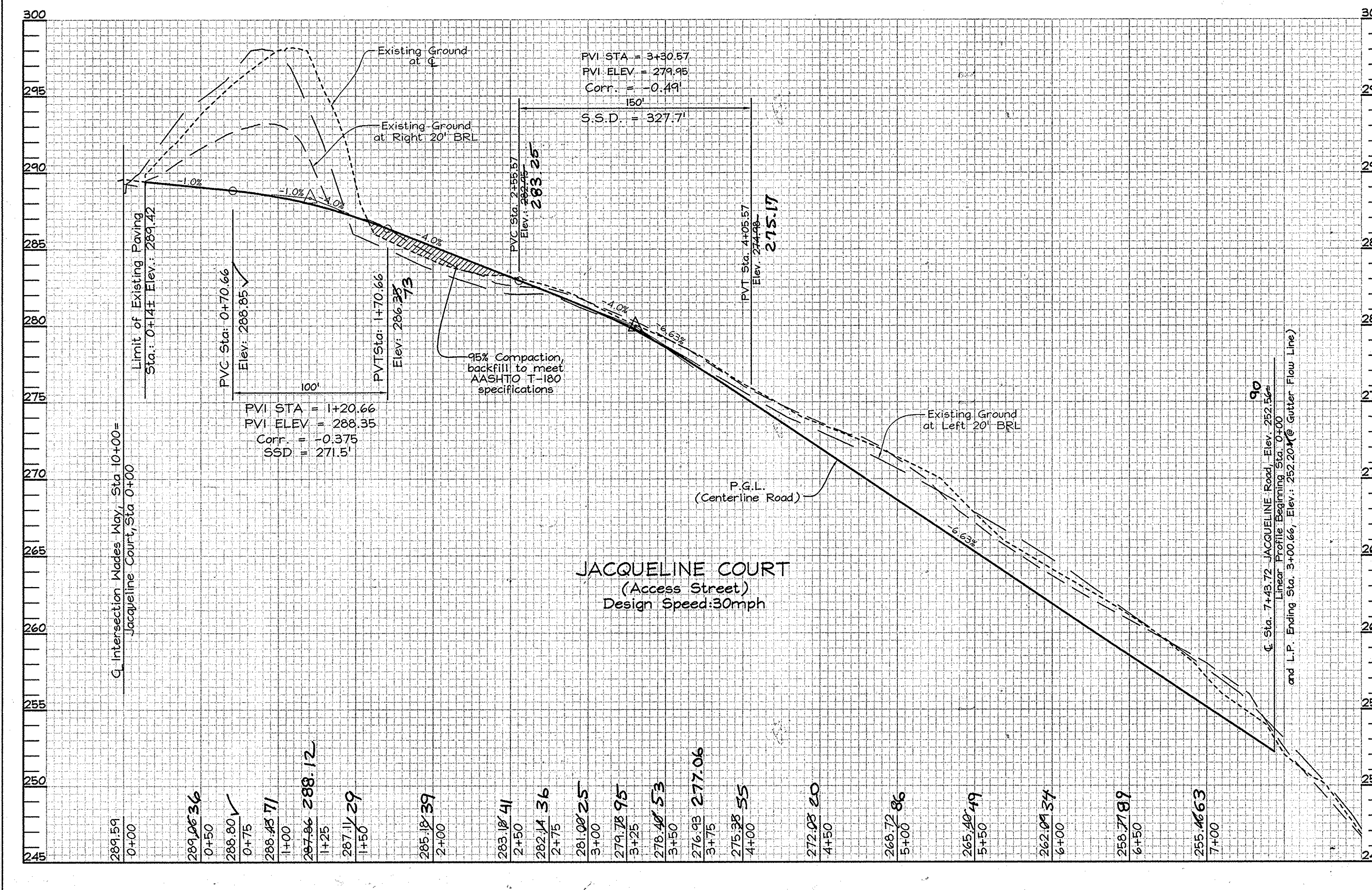
DESIGN BY: MLT
 DRAWN BY: CED/GH
 CHECKED BY: ZYF
 SCALE: As Shown
 DATE: April 28, 2010
 P.L.O. No.: 3430
 SHEET No.: 1 OF 12



APPROVED: DEPARTMENT OF PUBLIC WORKS
W. R. ...
 Chief, Bureau of Highways
 Date: 6-7-10

APPROVED: DEPARTMENT OF PLANNING AND ZONING
K. J. ...
 Chief, Division of Land Development
 Date: 6-15-10

M. ...
 Chief, Development Engineering Division
 Date: 6/19/10



STATE OF MARYLAND PROFESSIONAL ENGINEER
 Donald Mason, P.E. No. 21443
 License No. 21443, Expiration Date: 12-21-16

FSH Associates
 Engineers Planners Surveyors
 6339 Howard Lane Elkridge, MD 21075
 Tel: 410-587-5200 Fax: 410-796-1562
 E-mail: info@fsh.net

DESIGN BY: MLT
 DRAWN BY: AY/GED
 CHECKED BY: ZYF
 SCALE: As Shown
 DATE: April 28, 2010
 W.O. No.: 3430
 SHEET No. 2 OF 13

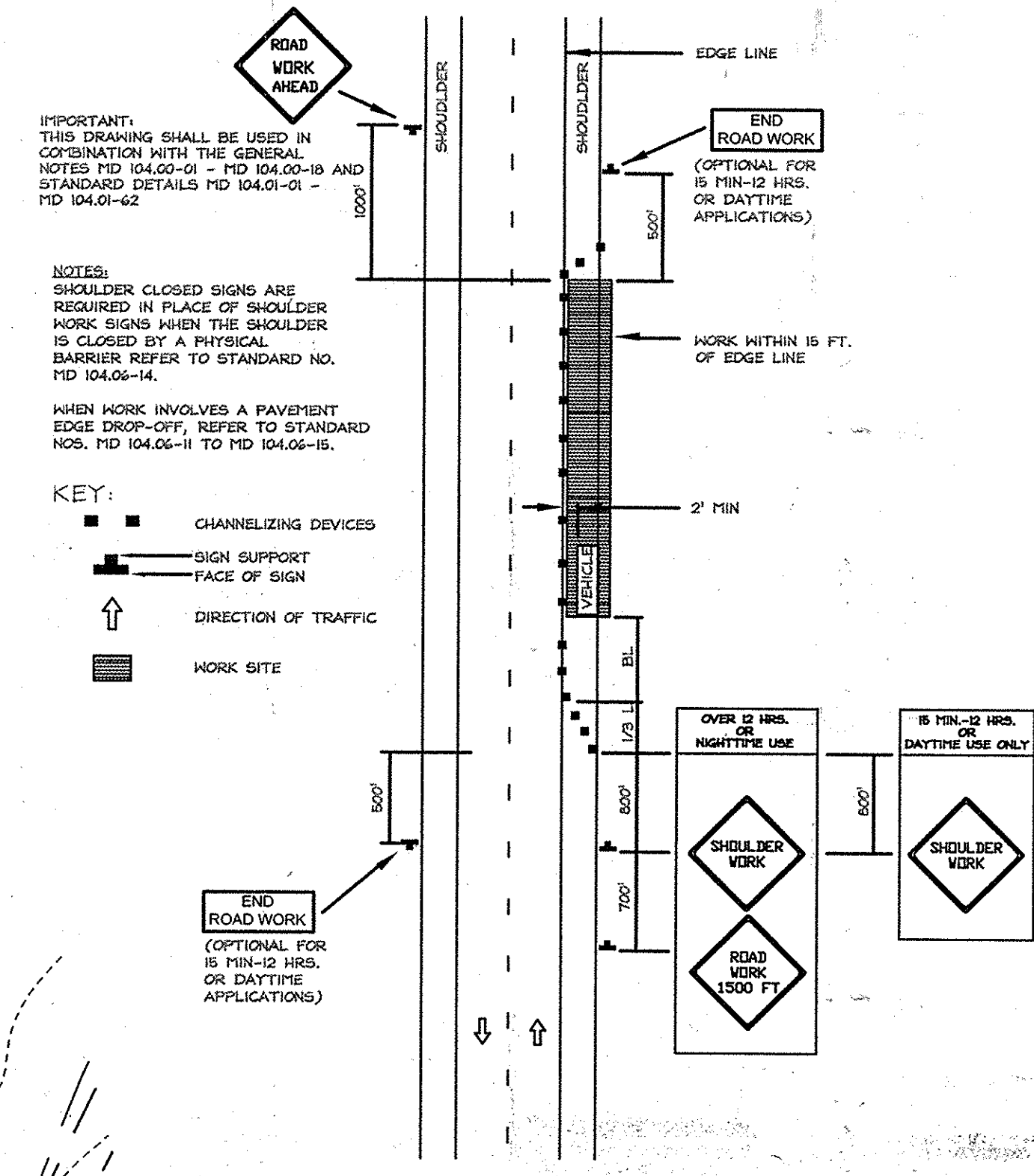
SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
Khc2	Keypoint silt loam, 3 to 10 percent slopes, moderately eroded	C
LuB	Luka loam, local alluvium, 1 to 5 percent slopes	C
SsB	Sandy and clayey loam, gently sloping	C
SfC2	Sassafras gravelly sandy loam, 5 to 10 percent slopes, moderately eroded	B
SfB2	Sassafras loam, 1 to 5 percent slopes, moderately eroded	B
SaE	Sassafras silt, 15 to 40 percent slopes	B

No As-Built information is required on this sheet

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 21443 Expiration Date: 12-21-16



TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



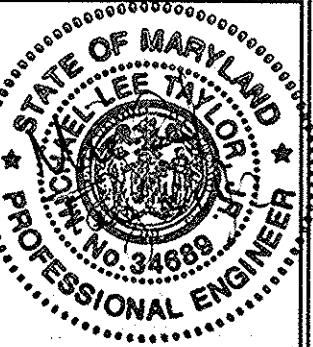
MARYLAND STATE HIGHWAY
 STANDARD DETAIL
 MD104.02-02
 NOT TO SCALE

NOTE:
 The First Floor (F.F.) and Basement (B) Elevations shown within the House Boxes are for Illustrative Purposes only. Final Grading of Lots shall be based on the Approved Site Development Plan.

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. #34689, Expiration Date: 07/08/2011.

OWNER/DEVELOPER
 J L N Development, LLC
 46 Poplar Point Road
 Edgewater, Maryland 21037
 (410)224-7575 Fax: (410)224-4774

GRADING, SOILS AND SEDIMENT & EROSION CONTROL PLAN
PLEASANT CHASE - PHASE IV
 LOTS 144 THRU 176 AND OPEN SPACE LOTS 177 AND 178
 A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 143 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS
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 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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 E-mail: info@fshet.com

DESIGN BY: M.L.T.
 DRAWN BY: C.E.D./R.L.
 CHECKED BY: Z.Y.F.
 SCALE: As Shown
 DATE: April 28, 2010
 W.O. No.: 3490
 SHEET No.: 3 OF 12

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 6-7-10

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 Date: 6-15-10

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Date: 6/9/10

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

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN AND THAT I AM PREPARED TO ATTEST TO THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 SIGNATURE OF ENGINEER: [Signature]
 DATE: 5/25/10

DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE IN THE TRAINING PROGRAM OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT EROSION BEFORE BEGINNING ANY CONSTRUCTION. I/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
 SIGNATURE OF DEVELOPER: [Signature]
 DATE: 4/27/10

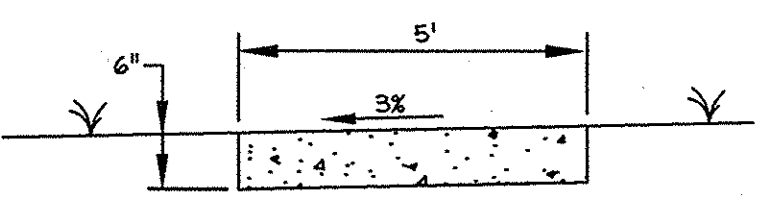
PLAN VIEW
 SCALE: 1"=30'

MATCHLINE B-B SEE SHEET 4

STORMWATER MANAGEMENT SUMMARY TABLE

SWM Facility	Rev Area	Rev Req'd* (Percent Volume Method)	Rev Provd.* (Percent Area Method)	WQV Area**	WQV Required**	WQV Provided**	CPV Area***	CPV Required***	CPV Provided***	Q ₁₀ Req'd****	Q ₁₀ Provd****	Q ₁₀₀ Req'd****	Q ₁₀₀ Provd****
Micro-Pool Extended Detention Facility (Type P-1) with Shared Maintenance with Howard County-Hazard Class 'A'	9.36 ac.±	(Computed for Entire Site) Rev = 3,014 cu.ft.	3,014 cu.ft. provided through stone storage below the sand filter using the percent volume method	2.84 ac.±	5,155 cu.ft.	5,330 cu.ft. Provd thru Extended Detention	7.14 ac.±	22,712 cu.ft.	22,712 cu.ft. Provd thru 1 Yr. Extended Detention	N/A	N/A	N/A	N/A
Surface Sand Filter Facility				5.76 ac.±	12,545 cu.ft.	12,545 cu.ft. Provd thru Sand Filter	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note: All flows above the water quality storm flows are diverted away from the sand filter facility via the diversion manhole, F1-3.
 * Retention, not drainage area specific, was computed using the entire site area and provided through stone storage beneath the Surface Sand Filter Facility.
 ** Water Quality is provided within the Surface Sand Filter Facility through infiltration through the sand filter and through the permanent wet pool within the Micro-Pool Extended Detention Facility.
 *** Channel Protection is provided through 1 year extended detention within the Micro-Pool Extended Detention Facility. The 1 Year discharge was diverted away from the Surface Sand Filter Facility via Diversion FH-3 in order to reduce the 1 yr runoff loading to the sand filter to 2.0 c.f.s. or less therefore eliminating the need for channel protection within the sand filter facility drainage area.
 **** Per Howard County Design Manual Volume 1, Section 5.2.1.1 (A) and 100 year management are not required for this watershed area.



MACADAM PATHWAY DETAIL
NOT TO SCALE

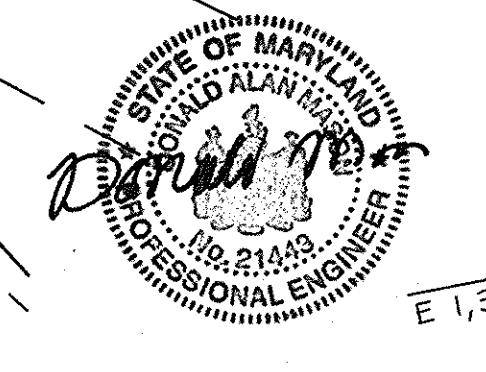


MATCHLINE B-B SEE SHEET 3

STONE OUTLET SEDIMENT TRAP-ST II
(See Sediment Trap Grading and Summary on Sheet 5)

AS-BUILT CERTIFICATION
I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this AS-BUILT plan.
Donald Mason, P.E. No. 21443 Date 2-3-15

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443, Expiration Date: 12-21-16



NOTE:
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PROFESSIONAL CERTIFICATION
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OWNER/DEVELOPER
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GRADING, SOILS AND SEDIMENT & EROSION CONTROL PLAN
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A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 148 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS
TAX MAP 43 GRID 8 PARCELS 211, 242, 493, 494, 622
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN BY: MLT
DRAWN BY: CED/RL
CHECKED BY: ZTF
SCALE: As Shown
DATE: April 28, 2010
H.O. No.: 3492
SHEET No.: 4 OF 12

FSH Associates
Engineers Planners Surveyors
6339 Howard Lane, Elkridge, MD 21075
Tel: 410-987-5200 Fax: 410-987-1562
E-mail: info@fshri.com

