### GENERAL NOTES

Existing Zoning: PEC-MXD-3 per April 2004 Comprehensive Zoning Plan and ZB Case No. 979-m and the comp lite zoning regulation amendments effective on 7/28/06.

Deed Reference: 5289/330

Plat Reference: 15752 \$ 17382

5. Plat Reference: 15752 \$ 17582 4. Gross Area of Tract: 4.6492 ac. 5. Area of 100 Year Floodplain: N/A 5. Area of Steep Siopes: 0,00 ac. 7. Net Area of Tract: 4.6492 ac. 6. Number of Proposed Lots/Parcels: 50 6. Land for a Public Road will be dedicated under a plat to be submitted with the Final Plan for the Emerson.

10. This project is in conformance with the latest Howard County Standards unless waivers have

This project is in conformance with the latest Howard County Standards unless waivers have been approved.
 The existing topography shown hereon is based on a field survey prepared by DeMario Design Consultants, inc. dated March, 2006.
 This plan has been prepared in accordance with the provisions of section 16.124 of the Howard County code. Financial surety for the required landscaping in the amount of \$2,400.00 must be paid as part of the developer's agreement (4 shade trees, 8 evergreens).
 This project complies with the forest conservation requirements of Section 16.1200 of the Howard County Code and the Forest Conservation Manual because the obligation was previously addressed under F-01-137, F-01-145, F-02-55, and F-05-49. The forest conservation obligations for this site have been provided by 16.77 acres of retention and 5.03 acres of reforestation under F-05-49. No clearing, grading or construction is permitted within the Forest Conservation Easement; however, Forest Management Practices as defined in the deed of Forest Conservation Easement are allowed.
 The coordinates shown hereon are based upon the Howard County Geodetic Control, which is based upon the Maryland State Coordinate System. Howard County Monument No's 47DC \$ 47EB were used for this project.

were used for this project. This property is within the Metropolitan District.

16. Stormwater management for this development is provided under F-02-55 & F-01-145. This existing facility is a wet pond on adjacent H.O.A. lot 174 Emerson Section 2 Phase IB. The stormwater management facility is privately owned and jointly maintained (H.O.A. and Howard

County).

17. Existing utilities shown hereon are based on field surveys and record drawings.

18. There is no floodplain onsite as well as no steep slopes, streams or buffers onsite.

19. There are no wetlands onsite based on Plat 17382, recorded July 28, 2003.

20. Traffic study prepared by Wells & Associates, Inc. dated February, 2006..

21. The geotechnical study for this project was prepared by Hillis Carnes Engineering Associates, Inc. in February, 2006..

22. Project Background Information:

a) Subdivision Name: Emerson Section 2 Phase 3 Parcel D4 b) Tax Map/Block/Parcei: 47/8/3 c) Zoning: PEC-MXD-3 d) Election District: 6th e) Total (Gross) Tract Area: 4.6 ac. f) Number of Proposed Lots/Parcels: 45

g) Applicable Department of Planning & Zoning File No's: S-99-12(Key Property), F-03-13, P-02-15, WP-03-46, WP-99-96, PB-339, PB359, ZB-979M, P-06-12, SP-06-05, F-05-49 F-07-182.

23. There are no existing dwellings on the site.
24. The proposed access streets shall be public.
25. Sediment and erosion control measures will be provided in accordance with the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control.
26. Street trees are provided on the access street in accordance with Section 16.124 of the Howard County Subdivision Regulations.
27. Sidewalks are provided in accordance with Section 16.134 of the Howard County Subdivision Regulations. Sediment control is provided for this final plan.
28. Phasing for this project is in accordance with the Decision and Order for Zoning Board Case No. 979-M and the Decision and Order approved for PB-339 (Comprehensive Sketch Plan, S-99-12)

29. There are no historic structures or cemeteries located on the subject property.

30. The minimum building setback restrictions from property lines and public road right-of-way lines for the SFA residential lots shall be in accordance with the comprehensive sketch plan development criteria approved under S-99-12, PB-339 and PB-359.

31. No grading, removal of vegetative cover or trees, paving and new structures shall be permitted within the wetlands, stream or their required buffers, flood plain and forest conservation.

easement.
32. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications

if applicable.

33. 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.

34. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.

35. Traffic control devices, markings and signings shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD).

All street and regulatory signs shall be in place prior to placement of any apphalt

All street and regulatory signs shall be in place prior to placement of any asphalt.

