

**GENERAL NOTES**

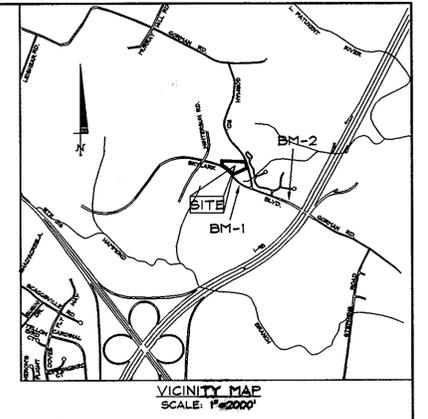
- Existing Zoning: PEC-MXD-3 per April 2004 Comprehensive Zoning Plan and ZB Case No. 979.
- Plat Reference: 6549/334
- Plat Reference: 16078
- Gross Area of Tract: 2.82 ac.
- Area of 100 Year Floodplain: N/A
- Area of Steep Slopes: 0.00 ac.
- Net Area of Tract: 2.82 ac.
- Number of Proposed Lots/Parcels: 9
- Area of Proposed Lots/Parcels:
  - Buildable Lots: 1.515 ac.
  - Open Space Lots: 0.984 ac. (35% of This Resubdivision)
  - 35.5% Provided Under F-03-13
  - Minimum open space required is 35%
  - Area of proposed public roads: 0.317 AC.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Ho. Co. Code, Financial survey for the required landscaping in the amount of \$11,400.00 must be posted as part of the Developer's Agreement (25 shade trees, 26 evergreen trees).
- This project is in conformance with the latest Howard County Standards unless waivers have been approved.
- The existing topography shown herein is based on a field survey prepared by DeMario Design Consultants, Inc. dated March, 2006.
- Landscaping for this development and landscaping survey will be provided as part of the Developer's Agreement, at final plan stage, in accordance with the latest edition of the Howard County Landscape Manual and the approved Emerson Landscape and Street Trees Design Criteria. Landscaping for Lots 1 through 9 shown herein is provided in accordance with a certified landscape plan on file with this plat in accordance with section 16.124 of the Howard County Code and the landscape manual.
- The forest conservation obligation for this development have been met by retention under F-03-13. Development of Emerson 2, Phase 4 (F-03-13) under the current forest conservation act involves the clearing of approximately 5.48 acres of forest, and the retention of approximately 5.20 acres on the net tract area. When evaluated cumulatively with previous phases of the project, a total of 47.03 acres of forest clearing and 51.03 acres of retention are proposed, and no reforestation is required. Approximately 5.03 acres of reforestation was provided in previous phases and may be used to offset reforestation requirements for future phases of this development.
- The coordinates shown herein are based upon the Howard County Geodetic Control, which is based upon the Maryland State Coordinate System. Howard County Monument No. 47DC & 47EB were used for this project.
- This property is within the Metropolitan District.
- Stormwater management for this development will be provided by the following means:
  - Recharge volume (REV) will be provided via a grass channel with check dams. The water quality (WQV) will be provided through a wet-pool extended detention pond. Channel protection volume (CPV) will be provided through the wet-pool extended detention pond. Overbank flood protection volume and extreme flood protection volume are not required.
  - To be privately owned and privately maintained.
  - Existing utilities shown herein are based on field surveys and record drawings.
  - There is no floodplain onsite.
  - There are no wetlands onsite, based on Plat 16078, recorded July 28, 2003.
  - Traffic study prepared by Wells & Associates, Inc. dated February, 2006.
  - The geotechnical study for this project was prepared by Hilli Corne Engineering Associates, Inc. in February, 2006.
  - Project Background Information:
    - Subdivision Name: Emerson Section 2 Phase 4A
    - Tax Map/Block/Parcel: 47/8/1053
    - Zoning: PEC-MXD-3
    - Election District: 6th
    - Total (Gross) Tract Area: 2.820 ac.
    - Number of Proposed Lots/Parcels: 9
    - Applicable Department of Planning & Zoning File No.'s: S-99-12(Key Property), F-03-13, F-02-15, W-03-46, W-99-96, PB-339, PB354, ZB-979M, F-06-12

# FINAL ROAD CONSTRUCTION PLANS for EMERSON SECTION 2, PHASE 8A

LOTS 1 THRU 4 & 6 THRU 8 OPEN SPACE LOTS 5 & 9  
A RESUBDIVISION OF EMERSON SECTION 2, PHASE 4, LOTS 117-120  
TAX MAP 47, GRID 8, PARCEL P/O 1053  
6TH ELECTION DISTRICT HOWARD COUNTY, MD

**BENCHMARK DESCRIPTION**

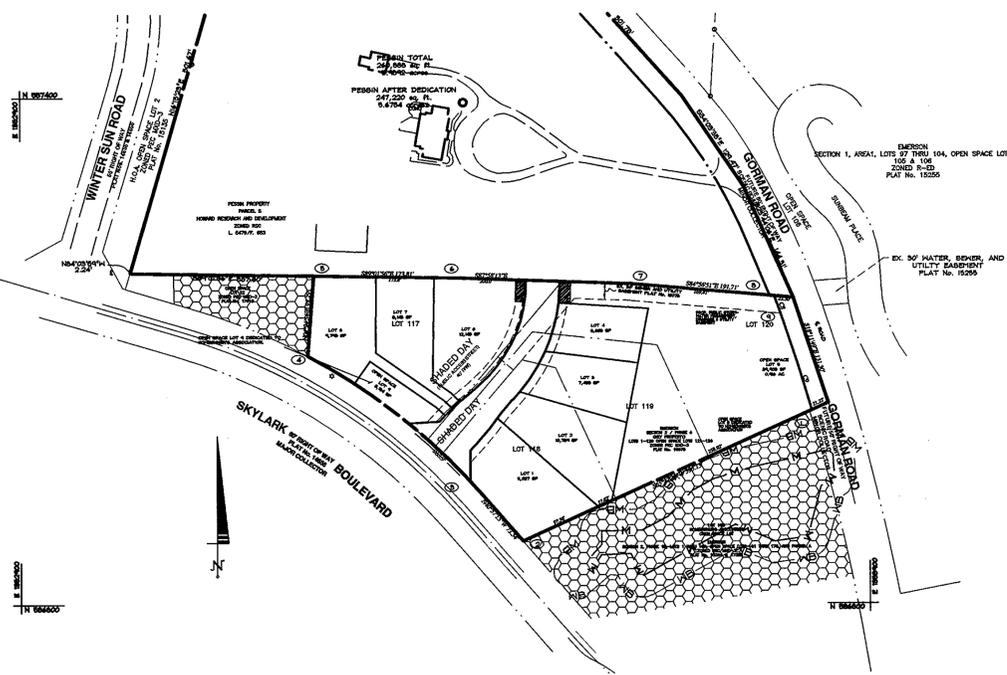
<b>BENCHMARK #1</b>	N. 536615.0157
E. 1953674.1226	47DC
B.M. ELEV. 343.249	
<b>BENCHMARK #2</b>	N. 536212.7456
E. 1954833.6403	47EB
B.M. ELEV. 354.296	



**DRAWING INDEX**

SHEET	COVER SHEET	DESCRIPTION
1	COVER SHEET	
2	FINAL ROAD CONSTRUCTION PLAN & PROFILE	
3	GRADING & SEDIMENT CONTROL PLAN	
4	SEDIMENT EROSION CONTROL DETAILS	
5	SEDIMENT EROSION CONTROL NOTES	
6	STORMWATER MANAGEMENT DETAILS	
7	STORM DRAIN DRAINAGE AREA MAP	
8	LANDSCAPE PLAN	
9	LANDSCAPE DETAILS & NOTES	

24. There are no dwelling on the site.
25. The proposed access street shall be public.
26. BRL denotes the Building Restriction Lines.
27. Sediment and erosion control measures will be provided in accordance with the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control and will be shown on the Final Plan.
28. Street trees will be provided on the access street in accordance with Section 16.124 of the Howard County Subdivision Regulations.
29. Sidewalks are provided in accordance with Section 16.134 of the Howard County Subdivision Regulations.
30. A Community Input Meeting is not required in the MXD zone.
31. Open Space Lot 5 and Lot 9 is to be owned and maintained by the HOA.
32. This plan is a resubdivision of Emerson, Section 2, Phase 4 Lots 117-120, F-03-13 as part of the 120 units as Lots 117-120.
33. The minimum building setbacks from property lines and public road right-of-way lines for the SFD residential lots shall be in accordance with the comprehensive Sketch Plan Development Criteria approved under S-99-12, PB-339 and PB-354.
34. Phasing for this project is in accordance with the Decision and Order for Zoning Board Case No. 479-M and the Decision and Order approved for PB-339 (Comprehensive Sketch Plan, S-99-12).
35. There are no historic structures or cemeteries located on the subject property.
36. No grading, removal of vegetative cover or trees, paving and new structures shall be permitted within the utility, electric, street or their required buffers, flood plain and forest conservation easement.
37. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
38. The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410)-315-1880 at least (5) working days prior to the start of work.
39. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
40. Traffic control devices, markings and signs 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 placement of any asphalt.
41. Street light placement and the type of fixture and pole shall be in accordance with the Howard County Design Manual, Volume III (1993) and as modified by "Guidelines for Street Lights in Residential Developments June (1993)". A minimum spacing of 20' shall be maintained between any streetlight and any tree. 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 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.
42. Water is public and tied to contract # 24-4389-D.
43. Sewer is public and tied to contract # 24-4389-D.
44. This plan is subject to a design waiver to Figure 2-17 approved July 24, 2006, subject to providing lane to Skyline Blvd. Per DED No. decal lane provided since there is sufficient room for turning vehicles.
45. 65% compaction in fill areas per AASHTO-T190.
46. The Articles of Incorporation have been filed with the State Department of Assessments and Taxation with incorporation number D06489454. The covenants for the Emerson Community, Inc. were recorded in the Land Records of Howard County, Maryland in Liber 5728 Folio 464.
47. The contractor shall inspect and install any necessary maintenance on the sediment erosion control devices shown on the plan. The inspection shall be on a daily basis and after every rainfall.



**MINIMUM LOT SIZE CHART**

LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
1	0.187 AC	0.011 AC	0.176 AC
2	0.225 AC	0.030 AC	0.189 AC

**COORDINATE CHART**

NO.	NORTH	EAST
1	537028.9	1953681.7
2	536874.5	1953491.2
3	536930.1	1953449.0
4	537094.2	1953238.1
5	537189.3	1953245.4
6	537186.3	1953419.2
7	537179.2	1953619.1
8	537164.3	1953787.9
9	537136.2	1953747.9

**CURVE TABLE**

CURVE	RADIUS	LENGTH	DELTA	CHORD-BRG	CHORD-DIST	TANGENT
C1	729.96'	263.96'	20°43'08"	N51°17'36" W	262.55'	193.44'
C2	197.00'	23.05'	6°42'17"	S46°52'12" W	23.04'	11.54'
C3	181.00'	21.18'	6°42'17"	N46°52'12" E	21.17'	10.60'
C4	154.95'	120.67'	43°13'25"	N21°53'54" E	117.83'	63.37'
C5	199.96'	150.85'	43°13'25"	N21°54'01" E	147.30'	79.22'
C6	181.00'	21.18'	6°42'17"	S40°09'55" W	21.17'	10.60'
C7	197.00'	23.05'	6°42'17"	N40°09'55" E	23.04'	11.54'
C8	186.50'	23.91'	7°58'59"	N19°44'07" W	23.91'	
C9	2501.37'	112.51'	2°34'38"	N17°28'49" W	112.50'	

**EMERSON, SECTION 2 & 3 OVERALL DEVELOPMENT TRACKING CHART**

Section and Phase	File Reference Number	Gross Acreage	SFD Ac. (%) (A)	Other Res. Ac. (%) (B)	Employment Ac. (%) (C)	Open Space Ac. (%) (D)	SFD Units	SFD Density (E)	Other Res. Units (SFA/Ag/Condo)	Other Res. Density (F)
2/1A	F-01136	8.4	3.6 (43%)	-	-	4.8 (57%)	-	-	-	-
2/1B	F-01137	97.8	49.7 (50.8%)	8.0 (8.2%)	-	40.1 (41%)	160	3.2	80 SFA	10 D.U./Ac
2/2	F-01145	12.7	-	12.7 (100%)	-	-	-	-	120 SFA	9.4 D.U./Ac
2/3	F-0255	18.5	-	12.0 (64.9%)	-	6.5 (35.1%)	-	-	120 SFA	10 D.U./Ac
2/3	F-02131	19.5	-	-	22.0 (31.7%)	47.5 (68.3%)	-	-	-	-
3/2	F-02178	12.3	-	-	8.9 (72.4%)	3.4 (27.6%)	-	-	-	-
2/4	F-0313	44.5	27.4 (61.5%)	-	-	17.1 (38.5%)	120	4.4	-	-
2/5C	F-03175	3.0	0.7 (23.3%)	-	0.2 (6.7%)	2.1 (70%)	-	-	-	-
2/6A (F)	F-0468	10.4	-	9.4 (90.4%)	-	1.0 (9.6%)	-	-	100 SFA	10.6 D.U./Ac
2/5A & 3/3	F-0453	29.2	22.7 (77.7%)	-	3.9 (13.4%)	2.6 (8.9%)	87	3.9	60 Apt (6M/P)	11.4 D.U./Ac
2/5B & 2/8	F-04127	23.9	-	2.9 (12.1%)	14.1 (59%)	6.9 (28.9%)	-	-	33 SFA (OR)	11.4 D.U./Ac
2/6	F-0559	6.2	4.9 (79.0%)	-	-	1.3 (21.0%)	20	4.1	60 Apt (6M/P)	11.4 D.U./Ac
2/7	F-0593	8.5	-	8.5 (100%)	-	-	-	-	73 Apt	14.1 D.U./Ac
2/8A (C)	F-04128	0.0	-	-	-	-	3	-	47 SFA	-
2/8B	F-0611	28.8	-	8.5 (29.5%)	12.72 (44.2%)	7.58 (26.3%)	117 Apt	3.6	13.8 D.U./Ac	-
<b>TOTAL</b>		<b>373.7</b>	<b>189 (29.2%)</b>	<b>62 (16.6%)</b>	<b>61.82 (16.3%)</b>	<b>140.9 (37.7%)</b>	<b>390</b>	<b>3.6</b>	<b>250 Apt</b>	<b>12 D.U./Ac</b>