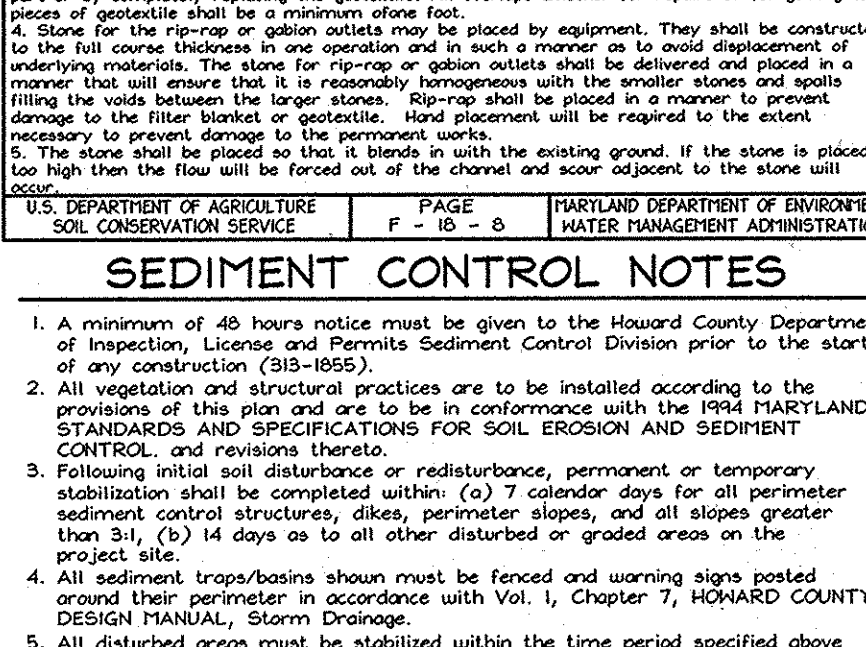
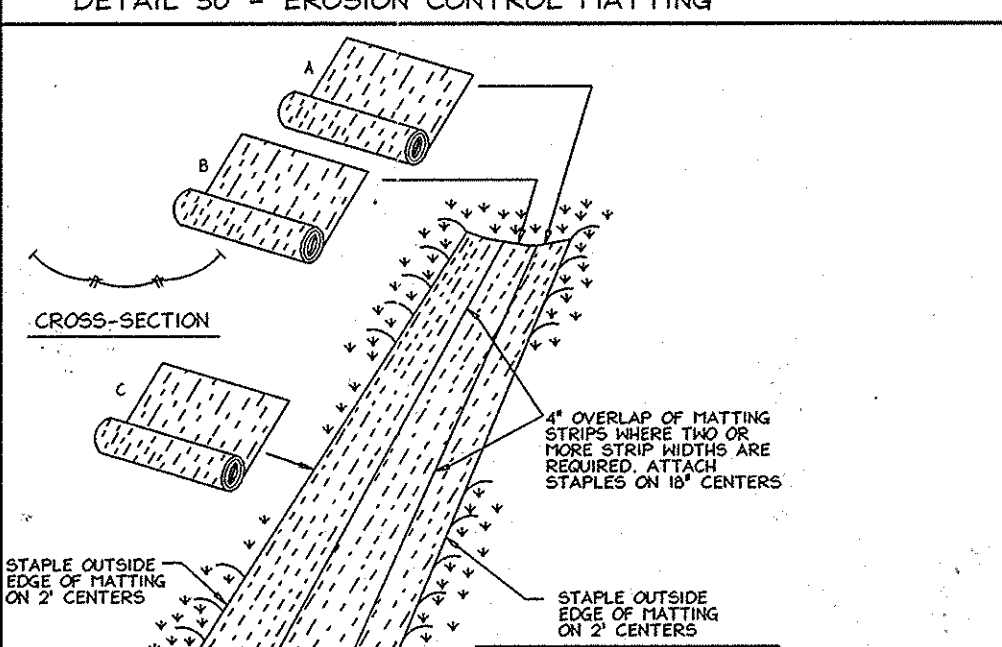
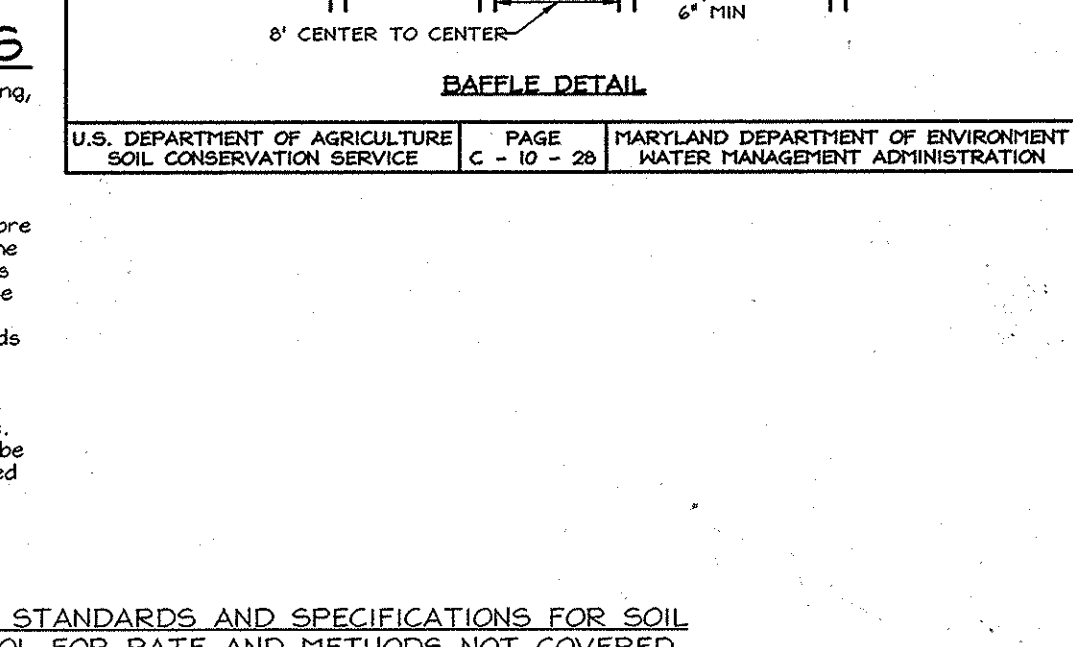
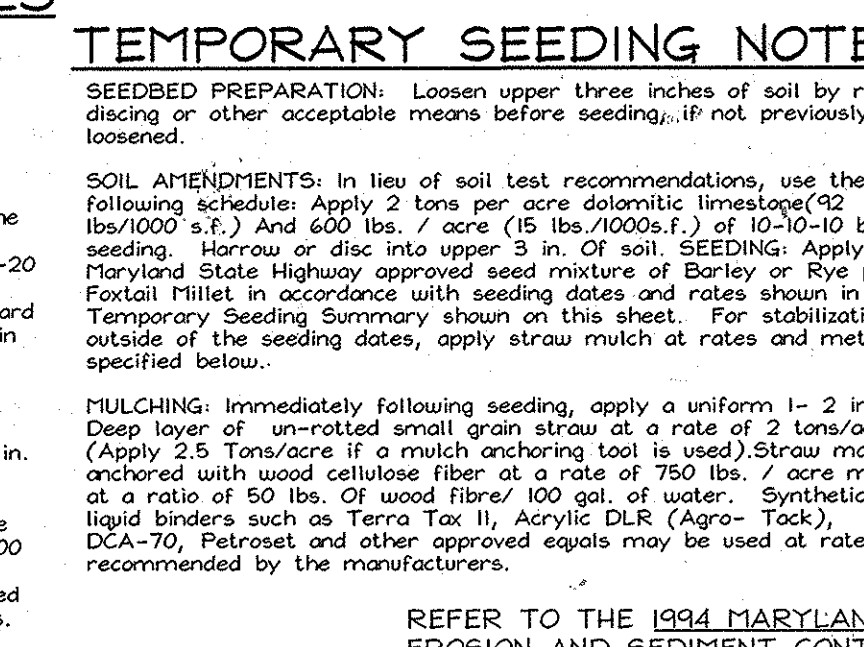
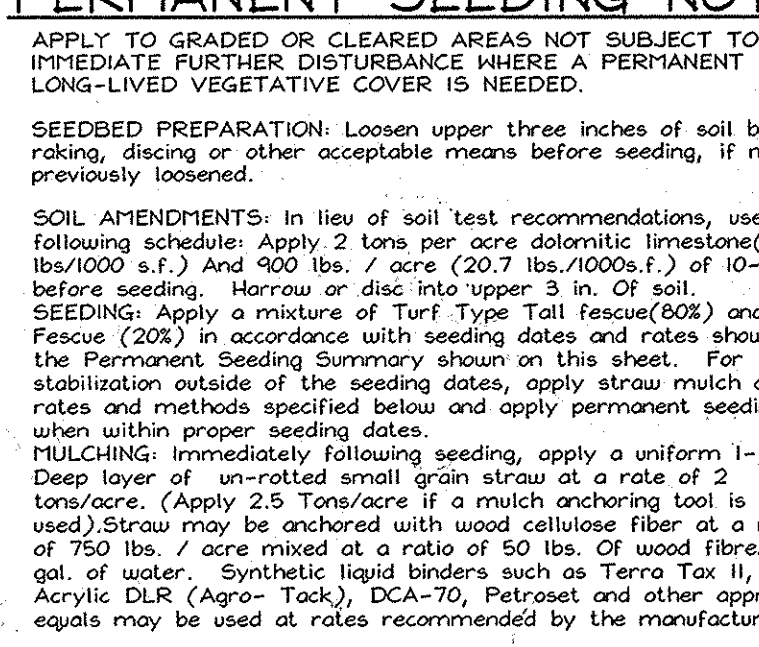
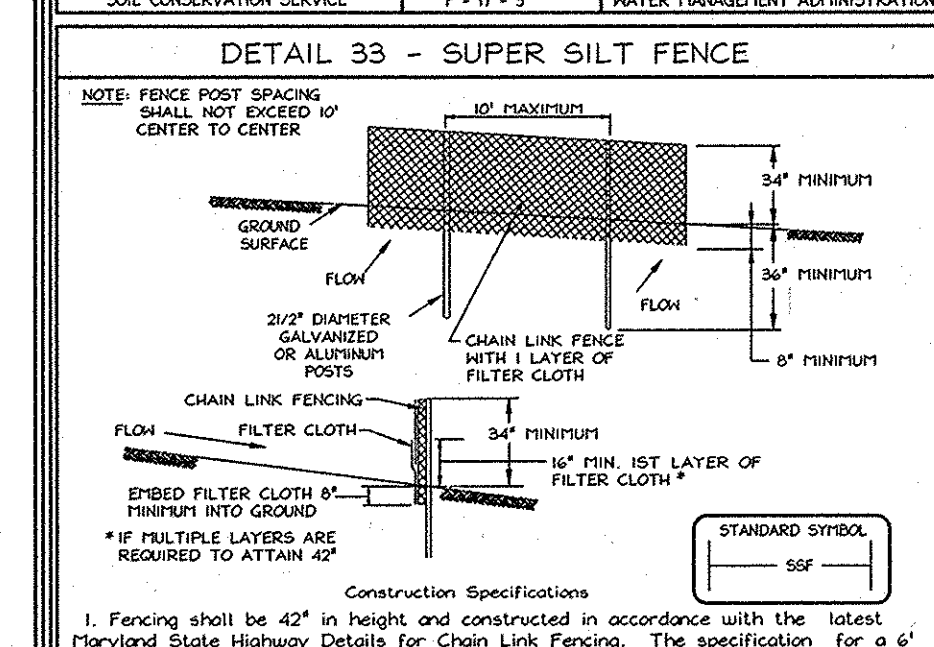
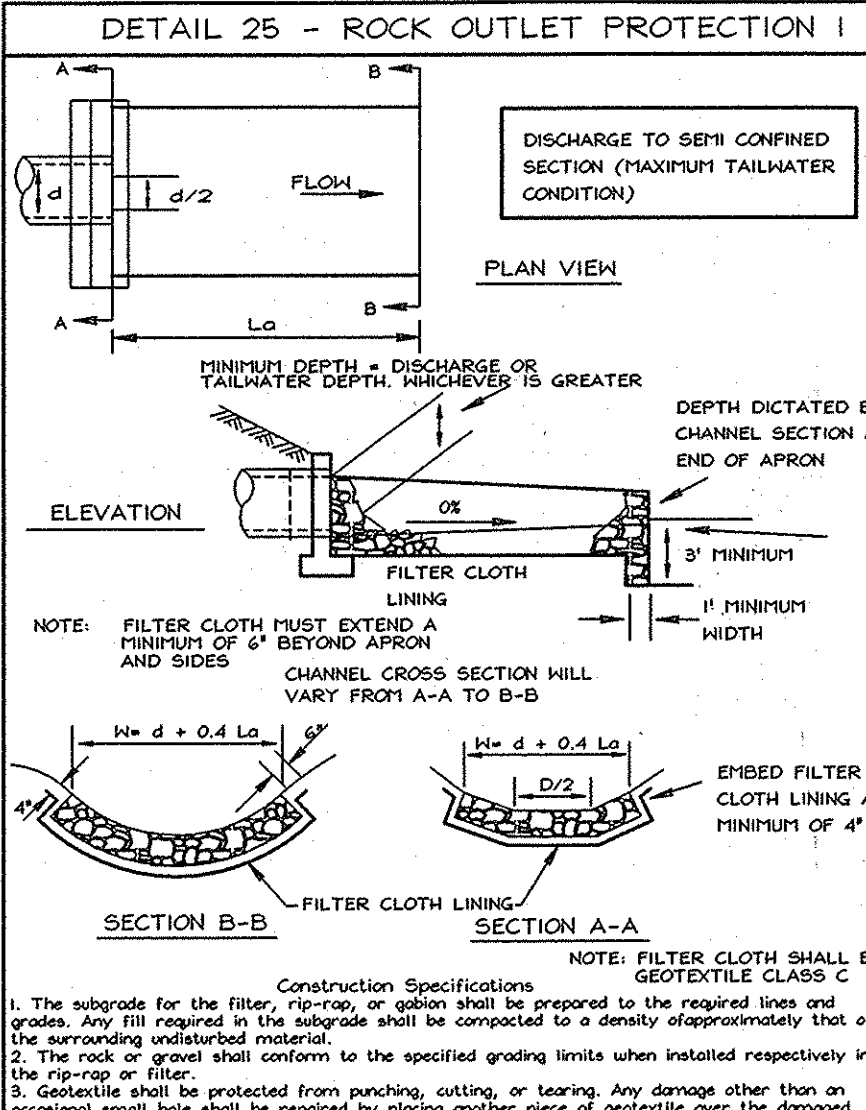
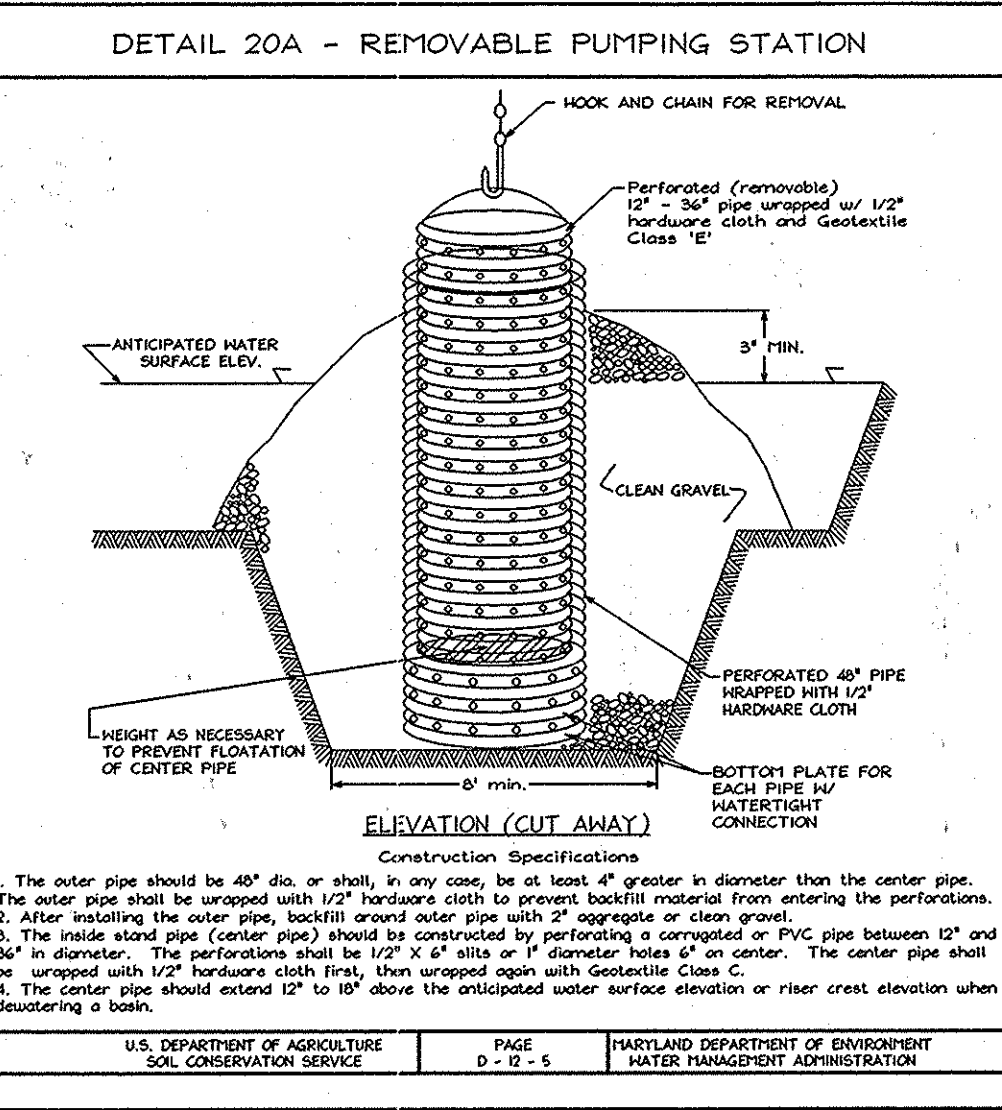
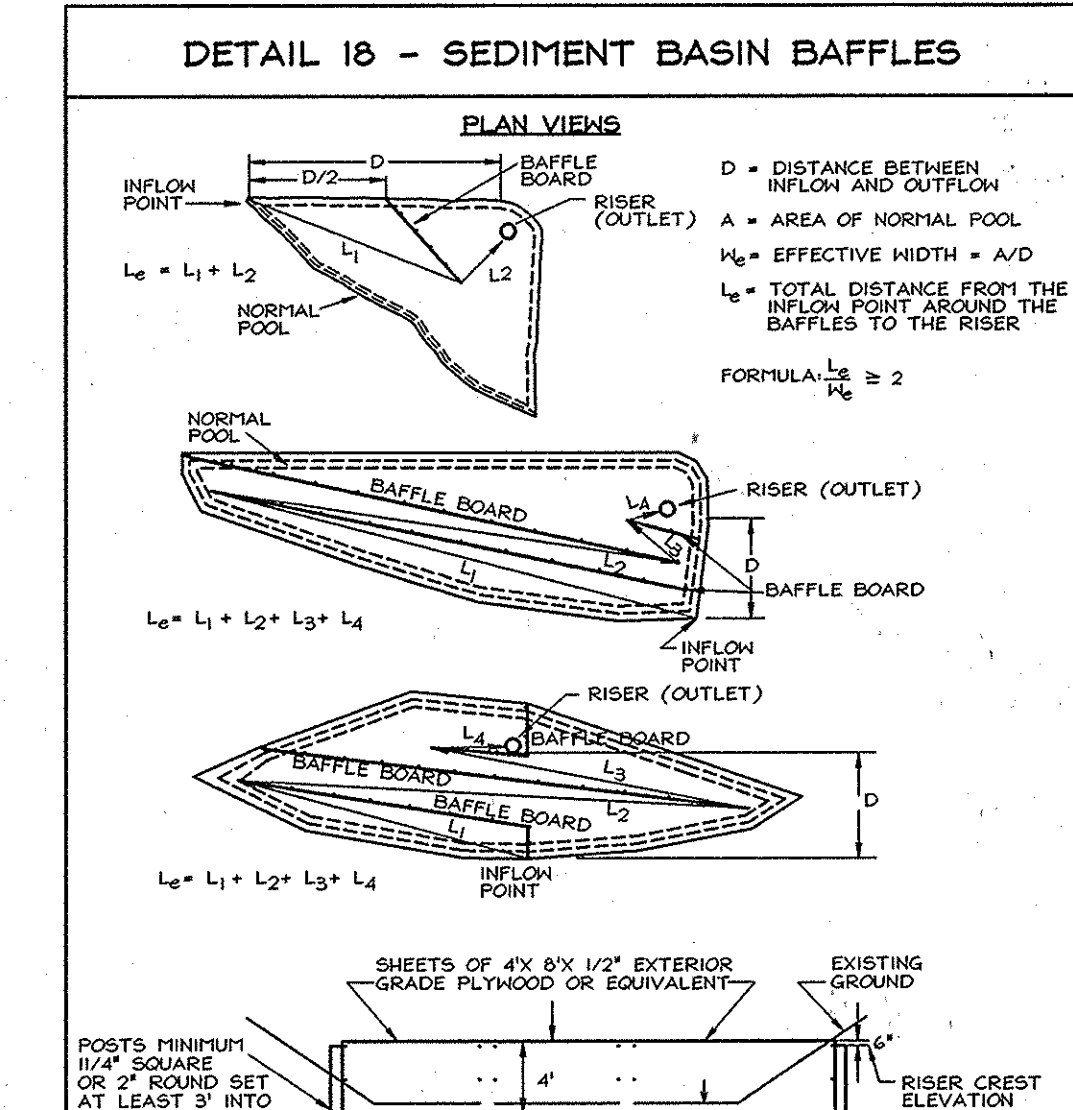
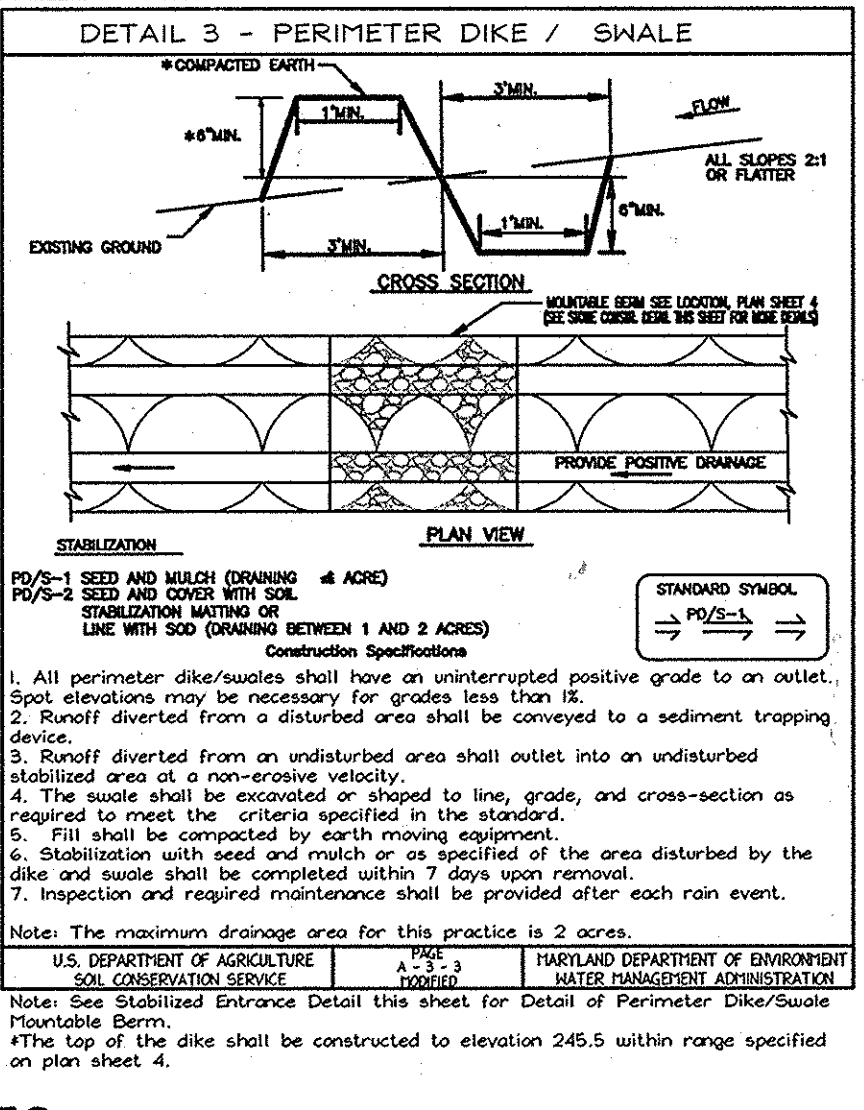
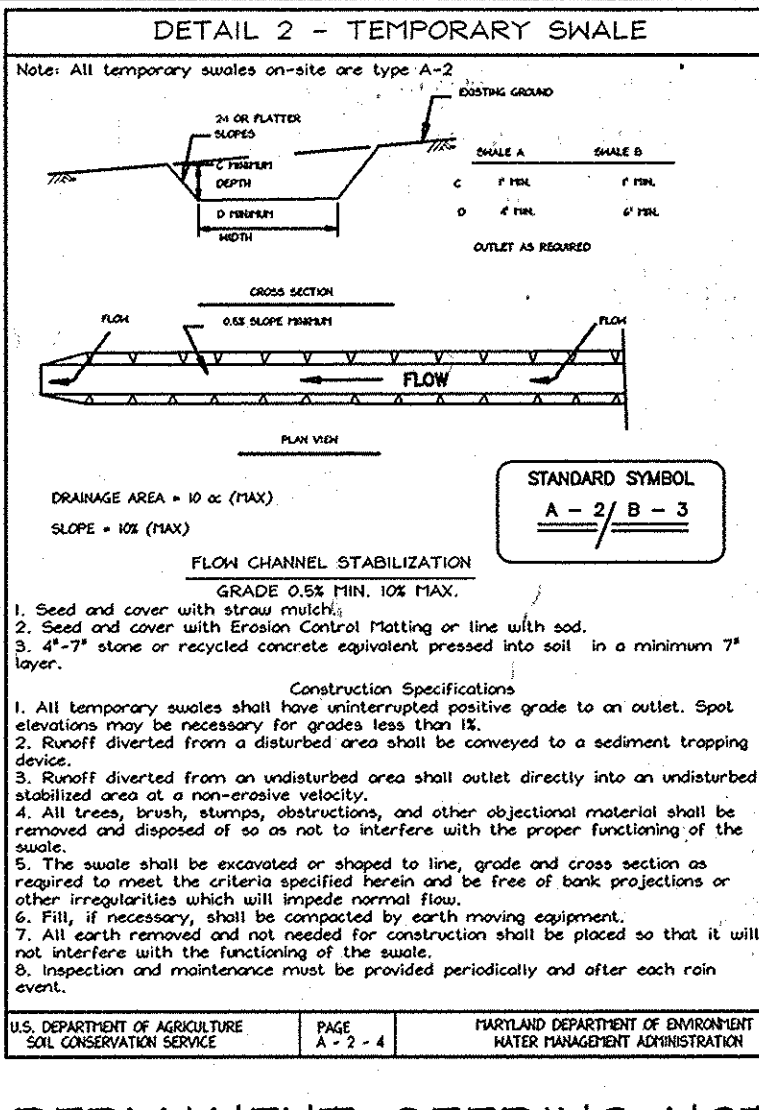
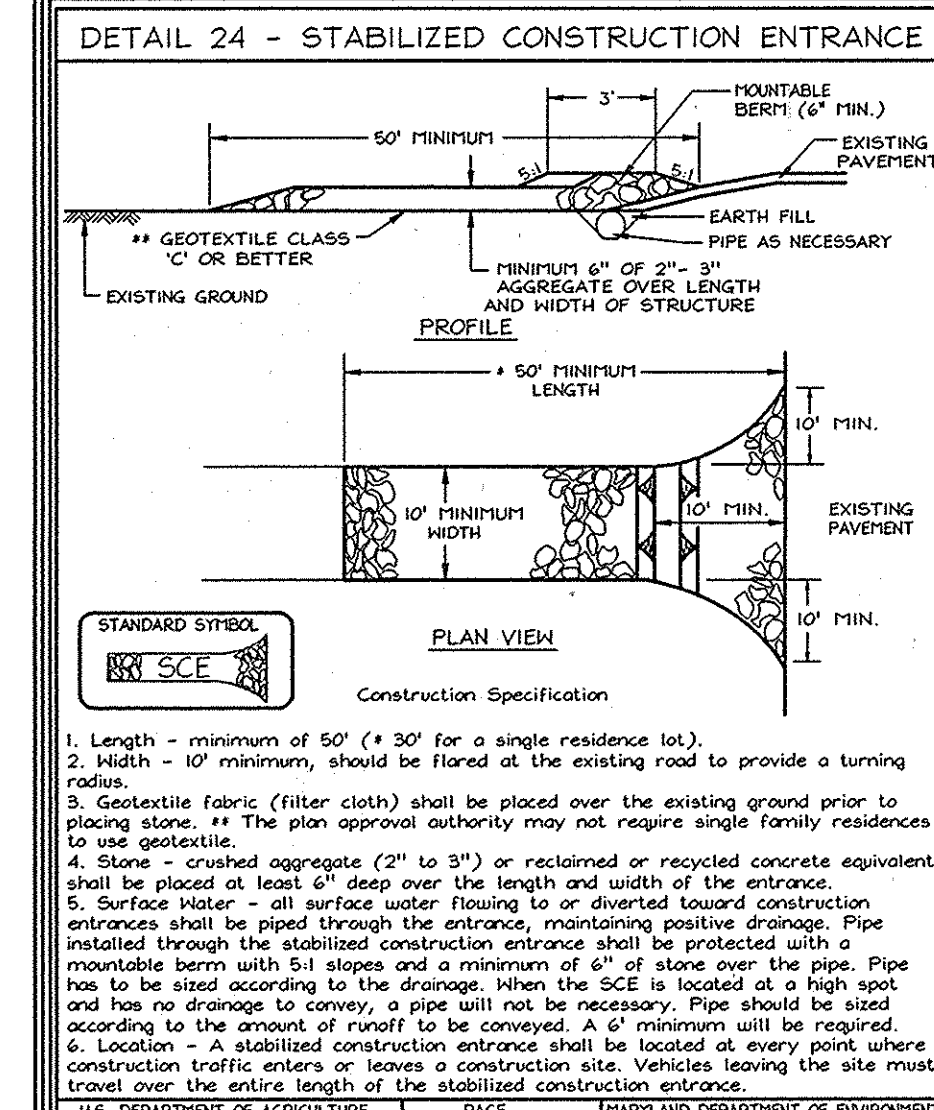
ENGINEERS CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 90 DAYS OF COMPLETION.
4/27/10
SIGNATURE OF ENGINEER: MICHAEL L. TAYLOR JR.
DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS.
Walter Z. Wall
Chief, Bureau of Highways
6-7-10
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Vet. Delwood
Chief, Division of Land Development
6-15-10
6/9/10

PLAN VIEW
SCALE: 1"=30'

DEVELOPER'S CERTIFICATE
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 90 DAYS OF COMPLETION.
4/27/10
SIGNATURE OF DEVELOPER: [Signature]
DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature]
HOWARD SOIL CONSERVATION DISTRICT
4/25/10
DATE



PERMANENT SEEDING NOTES

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

SEEDING PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: In lieu of soil test recommendations, use the following schedule: Apply 2 tons per acre dolomitic limestone (52 lbs/1000 s.f.) and 400 lbs. / acre (20.7 lbs./1000s.f.) of 10-20-20 before seeding. Add straw or disc into upper 3 in. of soil.