36. 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) installed in the county right-of-way shall be mounted on a 2" galvanized steel, perforated, square tube post (14 gauge)

be mounted on a 2" galvanized steel, perforated, square tube post (14 gauge) inserted into a 2-1" galvanized steel, perforated, square tube sleeve (12 gauge) - 3" long. A galvanized steel pole cap shall be mounted on top of each post.

37. 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.

38. Water is public, Contract #24-4495D.

39. Sewer is public, Contract #24-4495D.

40. Parcel D-4 was allocated 45 units with the recordation of F-05-49, Plat Nos. 17381 thru 17383.

41. WP-04-14, Emerson 2/3, Bulk Parcel D-1 approved on September 10, 2003 Section 16.1106.h.(2) establishes the milestone date by which a sketch plan/preliminary equivalent sketch plan (for fee-simple lots) or a site plan (for condominium development or non-residential development) must be submitted when a bulk parcel is recorded on a record plat; and Section 16.144.(q), which provides that when a milestone date is not complied with, the plan shall be voided and all previous approvals and housing unit allocations rescinded.

42. A waiver request has been approved on 1/23/06 to waive Section 2.5.2.H of Design Manual, Volume III to reduce the required sight distance from 462' to 330'.

# FINAL ROAD CONSTRUCTION PLANS EMERSON PARCEL D4

A RESUBDIVISION OF EMERSON SECTION 2 PHASE 3 PARCEL D4 LOTS 1 THRU 45 AND OPEN SPACE LOTS 46 THRU 50 Site Analysis Data Chart

> LOCATION MAP: SCALE: 1"=100'

> > 6.5 (35.1%)

47.5 (68.3%)

3.4 (27.6%)

2.1 (70%) 1.0 (9.6%) 2.6 (8.9%)

1.3 (21.0%)

(E) Proposed density tabulations arehown for informational purposes only. Those tabulations will be reconciled against the maximum density tabulations with the last plat or phase.
 (F) Resubdivided by F 0625 to create 1.0 ac of credited Open Space
 (G) This is a resubdivision of SFD Land Use recorded with F 03-13

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.

7, 58 (26,3%)

This subdivision plan represents the resubdivision of F-02-55 for Phase 2/3.

EMERSON, SECTION 2 & 3 OVERALL DEVELOPMENT TRACKING CHART

9.4 (90.4%) -0-

Overall OR Density

(A) SFD acreage includes Common Open Areas (COA Lots). (B) Overall allowed density based on maximum number of units allowed per

ZB 979 M and Max. Allowed Land Use Acreages. (C) Max. density for any individual SFD area is 5.0 units/acr

TAX MAP 47, GRID 8, 6TH ELECTION DISTRICT

HOA OPEN SPACE

PARCEL P/0 1053 HOWARD COUNTY, MD

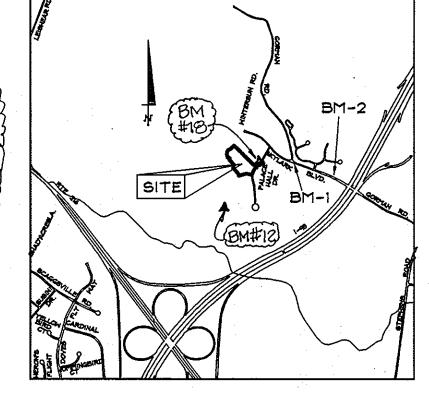
1. General Site Data

## DESCRIPTION

BENCHMARK

BENCHMARK #1 536615.0157 1353679.1226 47DC ELEV. 343.249 <u>BENCHMARK #2</u> N. 536212.7456 1354833.6403 ELEV. 354,296

BENCHMARK#18 N538184.56 E 1351577.43 ELEY, 359,41 BENCHMARK #12 N535808 AI E1353001.41 BM 12 ELEV.327.90



VICINITY MAP SCALE: 1"=2000"

a. Present Zoning: PEC MXD-3

b. Applicable DPZ File References: \$-99-12, PB-339, ZB-979-M, F-03-16, F-04-176, F-03-113, F-01-137, F-02-55, PB-359, F-04-127, P-01-17, WP-01-22, F-05-49, WP-01-14, WP-03-154, P-03-16, WP-04-14, SP-06-05.

c. Proposed Use of Site or Structure(S):\_\_SFA RESIDENTIAL\_\_ Proposed Water and Sewer Systems:\_\_X\_ Public - \_\_\_\_ Private Any Other Information Which May be Relevant: \_\_\_\_N/A\_\_\_

a. Total Area of Site 4.6492 Ac.