**Overall Density Tabs**

Overall SFD Density	(B) Proposed	(B) Allowed	Land Use Acres	Proposed SFD	Allowed SFD	Max. Res. Units Proposed	SFD	Other Res. Units	Allowed
Overall SFD Density	3.6	3.8	SFD	109	117	390	SFD	28,979	5,991
Overall OR Density	12.0	12.1	OR	62	62	250	AFT	450 (37.5%)	395 (34.5%)
Overall Project Density	2.21	2.32	EMP	61.82	154.9	500	SFA	250 (20.8%)	250 (21.8%)
			Open Space	148.9	183	500	SFA	500 (41.7%)	500 (43.7%)
			<b>TOTAL</b>	<b>373.7</b>	<b>516.9</b>			<b>750 Total</b>	<b>1165</b>

(A) SFD acreage includes Common Open Areas (COA) Lots.  
 (B) Overall allowed density based on maximum number of units allowed per ZB 99 M and Max. Allowed Land Use Acreages F-02-17. FLOODPLAIN EXCLUDES 1.20 AC FOR MITIGATION AREA FLOODPLAIN COUNTED UNDER F-04-127.  
 (C) Max. density for an individual SFD area is 5.0 units/acre.  
 (D) Max. density for an individual OR area is 20.0 units/acre.

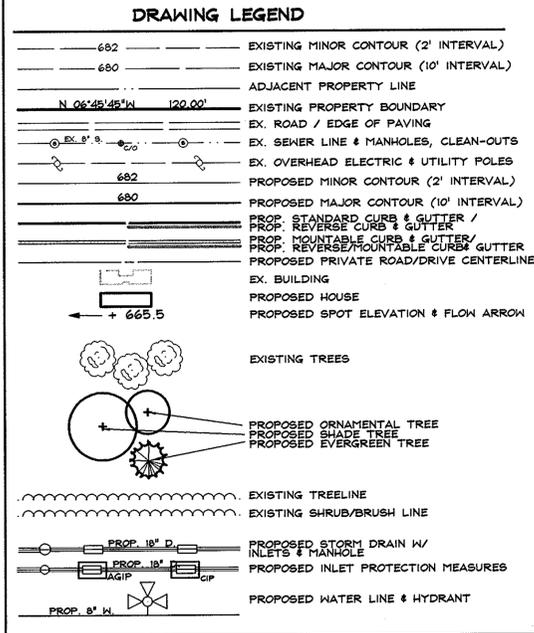
(E) Proposed density tabulations are shown for informational purposes only. Those tabulations will be reconciled against the maximum density tabulations with the last plat or phase.  
 (F) Resubdivided by F-06-25 to create 1.0 ac of credited Open Space.  
 (G) This is a subdivision of SFD Land. SFD recorded with F-0313.

Note: This chart reflects the current information for this project at the time of recordation of each individual plat. For current information, refer to the most recently recorded plat.

**FOREST CONSERVATION TRACKING CHART**

DPZ FILE Number	Section/Phase Number	Gross Area	Floodplain	Net Tract	Ex. Forest	Forest Cleared	Forest Retained	Reforest./Affor. Provided	Reforest./Affor. Required	Comments
F-01-137	2 1A/B	106.20	9.50	102.70	24.70	7.93	16.77	0.61	5.03	
F-01-145	2/2	118.90	3.50	115.40	24.80	8.03	16.77	2.98	5.03	
F-02-55	2/3	137.95	4.00	133.95	34.40	12.53	21.87	1.27	5.03	See Note A
F-02-181	3/1	206.85	21.19	185.66	85.30	39.47	45.83	0.00	5.03	See Note B
F-02-178	3/2	220.27	21.27	199.00	87.50	41.67	45.83	0.00	5.03	See Note C
F-03-13	2 1/4	264.81	26.97	238.24	48.18	47.16	51.03	0.00	5.03	5.24
F-03-175	2/5/C	240.44	27.40	210.44	48.62	47.99	51.03	0.00	5.77	5.24
F-04-68	2/6/A	277.75	27.40	250.35	48.62	47.99	51.03	0.00	5.77	5.24
F-04-131	2/4	277.75	27.40	250.35	48.62	47.99	51.03	0.00	5.85	5.41
F-04-53	2/6/A	306.93	27.51	279.42	49.66	47.63	51.03	2.74	5.74	5.91
F-04-127	2/5/B	382.63	32.48	350.20	119.66	63.31	52.35	8.51	11.51	See Note F
F-05-44	2/1/B	332.63	32.48	300.20	119.66	61.73	53.93	6.53	15.29	See Note G
F-05-93	2/7	341.19	32.48	308.76	119.66	61.73	53.93	7.81	13.29	1.84
F-05-94	2/6/B	347.46	32.48	315.03	121.26	67.33	53.93	10.15	15.52	1.84
BDP-05-124	FARM POND	247.46	32.48	315.03	121.26	67.33	53.93	10.15	15.49	1.84
F-06-11	2/8B	379.80	32.48	341.37	125.82	71.14	54.68	14.82	16.11	See Note H

- \* EMERSON, SECTION 2, PHASE 8A IS A RESUBDIVISION OF F-03-13.
- FOREST CONSERVATION TRACKING CHART PROVIDED BY DAFT-ISCUNE-HALKER, INC.
- 1.20/- ACRES OF FUTURE FOREST CLEARING SHOWN ON F-01-137 WAS CLEARED FOR SHM ON OPEN SPACE LOT 17A.
  - 1.04/- ACRES OF FUTURE FOREST CLEARING SHOWN ON F-01-137 WAS CLEARED FOR SHM ON OPEN SPACE LOT 17B.
  - GROSS AREA INCLUDES 1.07/- ACRES FOR SANITARY BENCHER EXTENSION AND CONTAINS 0.04/- ACRES OF FLOODPLAIN.
  - GROSS AREA INCLUDES 0.36 ACRES FOR THE SANITARY BENCHER SHOWN ON F-02-178. GROSS AREA ALSO EXCLUDES 0.07 ACRES FOR AREA PREVIOUSLY ACCOUNTED FOR UNDER F-03-16.
  - THIS LINE ITEM ACCOUNTS FOR REFORESTATION PROVIDED RETROACTIVELY ON A PHASE THAT PREVIOUSLY ADDRESSED FOREST CONSERVATION. APPROXIMATELY 1.33 ACRES OF FUTURE REFORESTATION AREA WILL BE USED UNDER THIS REFORESTATION.
  - GROSS AREA EXCLUDES 0.82 ACRES FOR SANITARY BENCHER SHOWN ON F-02-178. A GROSS AREA INCLUDES 2.57 ACRES FOR THE MITIGATION AREA FLOODPLAIN. FLOODPLAIN INCLUDES 1.2 ACRES FOR THE MITIGATION AREA FLOODPLAIN.
  - APPROXIMATELY 0.42 ACRES OF FUTURE CLEARING/FUTURE REFORESTATION IS BEING CLEARED AND IS NOT BEING REFORESTED. APPROXIMATELY 1.08 ACRES OF FUTURE CLEARING/FUTURE REFORESTATION IS BEING RETAINED. APPROXIMATELY 0.19 ACRES OF FUTURE REFORESTATION IS BEING REFORESTED.
  - GROSS AREA EXCLUDES 0.18 AC FOR BENCHER SHOWN ON F-02-178. GROSS AREA ALSO EXCLUDES 2.87 AC FOR MITIGATION AREA FLOODPLAIN COUNTED UNDER F-04-127.



**DATA SOURCES:**  
 TOPOGRAPHY SHOWN HEREON BASED ON A FIELD SURVEY PREPARED BY DEMARIO DESIGN CONSULTANTS, INC. DATED MARCH, 2006. BOUNDARY SHOWN HEREON IS BASED ON RECORDED PLATS BY OTHERS.

**DeMario Design Consultants, Inc.**

192 East Main Street  
Westminster, MD 21157  
Phone: (410) 386-6560  
Fax: (410) 386-0664  
eMail: ddc@demariodesign.com

**OWNER:** EMERSON LAND BUSINESS TRUST  
**DEVELOPER:** GENERAL GROWTH PROPERTIES  
 10275 LITTLE PATUXENT PKWY  
 COLUMBIA, MD 21044  
 410-992-6200

**SITE ADDRESS:** SKYLARK BOULEVARD

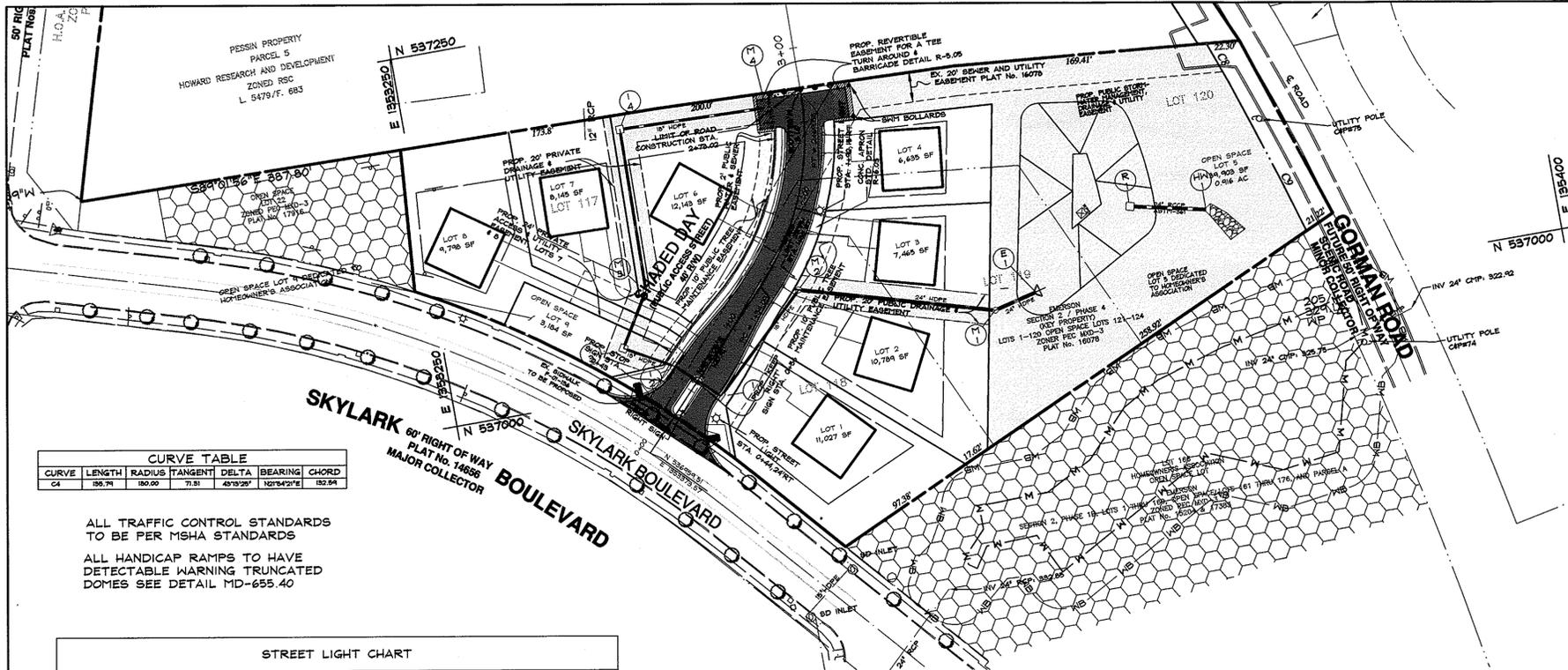
**FINAL ROAD CONSTRUCTION PLANS**  
 EMERSON SECTION 2, PHASE 8A  
 LOTS 1 THRU 4 & 6 THRU 8 OPEN SPACE LOTS 5 & 9

**COVER SHEET**

6TH ELECTION DISTRICT HOWARD COUNTY, MD

REVISIONS

NO.	DESCRIPTION OF CHANGES	DRN.	REV.	DATE
CO. FILE #	F-07-128	DES. BY:	JCO/WRD	
TAX ACC. #		DRN. BY:	JCO	
TAX MAP:	47	CHK. BY:	RBW	
BLOCK/GRID:	8	DATE:	09.25.07	
PARCEL #:	P/O 1053	DDC JOB#:	05122.2	
ZONE/USE:	PEC/MXD3	SHEET NUMBER:		
DWG. SCALE:</				