SEEDING: Apply a mixture of Turf Type Tall Fescue (80%) and Hard Fescue (20%) in accordance with seeding dates and rates shown in the Permanent Seeding Summary shown on this sheet. For stabilization outside of the seeding date, apply straw mulch at rates and methods specified below and apply permanent seeding when within proper seeding dates.

MULCHING: Immediately following seeding, apply a uniform 1-2 in. Deep layer of un-rotted small grain straw at a rate of 2 tons/acre. Apply 2.5 Tons/acre if a mulch anchoring tool is used. Straw may be anchored with wood cellulose fiber at a rate of 50 lbs. of wood fiber/100 gal. of water. Synthetic liquid binders such as Terra Tex II, Acrylic DLR (Agra-Tack), DCA-70, Patrazed and other approved equals may be used at rates recommended by the manufacturers.

TEMPORARY SEEDING NOTES

SEEDING PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: In lieu of soil test recommendations, use the following schedule: Apply 2 tons per acre dolomitic limestone (52 lbs/1000 s.f.) and 400 lbs. / acre (15 lbs./1000s.f.) of 10-10-10 before seeding. Add straw or disc into upper 3 in. of soil.

SEEDING: Apply a mixture of Turf Type Tall Fescue (80%) and Hard Fescue (20%) in accordance with seeding dates and rates shown in the Temporary Seeding Summary shown on this sheet. For stabilization outside of the seeding dates, apply straw mulch at rates and methods specified below.

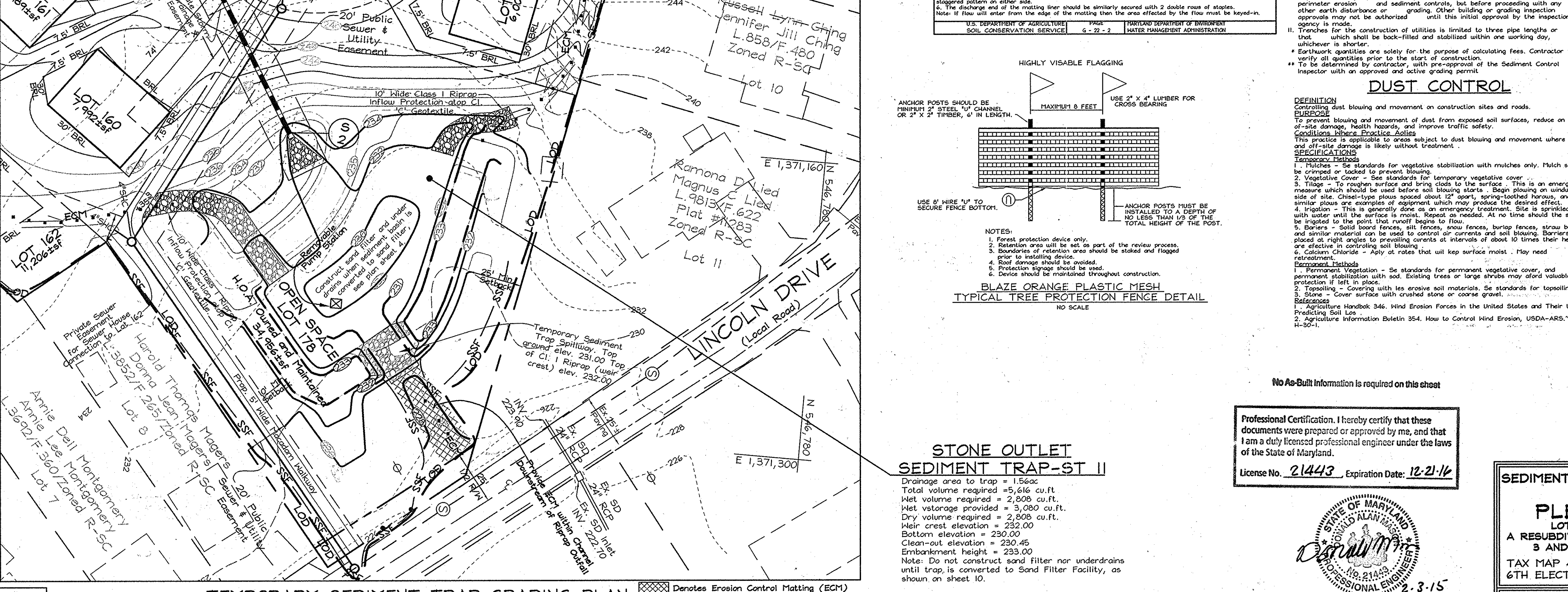
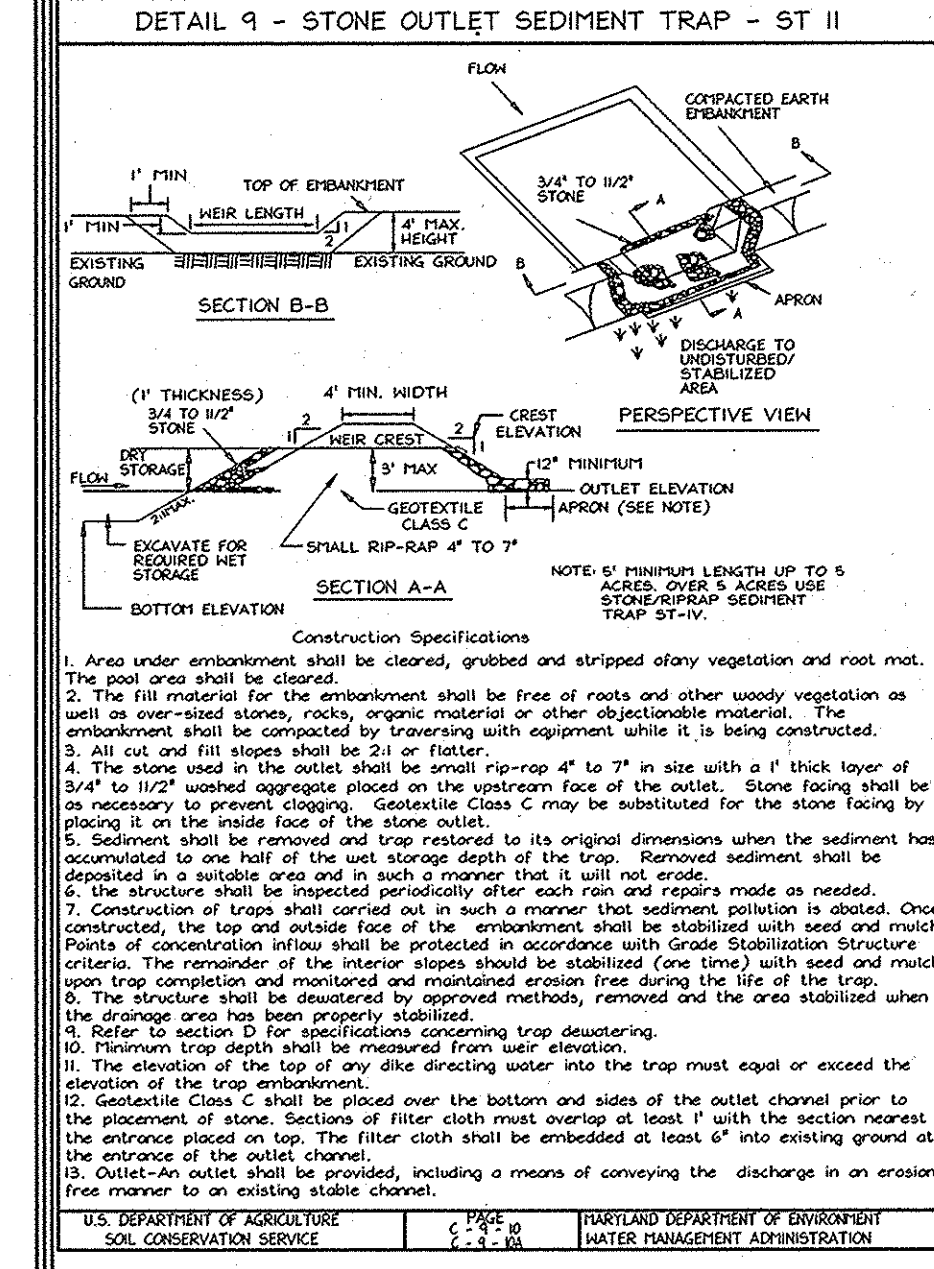
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PERMANENT SEEDING SUMMARY

No.	Species	Seed Mixture (Hardness Zone 7a and 8b)		Fertilizer Rate (10-20-20)		Lime Rate
		Application Rate (lb/acre)	Seeding Dates	N	P2O5 K2O	
10	Tall Fescue (80%) Hard Fescue (20%)	120 30	3/1-5/15 6/15-11/15	0.5 in.	400lb/ac (2.0lb/1000s.f.)	175lb/ac (4lb/1000s.f.)

TEMPORARY SEEDING SUMMARY

No.	Species	Seed Mixture (Hardness Zone 6a and 7a)		Fertilizer Rate (10-10-10)		Lime Rate
		Application Rate (lb/acre)	Seeding Dates	N	P2O5 K2O	
2	Barely or Rye plus Foxtail Fillet	150 lbs. (3.5lbs/1000sqft)	2/1-11/30 (7a) 3/15-10/31 (6a)	1/4 in. 1/2 in.	600 lb/ac (15lb/1000s.f)	2 tons/acre (100lb/1000s.f)



APPROVED: DEPARTMENT OF PUBLIC WORKS
Date: 6-7-10
Approved: Bureau of Highways
Date: 6-15-10
Approved: Department of Planning and Zoning
Date: 6-10-10

ENGINEERS CERTIFICATE
I, CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND FEASIBLE PLAN AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
SIGNATURE OF ENGINEER: [Signature]
DATE: 5/15/10

DEVELOPER'S CERTIFICATE
I, CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
SIGNATURE OF DEVELOPER: [Signature]
DATE: 4/27/10

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 454639, expiration date 7/08/2011.
SIGNATURE OF PROFESSIONAL ENGINEER: [Signature]
DATE: 4/27/10

STONE OUTLET SEDIMENT TRAP-ST II
Drainage area to trap = 1.65acs
Total volume required = 5,616 cu.ft.
Net volume required = 2,808 cu.ft.
Net storage provided = 3,080 cu.ft.
Dry volume required = 2,808 cu.ft.
Hair crest elevation = 232.00
Bottom elevation = 230.00
Clean-out elevation = 230.45
Embankment height = 233.00
Notes: Do not construct sand filter nor underdrains until trap is converted to Sand Filter Facility, as shown on sheet 10.

SEDIMENT TRAP PLAN AND SEDIMENT & EROSION CONTROL NOTES AND DETAILS

PLEASANT CHASE - PHASE IV
LOTS 144 THRU 176 AND OPEN SPACE LOTS 177 AND 178
A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 148 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS
TAX MAP 43 GRID B PARCELS 211, 492, 493, 494, 622
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN BY: M.L.T.
DRAWN BY: CED/SPM
CHECKED BY: Z.Y.F.
SCALE: As Shown
DATE: April 28, 2010
P.L.O. No.: 3430
SHEET No. 5 OF 12

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

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

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

Conditions Where Practice Applies:

- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plan.

Construction and Material Specifications

Topsoil salvaged from the existing site may be provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.

- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or a soil scientist and approved by the appropriate authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 and 1/2 in. diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, rutenside, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clays, coarse limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- For sites having disturbed areas over 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting topsoil specifications obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH of topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.0 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil shall have a soluble salt content greater than 500 parts per million shall not be used.
 - No sod or seed shall be placed on soil which has been previously used for sod or seed. Topsoil shall be placed on soil which has been used for sod or seed only if sufficient time has elapsed (14-days min.) to permit dissipation of phytotoxic materials.

NOTE: Topsoil (if required) and soil amendments specified in 20.0 Vegetative Stabilization-Section I-Vegetative Stabilization Methods and Materials.

V. Topsoil Application

- When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Side Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, except at a higher elevation.
- Topsoil shall be uniformly distributed in a 4' - 6' layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding on ground having a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed where the topsoil or subsoil is in a frozen or muddy condition; when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeding preparation.

SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspection, Licenses and Permits Sediment Control Division prior to the start of any construction (918-1855).
- Any sediment control practice area to be installed according to the standards and specifications of this plan and one to be in conformance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and one to be in conformance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and one to be in conformance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, for permanent seeding, and one to be in conformance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, for temporary seeding, and one to be in conformance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, for stabilization with mulch alone shall be placed when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Division.
- Site Analysis:

Area Disturbed	0.23 Acres
Area to be reseeded or paved	0.32 Acres
Area to be vegetatively stabilized	1.58 Acres
Total	2.13 Acres
Total Cut	200,000 CY
- Off-site water/borrow area location:
 - See standards for temporary vegetative cover.
 - Topsoil shall be maintained, except at a higher elevation.
 - Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Division.
 - On all sites with disturbed areas in excess of 2 acres, approval of the Howard County Sediment Control Division is required upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbing activity. Temporary stabilization with mulch alone shall not be authorized until this initial approval by the inspection agency is received.
 - Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.
 - Earthwork quantities are solely for the purpose of calculating fees. Contractor to verify all quantities prior to the start of work.
 - To be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active permit.

SEQUENCE OF CONSTRUCTION

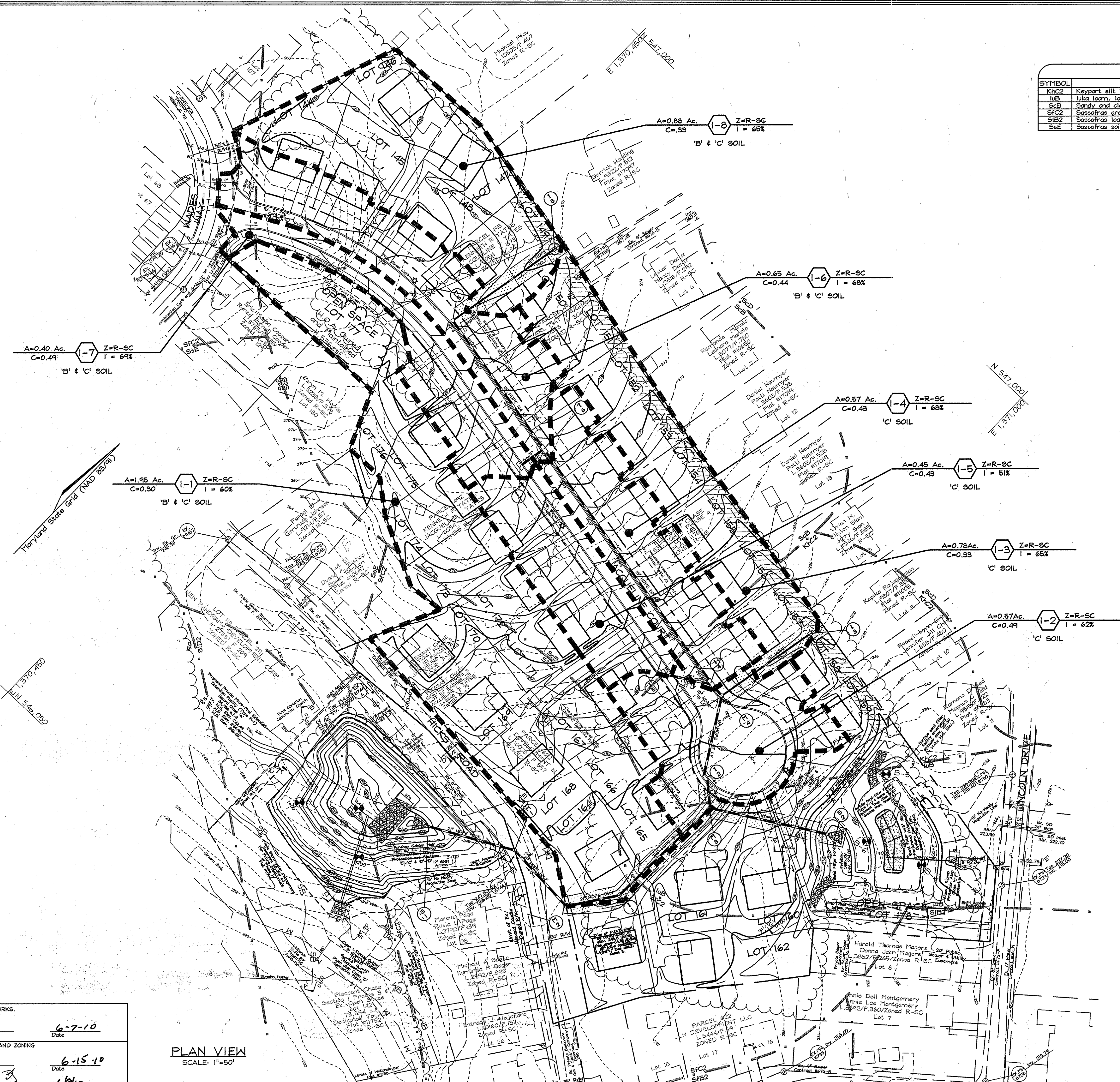
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 318-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
- Obtain grading permit and contact Howard County Sediment Control Inspector (SCI) to arrange a pre-construction meeting. (1 day)
- Install stone construction entrance (SCE) and all super silt fence (SSF) 1 day.
- Clear and grub for and install sediment basin (see temporary grading and riser modifications required for basin on sheets 4 and 9 respectively).
- Install stone outlet sediment trap (see SOST grading sheet) and erosion control matting (ECH) below SOST outfall. (1 week)
- With permission of sediment control inspector clear and grub for and install all remaining sediment control measures temporary stabilization, perimeter dike/swale with mounded berm and highly visible fence (TFP) and install storm drain system from 3-1 up to 1-1 but do not install inlet. (1-1) The 24" diameter storm drain pipe opening prior to 1-1 shall be used to collect sediment from the perimeter dike swale into the sediment basin. (1 day)
- With permission of sediment control inspector clear and grub for and install all remaining sediment control measures temporary stabilization, perimeter dike/swale with mounded berm and highly visible fence (TFP) and install storm drain system from 3-1 up to 1-1 but do not install inlet. (1-1) The 24" diameter storm drain pipe opening prior to 1-1 shall be used to collect sediment from the perimeter dike swale into the sediment basin. (1 day)
- With the permission of the sediment control inspector clear and grub the site, bring rock to subgrade remove perimeter dike/swale with mounded berm and TFP and install remaining storm drains. (1 day)
- Install low flow opening within manhole 11-3 in order to direct all storm drain flows into the sediment basin and the sediment trap. (2 weeks)
- Stabilize all disturbed areas with permanent seeding and pave road. (1 week)
- With permission of the Sediment Control Inspector convert the sediment basin to the micro-pool extended detention facility (remove dewatering device from riser, install inverted siphon at riser, remove 2' dia. and 14" dia. blocking devices from riser, close 4" gate valve at riser, install forestry and grade facility according to SOST plan, sheet 8); convert the sediment trap to the surface sand filter facility (install forestry, sand filter with underdrains and outfall pipe and grade facility according to plan shown on sheet 10) and remove blocking of 2" opening at 11-3. (1 week)
- Remove all remaining sediment control measures and stabilize all remaining disturbed areas with permanent seeding. (1 day)
- Provide a copy of the Howard SCD "As-Built" approval letter to the inspector.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443 Expiration Date: 12-21-16

SEDIMENT TRAP PLAN AND SEDIMENT & EROSION CONTROL NOTES AND DETAILS

PLEASANT CHASE - PHASE IV
LOTS 144 THRU 176 AND OPEN SPACE LOTS 177 AND 178
A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 148 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS
TAX MAP 43 GRID B PARCELS 211, 492, 493, 494, 622
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN BY: M.L.T.
DRAWN BY: CED/SPM
CHECKED BY: Z.Y.F.
SCALE: As Shown
DATE: April 28, 2010
P.L.O. No.: 3430
SHEET No. 5 OF 12



SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
KhC2	Keypoint silt loam, 3 to 10 percent slopes, moderately eroded	C
LuB	luke loam, local alluvium, 1 to 5 percent slopes	C
SsB	Sandy and clayey sand, gently sloping	C
SfC2	Sassafras gravelly sandy loam, 5 to 10 percent slopes, moderately eroded	B
SfB2	Sassafras loam, 1 to 5 percent slopes, moderately eroded	B
SsE	Sassafras soils, 15 to 40 percent slopes	B

A=0.40 Ac. Z=R-SC
C=0.49 I = 64%
'B' & 'C' SOIL

A=0.88 Ac. Z=R-SC
C=0.33 I = 65%
'B' & 'C' SOIL

A=0.65 Ac. Z=R-SC
C=0.44 I = 68%
'B' & 'C' SOIL

A=0.57 Ac. Z=R-SC
C=0.43 I = 68%
'C' SOIL

A=0.45 Ac. Z=R-SC
C=0.43 I = 51%
'C' SOIL

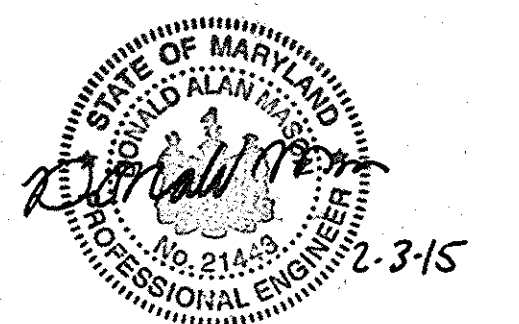
A=0.78 Ac. Z=R-SC
C=0.33 I = 65%
'C' SOIL

A=0.57 Ac. Z=R-SC
C=0.49 I = 62%
'C' SOIL

A=1.95 Ac. Z=R-SC
C=0.30 I = 60%
'B' & 'C' SOIL

No As-Built information is required on this sheet

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
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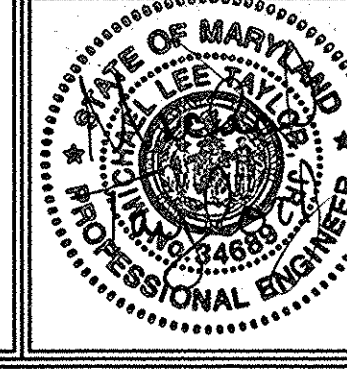
PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. #34689, Expiration Date: 7/08/2011.