1. Parcel D-4 = 4.6 Ac.+/\_

b. Approximate Area of 100 Year Floodplain: O Acres

c. Approximate Area of Steep Slopes (25% or Greater): O Acres

d. Net Area of Site 4.6492 Ac.+/\_

e. Area of Proposed Building Lots: 2.5670 Acres

f. Area of Proposed Open Space Lots: 1.0942 Acres

g. Area of Bulk Parcels: O Acres

h. Area of Proposed Public Roads: 0.9880 Ac.+/\_

i. Area of Proposed Private Roads: 0.2 Ac. (Included in proposed open space).

3. Unit/Lot Tabulation

a. Total Number of Residential Units/Lots Allowed for Project by Right: 20 units per gross acre allowed for individual parcels per Emerson Development criteria in the OR zone with the overall density not to exceed 12.1 units per gross acre for entire OR zone.

1. Parcel D-4 = 9.7 Units

b. Total Number of Residential units/Lots Proposed on this Submission 1. Parcel D-4 = 45

THIS PLAN: 1.0942 Ac. (23.5%)

c. Density of Project Per Gross Acre: 9.7 units

d. Total number of Open Space lots proposed: 5

e. Total Number of Non - Buildable Buik Parcels Proposed: C

f. Total Number of Lots/ Parcels Proposed: 50 4. Open Space Tabulation

a. Open Space Required: 35%

b. Open Space Provided: F-02-55 A=6.5 AC.(35.1%)

5. Parking Tabulation

a. Parking Required: 90 spaces (45 Units x 2.0 spaces/units = 90 spaces)

DESCRIPTION COVER SHEET 2 FINAL ROAD CONSTRUCTION PLAN & PROFILE ROAD GEOMETRY, LIGHT, SIGNAGE AND M.O.T. PLAN GRADING & SEDIMENT CONTROL PLAN 5 SEDIMENT & EROSION CONTROL & SITE DETAILS STORM DRAIN DRAINAGE AREA MAP 8 STORM DRAIN PROFILES

DRAWING INDEX

LANDSCAPE PLAN DETAILS, NOTES AND STREET TREE PLAN

b. Parking Provided: 104 spaces

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING

			CUR	VE TABLE		
CURVE	RADIUS	LENGTH	DELTA	CHORD BRG.	CHORD DIST.	TANGENT
CI	440.00'	45.64	05'56'36"	N59'19'27'E	45.621	22.84
C2	60.00 <sup>1</sup>	48.02 <sup>1</sup>	45*5! 26"	579'16'52"W	46.751	25.38
СЗ	25.00 <sup>1</sup>	23,461	53*46'17'	N75*20'05"E	22.61 <sup>1</sup>	12.68
C4	478.10	540.31	64.45.02	S16.05,21M		303.12
C5	83.00	20.60	14*13'26"	S56*17'15"E	20.55¹	10.36
C6	67.00	22.81	19.30,18,	N58°55'41"W	22.701	11.52
C7	705.00	104.06	08'27'24	' N72°54'33"µ	103.961	52.12
ය	53.821	46.61	49'37'22	N51*41'37"E	45.17 <sup>1</sup>	24.88
<b>C9</b>	59.001	69.97	67*56'39	S19*55'16"W	65.94'	39.75
CIO	125.001	25.341	11'36'46"	S20'02'33"E	25.291	12.71
CII	17.001	21.74	73*15'29"	N50°51'55"W	20,291	12.64
C12	58.001	45.78	45*13'12"	S64*53'03"E	44.60'	24.15
CIB	58.001	46.45	45*52'56	N19'19'59"W	45.22'	24.55
C14	42.00	13.08	17.50,39"	S05*18'51"E	13.031	6.59
C15	85.001	93.321	62'54'04"	S45*41'12"E	88.70¹	51.99
C16	745.00	113.57	08*44'04'		113.461	56.90
C17	67.00	18.591	15*53'58"	S76*21'10"E	18.531	9.36
CIB	83.001	25.061	17"18"10"	N75°39'03"N	24.971	12.63

BOUNDARY SHOWN PER BOUNDARY SURVEY DATED JUNE, 1996 Prepared by Daft-Macune-Walker, Inc. soils(if Shown) taken from Howard County Soil Survey, 1968. Additional