CURVE	LENGTH	RADIUS	TANGENT	DELTA	BEARING	CHORD
C4	156.74	180.00	71.81	43°19'28"	N07°42'12"	182.84

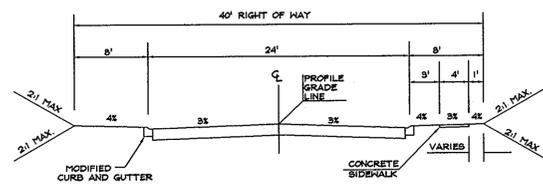
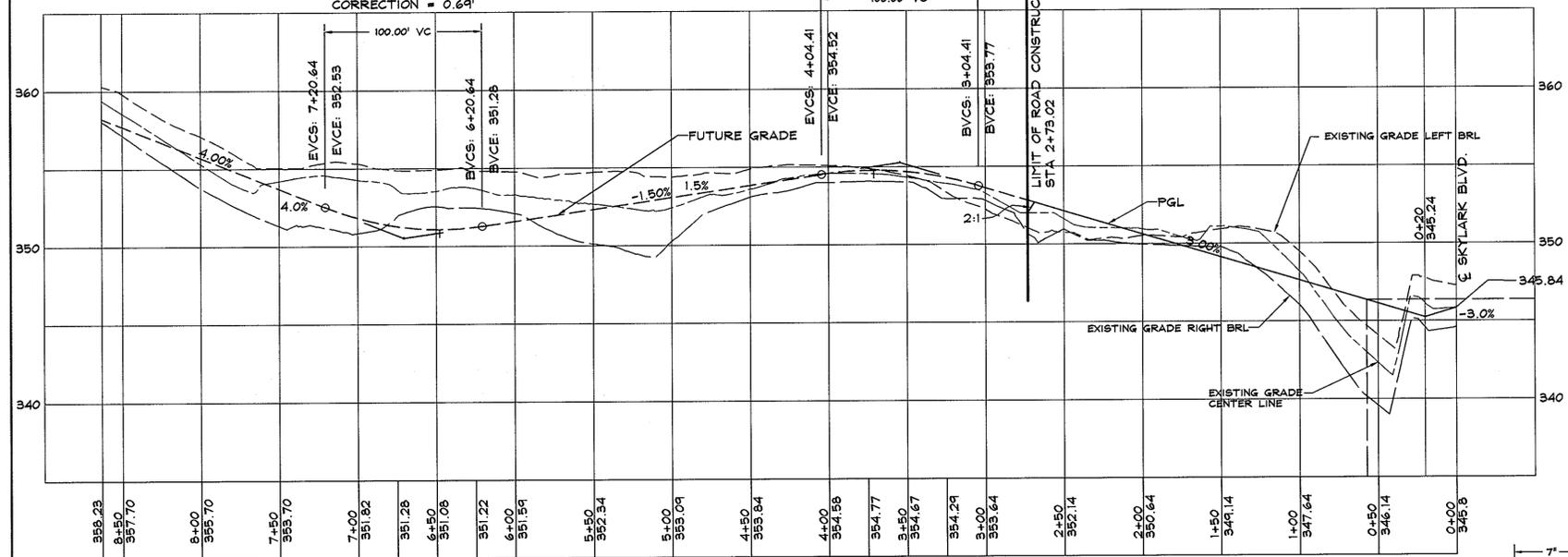
ALL TRAFFIC CONTROL STANDARDS TO BE PER MSHA STANDARDS  
 ALL HANDICAP RAMPS TO HAVE DETECTABLE WARNING TRUNCATED DOMES SEE DETAIL MD-655.40

STREET LIGHT CHART

SYMBOL	TYPE	LOCATION
☼	100 WATT HIGH PRESSURE SODIUM (HPS) VAPOR PREMIER	SHADED DAY @ STA. 0+44.24' RT.
☼	100 WATT HIGH PRESSURE SODIUM (HPS) VAPOR PREMIER	SHADED DAY @ STA. 1+92, 17' RT.

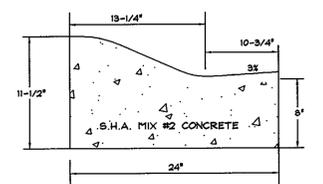
LOW POINT ELEV = 351.07  
 LOW POINT STA = 6+47.92  
 PVI STA = 6+70.64  
 PVI ELEV = 350.53  
 SSD = 200.00'  
 CORRECTION = 0.64'

HIGH POINT ELEV = 354.77  
 HIGH POINT STA = 3+71.08  
 PVI STA = 3+54.41  
 PVI ELEV = 355.27  
 SSD = 200.00'  
 CORRECTION = -0.39'

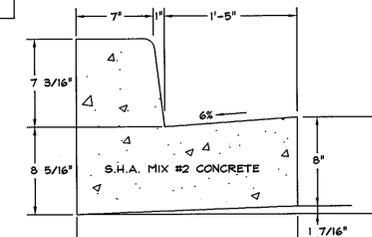


TYPICAL ROAD SECTION (FIG. 209a)  
 SHADED DAY PUBLIC ACCESS STREET  
 SCALE: NTS

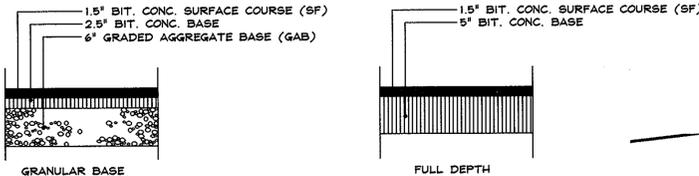
SHADED DAY PROFILE  
 25 MPH PUBLIC ACCESS STREET  
 SCALE - HORIZONTAL = 1"=50'  
 VERTICAL = 1"=5'



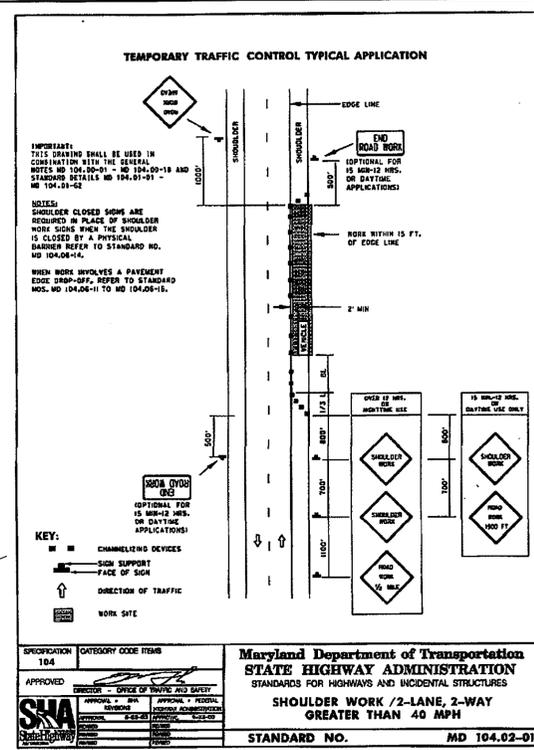
MODIFIED CURB & GUTTER (R-3.01)  
 SCALE: NTS



STANDARD CURB & GUTTER (R-3.01)  
 SCALE: NTS

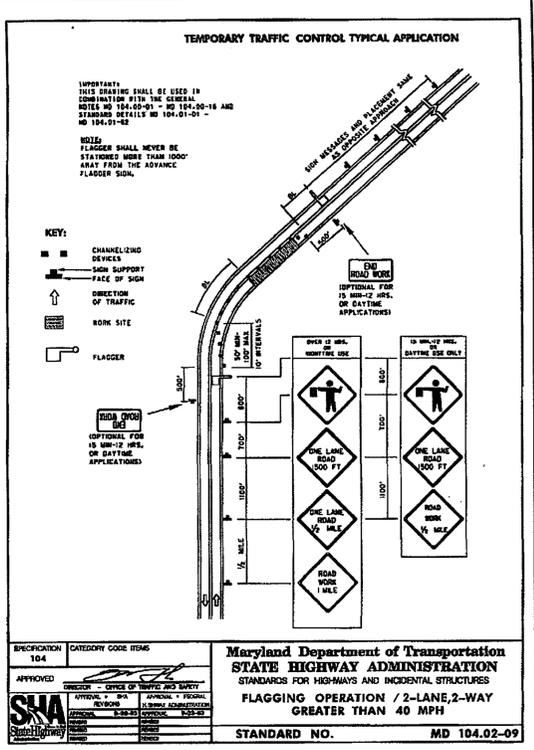


P-2 PAVING SECTION (R-2.01)  
 SCALE: NTS



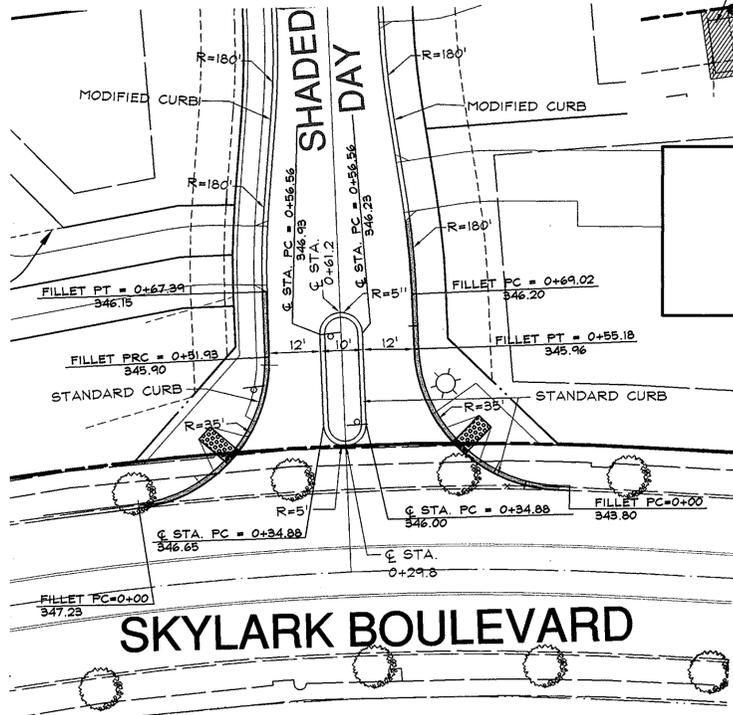
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 DATE: 11-5-07  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
 DATE: 11/2/10

Maryland Department of Transportation  
 STATE HIGHWAY ADMINISTRATION  
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
 SHOULDER WORK / 2-LANE, 2-WAY  
 GREATER THAN 40 MPH  
 STANDARD NO. MD 104.02-01

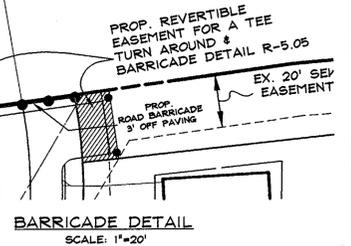


APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 DATE: 11-5-07  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
 DATE: 11/2/10

Maryland Department of Transportation  
 STATE HIGHWAY ADMINISTRATION  
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
 FLAGGING OPERATION / 2-LANE, 2-WAY  
 GREATER THAN 40 MPH  
 STANDARD NO. MD 104.02-09



STREET ENTRANCE DETAIL  
 SCALE: 1"=20'



BARRICADE DETAIL  
 SCALE: 1"=20'

DATA SOURCES:  
 TOPOGRAPHY SHOWN HEREON BASED ON A FIELD SURVEY PREPARED BY DEMARIO DESIGN CONSULTANTS, INC. DATED MARCH, 2006. BOUNDARY SHOWN HEREON IS BASED ON RECORDED PLATS BY OTHERS.

**DeMario Design Consultants, Inc.**  
 192 East Main Street  
 Westminster, MD 21157  
 Phone: (410) 386-6560  
 Fax: (410) 386-0564  
 eMail: ddc@demariodesign.com

OWNER: EMERSON LAND BUSINESS TRUST  
 DEVELOPER: GENERAL GROWTH PROPERTIES  
 10275 LITTLE PATUXENT PKWY  
 COLUMBIA, MD 21044  
 410-992-6000