OWNER/DEVELOPER
J L N Development, LLC.
46 Poplar Point Road
Edgewater, Maryland 21037
(410)224-7575 Fax:(410)224-4774

STORM DRAIN DRAINAGE AREA MAP
PLEASANT CHASE - PHASE IV
LOTS 144 THRU 176 AND OPEN SPACE LOTS 177 AND 178
A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 143 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS
TAX MAP 43 GRID 8 PARCELS 211, 492, 493, 494, 622
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

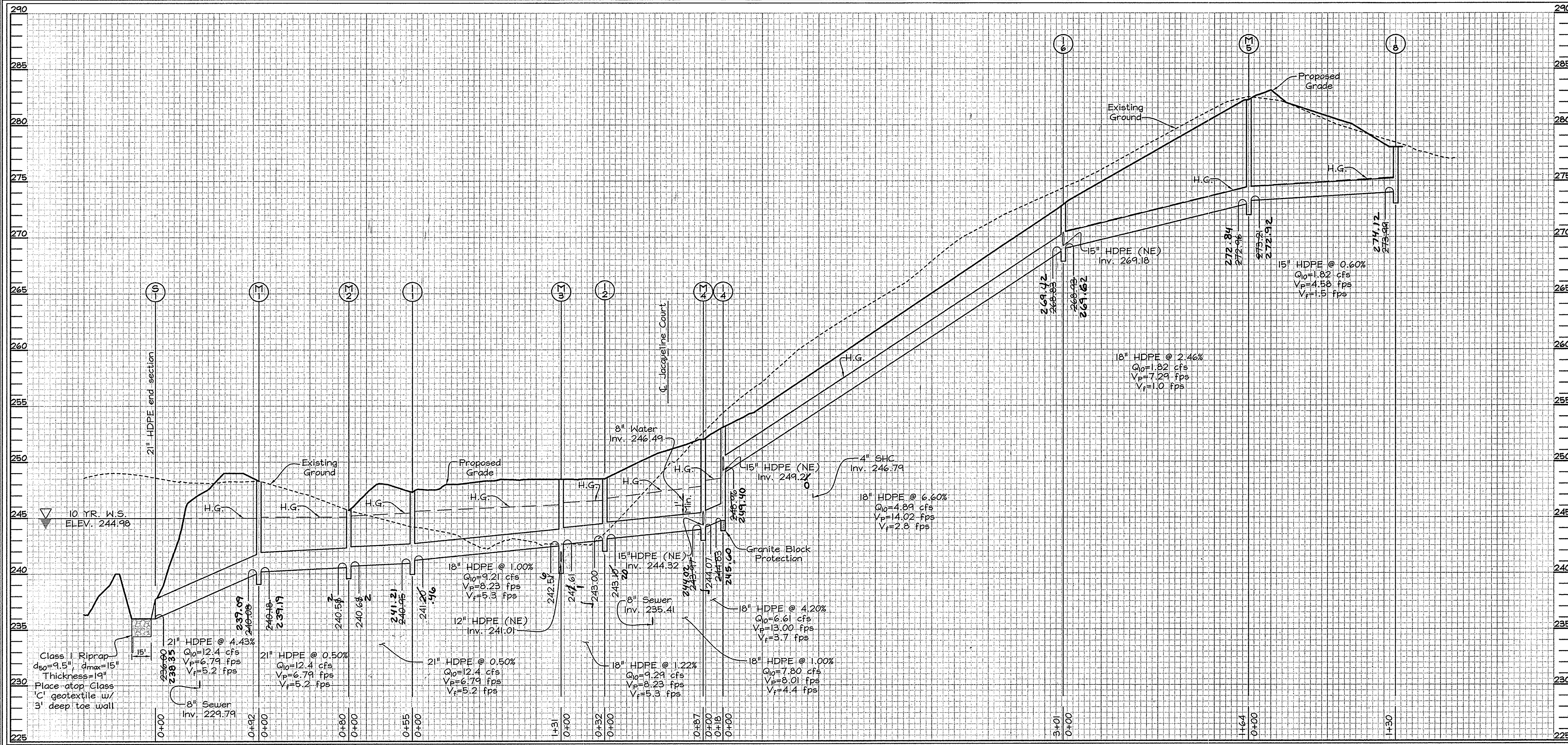
APPROVED: DEPARTMENT OF PUBLIC WORKS.
Walter Z. Marshall 6-7-10
Chief, Bureau of Highways
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Kate Lindholm 6-15-10
Chief, Division of Land Development
Chad Deanna 6/10
Chief, Development Engineering Division

PLAN VIEW
SCALE: 1"=50'

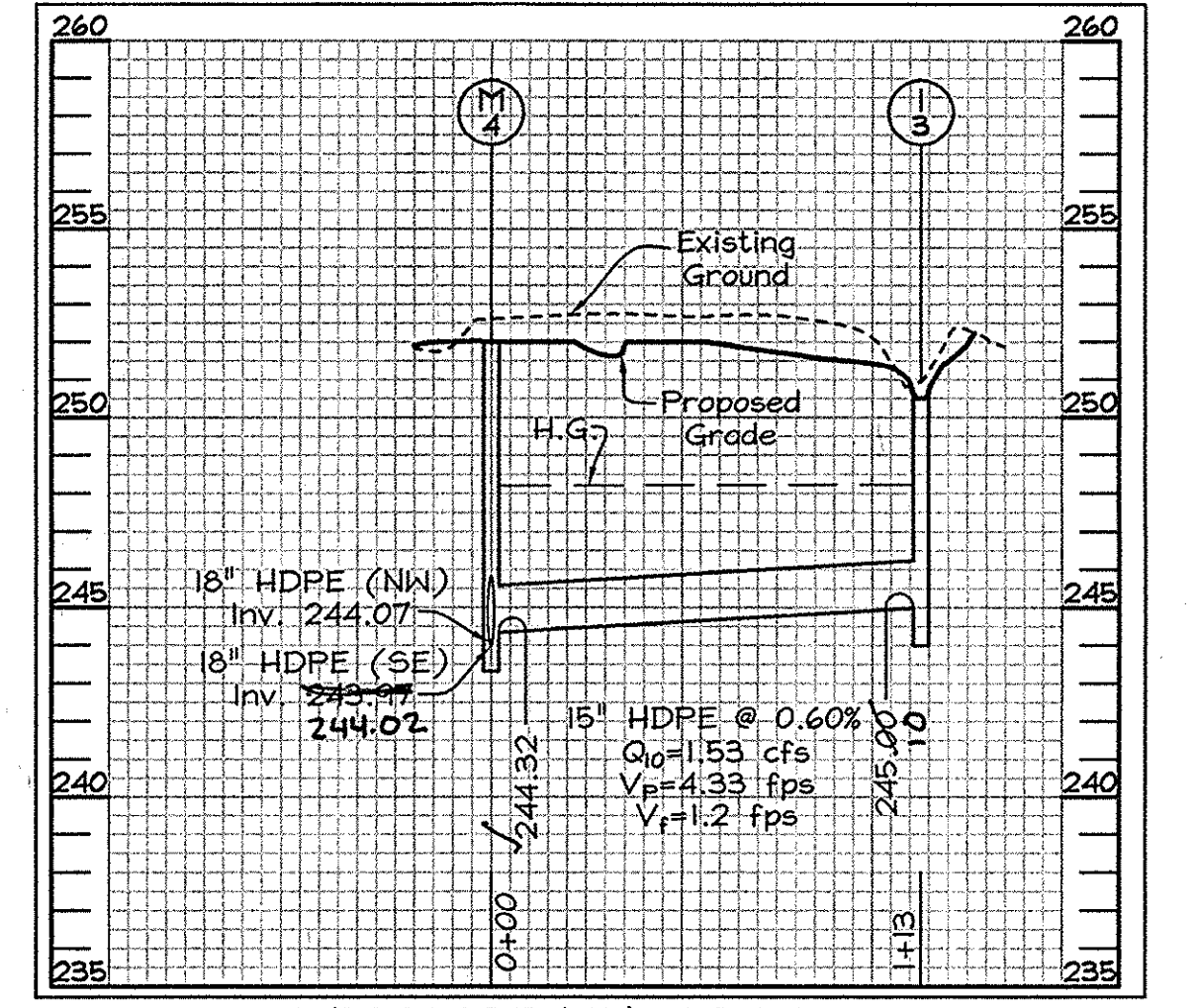


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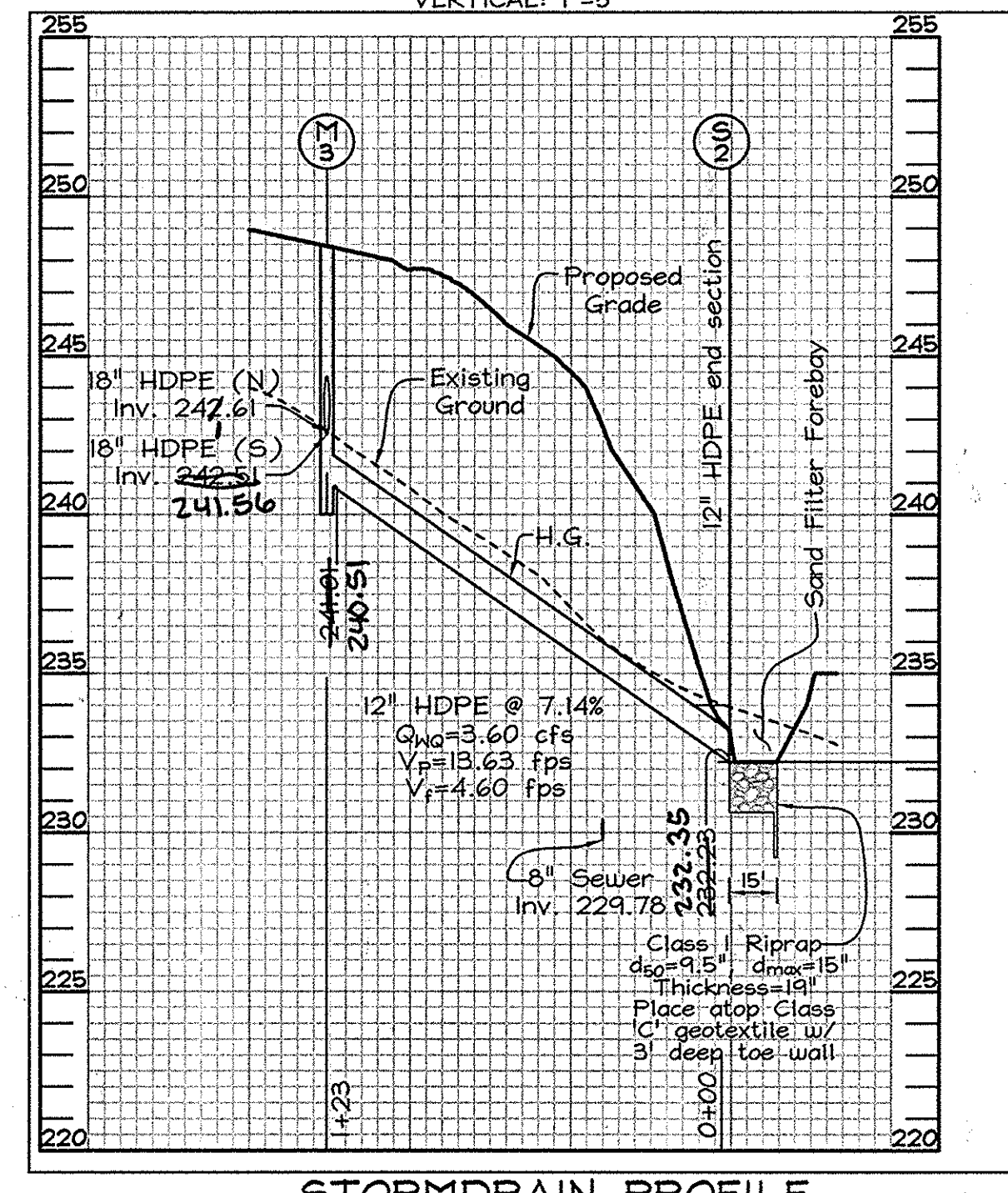
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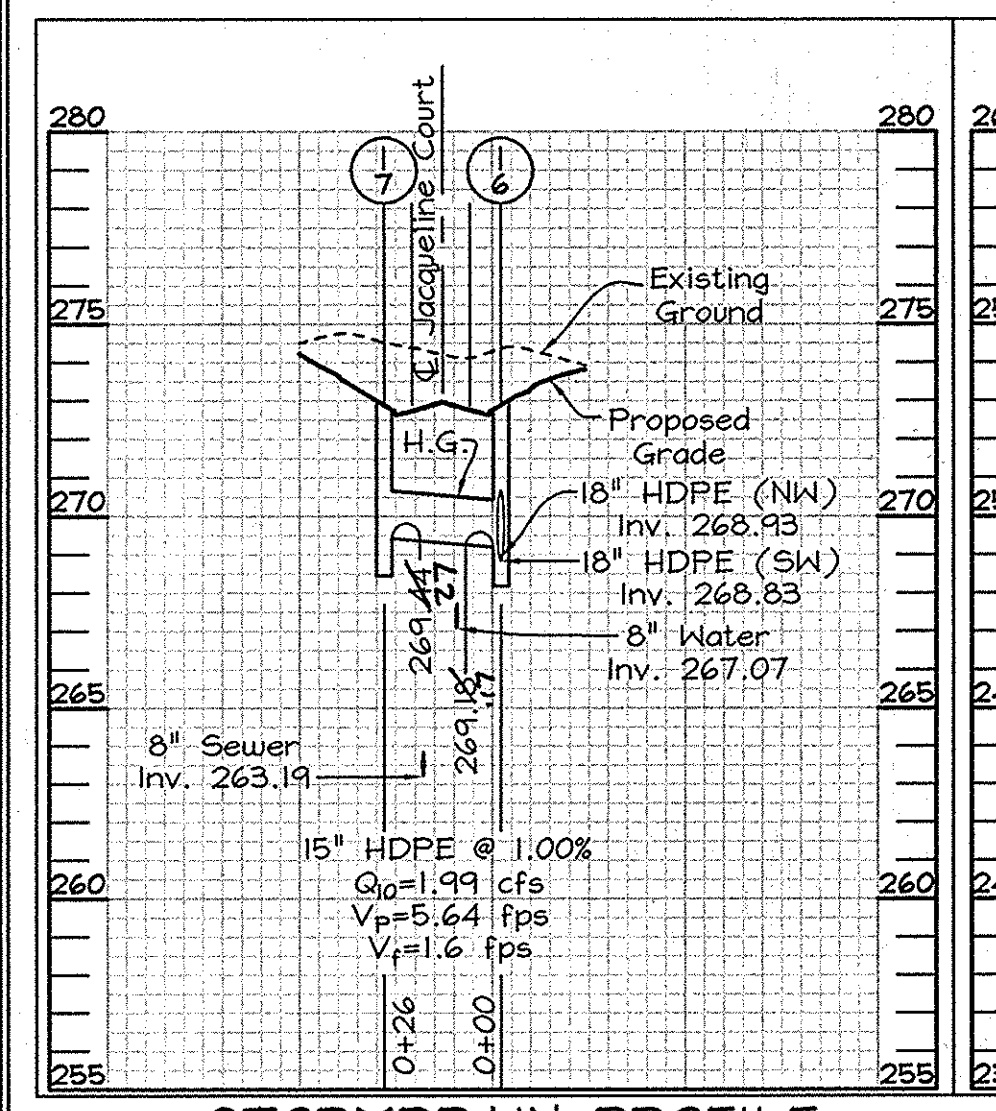
STORMDRAIN PROFILE
SCALE- HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



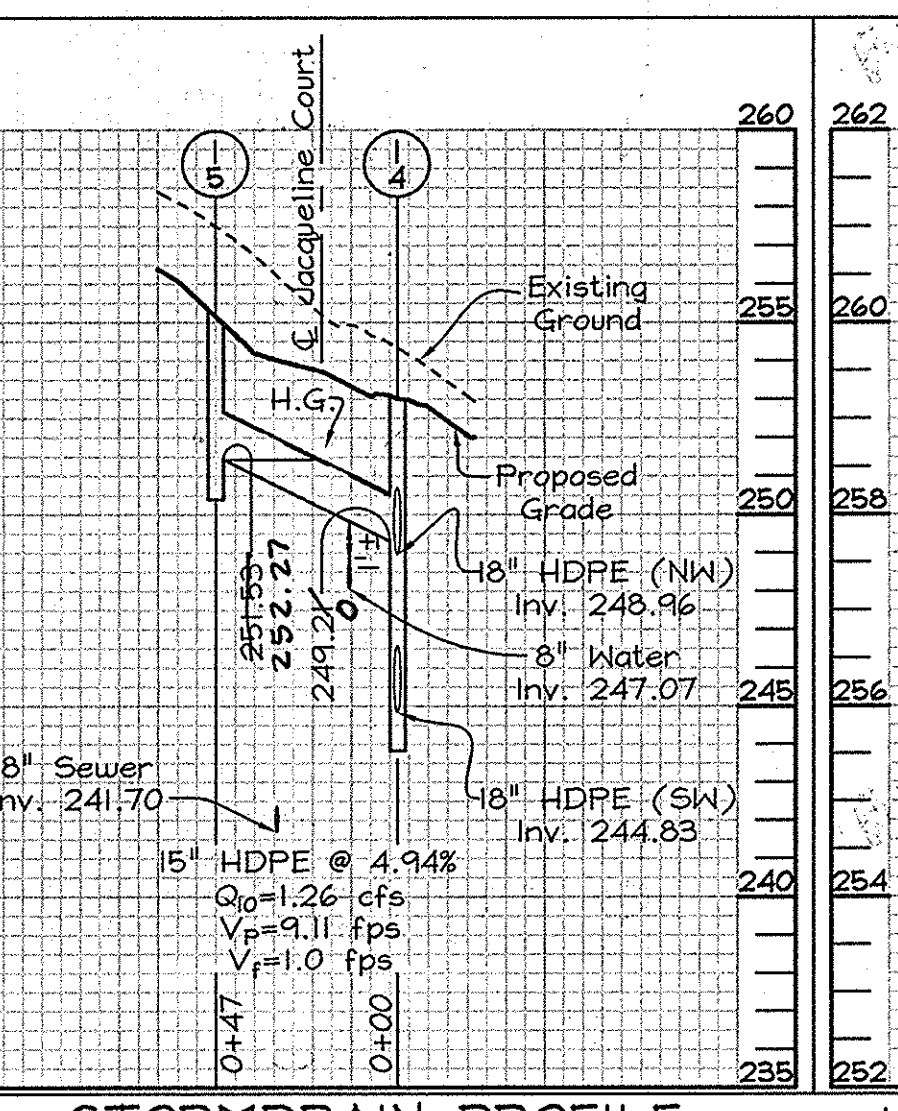
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SCALE- HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



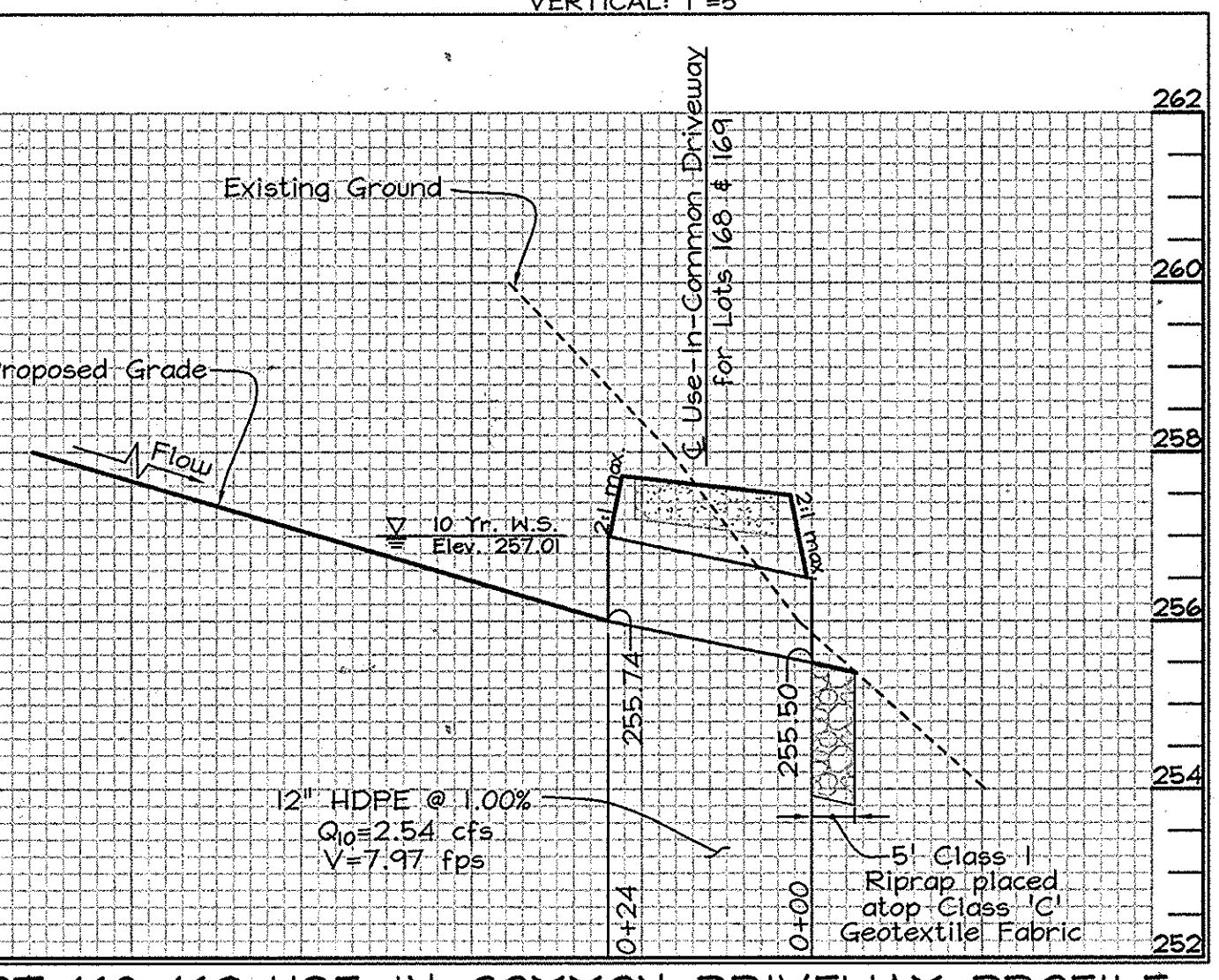
STORMDRAIN PROFILE
SCALE- HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