SITE ADDRESS: PALACE HALL DRIVE

> EMERSON SECTION 2 PHASE S LOTS 1 THRU 45 AND OPEN SPACE LOTS 46 THRU 50

COVER SHEET

HOWARD COUNTY 6TH ELECTION DISTRICT 1) (AS-BUILT) NO. DESCRIPTION OF CHANGES CO. FILE #: F-07-169 TAX ACC #: N/A TAX MAP: 47 BLOCK / GRID: 8

DWG. SCALE:1"=100'

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. 25420 , Expiration Date: 07-20-08

(44) DRN. REV. DAT DES. BY: JCO DRN. BY: TPM/SDS CHK. BY: JCO DATE: 4-09-2007 PARCEL# 3 DDC JOB#: 06127.1 SHEET NUMBER: ZONE / USE: PEC-MXD-3

F-07-169

POINT	NORTH	EAST	POINT	NORTH	EAST	POINT	NORTH	EAST	POINT	NORTH	EAST
300	536061.7292	1353029.3361	312	536610.8990	1352553.0974	324	536235.8860	1352878.0197	336	536264.2530	1352784.44
301	536092.2481	1352905.2819	313	536612.5704	1352587.8172	325	536297.8499	1352814.5525	337	536260.0636	1352783.37
302	536057.4023	1352746.6950	314	536693.2823	1352675.1122	326	536383.2423	1352792.8876	338	536198.0711	1352760.90
303	536103.2974	1352736.6106	315	536267.7309	1353069.5836	327	536396.2140	1352791,6810	339	536145.1716	1352774.32
304	536228.7220	1352630.1979	316	536291.0058	1353108.8207	328	536418.0444	1352793.0575	340	536159.4600	1352830.64
305	536290.3538	1352652.3338	317	536299.7009	1353154.7550	329	536460.7097	1352778.0886	341	536187.4565	1352866.08
306	536398.2438	1352567.4318	318	536305.4253	1353176.6290	330	536576.5550	1352672.7728	342	536194.5173	1352879.50
307	536438.6193	1352573.2322	319	536188.5874	1353080.7365	331	536511.6750	1352601.4061	343	536188.7409	1352904.80
308	536445.0184	1352528.6895	320	536183.5683	1353064.2757	332	536405.5332	1352697.9006	344	536158.1879	1353004.171
309	536486.4884	1352520.7141	321	536189.7566	1353040.0847	333	536386.6040	1352738.2810	345	536146.4728	1353023.612
310	536511.8890	1352519.4913	322	536194.1293	1353022.0753	334	536373.8009	1352754.0157	346	536135,0659	1353040.70
311	536575.5876	1352525.5917	323	536227.7371	1352913.7058	335	536288.0132	1352775.7809	347	536119.0041	1353047.310
	D	RAWING	LEGE	ND							

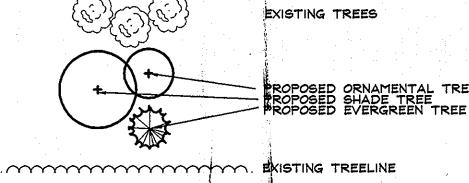
COORDINATE TABLE

\_\_\_\_\_680 \_\_\_\_\_ EXISTING MAJOR CONTOUR (10 INTERVAL) - ADJACENT PROPERTY LINE --- EX. SEWER LINE \$ MANHOLES, CLEAN-OUTS

PROPOSED MAJOR CONTOUR (10' INTERVAL) PROP. STANDARD CURB & GUTTER PROP. REVERSE CURB & GUTTER

> Land Lower of PROPOSED HOUSE

EXISTING TREES



EXISTING MINOR CONTOUR (2' INTERVAL)

- EX. OVERHEAD ELECTRIC & UTILITY POLES PROPOSED MINOR CONTOUR (2' INTERVAL)

PROP. MOUNTABLE CURB & GUTTER/ PROP. REVERSE/MOUNTABLE CURB & GUTTER PROPOSED PRIVATE ROAD/DRIVE CENTERLINE

PROPOSED SPOT ELEVATION & FLOW ARROW

PROPOSED INLET PROTECTION MEASURES Proposed water line 4 hydrant

W:\06127.1 - Emerson D-4\dwa\Einsl Rosd Pisns\061271\_CVR1.dwg, 3\3/2008 10:16:54 AM, DDC\_HPD1430.pc3, LIC