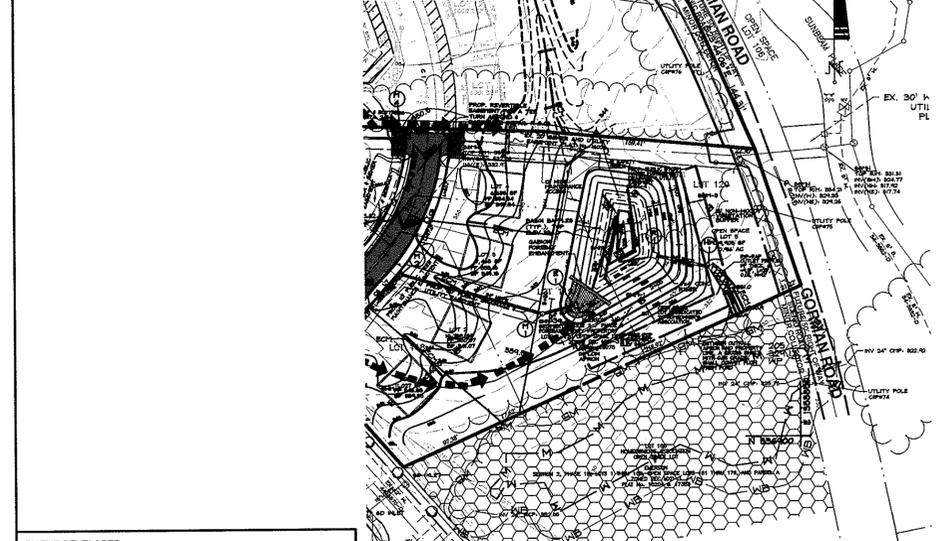
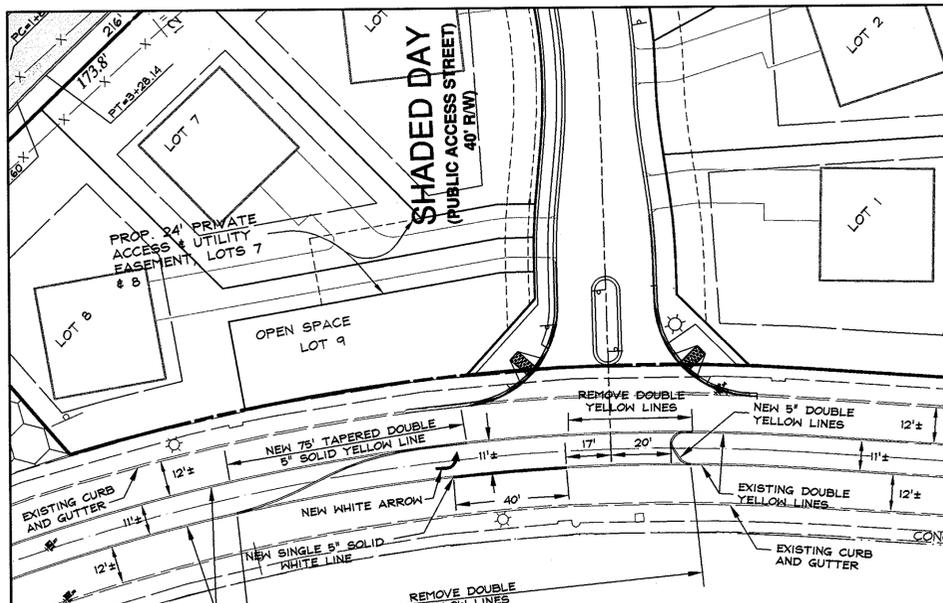
FINAL ROAD CONSTRUCTION PLANS  
 EMERSON SECTION 2, PHASE 6A  
 LOTS 1 THRU 4 & 6 THRU 8 OPEN SPACE LOTS 5 & 9  
 FINAL ROAD CONSTRUCTION PLAN,  
 PROFILE, MOT AND STRIPING PLAN  
 6TH ELECTION DISTRICT HOWARD COUNTY, MD

NO.	DESCRIPTION OF CHANGES	DRN.	REV.	DATE
CO. FILE #	F-07-128	DES. BY:	JCO	
TAX ACC. #		DRN. BY:	SDS	
TAX MAP:	47	CHK. BY:	RBW	
BLOCK/GRID:	8	DATE:	09.25.07	
PARCEL #:	P/O 1053	DDC JOB#:	05122.2	
ZONE/USE:	PECMXD3	SHEET NUMBER:		
DWG. SCALE:	1"=50'		2 of 9	

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 DATE: 11-5-07  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
 DATE: 11/2/10

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. 25460, Expiration Date: 07/2008.

Professional Engineer Seal: [Seal]



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

*Paul G. Cunningham* 9/25/07  
DEVELOPER DATE

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

*M. Williams* 9/25/07  
ENGINEER DATE

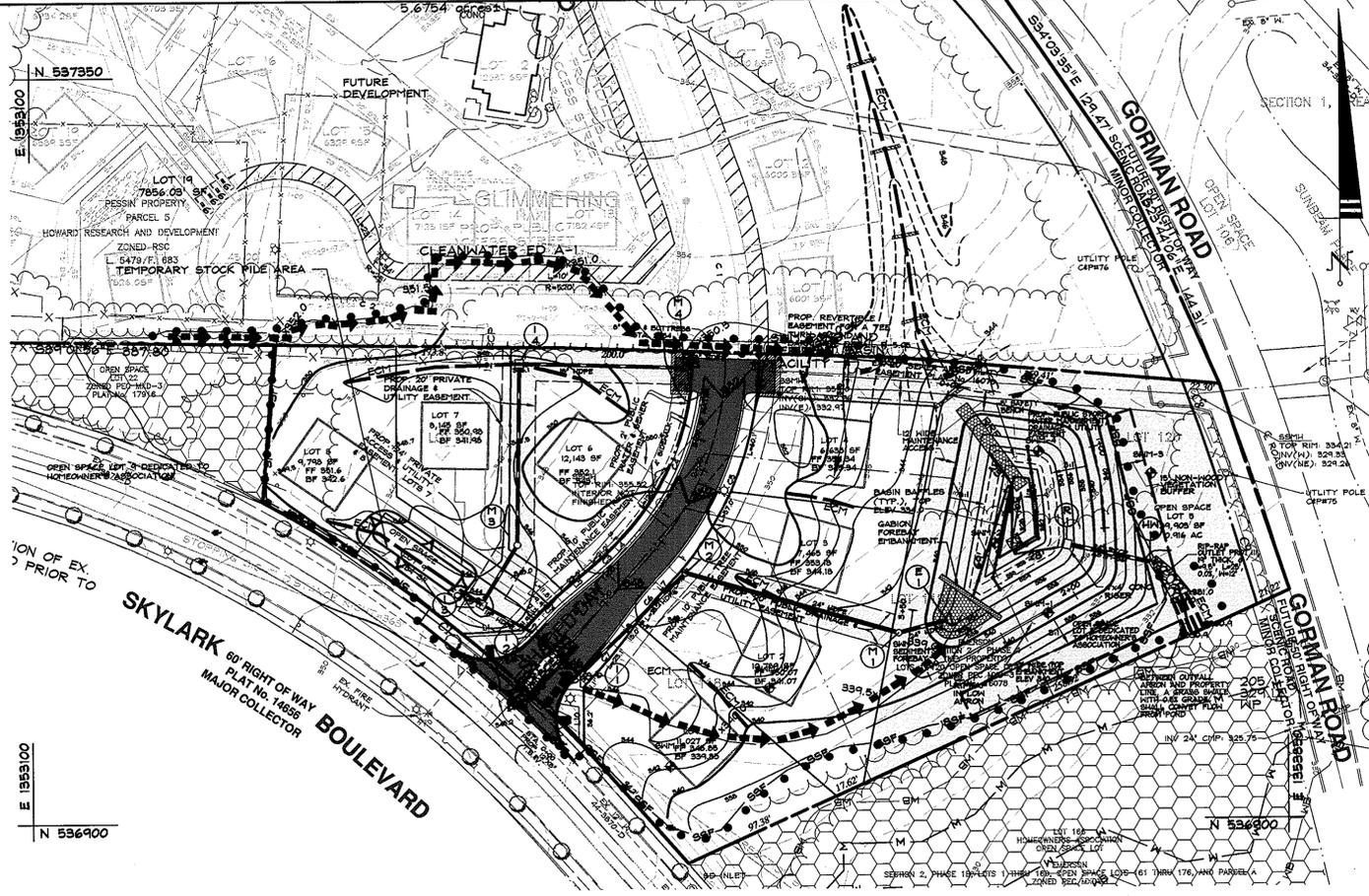
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*Jim Meyer* 10/9/07  
NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

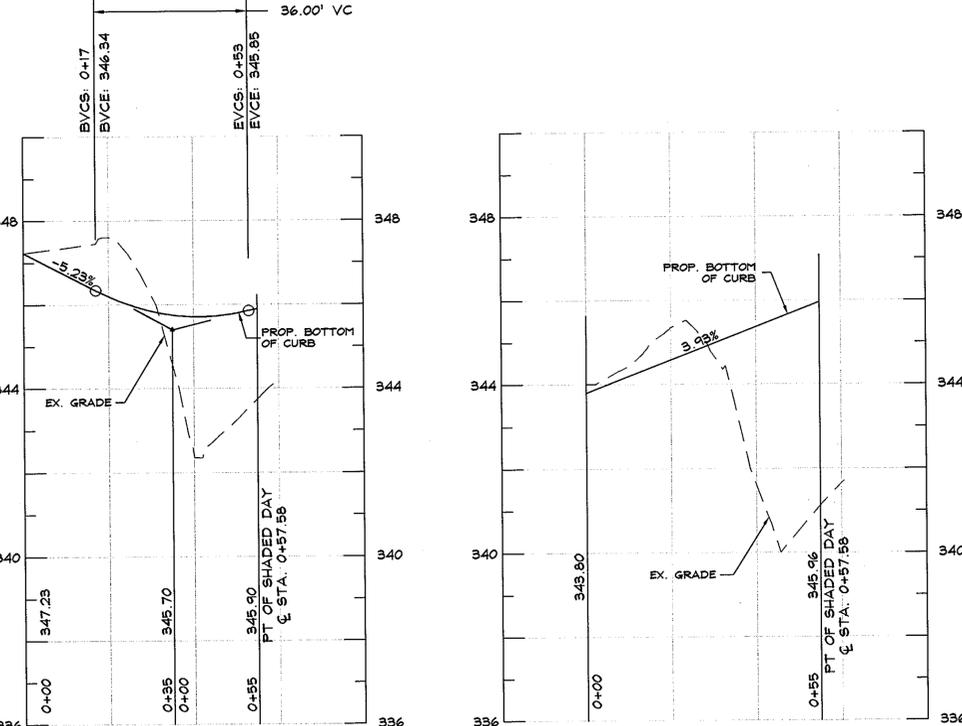
*Sherry Schmitz* 10/9/07  
HOWARD SOIL CONSERVATION DISTRICT DATE

SWM POND FACILITY SUMMARY TABLE	
SWM FACILITY TYPE USED: DETENTION POND	
OWNERSHIP	PRIVATE
STRUCTURE TYPE	WET DETENTION POND
STRUCTURE CLASS	MD-37B
DRAIN AREA (WQV) (Ac)	5.85
HT TO EMBANKMENT (ft)	8.5
STREAM USE	I-P
WATERSHED	MIDDLE PATUXENT R.
WQV REQUIRED (Ac-ft)	0.191
WQ PROVIDED IN WET POOL (Ac-ft)	0.193
Rev REQUIRED (Ac-ft)	0.048
Rev PROVIDED IN GRASS SHALE WITH CHECK DAMS	0.057
Cpv REQUIRED (Ac-ft)	0.226
Cpv PROVIDED AFTER CREDITS (Ac-ft)	0.226
Cpv PROVIDED IN POND (Ac-ft)	0.226
Cpv HSE (1-yr FROM TR20) (ft)	336.0
1-yr PROP. INFLOW (cfs)	0.20
1-yr PROP. OUTFLOW (cfs)	0.20
10-yr WATER SURFACE ELEVATION (ft) CLOGGED	337.32
100-yr WATER SURFACE ELEVATION (ft) CLOGGED	337.69
10-yr WATER SURFACE ELEVATION (SEC) (ft) CLOGGED	337.24
FREEBOARD REQUIRED (ft)	2.0
FREEBOARD PROVIDED (ft)	2.31
STORAGE-HEIGHT PRODUCT (Ac-ft-ft)	4.3
NORTH COORDINATE	N 537,000
EAST COORDINATE	E 1,359,500



**PLAN VIEW**  
SCALE: 1"=50'

LOW POINT ELEV = 345.70  
LOW POINT STA = 0+41.35  
PVI STA = 0+35  
PVI ELEV = 345.40  
A.D. = 7.73  
K = 4.66



**INTERSECTION FILLET PROFILE**  
WEST OF  $\phi$  SHADED DAY  
SCALE - HORIZONTAL - 1"=20'  
VERTICAL - 1"=2'

**INTERSECTION FILLET PROFILE**  
EAST OF  $\phi$  SHADED DAY  
SCALE - HORIZONTAL - 1"=20'  
VERTICAL - 1"=2'

BASIN TABLE		
BASIN TYPE	BASIN	
EXISTING DRAINAGE AREA/ACRES	0.66	
INTERIM DRAINAGE AREA: ACRES	2.45	
PROPOSED DRAINAGE AREA: ACRES	2.45	
STORAGE REQUIRED (CUBIC FEET):	WET	4,410
	DRY	4,410
	TOTAL	8,820
STORAGE PROVIDED (CUBIC FEET):	WET	8,157
	DRY	9,164
	TOTAL	17,321
EXISTING GROUND ELEVATION	334.0	
TOP EMBANKMENT ELEVATION	340.0	
WEIR CREST ELEVATION	336.33	
DRY STORAGE ELEVATION	336.33	
WET STORAGE ELEVATION	334.0	
CLEANOUT ELEVATION	332.0	
BOTTOM ELEVATION	328.0	
DEPTH OF CHANNEL (d)	N/A	
OUTLET WIDTH (b)	N/A	
BOTTOM DIMENSION	55x15	
BASIN SIDE SLOPES	3:1	
BASIN DEPTH	C/O	2.0
	WET	6.0
	DRY	8.33
BARREL DIAMETER	24"	
RISER DIMENSIONS (PER SIDE)	4'	
WET STORAGE ZONE ELEVATION	328.0-334.0	
DRY STORAGE ZONE ELEVATION	334.0-336.33	

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
*Walter R. Hall* 11-5-07  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
*Cindy Hunt* 11/2/07  
CHIEF DIVISION OF LAND DEVELOPMENT DATE

*John P. ...* 11/14/07  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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. 25422. Expiration Date: 07/26/08.