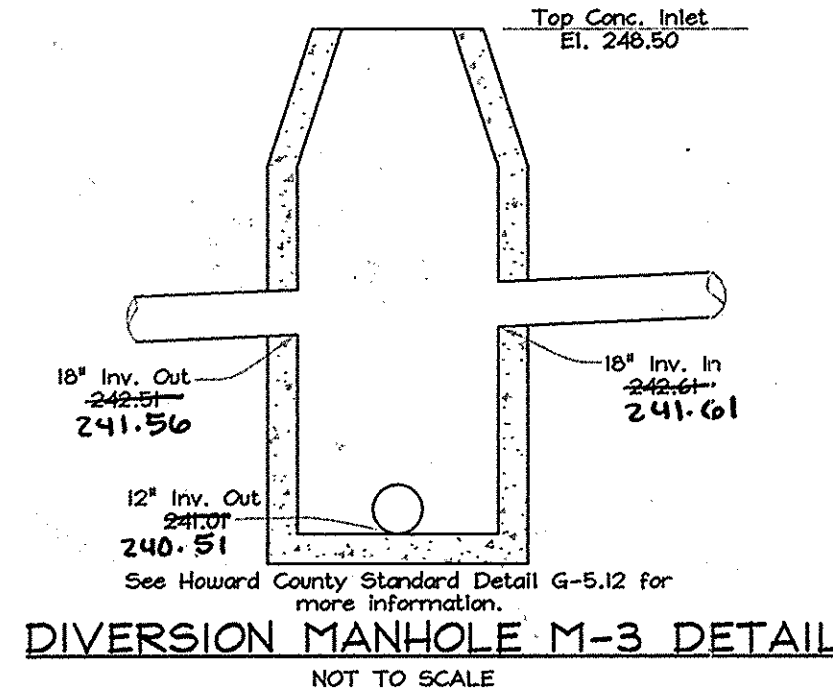
STORMDRAIN PROFILE
SCALE- HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



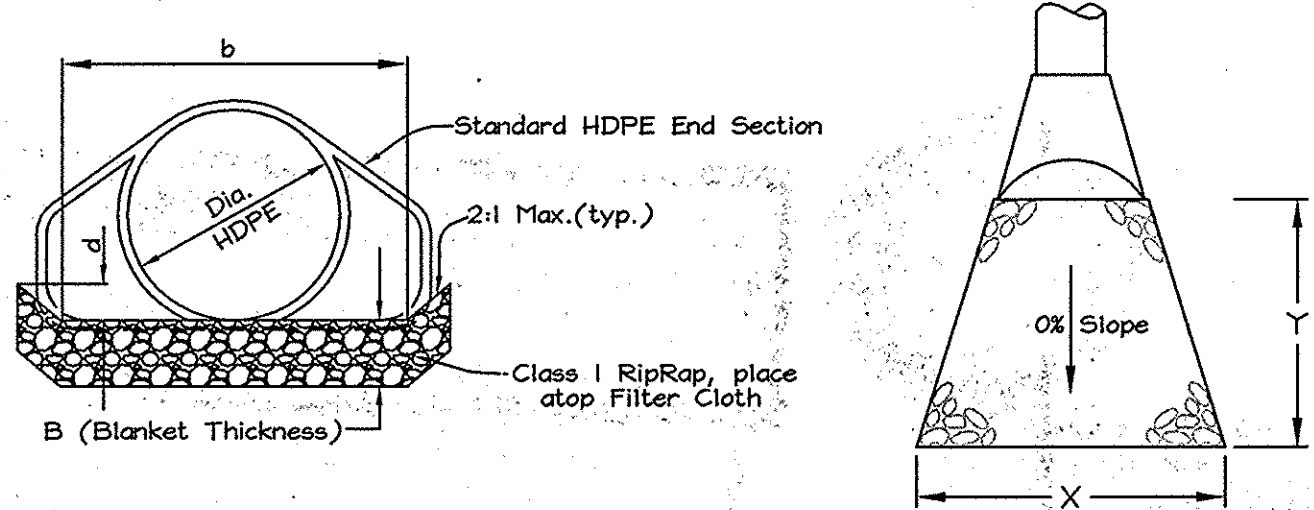
STORMDRAIN PROFILE
SCALE- HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



LOT 168-169 USE-IN-COMMON DRIVEWAY PROFILE
SCALE- HORIZONTAL: 1"=20'
VERTICAL: 1"=2'



DIVERSION MANHOLE M-3 DETAIL
NOT TO SCALE



RIPRAP APRON DETAILS
Not to Scale

Structure	Q(c.f.s.)	S	n	Dia.	b	d	d _{max}	d ₅₀	B (Blanket Thickness)	X	Y
S-1	12.4 cfs	0.0%	0.06	21"	59"	1.0'	15"	9.5"	19"	17'	15'
S-2	3.6 cfs	0.0%	0.06	12"	42"	1.0'	15"	9.5"	19"	16'	15'

NO.	TYPE	LOCATION	TOP ELEV.		INV.		REMARKS
			IN	OUT	IN	OUT	
1-1	Single Type 'S' Inlet	N 546,334.8189, E 1,371,056.9560	247.00	246.20	241.00	241.00	Detail D-4.21
1-2	Precast Type A-5 Inlet	LP Sta 0+79.70 @ 249.70	246.97	243.18	243.00	243.00	Detail D-4.01
1-3	Single Type 'S' Inlet	N 546,670.1845, E 1,371,011.5235	250.50	249.40	245.00	245.00	Detail D-4.22
1-4	Precast Type A-10 Inlet	C Sta. 7+36.51 @ 12 LT 253.40	263.00	249.27	244.88	245.10	Detail D-4.03
1-5	Precast Type A-10 Inlet	C Sta. 7+00.93 @ 12 RT	255.36	247.77	244.88	245.10	Detail D-4.03
1-6	Precast Type A-10 Inlet	C Sta. 4+35.51 @ 12 LT 273.37	259.45	248.18	244.88	245.10	Detail D-4.03
1-7	Precast Type A-10 Inlet	C Sta. 4+35.51 @ 12 RT 273.40	259.45	248.18	244.88	245.10	Detail D-4.03
1-8	Single Type 'S' Inlet	N 546,777.7721, E 1,370,540.8732	242.40	241.12	239.44	239.44	Detail D-4.22
M-1	Standard 4' Precast MH	N 546,243.8927, E 1,370,945.6141	248.30	244.88	241.00	241.00	Detail G-5.12
M-2	Shallow 4' Precast MH	N 546,288.5711, E 1,371,024.8639	246.40	240.58	240.58	240.58	Detail G-5.12
M-3	Shallow 4' Precast MH	N 546,466.1469, E 1,371,062.4782	249.50	248.61	246.88	246.88	Detail G-5.12
M-4	Standard 4' Precast MH	LP Sta 2+40.38 @ 3.22 RT of FGL	246.45	244.07	244.32	244.32	Detail G-5.12
M-5	Standard 4' Precast MH	C Sta 2+72.47 @ 15.90 LT	262.87	249.21	244.32	244.32	Detail G-5.12
S-1	HDPE End Section	N 546,250.9076, E 1,370,864.8157	-44	246.00	241.35	-	21" HDPE End Section
S-2	HDPE End Section	N 546,529.8496, E 1,371,168.0020	-44	239.25	234.55	-	12" HDPE End Section

STORM DRAIN STRUCTURE SCHEDULE NOTES:

- The top elevations for all type 'S' inlets (1-1, 1-3 and 1-8) are the top of the grate elevation. The location of all type 'S' inlets is the center of grate elevation.
- The top elevations for all type 'A' inlets (1-2 & 1-4 through 1-7) are the top of lid elevation. The location of all type 'A' inlets is the flow line (gutter) at the center of the inlet.
- Top elevations and location for Precast Manholes are to the center top of manhole cover.
- The HDPE End Sections location correspond to the point where the end section meets the incoming pipe. Install granite block protection within bottom of inlet.

**** PRIVATELY OWNED AND MAINTAINED.**

AS-BUILT CERTIFICATION
I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this AS-BUILT plan.
Date: 2-3-15
Donald Mason, P.E. No. 21445

APPROVED: DEPARTMENT OF PUBLIC WORKS.
Date: 6-7-10

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Date: 6-15-10

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. #34689, Expiration Date: 7/08/11.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443, Expiration Date: 12-21-16

PRIVATE PIPE SCHEDULE

SIZE	TYPE	LENGTH
12"	HDPE	147'
15"	HDPE	249'

PUBLIC PIPE SCHEDULE

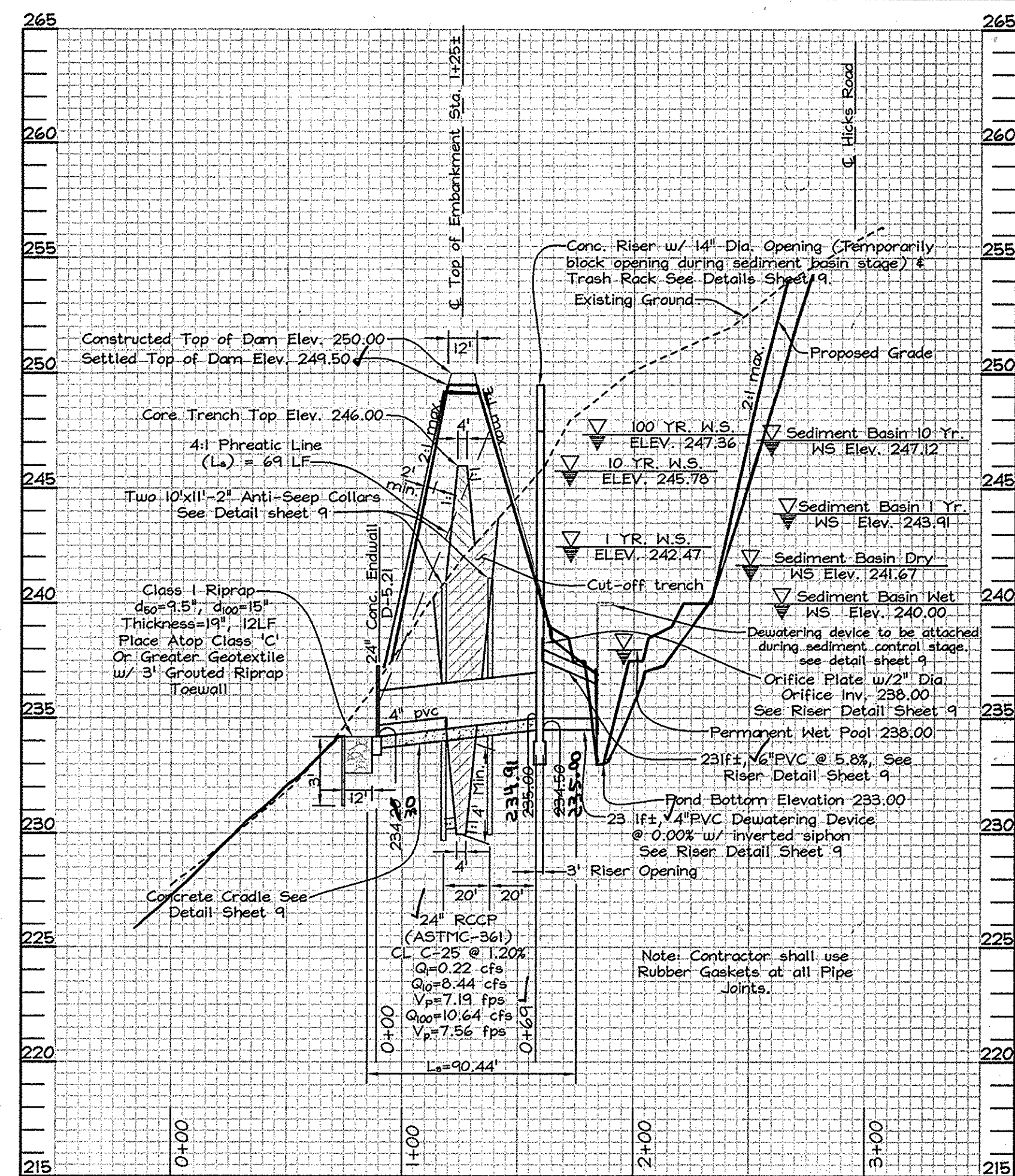
SIZE	TYPE	LENGTH
15"	HDPE	73'
18"	HDPE	733'
21"	HDPE	227'

OWNER/DEVELOPER
J L N Development, LLC.
46 Poplar Point Road
Edgewater, Maryland 21037
(410)224-7575 fax(410)224-4774

STORM DRAIN PROFILES
PLEASANT CHASE - PHASE IV
LOTS 144 THRU 176 AND OPEN SPACE LOTS 177 AND 178
A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 143 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS
TAX MAP 43 GRID 8 PARCELS 211, 492, 493, 494, 622
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FSH Associates
Engineers Planners Surveyors
8339 Howard Lane, Elkridge, MD 21075
Tel: 410-587-6200 Fax: 410-796-1582
E-mail: info@fsher.com

DESIGN BY: M.L.T.
DRAWN BY: CED.
CHECKED BY: Z.T.F.
SCALE: As Shown
DATE: April 28, 2010
I.O. No.: 3430
SHEET No.: 7 OF 12

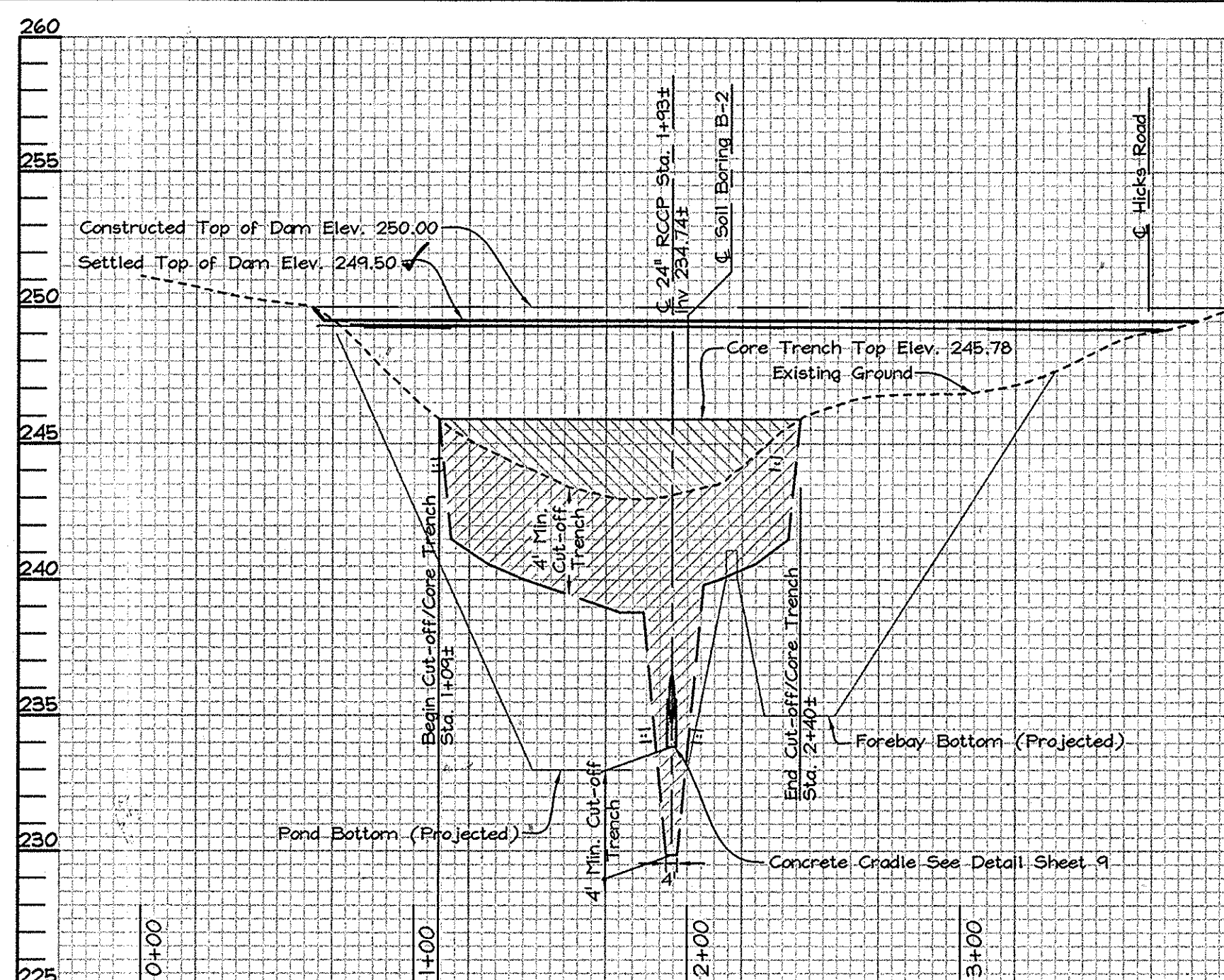


SECTION 'A'-'A' MICRO-POOL FACILITY PRINCIPAL SPILLWAY PROFILE
 SCALE- HORIZONTAL: 1"=50'
 VERTICAL: 1"=5'

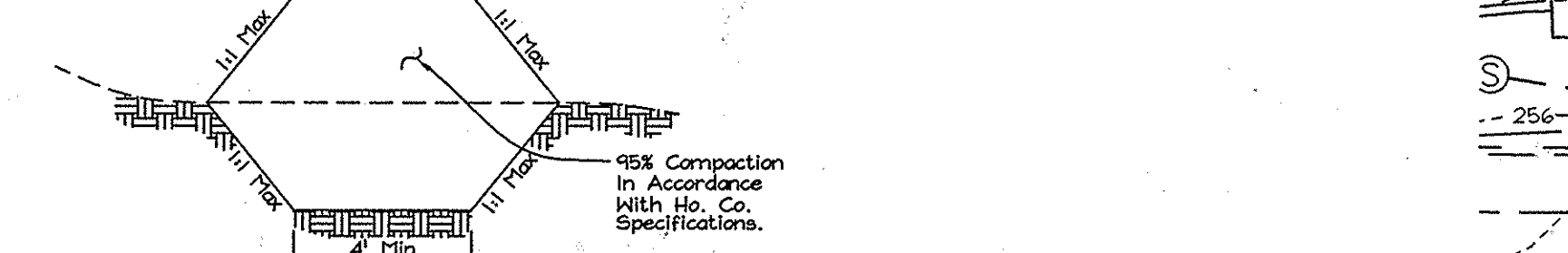
OPERATION AND MAINTENANCE SCHEDULE FOR HOMEOWNERS ASSOCIATION OWNED AND JOINTLY MAINTAINED STORMWATER PONDS (P-1 THROUGH P-5)

Routine Maintenance: (H.D.A.)
 1. Facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the pond is functioning properly.
 2. Top and side slopes of the embankment shall be mowed a minimum of two (2) times per year, once in June and once in September. Other side slopes and maintenance access shall be mowed as needed.
 3. Debris and litter shall be removed during regular mowing operations and as needed.
 4. Visible signs of erosion in the pond as well as the riprap or gabion outlet area shall be repaired as soon as it is noticed.