PROVIDED ON THIS SHEET G. SCOTT SHANABERGER SHANABERGER & LANE

NOTE: THERE IS NO AS-

BUILT INFORMATION

9.4 D.U./Ac.

10 D.U/Ac

10.6 D.WAc.

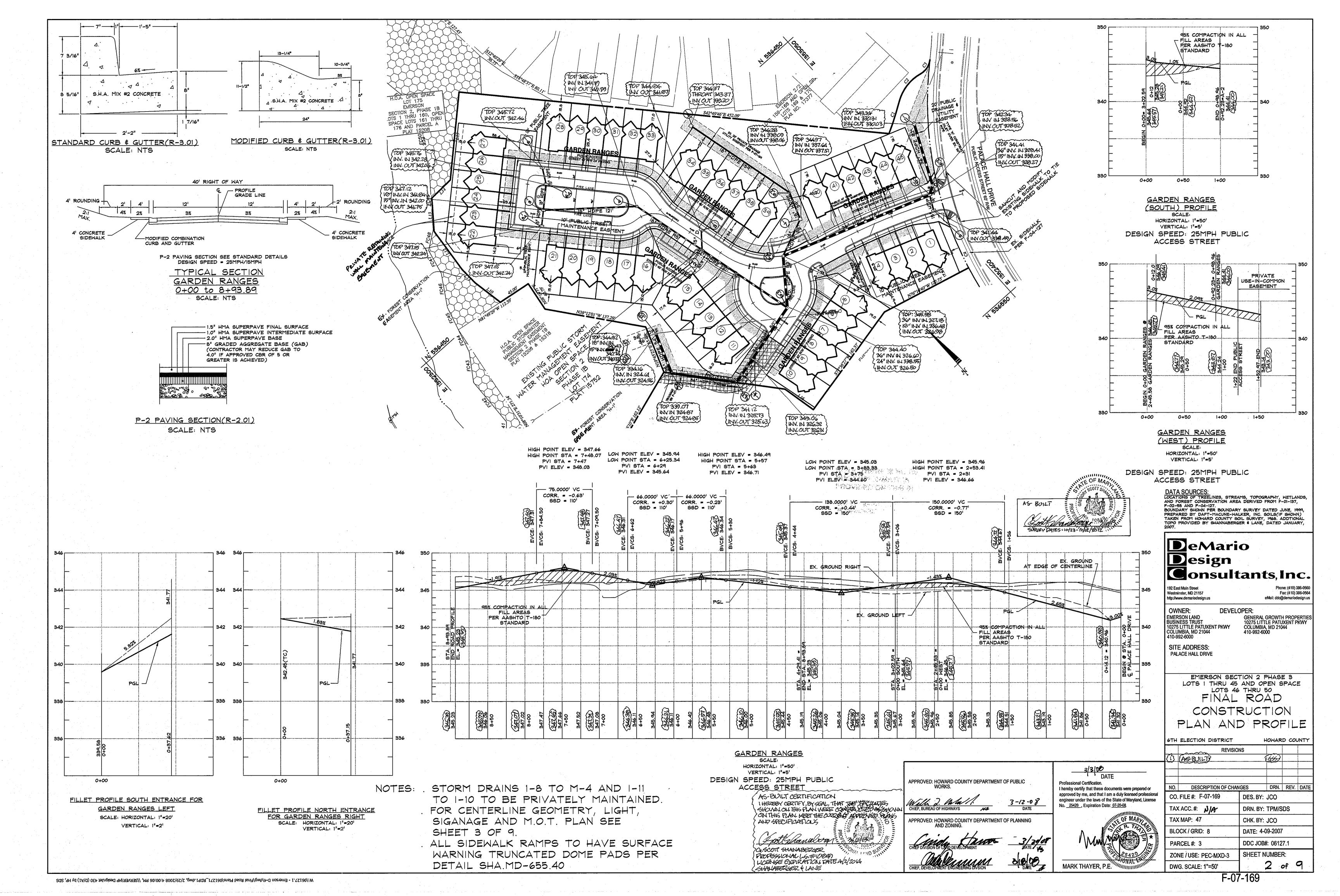
11.4 D.U./A

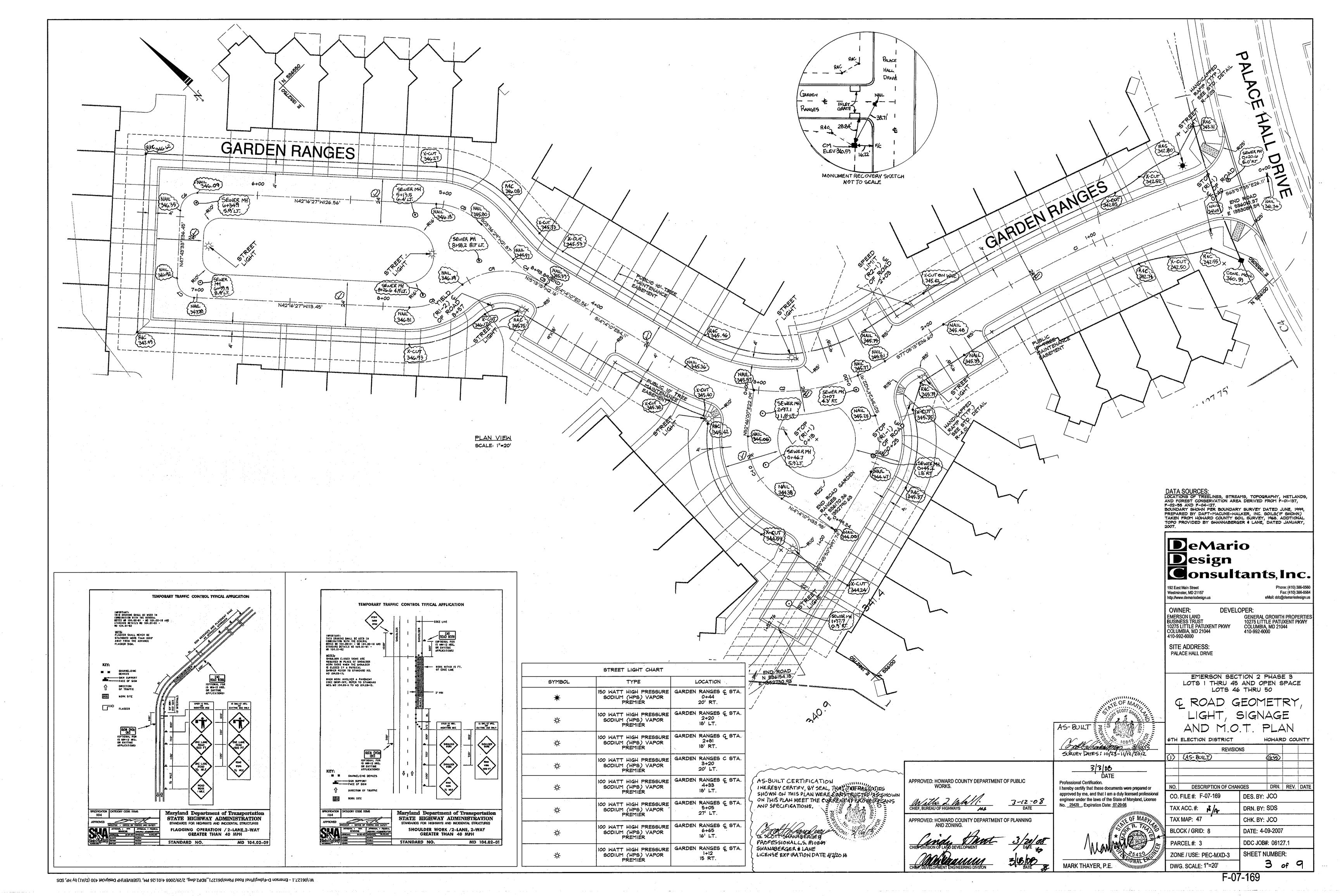
13.8 D.U/A

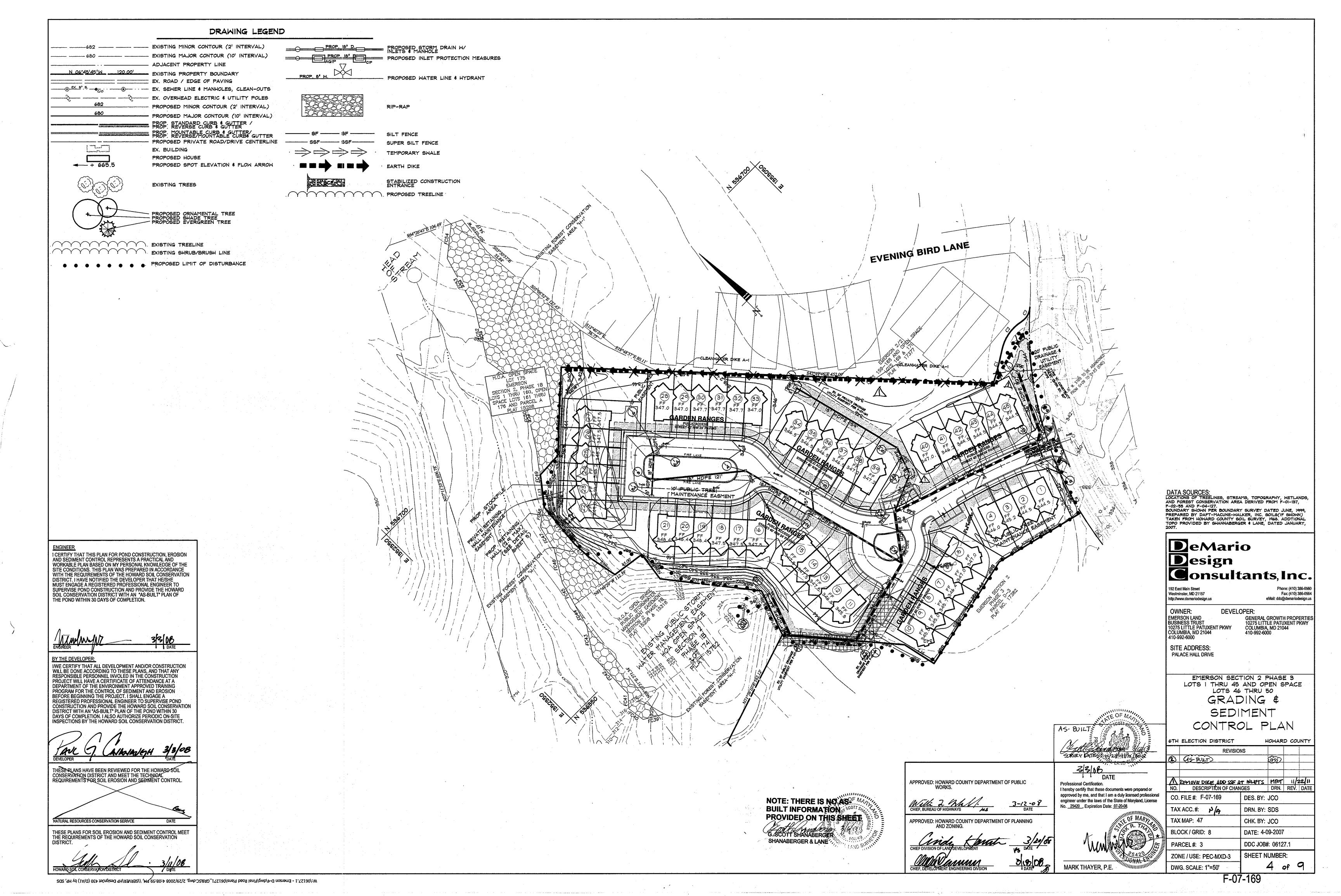
395 (34.5%