*[Signature]* 9/25/07  
DATE

- DRAWING LEGEND**
- 682 EXISTING MINOR CONTOUR (2' INTERVAL)
  - 680 EXISTING MAJOR CONTOUR (10' INTERVAL)
  - ADJACENT PROPERTY LINE
  - EXISTING PROPERTY BOUNDARY
  - EX. ROAD / EDGE OF PAVING
  - EX. SEWER LINE & MANHOLES, CLEAN-OUTS
  - EX. OVERHEAD ELECTRIC & UTILITY POLES
  - 682 PROPOSED MINOR CONTOUR (2' INTERVAL)
  - 680 PROPOSED MAJOR CONTOUR (10' INTERVAL)
  - PROP. STANDARD CURB & GUTTER / PROP. REVERSE CURB & GUTTER
  - PROP. MOUNTABLE CURB & GUTTER / PROP. REVERSE/MOUNTABLE CURB & GUTTER
  - PROPOSED PRIVATE ROAD/DRIVE CENTERLINE
  - EX. BUILDING
  - PROPOSED HOUSE
  - PROPOSED SPOT ELEVATION & FLOW ARROW
- EXISTING TREES
  - PROPOSED ORNAMENTAL TREE
  - PROPOSED SHADE TREE
  - PROPOSED EVERGREEN TREE
  - EXISTING TREELINE
  - EXISTING SHRUB/BRUSH LINE
  - PROP. 18" D. STORM DRAIN W/ INLETS & MANHOLE
  - PROP. 18" AGIP
  - PROP. 6" W. WATER LINE & HYDRANT
  - RIP-RAP
  - SILT FENCE
  - SSP SUPER SILT FENCE
  - STABILIZED CONSTRUCTION ENTRANCE
  - PROPOSED TREELINE
  - PROPOSED LIMIT OF DISTURBANCE
  - EARTH DIKE
  - OFFSITE FUTURE CONTOURS
  - ECM EROSION CONTROL MATTING

**DATA SOURCES:**  
TOPOGRAPHY SHOWN HEREON BASED ON A FIELD SURVEY PREPARED BY DEMARIO DESIGN CONSULTANTS, INC. DATED MARCH, 2006. BOUNDARY SHOWN HEREON IS BASED ON RECORDED PLATS BY OTHERS.

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eMail: dmd@demariodesign.com

**OWNER:** EMERSON LAND BUSINESS TRUST  
10275 LITTLE PATUXENT PKWY  
COLUMBIA, MD 21044  
410-992-6000

**DEVELOPER:** GENERAL GROWTH PROPERTIES  
10275 LITTLE PATUXENT PKWY  
COLUMBIA, MD 21044  
410-992-6000

**SITE ADDRESS:** SKYLARK BOULEVARD

**FINAL ROAD CONSTRUCTION PLANS**  
EMERSON SECTION 2, PHASE 8A  
LOTS 1 THRU 4 & 6 THRU 8 OPEN SPACE LOTS 5 & 9

**GRADING & SEDIMENT CONTROL PLAN**

6TH ELECTION DISTRICT HOWARD COUNTY, MD

REVISIONS				
NO.	DESCRIPTION OF CHANGES	DRN.	REV.	DATE
1	CO. FILE # F-07-128	DES. BY:	WRD/JCO	
2	TAX ACC. #	DRN. BY:	JCO	
3	TAX MAP: 47	CHK. BY:	RBWMRT	
4	BLOCK/GRID: 8	DATE:	09.25.07	
5	PARCEL #:	DDC JOB#:	05122.2	
6	ZONE/USE: PEKMD3	SHEET NUMBER:		
7	DWG. SCALE: AS SHOWN			



TABLE 25: PERMANENT SEEDING FOR LOW MAINTENANCE AREAS  
HARDNESS ZONE 6b

MIX	SEED MIX USE CERTIFIED MATERIAL IF AVAILABLE	PLANTING LBS./AC. 1000 SF	SITE CONDITIONS	USDA HARDNESS ZONES	3/1-5/15	5/16-8/14	8/15-11/15	11/16-2/31	2/31-5/15	5/16-8/14	8/15-11/15	11/16-2/31	2/31-5/15	5/16-8/14	8/15-11/15	11/16-2/31	2/31-5/15
1	TALL FESCUE (75%) CANADA BLUEGRASS (10%) KENTUCKY BLUEGRASS (10%) REDTOP (5%)	150 3.4	MOIST TO DRY	6b													
2	KENTUCKY BLUEGRASS (50%) CREEPING RED FESCUE OR A HARD FESCUE (40%) REDTOP (10%)	150 3.4	MOIST TO MODERATELY DRY	6b													
3	TALL FESCUE (85%) PERENNIAL RYEGRASS (10%) KENTUCKY BLUEGRASS (5%)	125 2.9	MOIST TO DRY	6b													
4	RED FESCUE OR CHEWING FESCUE (80%) PERENNIAL RYEGRASS (20%)	60 92 60 92 15 34	MOIST TO DRY	6b													
5	TALL FESCUE (85%) OR, PERENNIAL RYEGRASS (50%) PLUS CROWNVEITCH OR FLATPEA	110 2.5 20 46 20 46 20 46	MOIST TO DRY	6b													
6	WEEPING LOVEGRASS (17%) SERECIA LESPEDEZA (83%)	4 09 2 46	DRY TO VERY DRY	6b													
7	TALL FESCUE (83%) WEEPING LOVEGRASS (2%) SERECIA LESPEDEZA(15%)	110 2.5 3 07 20 46	DRY TO VERY DRY	6b													
8	REEDY CANARYGRASS (75%) REDTOP (6%) PLUS BIRDSFOOT TREFLOIL (19%)	40 92 3 07 10 23	WET TO MODERATELY DRY	6b													
9	TALL FESCUE (86%) POA TRIVIALIZE (7%) BIRDSFOOT TREFLOIL (7%)	125 2.9 10 23 10 23	WET TO MODERATELY DRY	6b													
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 3.4 30 69	WET TO DRY	6b													
11	HARD FESCUE (100%)	.75 3.4	MOIST TO DRY	6b													

NOTES: A/ USED BY SHA ON SLOPED AREAS. ADD A LEGUME FOR SLOPES > THAN 3:1  
B/ USED IN MEDIAN AREAS BY SHA. SHADE TOLERANT  
C/ POPULAR MIX - PRODUCES PERMANENT GROUNDCOVER QUICKLY. BLUEGRASS QUICKENS STAND.  
D/ BEST USE ON SHADY SLOPES NOT ON POORLY DRAINED CLAYS.  
E/ USE ON LOW MAINTENANCE, STEEP SLOPES. USE TALL FESCUE IN DRAUGHT CONDITIONS. CROWN VETCH BEST FOR 5b, 6a, 6b.  
F/ SUITABLE FOR SEEDING IN MIDSUMMER.  
G/ WEEPING LOVEGRASS MAY BE SEEDED WITH TALL FESCUE IN MID-SUMMER. SERECIA LESPEDEZA IS BEST SUITED FOR ZONES 7a & 7b.  
H/ USE ON POORLY DRAINED SOILS - DITCHES OR WATERWAYS. BIRDSFOOT TREFLOIL IS BEST FOR ZONES 5a, 6a ABOVE 2,000 FT.  
I/ USE IN AREAS OF MOIST SHADE. POA TRIVIALIZE THRIVES IN WET SHADY AREAS.  
J/ TALL FESCUE MAY BE SEEDING ALONE. THE HARD FESCUE PROVIDES BETTER SHADE TOLERANCE AND PRODUCES A BETTER STAND.  
K/ LOW FERTILITY GRASS. REQUIRES INFREQUENT MOWING. GOOD COMPANION FOR WILDFLOWERS.

TABLE 26 TEMPORARY SEEDING RATES, DEPTHS, AND DATES (HARDNESS ZONE 6b)

SPECIES	MINIMUM SEEDING RATES		PLANTING DEPTH INCHES	DATE	
	PER ACRE	LBS./1000 SQ.FT.		3/1-4/30	5/1-11/15
CHOOSE ONE:					
BARLEY	122 lbs	2.80	1-2	X	10/15
RYE	96 lbs	2.21	1-2	X	10/15
RYE PLUS FOXTAIL MILLET	140 lbs	3.22	1-2	X	10/15
BARLEY OR RYE PLUS FOXTAIL MILLET	150 lbs	3.45	1	X	10/15
WEEPING LOVEGRASS	4 lbs	.09	1/4-1/2	X	-
ANNUAL RYEGRASS	50 lbs	1.15	1/4-1/2	X	11/1
MILLET	50 lbs	1.15	1/2	X	-

Note: Select one or more of the species or mixtures listed on Table 26 for the appropriate plant hardness zone.

BY THE DEVELOPER:  
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL 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.

DEVELOPER: *Paul G. Cavallaro* DATE: 9/25/07

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

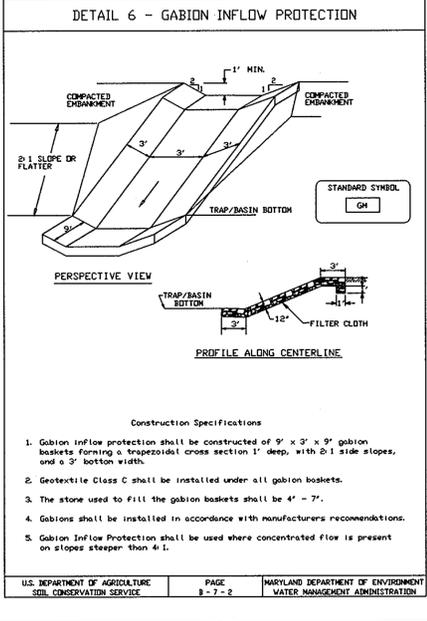
ENGINEER: *Michael J. ...* DATE: 9/25/07

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES SERVICE DATE: 10/9/07

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DATE: 10/9/07



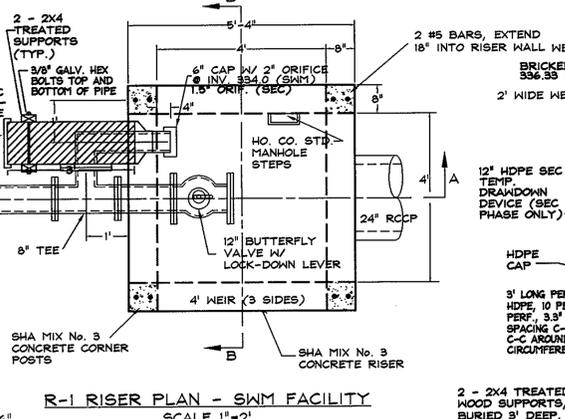
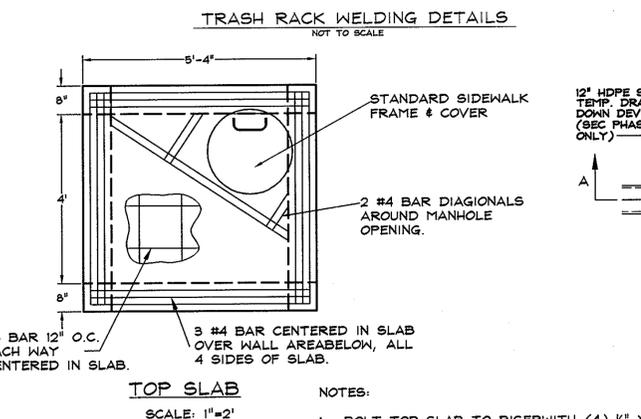
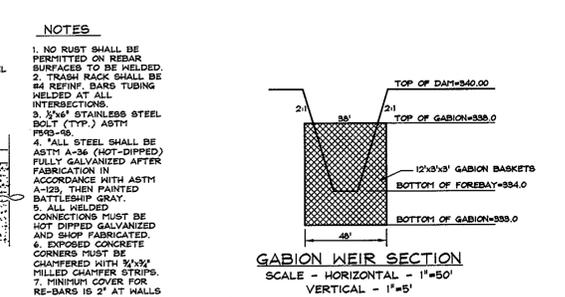
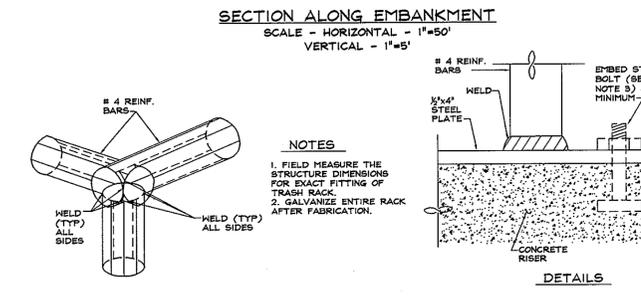
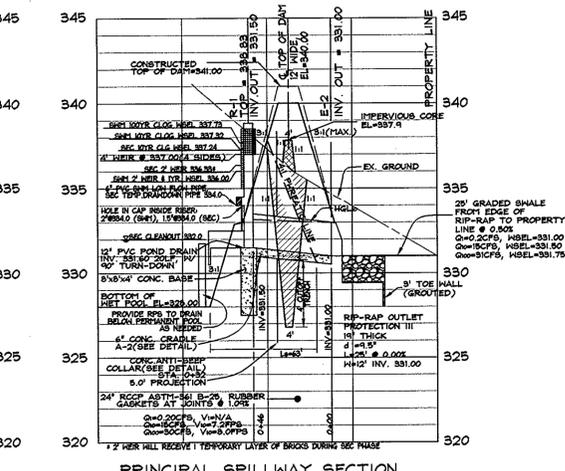
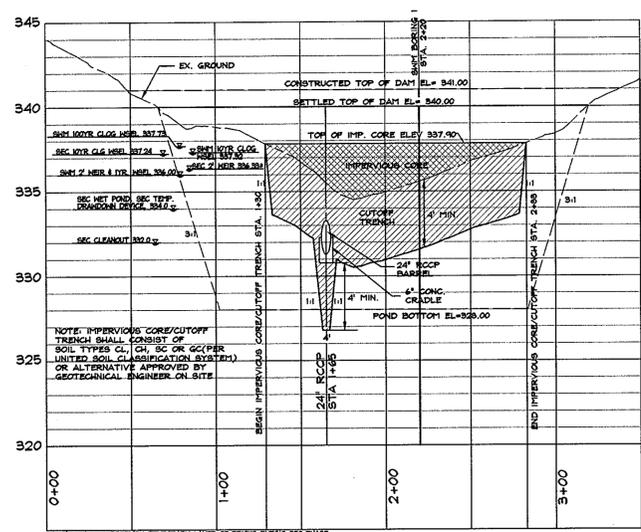
STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Section I - Vegetative Stabilization Methods and Materials