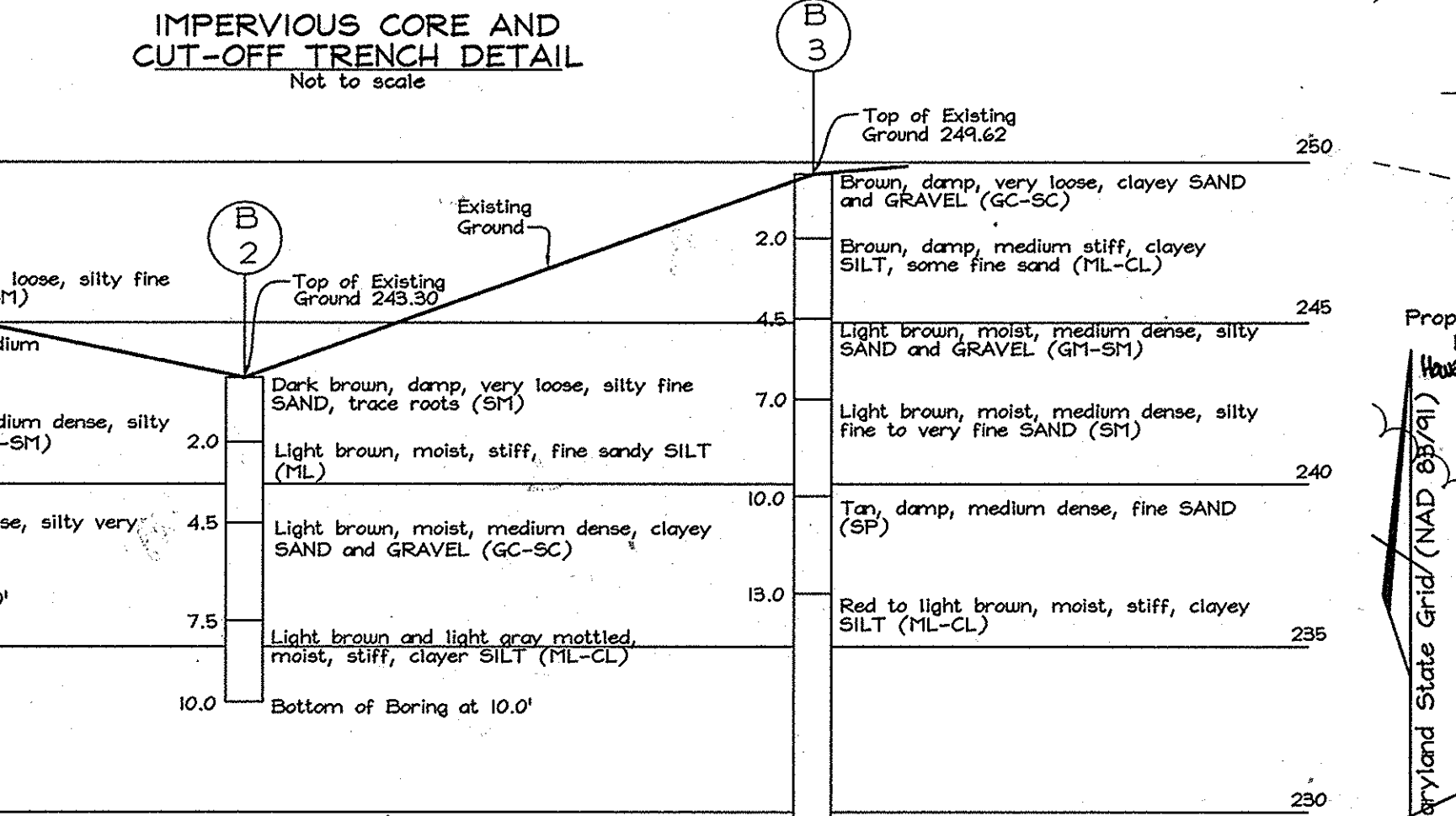
Non-Routine Maintenance: (Howard County)
 1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.
 2. Sediment shall be removed from the pond, and forebay,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



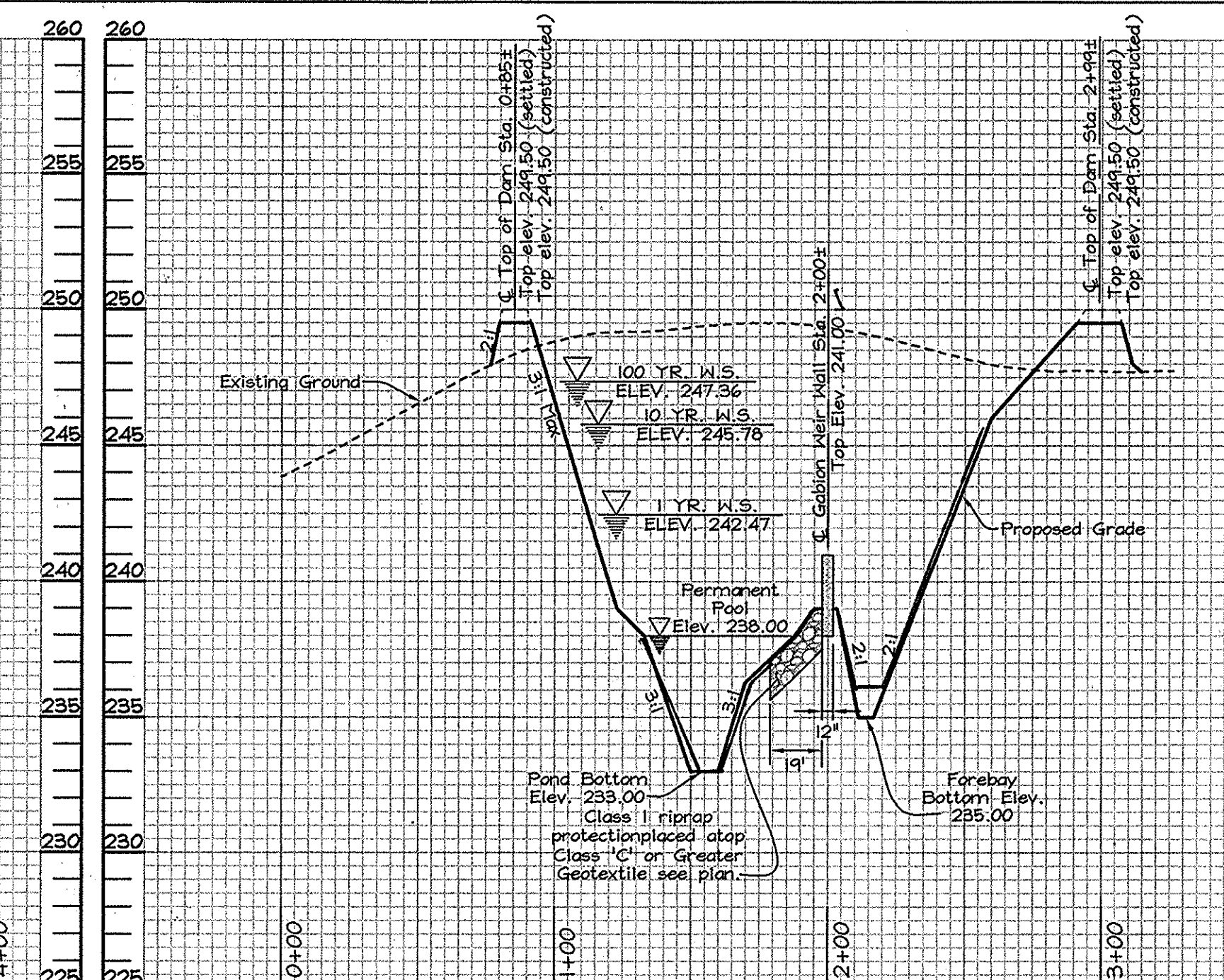
SECTION 'B'-'B' PROFILE ALONG MICRO-POOL FACILITY TOP OF DAM
 SCALE- HORIZONTAL: 1"=50'
 VERTICAL: 1"=5'



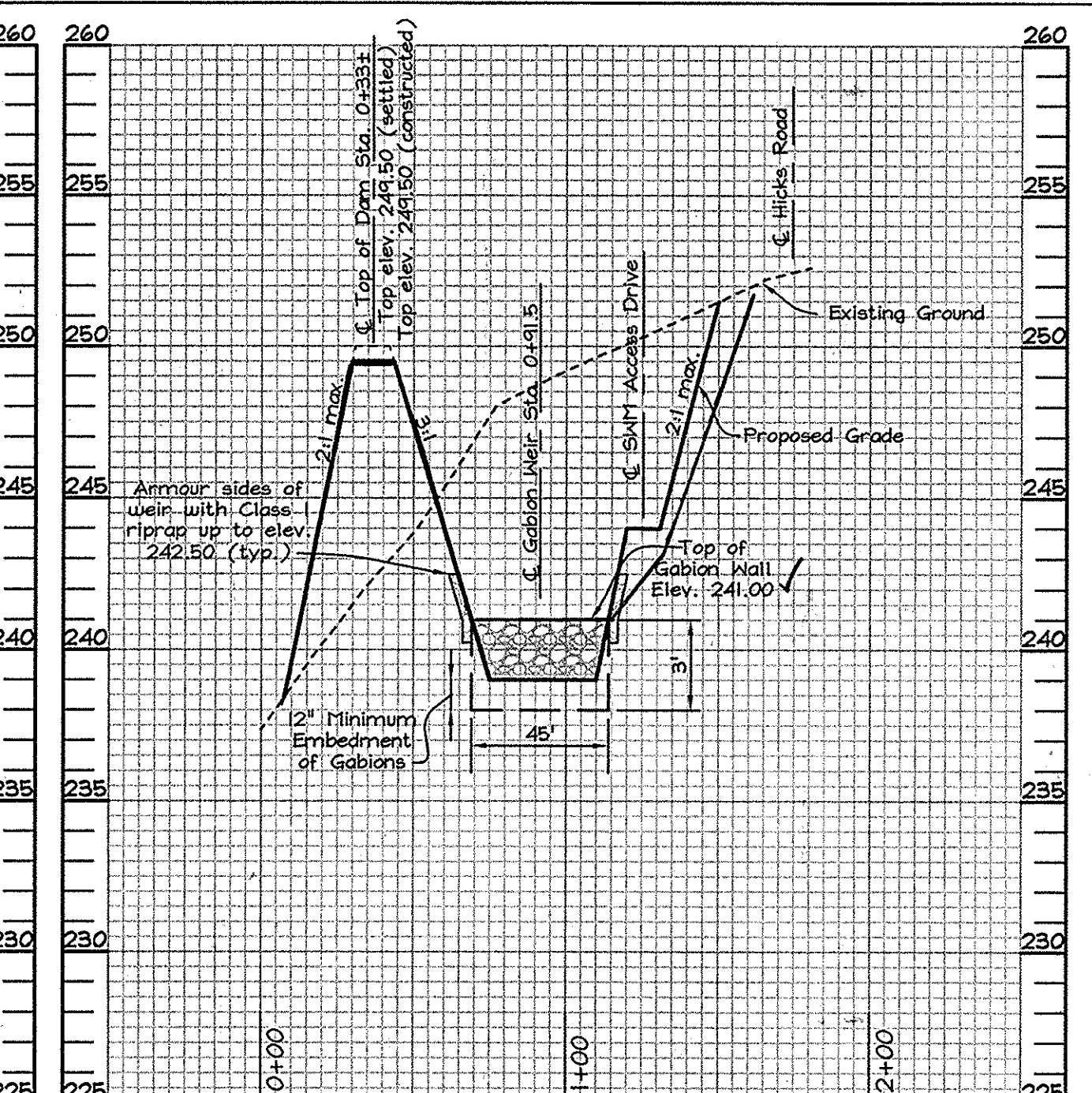
IMPERVIOUS CORE AND CUT-OFF TRENCH DETAIL
 Not to scale



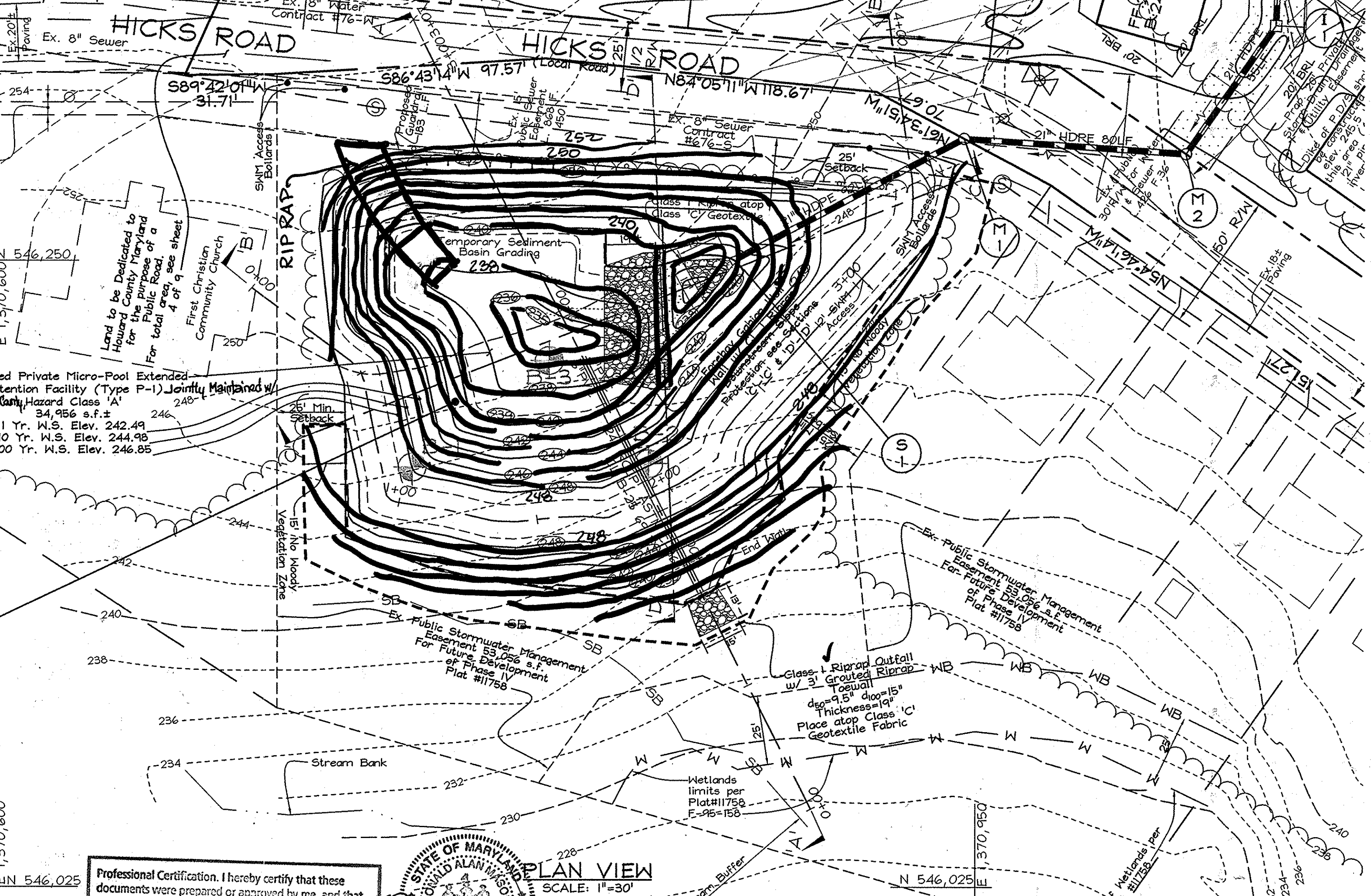
BORINGS PROFILE
 SCALE- VERTICAL: 1"=5'



SECTION 'C'-'C' PROFILE THRU FOREBAY GABION WEIR WALL
 SCALE- HORIZONTAL: 1"=50'
 VERTICAL: 1"=5'



SECTION 'D'-'D' PROFILE ALONG FOREBAY GABION WEIR WALL
 SCALE- HORIZONTAL: 1"=50'
 VERTICAL: 1"=5'



PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 21443, Expiration Date: 12-21-16

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 43468, Expiration Date: 7/08/2011

AS-BUILT CERTIFICATION
 I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this AS-BUILT plan.
 Date 2-3-15
 Rev. 9-29-15

RECHARGE SUMMARY TABLE

DRAINAGE AREA	AREA	Imp. Area %	Soil Specific Recharge Factor	Recharge Percent Volume Method	Recharge Percent Area Method	Recharge Provided
DA's-1-5	9.36 ac.±	4.91 ac.±	52%	0.17	3,014 cu.ft.	3,122 cu.ft. Provided Through 6' of Stone Depth Below the Sand Filter using the Recharge Percent Volume Method

WATER QUALITY SUMMARY TABLE

STRUCTURE	AREA	% IMP. (1)	R _v	WATER QUALITY VOLUME (WQV) REQ'D	WATER QUALITY VOLUME (WQV) PROV'D	REMARKS
SAND FILTER FACILITY	D.A.'s 1 & 2 5.76 ac.±	61%	0.60	12,545 cu.ft.	12,545 cu.ft.	PROV'D THROUGH SAND FILTER INFILTRATION
MICRO-POOL EXTENDED DETENTION FACILITY	D.A. 4 2.84 ac.±	50%	0.50	5,155 cu.ft.	5,330 cu.ft.	PROV'D THROUGH PERMANENT WET POOL

CHANNEL PROTECTION SUMMARY TABLE

DRAINAGE AREA	AREA	RCN	TC	One (1) Year Discharge Qcfs	Channel Protection Volume CP _v Req'd	CP _v Prov'd
DA-1 & 4 (D.A. to Pond)	7.14 ac±	87	0.22 hrs	11.7 cfs	22,712 cu.ft.	26,420 cu.ft.

DEVELOPER'S CERTIFICATE
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN SHALL BE CONSIDERED TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THAT THE HOWARD SOIL CONSERVATION DISTRICT HAS ENGAGED 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.

TEMPORARY SEDIMENT BASIN NOTES

Drainage area to basin = 7.14 ac.
 Wet volume required = 12,852 cu.ft.
 Wet volume provided = 14,199 cu.ft.
 Net volume elevation = 240.00
 Dry volume required = 12,852 cu.ft.
 Dry volume provided = 12,852 cu.ft.
 Dry volume elevation = 241.67
 Bottom of basin elevation = 235.00
 Dewatering orifice diameter = 3.5"
 Dewatering orifice invert elevation = 240.00
 4x4' riser crest elevation = 247.50
 Clean-out elevation = 238.41
 Top Embankment Elev. = 249.50
 Existing Flow to Basin 1 Yr. Q = 0.53 cfs
 Proposed Flow to Basin 1 Yr. Q = 11.60 cfs
 Newly graded Flow to Basin 1 Yr. Q = 19.80 cfs
 From sediment basin TR-20 Routing:
 1 Year Discharge = 0.62 c.f.s.; Elev. = 243.91 (Basin Outflow)
 10 Year Discharge = 2.81 c.f.s.; Elev. = 247.12 (Basin Outflow)
 100 Year Discharge = 21.88 c.f.s.; Elev. = 248.19 (Basin Outflow)
 Note: Do not construct forebay embankment during the sediment basin stage. Instead temporarily grade as shown above (Temp. Sed. Grading). Additionally see riser detail sheet 9 for temporary riser modifications for sediment basin during construction stage.

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 43468, Expiration Date: 7/08/2011

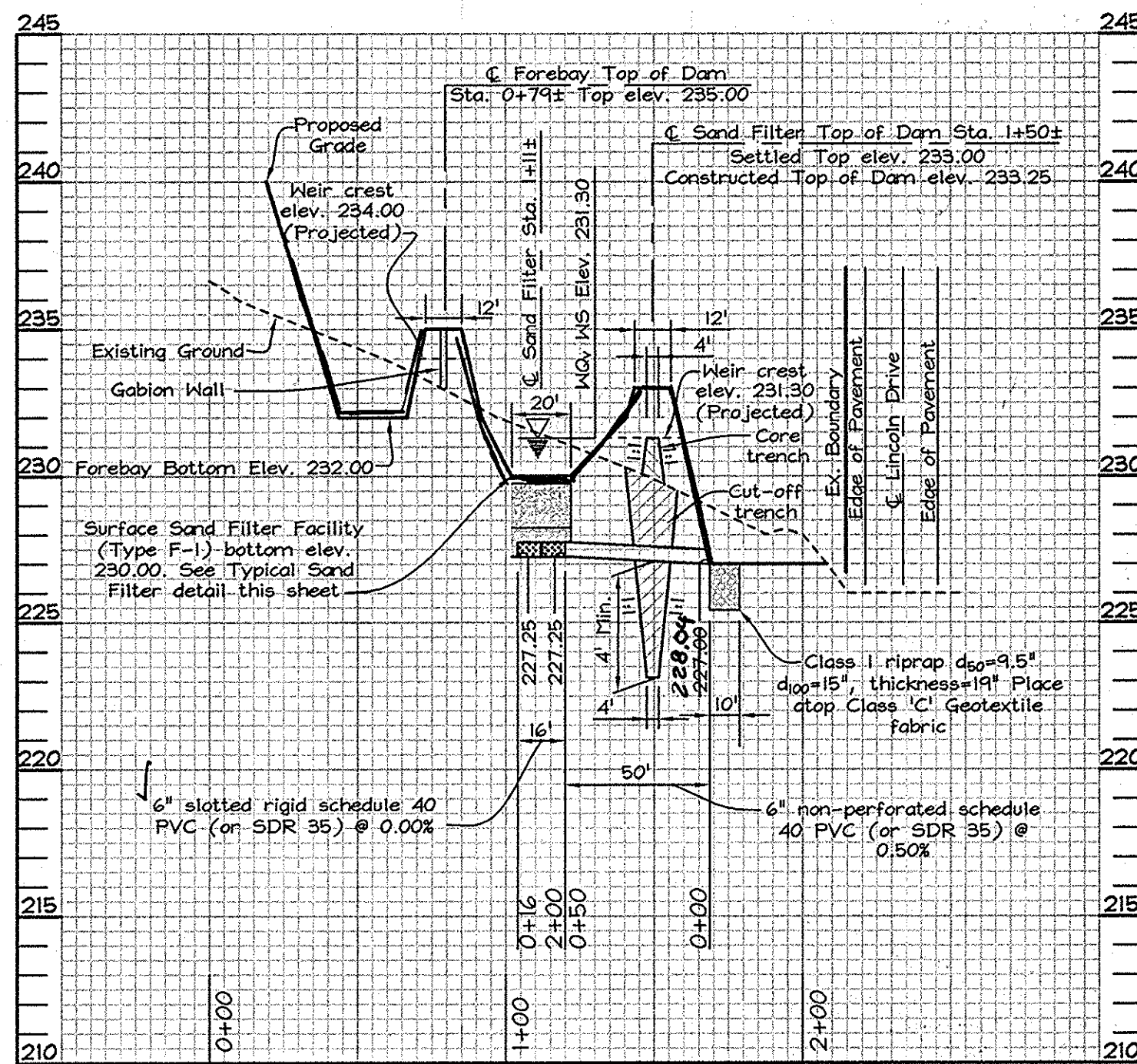
OWNER/DEVELOPER
 J L N Development, LLC
 46 Poplar Point Road
 Edgewater, Maryland 21037
 (410)224-7575 Fax: (410)224-4774

AS-BUILT CERTIFICATION
 I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this AS-BUILT plan.
 Date 2-3-15
 Rev. 9-29-15

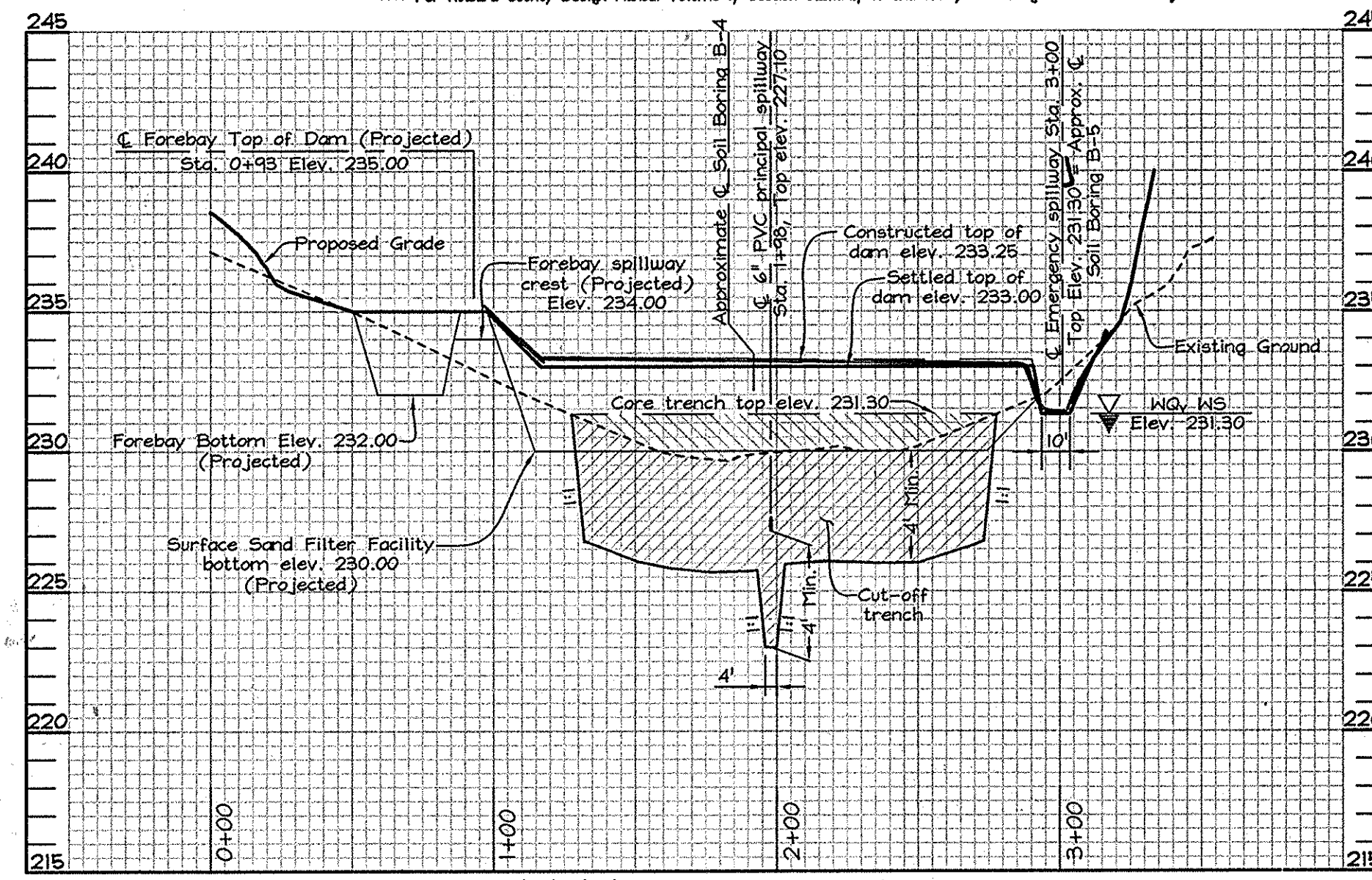
STORMWATER MANAGEMENT MICRO-POOL EXTENDED DETENTION FACILITY PLAN & PROFILES
PLEASANT CHASE - PHASE IV
 LOTS 144 THRU 176 AND OPEN SPACE LOTS 177 AND 178
 A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 143 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS
 TAX MAP 43 GRID 8 PARCELS 211, 492, 493, 494, 622
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FSH Associates
 Engineers Planners Surveyors
 6339 Howard Lane, Elkridge, MD 21075
 781-410-567-5200 Fax: 410-796-1562
 E-mail: info@fshri.com