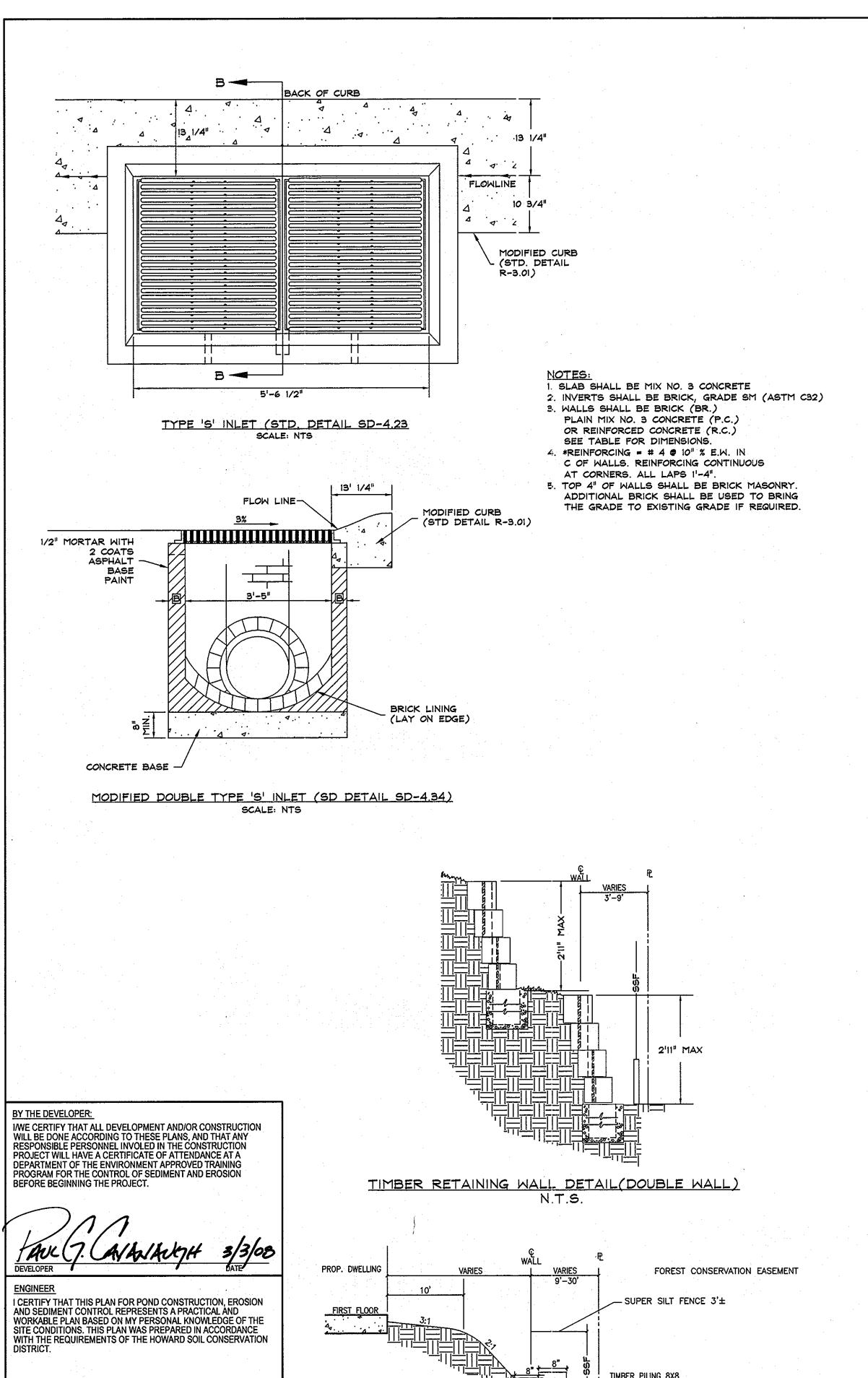
33 SFA (OR)

450 (37.5%)









\_\_\_\_TIMBER TIE 8X8

EACH TIE SET BACK 2"

SUBMERGE PILING 4' MINIMUM BELOW GRADE