A. Site Preparation  
I. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, waterways, or sediment basins.  
II. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.  
III. Schedule required soil test to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.  
B. Soil Amendments (Fertilizer and Lime Specifications)  
I. Soil test must be performed to determine the exact ratios and application rates for both lime and fertilizer. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.  
II. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment or container. Fertilizers shall all be delivered to the job fully and in accordance with the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.  
III. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 90% will pass through a #100 mesh sieve and 98% - 100% will pass through a #20 mesh sieve.  
IV. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.  
C. Seedbed Preparation  
I. Temporary Seeding  
a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable equipment or containers, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or graded smooth, but left in the roughened condition. Sloped areas (greater than 3:1) shall be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.  
b. Apply fertilizer and lime as prescribed on the plans.  
c. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.  
II. Permanent Seeding  
a. Minimum soil conditions required for permanent vegetative establishment  
1. Soil pH shall be between 6.0 and 7.0  
2. Soluble salts shall be less than 500 parts per million (ppm).  
3. The soil shall contain less than 40% clay but enough fine grained material (0.30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then a sandy soil (< 30% silt plus clay) would be acceptable.  
4. Soil shall contain 1.5% minimum organic matter by weight.  
5. Soil must contain sufficient pore space to permit adequate root penetration.  
6. If these conditions cannot be met by the soils on site, adding topsoil is required in accordance with section 4 of Standard and Specification for Topsoil.  
b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 - 5" to permit bond to the surface and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.  
c. Apply soil amendments as per soil test or as included on the plans.  
d. Mix soil amendments into the top 3 - 5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and study the area for seed application where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or roller. On steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Topsoil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.  
D. Seed Specifications  
I. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.  
Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.  
II. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used for legumes other than the ones specified on the drawings. Inoculants directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to use inoculant as soon as possible after the seed is sown. Inoculants above 75-80 F. can weaken bacteria and make the inoculant less effective.  
E. Methods of Seeding  
I. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast of drop seeder, or a cut/packer seeder.  
a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen maximum of 10 lbs./ac. or total of soluble nitrogen (phosphorus) 200 lbs/ac.; K2O (potassium) 200 lbs/ac.  
b. Use - use only ground agricultural limestone, (up to 3 tons per acre may be applied by broadcast or drop seeder, or cut/packer seeder) in conjunction with hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.  
c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.  
II. Dry Seeding: This includes use of conventional drop or broadcast spreaders.  
a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the drawings or the summaries in Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed contact.  
b. Where practical, seed should be applied in two directions perpendicular to each other, apply half the seeding rate in each direction.  
III. Drill or Cut/packer Seeding: Mechanized seeders that apply and cover seed with soil.  
a. Cut/packer seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.  
b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.  
F. Mulch Specifications (In order of preference)  
I. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color and shall not be moldy, caked, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.  
II. Wood Cellulose Fiber Mulch (WCFM)  
a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.  
b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly sprayed slurry.  
c. WCFM, including dye, shall contain no germination or growth inhibiting factors.  
d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber will remain in a uniform liquid suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a mat-like covering on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.  
e. WCFM material shall contain no elements or compounds at concentration levels that will be phytotoxic.  
f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm, diameter approximately .005, pH range of 4.0 to 8.5, ash content of 10% maximum and water holding capacity of 100 gallons of water per ton.  
Note: Only sterile straw mulch should be used in areas where one species of grass is desired.  
G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.  
I. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained during seeding season returns and seeding can be performed in accordance with these specifications.  
II. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of 1" and 2" of height. Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.  
III. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.  
IV. Application of liquid binders should be heavier at the edges where wind catches much, such as on valley or on steep slopes. The remaining area should be covered with a uniform 3:1:1 binder. Application Synthetic Binders - such as Acrylic ULR (Agro-Tack DC-10, Petrosol, Terra Tack II, Terra Tack Air) or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.  
IV. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.  
I. Incremental Stabilization -- Cut Slopes -- See G-20-6  
J. Incremental Stabilization -- Flat Slopes -- See G-20-7

21.0 STANDARDS & SPECIFICATIONS FOR TOPSOIL

Definition - Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.  
Purpose - To provide a suitable soil medium for vegetative growth. Soils of sufficient depth to support plants or furnish continuing supplies of moisture and plant nutrients.  
Conditions Where Practice Applies  
I. This practice is limited to areas having 2:1 or flatter slopes where:  
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.  
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.  
c. The original soil to be vegetated contains material toxic to plant growth.  
d. The soil is so acidic that treatment with limestone is not feasible.  
II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.  
Construction and Material Specifications  
I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with the Maryland Department of Agriculture.  
II. Topsoil Specifications - Soil to be used as topsoil must meet the following:  
I. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist. Topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 2% by volume of cinders, stones, slag, coarse sand, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.  
II. Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.  
III. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be applied at the rate of 100-400 pounds per 1,000 square feet prior to the placement of topsoil. The limestone shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedure:  
I. Topsoil shall be applied at the rate of 100-400 pounds per 1,000 square feet.  
II. Topsoil shall be applied at the rate of 100-400 pounds per 1,000 square feet.  
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BY THE DEVELOPER:  
I ME CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER: *Paul G. Cavonius* 9/25/07

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

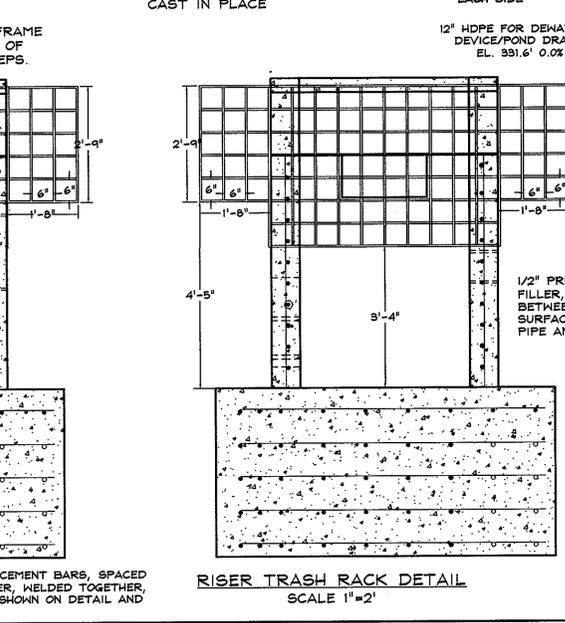
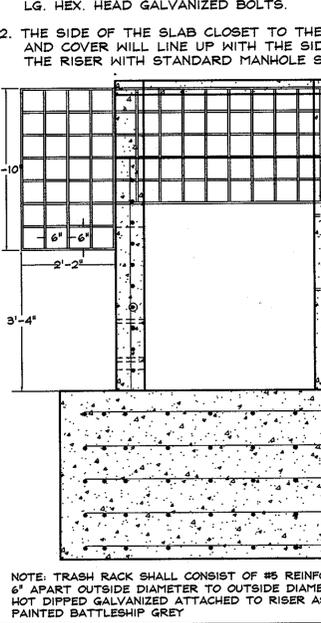
ENGINEER: *Mark W. W. W.* 10/5/07

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE: *Jim Mays* 10/9/07

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT: *Mark W. W. W.* 10/9/07



BORING LOG		BORING SWM-1	
The Robert B. Butler Company Geotechnical and Environmental Engineers Materials and Construction Inspection and Testing Telephone No. (410) 383-1555 www.rbbco.com			
CLIENT: General Growth Properties		PROJECT NAME: Emerson Section 2 Phase BA	
PROJECT LOCATION: Howard County, Maryland		PROJECT NUMBER: 14556-01 MD	
RIG: Truick CME 45	METHOD: Hollow Stem Auger	SAMPLER: 2.5" OD SS	HAMMER: 1450, FALL: 30", AUTOTYP
DATE STARTED: 3/18/06	COMPLETED: 3/18/06	DATE TIME	WATER LEVELS
DRILLER: Maurice Hardy	HELPER: Sam	LOGGERS: DEPTH (FEET) (DEPTH) (FEET) (DEPTH) (FEET)	WATER TEMPERATURE (TEMPERATURE) (TEMPERATURE) (TEMPERATURE)
REVIEWED BY: Katherine Cohn	SITE DELAYS	BULK SAMPLES	
LOCATION: As Shown	BULK SAMPLES: 0, 5		
DEPTH (FT)	SAMPLE TYPE AND NUMBER	MATERIAL DESCRIPTION	ATTENBERGS
0-1	1-1	SURFACE EL = 335.5	
1-1	1-2	2" GRADED SHALE	
1-2	1-3	2" GRADED SHALE	
1-3	1-4	2" GRADED SHALE	
1-4	1-5	2" GRADED SHALE	
1-5	1-6	2" GRADED SHALE	
1-6	1-7	2" GRADED SHALE	
1-7	1-8	2" GRADED SHALE	
1-8	1-9	2" GRADED SHALE	
1-9	1-10	2" GRADED SHALE	
1-10	1-11	2" GRADED SHALE	
1-11	1-12	2" GRADED SHALE	
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1-108	1-109	2" GRADED SHALE	
1-109	1-110	2" GRADED SHALE	
1-110	1-111	2" GRADED SHALE	
1-111	1-112	2" GRADED SHALE	
1-112	1-113	2" GRADED SHALE	
1-113	1-114	2" GRADED SHALE	
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1-115	1-116	2" GRADED SHALE	
1-116	1-117	2" GRADED SHALE	
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1-118	1-119	2" GRADED SHALE	
1-119	1-120	2" GRADED SHALE	
1-120	1-121	2" GRADED SHALE	
1-121	1-122	2" GRADED SHALE	
1-122	1-123	2" GRADED SHALE	
1-123	1-124	2" GRADED SHALE	
1-124	1-125	2" GRADED SHALE	
1-125	1-126	2" GRADED SHALE	
1-126	1-127	2" GRADED SHALE	
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1-166	1-167	2" GRADED SHALE	
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1-169	1-170	2" GRADED SHALE	
1-170	1-171	2" GRADED SHALE	
1-171	1-172	2" GRADED SHALE	
1-172	1-173	2" GRADED SHALE	
1-173	1-174	2" GRADED SHALE	
1-174	1-175	2" GRADED SHALE	
1-175	1-176	2" GRADED SHALE	
1-176	1-177	2" GRADED SHALE	
1-177	1-178	2" GRADED SHALE	
1-178	1-179	2" GRADED SHALE	
1-179	1-180	2" GRADED SHALE	
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1-188	1-189	2" GRADED SHALE	
1-189	1-190	2" GRADED SHALE	
1-190	1-191	2" GRADED SHALE	
1-191	1-192	2" GRADED SHALE	
1-192	1-193	2" GRADED SHALE	
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1-195	1-196	2" GRADED SHALE	
1-196	1-197	2" GRADED SHALE	
1-197	1-198	2" GRADED SHALE	
1-198	1-199	2" GRADED SHALE	
1-199	1-200	2" GRADED SHALE	
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1-207	1-208	2" GRADED SHALE	
1-208	1-209	2" GRADED SHALE	
1-209	1-210	2" GRADED SHALE	
1-210	1-211	2" GRADED SHALE	
1-211	1-212	2" GRADED SHALE	
1-212	1-213	2" GRADED SHALE	
1-213	1-214	2" GRADED SHALE	
1-214	1-215	2" GRADED SHALE	
1-215	1-216	2" GRADED SHALE	
1-216	1-217		



STREET TREE TABULATION

TREES REQUIRED	(SKYLARK BOULEVARD)*
6	237 L.F. @ 1 TREE/40 L.F. = 237/40 = 5.925
4	147 L.F. @ 1 TREE/40 L.F. = 147/40 = 3.675
12	480 L.F. @ 1 TREE/40 L.F. = 480/40 = 12