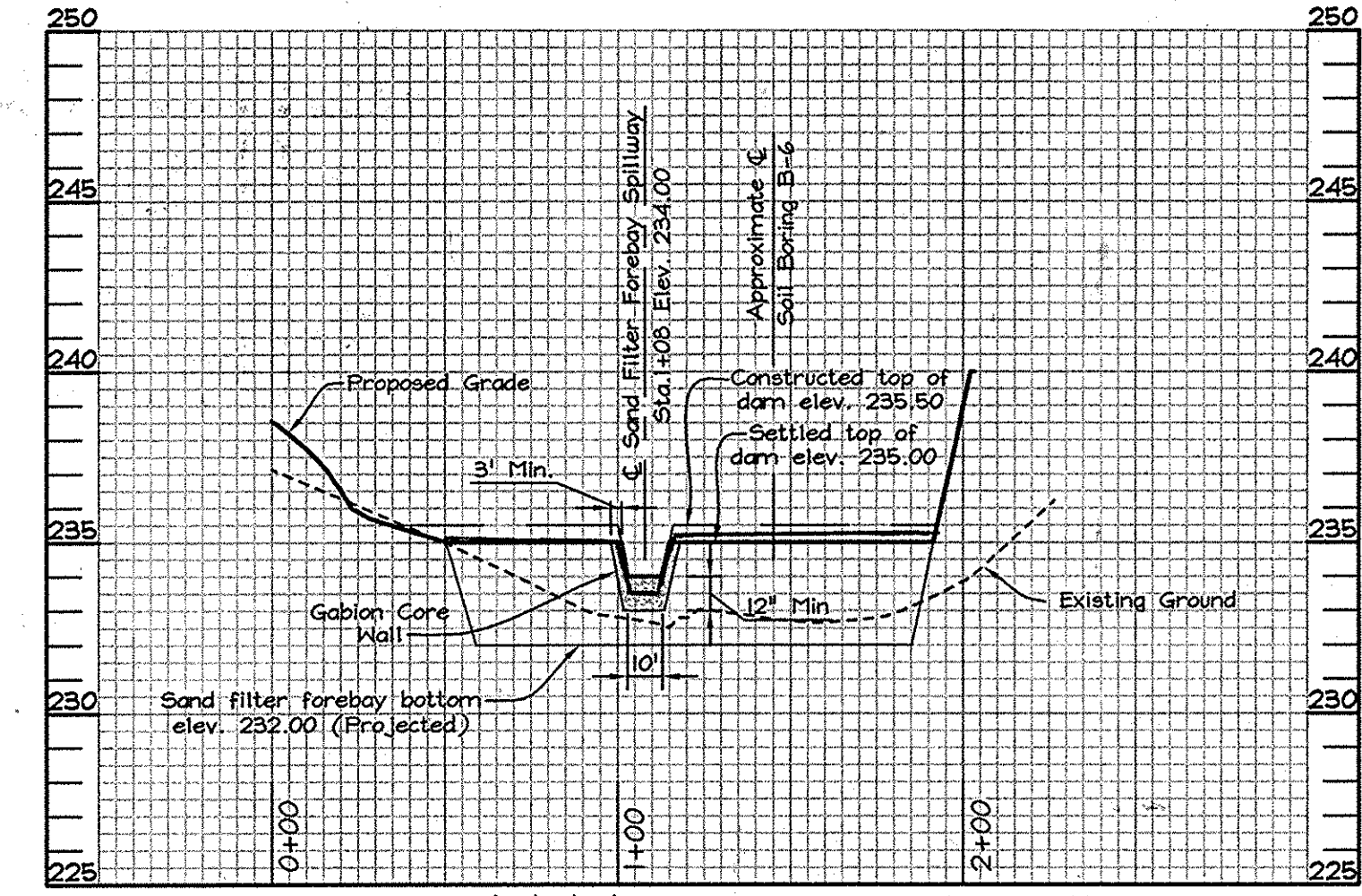
DESIGN BY: ZYF
 DRAWN BY: CED/SHM
 CHECKED BY: ZYF
 SCALE: As Shown
 DATE: April 28, 2010
 W.O. No.: 3430
 SHEET No.: 8 OF 12



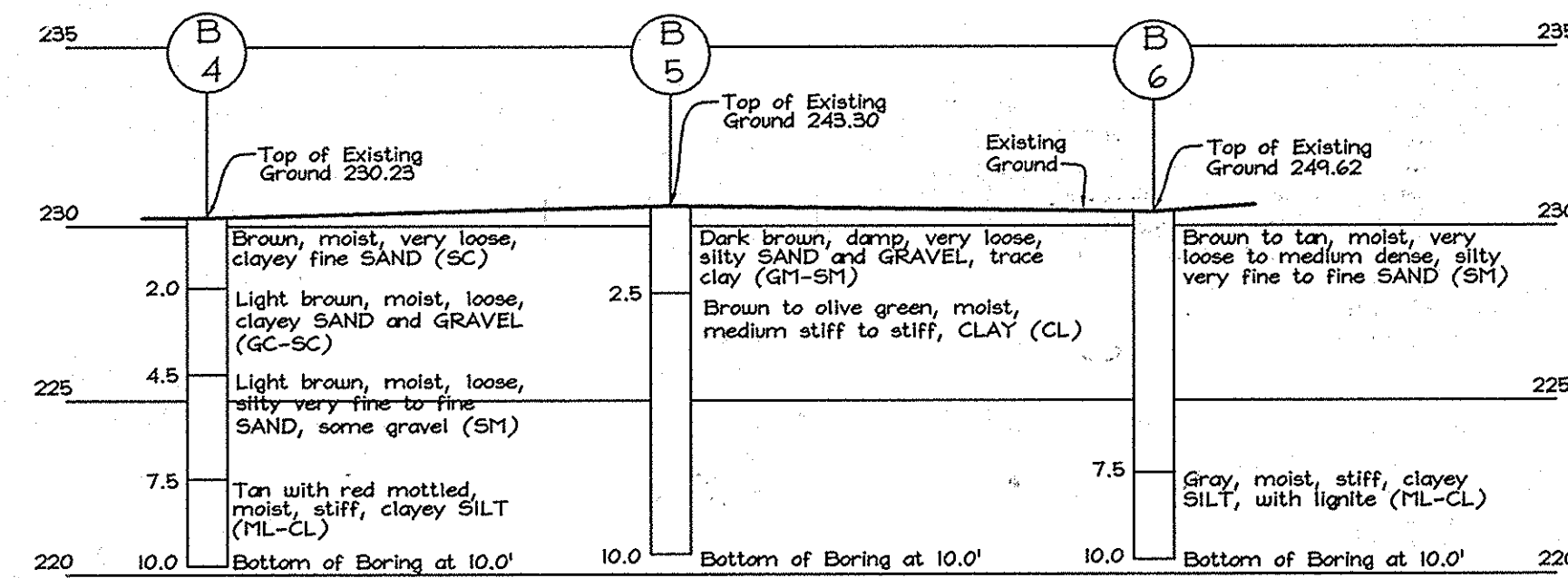
SECTION 'E'-'E' SAND FILTER FACILITY PRINCIPAL SPILLWAY PROFILE
SCALE- HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



SECTION 'E'-'F' SURFACE SAND FILTER FACILITY TOP OF DAM PROFILE
SCALE- HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



SECTION 'G'-'G' PROFILE ALONG SAND FILTER FOREBAY TOP OF DAM
SCALE- HORIZONTAL: 1"=50'
VERTICAL: 1"=5'

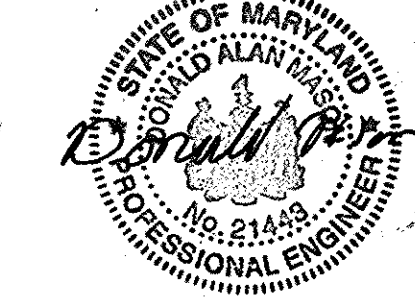


BORINGS PROFILE
SCALE- VERTICAL: 1"=5'

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (F-1, F-4, AND F-5)

- The stormwater wetland facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegetation reaches 18" in height or as needed.
- Filters that have a grass cover shall be mowed a minimum of three (3) times per growing season to maintain a maximum grass height of less than 12 inches.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
- Remove silt when it exceeds four (4) inches deep in the forebay.
- When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of discolored material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- A logbook shall be maintained to determine the rate at which the facility drains.
- The maintenance logbook shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

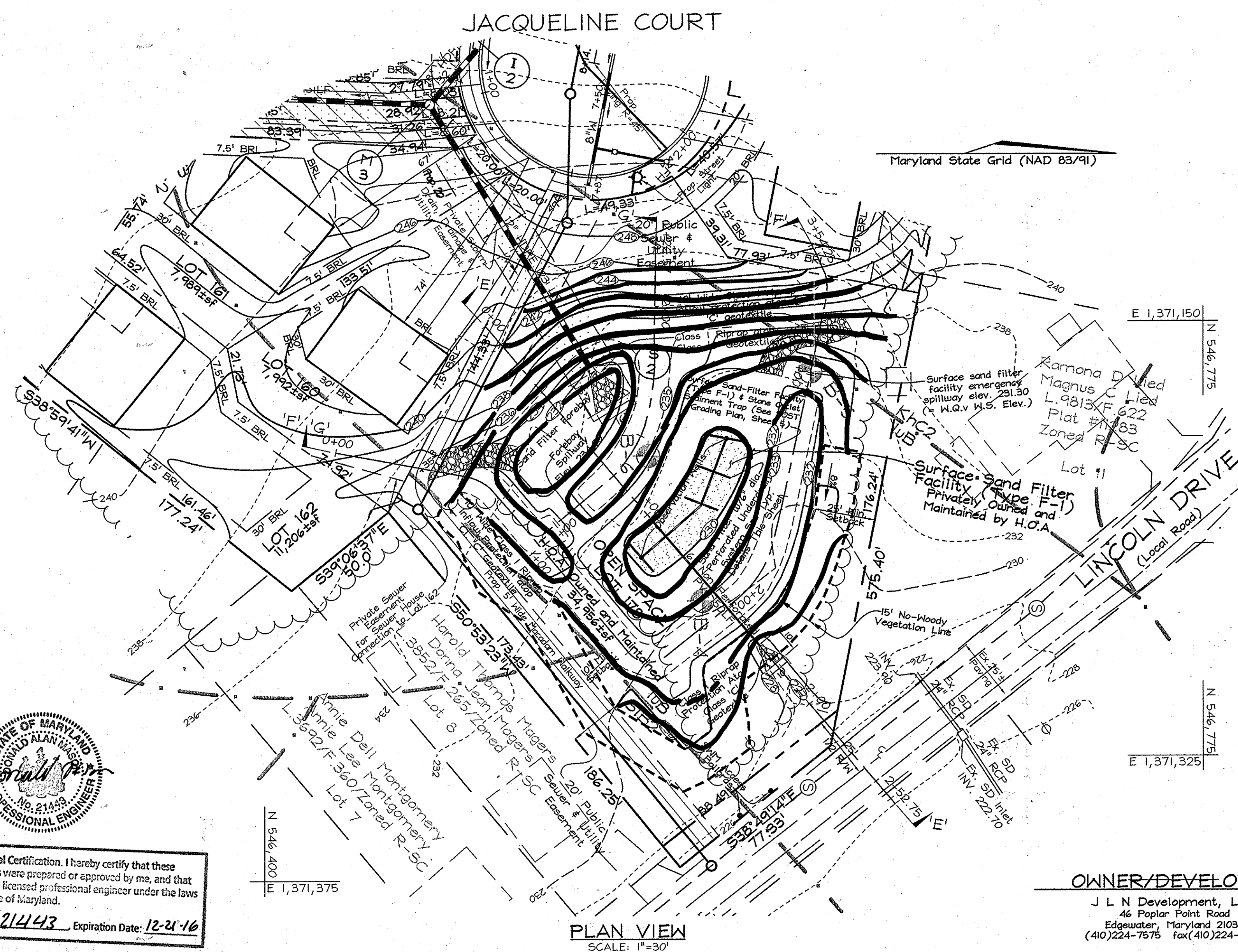
AS-BUILT CERTIFICATION
I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this AS-BUILT plan.
Donald Mason, P.E. No. 21443 Date 2-3-15



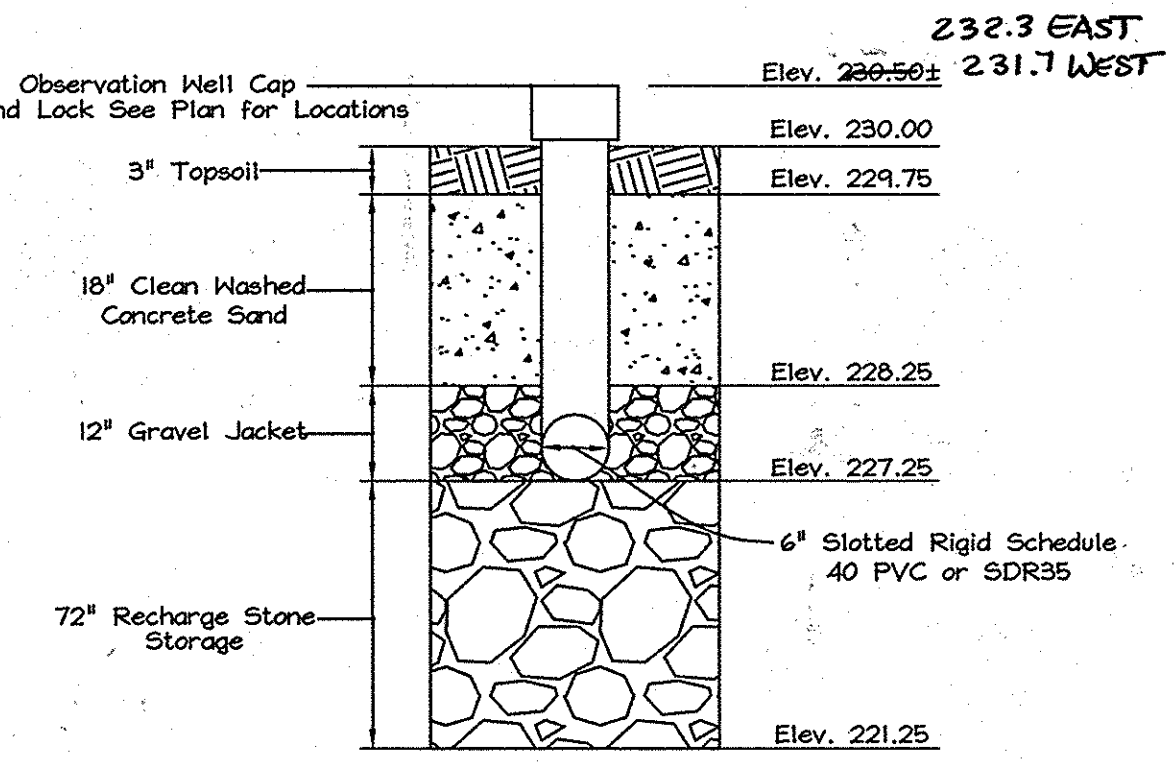
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443 Expiration Date: 12-21-16

SWM Facility	Rev Area*	Rev Req'd** (Percent Volume Method)		Rev Prov'd.* (Percent Area Method)		WQV Area**	WQV Required**	WQV Provided**	CFV Area***	CFV Required***	CFV Provided***	Q ₁₀ Req'd.****	Q ₁₀ Prov'd.****	Q ₁₀₀ Req'd.****	Q ₁₀₀ Prov'd.****
		(Computed for Entire Site)	Rev = 36,373 sq.ft.	3,014 cu.ft. provided through stone storage below the sand filter using the percent volume method	3,014 cu.ft. provided through stone storage below the sand filter using the percent volume method										
Micro-Pool Extended Detention Surface Sand Filter Facility	9.36 ac.±					2.84 ac.±	5,155 cu.ft.	5,330 cu.ft. Prov'd thru Extended Detention	7.14 ac.±	22,712 cu.ft.	22,712 cu.ft. Prov'd thru 1 Yr. Extended Detention	N/A	N/A	N/A	N/A
						5.76 ac.±	12,545 cu.ft.	12,545 cu.ft. Prov'd thru Sand Filter	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note: All flows above the water quality storm flows are diverted away from the sand filter facility via the diversion manhole, F-3.
* Recharge, not drainage area specific, was computed using the entire site area and provided through stone storage beneath the Surface Sand Filter Facility.
** Water Quality is provided within the Surface Sand Filter Facility through infiltration through the sand filter and through the permanent wet pool within the Micro-Pool Extended Detention Facility.
*** Channel Protection is provided through 1 year extended detention within the Micro-Pool Extended Detention Facility. The 1 Year discharge was diverted away from the Surface Sand Filter Facility via Diversion F-3 in order to reduce the 1 yr runoff draining to the sand filter to 2.0 c.f.s. or less therefore eliminating the need for channel protection within the sand filter facility drainage area.
**** Per Howard County Design Manual Volume 1, Section 5.2.1.A, 10 and 100 year management are not required for this watershed area.



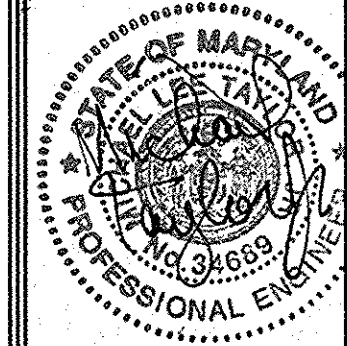
PLAN VIEW
SCALE: 1"=30'



TYPICAL SAND FILTER DETAIL
NOT TO SCALE

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. #34684, Expiration Date: 7/05/2011.

STORMWATER MANAGEMENT SURFACE SAND FILTER FACILITY PLAN, PROFILES, NOTES & DETAILS
PLEASANT CHASE - PHASE IV
LOTS 144 THRU 176 AND OPEN SPACE LOTS 177 AND 178
A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 145 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS
TAX MAP 43 GRID 8 PARCELS 211, 492, 493, 494, 622
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



FSH Associates
Engineers Planners Surveyors
3339 Howard Lane, Elkridge, MD 21075
Tel: 410-567-5200 Fax: 410-798-1562
E-mail: info@sheri.com

DESIGN BY: M.L.T.
DRAWN BY: CED.
CHECKED BY: Z.Y.F.
SCALE: As Shown
DATE: April 28, 2010
W.O. No.: 3430
SHEET No. 10 OF 12

OWNER/DEVELOPER
J L N Development, LLC.
46 Poplar Point Road
Edgewater, Maryland 21037
(410)224-7575 Fax:(410)224-4774

APPROVED: DEPARTMENT OF PUBLIC WORKS.
Walter Z. McNeil, Chief, Bureau of Highways, Date 6-7-10
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Vest Shelwood, Chief, Division of Land Development, Date 6-15-10
Date 6/9/10

LANDSCAPE NOTES

- At the time of installation, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements in accordance with the Howard County Landscaping Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- Financial surety for the required perimeter landscaping will be posted as part of the Developer's Agreement in the amount of \$27,000.00 (62 shade trees @ \$300.00 each and 56 evergreen trees @ \$150.00 each).