STREET TREES REQUIRED: 22 TOTAL  
STREET TREES PROVIDED: 21 TOTAL

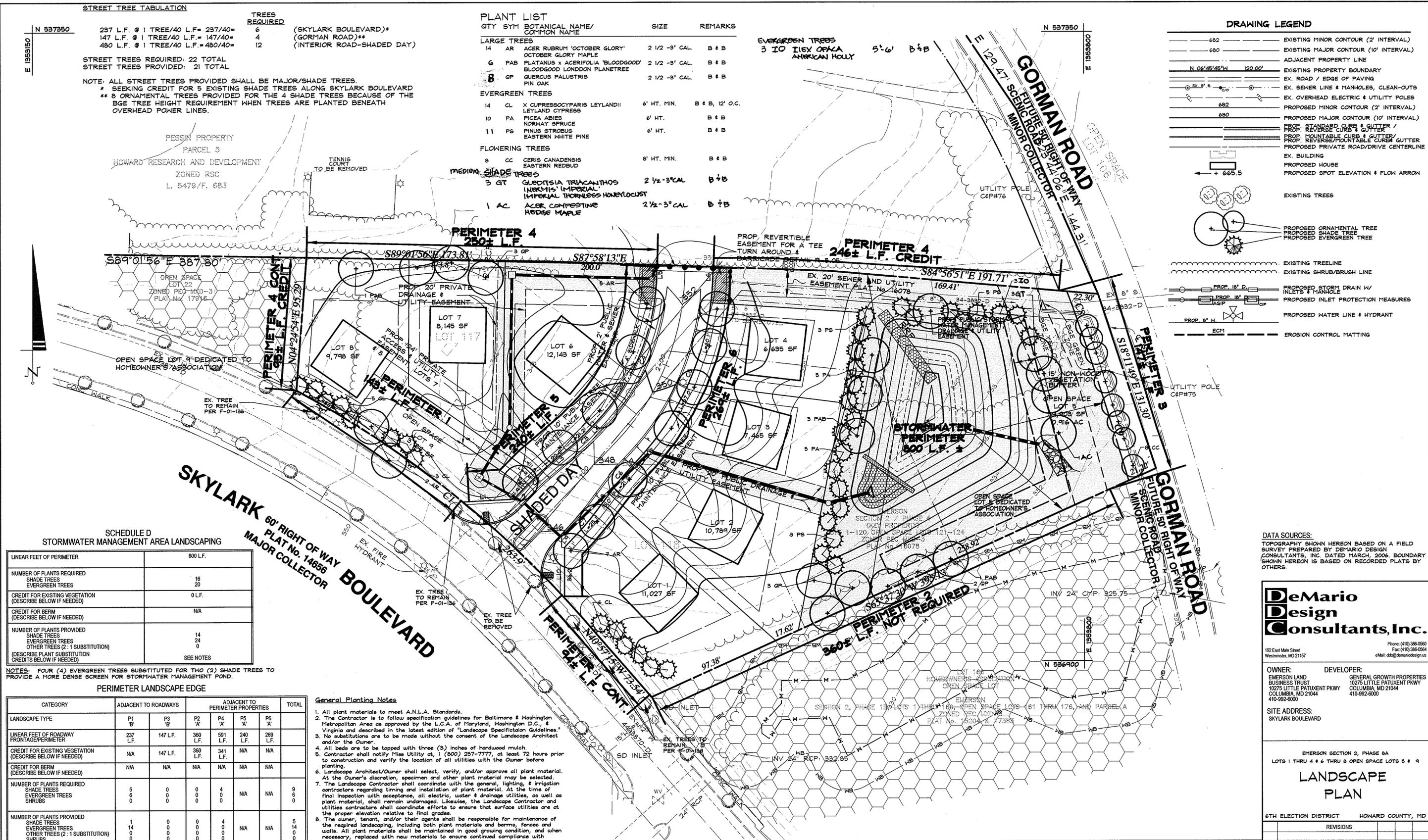
NOTE: ALL STREET TREES PROVIDED SHALL BE MAJOR/SHADE TREES.  
\* SEEKING CREDIT FOR 5 EXISTING SHADE TREES ALONG SKYLARK BOULEVARD  
\*\* 8 ORNAMENTAL TREES PROVIDED FOR THE 4 SHADE TREES BECAUSE OF THE BGE TREE HEIGHT REQUIREMENT WHEN TREES ARE PLANTED BENEATH OVERHEAD POWER LINES.

PLANT LIST

QTY	SYM	BOTANICAL NAME/ COMMON NAME	SIZE	REMARKS
14	AR	ACER RUBRUM 'OCTOBER GLORY'	2 1/2 -3" CAL.	B & B
6	PAB	PLATANUS X ACERIFOLIA 'BLOODGOOD'	2 1/2 -3" CAL.	B & B
8	QP	QUERCUS PALUSTRIS PIN OAK	2 1/2 -3" CAL.	B & B
<b>EVERGREEN TREES</b>				
14	CL	X CUPRESSOCYPARIS LEYLANDII LEYLAND CYPRESS	6' HT. MIN.	B & B, 12' O.C.
10	PA	PICEA ABIES NORWAY SPRUCE	6' HT.	B & B
11	PS	PINUS STROBUS EASTERN WHITE PINE	6' HT.	B & B
<b>FLOWERING TREES</b>				
8	CC	CERIS CANADENSIS EASTERN REDBUD	8' HT. MIN.	B & B
3	GT	GLADIOLUS TRIACANTHOS IMPERIAL THORNLESS HONEYLOCUST	2 1/2 -3" CAL.	B & B
1	AC	ACER COMPESTINE HEDGE MAPLE	2 1/2 -3" CAL.	B & B

DRAWING LEGEND

682	EXISTING MINOR CONTOUR (2' INTERVAL)
680	EXISTING MAJOR CONTOUR (10' INTERVAL)
N 06°45'48"W 120.00'	EXISTING PROPERTY BOUNDARY
EX. ROAD / EDGE OF PAVING	EXISTING ROAD / EDGE OF PAVING
EX. SENER LINE & MANHOLES, CLEAN-OUTS	EXISTING SENER LINE & MANHOLES, CLEAN-OUTS
EX. OVERHEAD ELECTRIC & UTILITY POLES	EXISTING OVERHEAD ELECTRIC & UTILITY POLES
682	PROPOSED MINOR CONTOUR (2' INTERVAL)
680	PROPOSED MAJOR CONTOUR (10' INTERVAL)
PROP. STANDARD CURB & GUTTER / PROP. REVERSE CURB & GUTTER	PROPOSED STANDARD CURB & GUTTER / PROP. REVERSE CURB & GUTTER
PROP. MOUNTABLE CURB & GUTTER / PROP. REVERSE MOUNTABLE CURB & GUTTER	PROPOSED MOUNTABLE CURB & GUTTER / PROP. REVERSE MOUNTABLE CURB & GUTTER
PROP. PRIVATE ROAD/DRIVE CENTERLINE	PROPOSED PRIVATE ROAD/DRIVE CENTERLINE
EX. BUILDING	EXISTING BUILDING
PROPOSED HOUSE	PROPOSED HOUSE
PROPOSED SPOT ELEVATION & FLOW ARROW	PROPOSED SPOT ELEVATION & FLOW ARROW
EXISTING TREES	EXISTING TREES
PROPOSED ORNAMENTAL TREE	PROPOSED ORNAMENTAL TREE
PROPOSED SHADE TREE	PROPOSED SHADE TREE
PROPOSED EVERGREEN TREE	PROPOSED EVERGREEN TREE
EXISTING TREELINE	EXISTING TREELINE
EXISTING SHRUB/BRUSH LINE	EXISTING SHRUB/BRUSH LINE
PROP. 18" D. STORM DRAIN W/ INLETS & MANHOLE	PROPOSED 18" D. STORM DRAIN W/ INLETS & MANHOLE
PROP. 18" MAGIF	PROPOSED 18" MAGIF
PROP. 8" W. WATER LINE & HYDRANT	PROPOSED 8" W. WATER LINE & HYDRANT
ECM	EROSION CONTROL MATTING



SCHEDULE D  
STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	800 L.F.
NUMBER OF PLANTS REQUIRED	
SHADE TREES	16
EVERGREEN TREES	20
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	0 L.F.
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)	N/A
NUMBER OF PLANTS PROVIDED	
SHADE TREES	14
EVERGREEN TREES	24
OTHER TREES (2:1 SUBSTITUTION)	0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	SEE NOTES

NOTES: FOUR (4) EVERGREEN TREES SUBSTITUTED FOR TWO (2) SHADE TREES TO PROVIDE A MORE DENSE SCREEN FOR STORMWATER MANAGEMENT POND.

PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS			ADJACENT TO PERIMETER PROPERTIES			TOTAL
	P1 'B'	P3 'B'	P2 'A'	P4 'A'	P5 'A'	P6 'A'	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	237 L.F.	147 L.F.	360 L.F.	591 L.F.	240 L.F.	269 L.F.	
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	N/A	147 L.F.	360 L.F.	341 L.F.	N/A	N/A	
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	
NUMBER OF PLANTS REQUIRED							
SHADE TREES	5	0	0	4	N/A	N/A	9
EVERGREEN TREES	6	0	0	0			6
SHRUBS	0	0	0	0			0
NUMBER OF PLANTS PROVIDED							
SHADE TREES	1	0	0	4	N/A	N/A	5
EVERGREEN TREES	14	0	0	0			14
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0			0
SHRUBS	0	0	0	0			0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	.	**	***	****	*****	*****	

NOTES:  
\* EIGHT (8) EVERGREEN TREES WERE SUBSTITUTED FOR FOUR (4) SHADE TREES TO PROVIDE MORE OPAQUE VEGETATIVE SCREEN ALONG SKYLARK BOULEVARD.  
\*\* PERIMETER 3 PLANTING REQUIREMENTS WERE REDUNDANT SCREENING DUE TO STORMWATER MANAGEMENT POND SCREENING REQUIREMENTS.  
\*\*\* PERIMETER 2 ADJACENT PROPERTY IS ALSO WITHIN EMERSON SUBDIVISION; THEREFORE, NO SCREENING IS REQUIRED ALONG THIS PERIMETER.  
\*\*\*\* PERIMETER 4 341 L.F. OF CREDIT IS SOUGHT DUE TO 246 L.F. OF REDUNDANT STORMWATER PERIMETER & 95 L.F. OF PERIMETER SHARED WITH ADJACENT LOT IN THE EMERSON SUBDIVISION.  
\*\*\*\*\* PERIMETER 5 & 6 ARE REPRESENT SINGLE FAMILY DETACHED WITH A "FRONT" ORIENTATION TO A PUBLIC STREET THEREFORE NO SCREENING IS REQUIRED.

General Planting Notes

- All plant materials to meet A.N.L.A. Standards.
- The Contractor is to follow specification guidelines for Baltimore & Washington Metropolitan Area as approved by the L.C.A. of Maryland, Washington D.C., & Virginia and described in the latest edition of "Landscape Specification Guidelines".
- No substitutions are to be made without the consent of the Landscape Architect and/or the Owner.
- All beds are to be topped with three (3) inches of hardwood mulch.
- Contractor shall notify the Utility at 1 (800) 257-7777, at least 72 hours prior to construction and verify the location of all utilities with the Owner before planting.
- Landscape Architect/Owner shall select, verify, and/or approve all plant material. At the Owner's discretion, specimen and other plant material may be selected.
- The Landscape Contractor shall coordinate with the general, lighting, & irrigation contractors regarding timing and installation of plant material. At the time of final inspection with acceptance, all electric, water & drainage utilities, as well as plant material, shall remain undamaged. Likewise, the Landscape Contractor and utilities contractors shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.
- 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.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Ho. Co. Code. Financial surety for the required landscaping in the amount of \$11,400.00 must be posted as part of the Developer's Agreement (25 shade trees, 25 evergreen trees).
- Developer/Builder'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, the Howard County Landscape Manual and the Emerson Landscape Design Criteria. I/We further certify that, upon completion, a letter of landscape installation, accompanied by an executed one-year guarantee of the plant materials, will be submitted to the Department of Planning and Zoning.

*Paul J. Canavanagh* 9/25/07  
NAME DATE

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
*Walter J. ...* 11-5-07  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
*Walter J. ...* 11/21/07  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Andrew J. Stine* 11/14/07  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE 9/25/2007

STATE OF MARYLAND  
ANDREW J. STINE  
LANDSCAPE ARCHITECT

ANDREW J. STINE  
LANDSCAPE ARCHITECT NO. 3222

DATA SOURCES:  
TOPOGRAPHY SHOWN HEREON BASED ON A FIELD SURVEY PREPARED BY DEMARIO DESIGN CONSULTANTS, INC. DATED MARCH, 2006. BOUNDARY SHOWN HEREON IS BASED ON RECORDED PLATS BY OTHERS.

**DeMario Design Consultants, Inc.**  
192 East Main Street  
Westminster, MD 21157  
Phone: (410) 386-6560  
Fax: (410) 386-6564  
eMail: ddc@demariodesign.us

OWNER: EMERSON LAND BUSINESS TRUST  
10275 LITTLE PATUXENT PKWY  
COLUMBIA, MD 21044  
410-992-6000

DEVELOPER: GENERAL GROWTH PROPERTIES  
10275 LITTLE PATUXENT PKWY  
COLUMBIA, MD 21044  
410-992-6000

SITE ADDRESS:  
SKYLARK BOULEVARD

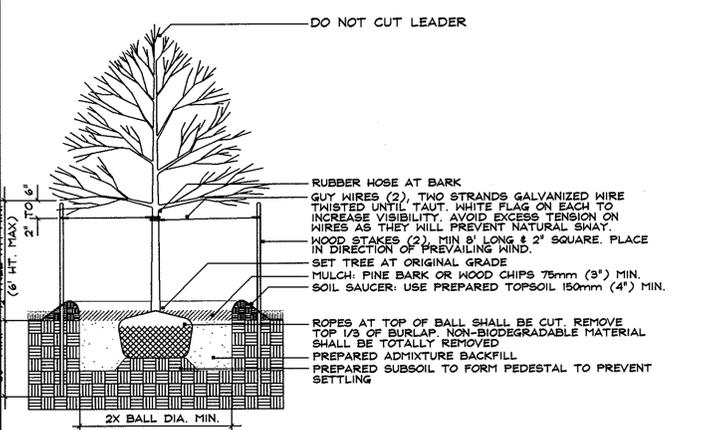
EMERSON SECTION 2, PHASE 8A  
LOTS 1 THRU 4 & 6 THRU 8 OPEN SPACE LOTS 5 & 9

**LANDSCAPE PLAN**

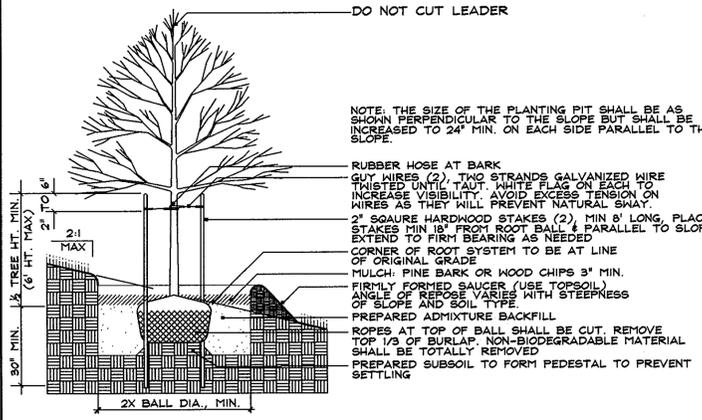
6TH ELECTION DISTRICT HOWARD COUNTY, MD

REVISIONS

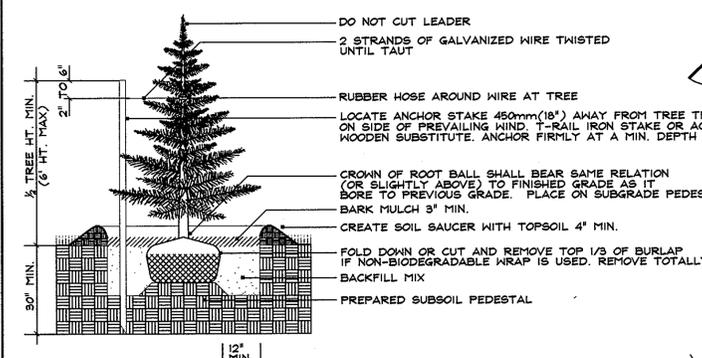
NO.	DESCRIPTION OF CHANGES	DRN.	REV.	DATE
CO. FILE #	F-07-128	DES. BY:	CVL	
TAX ACC. #		DRN. BY:	CVL	
TAX MAP:	47	CHK. BY:	AJS	
BLOCK/GRID:	8	DATE:	09.25.07	
PARCEL #	PJO 1053	DDC JOB#:	05122.2	
ZONE/USE:	PECMX3	SHEET NUMBER:		
DWG. SCALE:	1"=30'			



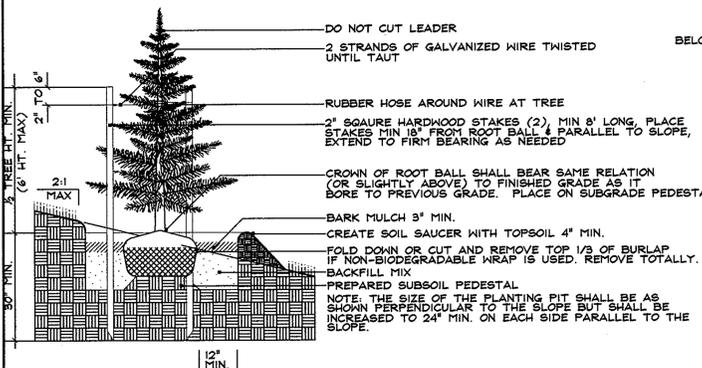
DECIDUOUS TREE PLANTING (LESS THAN 3" CAL.)  
N.T.S.



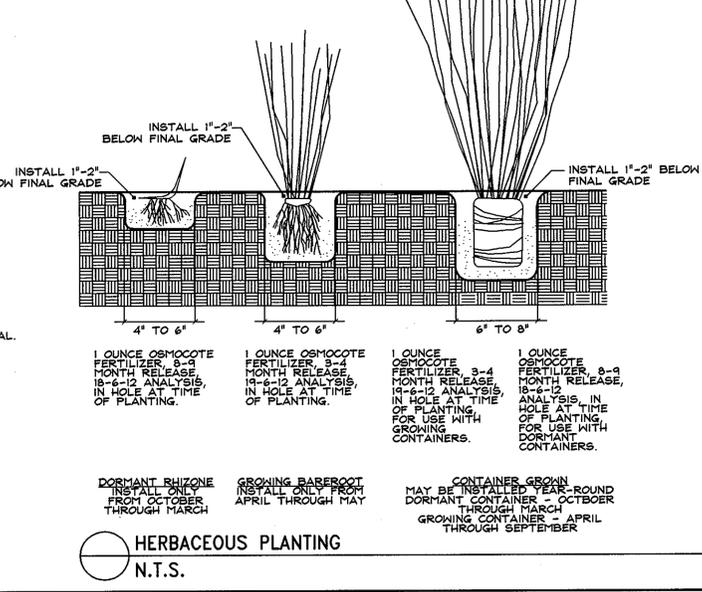
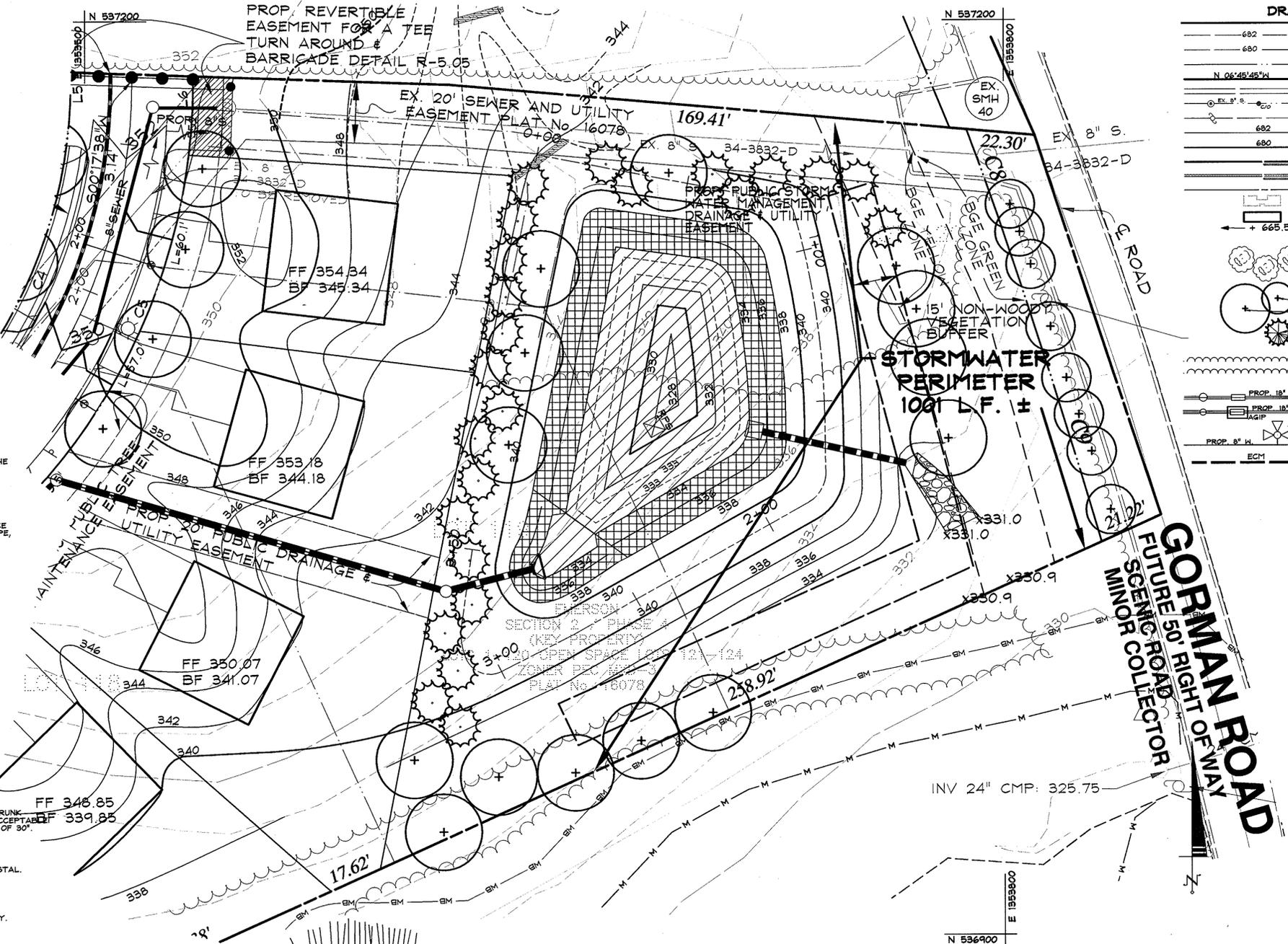
DECIDUOUS TREE PLANTING ON SLOPE (LESS THAN 3" CAL.)  
N.T.S.



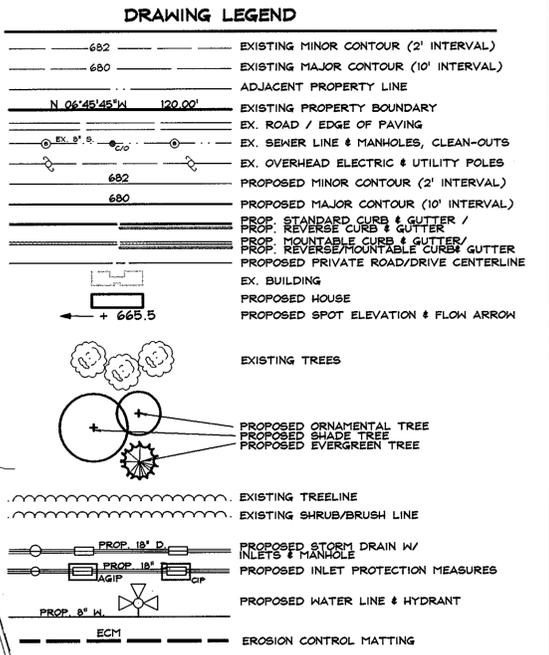
EVERGREEN TREE PLANTING  
N.T.S.



EVERGREEN TREE PLANTING ON SLOPE  
N.T.S.



HERBACEOUS PLANTING  
N.T.S.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 With Robert A. [Signature] 11-5-07  
 CHIEF, BUREAU OF HIGHWAYS  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 11/21/09  
 CHIEF DIVISION OF LAND DEVELOPMENT  
 [Signature] 11/14/07  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATA SOURCES:  
 TOPOGRAPHY SHOWN HEREON BASED ON A FIELD SURVEY PREPARED BY PEDIARIO DESIGN CONSULTANTS, INC. DATED MARCH, 2006. BOUNDARY SHOWN HEREON IS BASED ON RECORDED PLATS BY OTHERS.

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 192 East Main Street  
 Westminster, MD 21157  
 Phone: (410) 386-0560  
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OWNER: EMERSON LAND BUSINESS TRUST  
 DEVELOPER: GENERAL GROWTH PROPERTIES  
 10275 LITTLE PATUXENT PKWY  
 COLUMBIA, MD 21044  
 410-992-6000

SITE ADDRESS:  
 SKYLARK BOULEVARD

FINAL ROAD CONSTRUCTION PLANS  
 EMERSON SECTION 2, PHASE 8A  
 LOTS 1 THRU 4 & 6 THRU 8 OPEN SPACE LOTS 5 & 9

**LANDSCAPE DETAILS AND NOTES**

6TH ELECTION DISTRICT HOWARD COUNTY, MD

NO.	DESCRIPTION OF CHANGES	DRN.	REV.	DATE
CO. FILE #	F-07-128	DES. BY:	CVL	
TAX ACC. #		DRN. BY:	CVL	
TAX MAP:	47	CHK. BY:	AJS	
BLOCK/GRID:	8	DATE:	09.25.07	
PARCEL#	P/O 1053	DDC JOB#:	05122.2	
ZONE/USE:	PECM03	SHEET NUMBER:		
DWG. SCALE:	1"=20'			9 of 9

**WATER QUALITY PLANNING PLAN \*\***

**ZONE "A" (3,703 ± S.F.)**

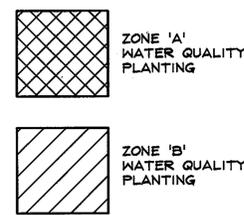
SPECIES	SIZE	SPACING	QUANTITY	REMARKS
SCIRPUS TABERNAEMONTANII	QUART CONTAINER #	36"	80	OBL
IRIS PSEUDACORIS	QUART CONTAINER #	36"	80	OBL
LOBELIA CARDINALIS	QUART CONTAINER #	36"	80	FACH
IRIS VERSICOLOR	QUART CONTAINER #	36"	80	OBL
PANICUM VIRGATUM	QUART CONTAINER #	36"	80	FAC
SAURURUS CERNUUS	QUART CONTAINER #	36"	80	OBL
TOTALS			480	

**ZONE "B" (4150 ± S.F.)**

SPECIES	SIZE	SPACING	QUANTITY	REMARKS
SAGITTARIA LATIFOLIA	QUART CONTAINER #	36"	266	OBL
PELTANDRA VIRGINICA	QUART CONTAINER #	36"	266	OBL
TOTALS			532	

\* DORMANT RHIZOMES OF SCIRPUS, IRIS AND SAURURUS, DORMANT TUBERS OF SAGITTARIA, AND 1ST YEAR BULBS OF PELTANDRA MAY BE SUBSTITUTED IF PLANTINGS ARE TO BE INSTALLED DURING THE DORMANT SEASON.  
 \*\* ALTERNATE SPECIES AND INSTALL IN RANDOM PATTERN, DISTRIBUTING EACH SPECIES ACROSS THE HYDROLOGIC GRADIENT OF EACH PLANTING ZONE. SINGLE SPECIES MASSINGS ARE TO BE AVOIDED.

**WATER QUALITY PLANTING LEGEND**



9/25/2007  
 DATE  
 ANDREW J. STINE  
 LANDSCAPE ARCHITECT NO. 3222