STREET TREE PLANTING SCHEDULE				
KEY	QUAN.	BOTANICAL/COMMON NAME	SIZE	NOTE
X	43	Tilia americana 'Redmond' 'Redmond' American Linden	2 1/2"-3" Cal.	B & B

SCHEDULE A PERIMETER LANDSCAPE EDGE					
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES
Perimeter/Frontage Designation Landscape Type	I A	4 B	2 A	3 A	5 A
Linear Feet of Roadway Frontage/Perimeter	35'	388'	1068'	322'	643'
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)	No	No	No	No	No
Credit for Wall, Fence, Berm, or Other Planting (Yes, No, Linear Feet Describe below if needed)	No	No	No	No	No
Number of Plants Required	1:50 I 1:40 I	1:50 B 1:40 B	1:60 A 1:40 A	1:60 A 1:40 A	1:60 A 1:40 A
Number of Plants Provided	1	7	18	5	11
Evergreen Trees	1	7	18	5	11
Shade Trees	1	7	18	5	11
Other Trees (2:1 Substitution)	-	-	-	-	-
Shrubs (10:1 Substitution)	-	-	-	-	-

SCHEDULE D : STORMWATER MANAGEMENT AREA LANDSCAPING			
Perimeter/Frontage Designation Landscape Type	50'x1' Perimeter B	50'x1' Perimeter B	50'x1' Perimeter B
Linear Feet of Perimeter	683'	795'	795'
Credit for Existing Vegetation (No, Yes and Linear Feet) Remaining Perimeter Length	No	Yes (264')	531'
Credit for Wall, Fence or Berm (No, Yes and %)	No	-	-
Number of Trees Required	1:50 I 1:40 I	1:50 I 1:40 I	1:50 I 1:40 I
Number of Trees Provided	11	23	9
Shade Trees	11	23	9
Evergreen Trees	-	-	-

APPROVED: DEPARTMENT OF PUBLIC WORKS.
 WITH R. M...
 Chief, Bureau of Highways
 Date: 6-7-10

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 K...
 Chief, Division of Land Development
 Date: 6-15-10

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 ...
 Chief, Development Engineering Division
 Date: 6/10

DEVELOPER'S/OWNER'S LANDSCAPE CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 Signature of Developer: [Signature]
 Date: 4/27/10

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. #34689, Expiration Date: 7/08/2011.
 Signature of Professional Engineer: [Signature]
 Date: 4/27/10

EXPLORATION RESEARCH, INC.
 ENVIRONMENTAL CONSULTANTS
 LANDSCAPE ARCHITECTS
 6338 HOWARD LANE
 ELKINS, MARYLAND 21075
 TEL: (410) 567-5200 FAX: (410) 790-1682

STREET TREE SCHEDULE			
STREET NAME	LF REQUIRED	TREES REQUIRED	PROVIDED
JACQUELINE COURT	1715'	(1:40) = 43	43

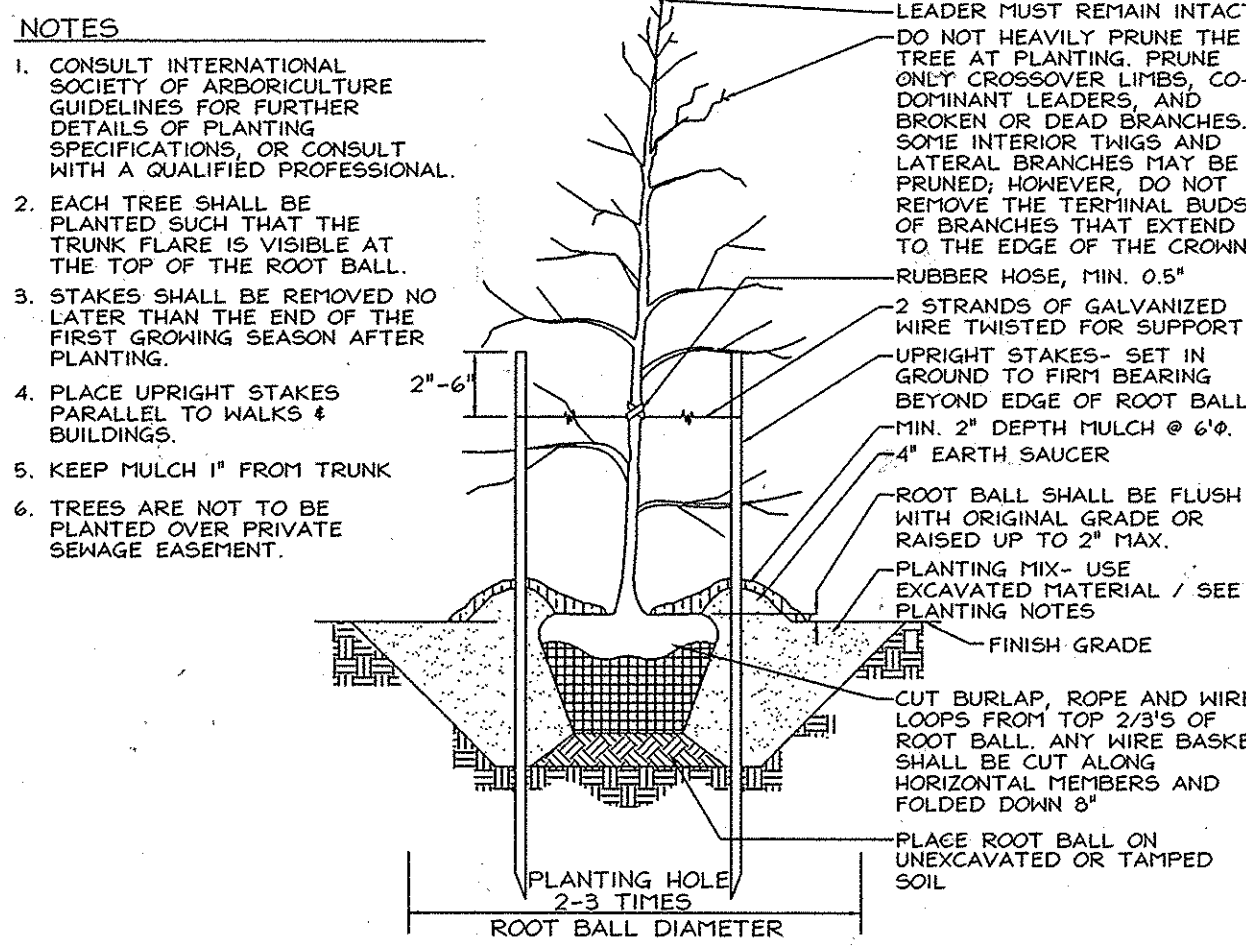
FOREST CONSERVATION NARRATIVE

This Forest Conservation plan has been developed in accordance with the Howard County Forest Conservation Manual and the Forest Conservation Act of 1991.
 In accordance with section 16.1202.(b).(1).(iii) of the Subdivision Regulations, existing Lot 143, Pleasant Chase Phase IV, has a Preliminary Plan approved prior to 12/31/1992. Therefore, only Parcels 492, 493, 494 & 622 are subject to Forest Conservation obligations.
 The above mentioned parcels consist of 1.75 acres. There are no forest resources contained on these parcels. Due to the small size of the lots, the 0.26 acres of afforestation requirement shall be satisfied with a fee-in-lieu payment of \$8,494.20 ((1,525.60 SF x 0.75).

FOREST CONSERVATION WORKSHEET

Item	Value
Net Tract Area	1.75
A. Total Tract Area	1.75
B. Area Within 100 Year Floodplain	---
C. Other deductions	---
D. Net Tract Area	1.75
Zoning Use Category: RESIDENTIAL-SUBURBAN	
Land Use Category	
E. Afforestation Minimum (15% x D)	0.26
F. Conservation Threshold (20% x D)	0.35
Existing Forest Cover	
G. Existing Forest on Net Tract Area	0
H. Forest Area Above Conservation Threshold	0
Break-even Point	
I. Forest Retention Above Threshold with no Mitigation	0.35
J. Clearing Permitted without Mitigation	0
Proposed Forest Clearing	
K. Forest Areas to be Cleared	0
L. Forest Areas to be Retained	0
Planting Requirements	
M. Reforestation for Clearing Above Threshold	0
N. Reforestation for Clearing Below the Threshold	0
P. Credit for Retention Above Conservation Threshold	0
Q. Total Reforestation Required	0
R. Total Afforestation Required	0.26
S. Total Reforestation and Afforestation Requirement	0.26

LANDSCAPE SCHEDULE				
KEY	QUAN.	BOTANICAL/COMMON NAME	SIZE	NOTE
⊙	22	Gleditsia triacanthos 'inermis' Thornless Honeylocust	2 1/2"-3" Cal.	B & B
⊗	17	Liquidambar styraciflua American Sweetgum	2 1/2"-3" Cal.	B & B
⊙	23	Quercus palustris Pin Oak	2 1/2"-3" Cal.	B & B
⊙	32	Ilex opaca American Holly	5'-6' Height	B & B
⊙	24	Pinus strobus White Pine	6'-8' Height	B & B



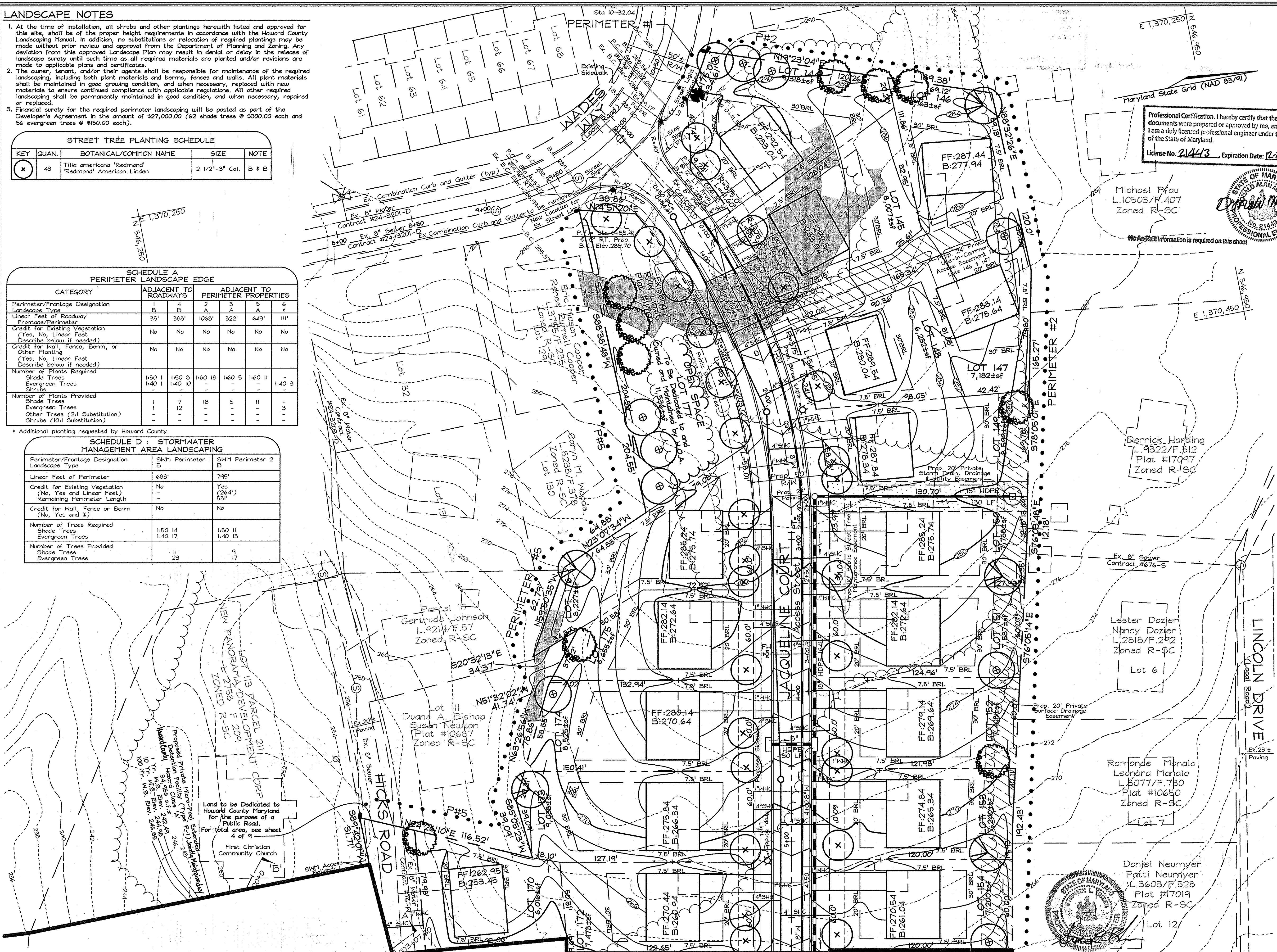
TYPICAL TREE PLANTING AND STAKING
 ALL TREES UP TO 3" CALIPER NOT TO SCALE

OWNER/DEVELOPER
 J. L. N. Development, LLC.
 46 Poplar Point Road
 Edgewater, Maryland 21037
 (410)224-7575 fax(410)224-4774

FINAL FOREST CONSERVATION AND LANDSCAPE PLAN
PLEASANT CHASE - PHASE IV
 LOTS 144 THRU 176 AND OPEN SPACE LOTS 177 AND 178
 A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 143 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS
 TAX MAP 43 GRID B PARCELS 211, 492, 493, 494, 622
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN BY: AB/SHM
 DRAWN BY: SHM
 CHECKED BY: YFM
 SCALE: As Shown
 DATE: April 28, 2010
 W.O. No.: 3490
 SHEET No.: II OF 12

FSH Associates
 Engineers Planners Surveyors
 25338 Howard Lane, Elkridge, MD 21075
 TEL: 410-567-5200 FAX: 410-796-1562
 E-mail: info@fsh.com

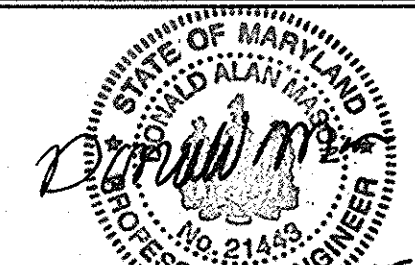


MATCHLINE C-C SEE SHEET 9

PLAN VIEW
 SCALE: 1"=30'

SWM PERIMETER #2

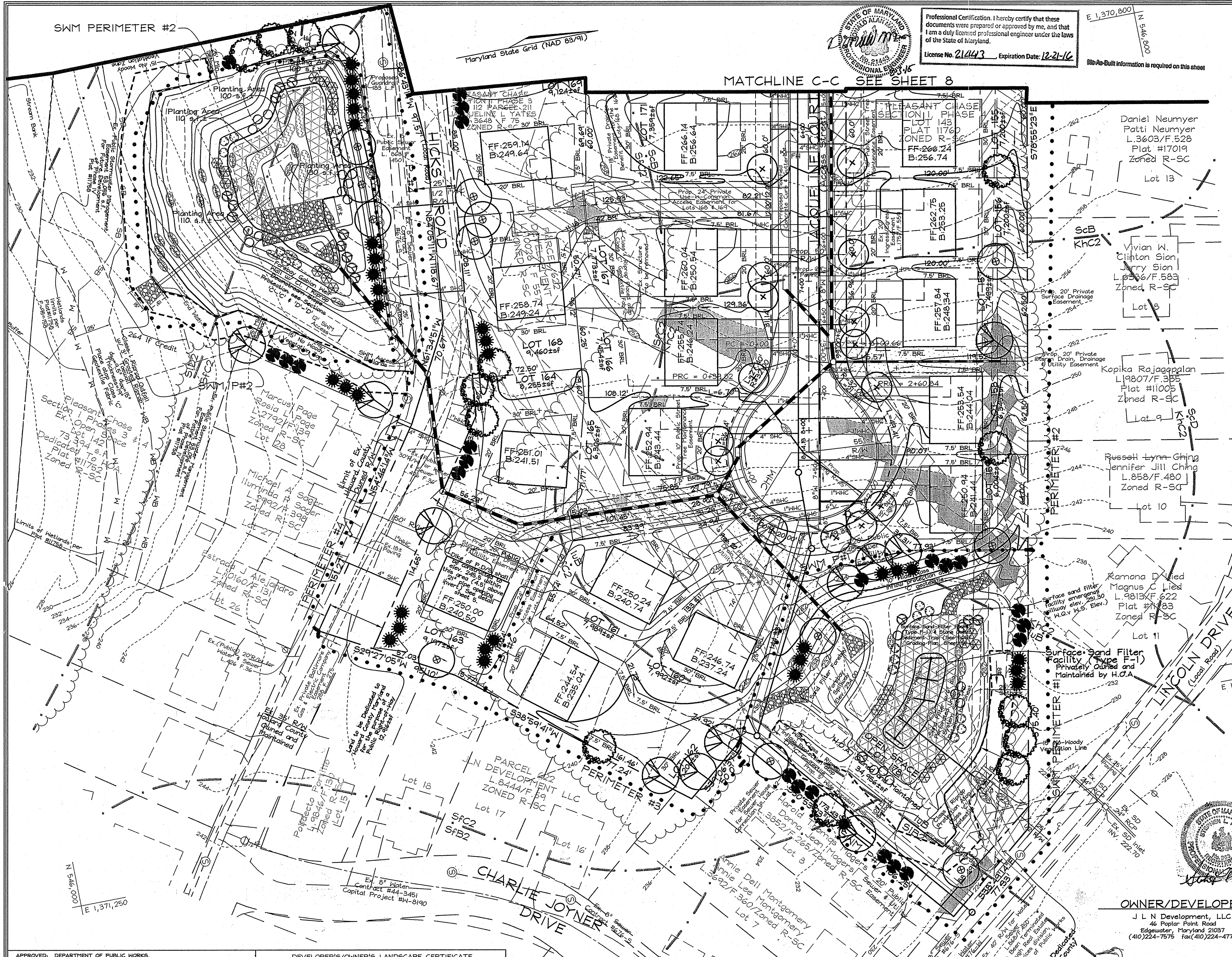
Maryland State Grid (NAD 83/91)



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443 Expiration Date: 12-21-16

E 1,370,800
N 546,800
AS-BUILT information is required on this sheet

MATCHLINE C-C SEE SHEET 8



SWM (Surface Sand Filter) Planting Notes

Within Facility - Bottom to 232.0 - 4,656 s.f.
To be planted with Red Top (Agrostis alba) at 5 lbs / 1000 s.f.

SWM POND WOODY PLANT SCHEDULE				
SYMBOL	QUAN.	BOTANICAL NAME	SIZE	NOTE
(Symbol)	9	Clethra alnifolia Sweet Pepperbush	3'-4' Ht.	Cont.
(Symbol)	9	Cephaelis occidentalis Buttonbush	3'-4' Ht.	Cont.
(Symbol)	9	Ilex verticillata Winterberry	3'-4' Ht.	Cont.
(Symbol)	5	Viburnum dentatum Arrowwood	3'-4' Ht.	Cont.

Remaining area around the stormwater management facility will be stabilized as per the permanent seeding notes, Sheet 5 of 12, and vegetated as per the landscape buffer requirements, this sheet.
Entire area to be prepared as per the permanent seeding notes.

SWM (Type P-1) Planting Notes

Emergent Planting Area
Within Facility - 238.0 to 239.0 - 1,985 s.f.
To be planted with Red Top (Agrostis alba) at 5 lbs / 1000 s.f.

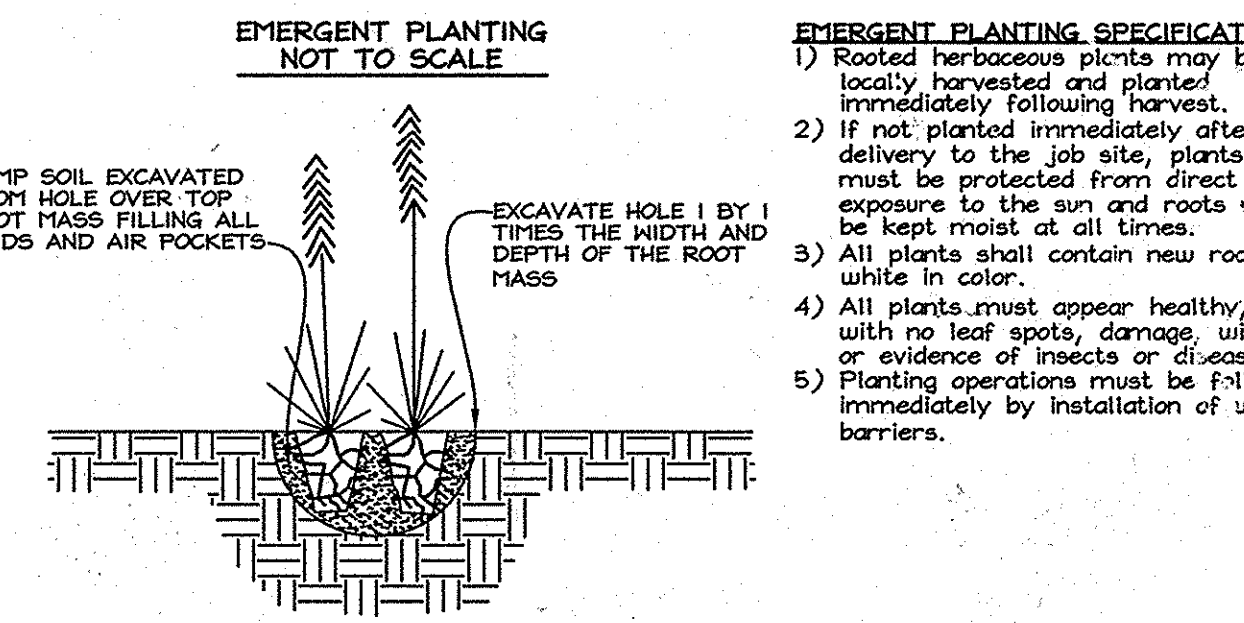
SWM POND WOODY PLANT SCHEDULE				
SYMBOL	QUAN.	BOTANICAL NAME	SIZE	NOTE
(Symbol)	11	Clethra alnifolia Sweet Pepperbush	3'-4' Ht.	Cont.
(Symbol)	11	Cephaelis occidentalis Buttonbush	3'-4' Ht.	Cont.
(Symbol)	11	Ilex verticillata Winterberry	3'-4' Ht.	Cont.
(Symbol)	11	Viburnum dentatum Arrowwood	3'-4' Ht.	Cont.

Remaining area around the stormwater management facility will be stabilized as per the permanent seeding notes, Sheet 5 of 12, and vegetated as per the landscape buffer requirements, this sheet.
Entire area to be prepared as per the permanent seeding notes.

EMERGENT PLANTING (550 S.F.) (160 PLANTINGS, 24" O.C. WITHIN FIVE 5'x 20'-26" PLOTS)

COMMON NAME	SCIENTIFIC NAME	INDICATOR STOCK	QUANTITY
Swamp Milkweed	Asclepias incarnata	OBL Bare root	40
Cardinal Flower	Loebelia cardinalis	FACTR+ Bare root	40
Panic Grass	Panicum longifolium	OBL Bare root	40
Duck Potato	Sagittaria latifolia	OBL Bare root	40

EMERGENT PLANTING NARRATIVE
Vegetation establishment is expected through natural plant propagation and will be enhanced by supplemental planting around the pond area. Supplemental planting in 5' wide plots of varying length (20'-26') see plan.
Plant installation may be delayed one year after grading to allow the graded area to settle and hydrology to stabilize.



APPROVED: DEPARTMENT OF PUBLIC WORKS.
 [Signature] Chief, Bureau of Highways
 Date: 6-7-10

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] Chief, Division of Land Development
 Date: 6-15-10

[Signature] Chief, Professional Engineering Division
 Date: 6/21/10

DEVELOPER'S/OWNER'S LANDSCAPE CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Signature of Developer: [Signature]
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PLAN VIEW
 SCALE: 1"=30'

OWNER/DEVELOPER
 J L N Development, LLC.
 46 Poplar Point Road
 Edgewater, Maryland 21037
 (410)224-7575 Fax:(410)224-4774

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 A RESUBDIVISION OF PLEASANT CHASE, PHASE 3, LOT 112 AND PHASES 3 AND 4, LOT 143 AND LOTS 9-12 & 14 OF ONE SPOT HEIGHTS

TAX MAP 43 GRID 8 PARCELS 211, 492, 493, 494, 622
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

EXPLORATION RESEARCH, INC.
 ENVIRONMENTAL CONSULTANTS
 LANDSCAPE ARCHITECTS
 6555 HOWARD LANE
 ELKRIDGES, MARYLAND 21075
 TEL: (410) 567-5230 FAX: (410) 798-1552

FSH Associates
 Engineers Planners Surveyors
 3039 Howard Lane, Elkridge, MD 21075
 Tel: 410-567-5230 Fax: 410-798-1552
 E-mail: info@fshert.com

DESIGN BY: AB
 DRAWN BY: AB
 CHECKED BY: ZYF
 SCALE: As Shown
 DATE: April 28, 2010
 W.O. No.: 3430
 SHEET No. 12 OF 12