TYPICAL DIMENSIONS

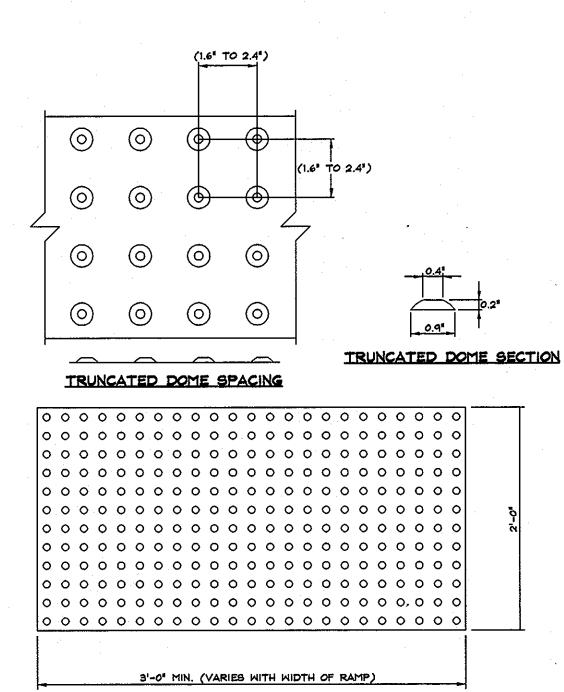
TIMBER RETAINING WALL(SINGLE) N.T.S.

COMPACTED SUBGRADE \_\_

#4 REBAR-LOCATE 9" O.C.

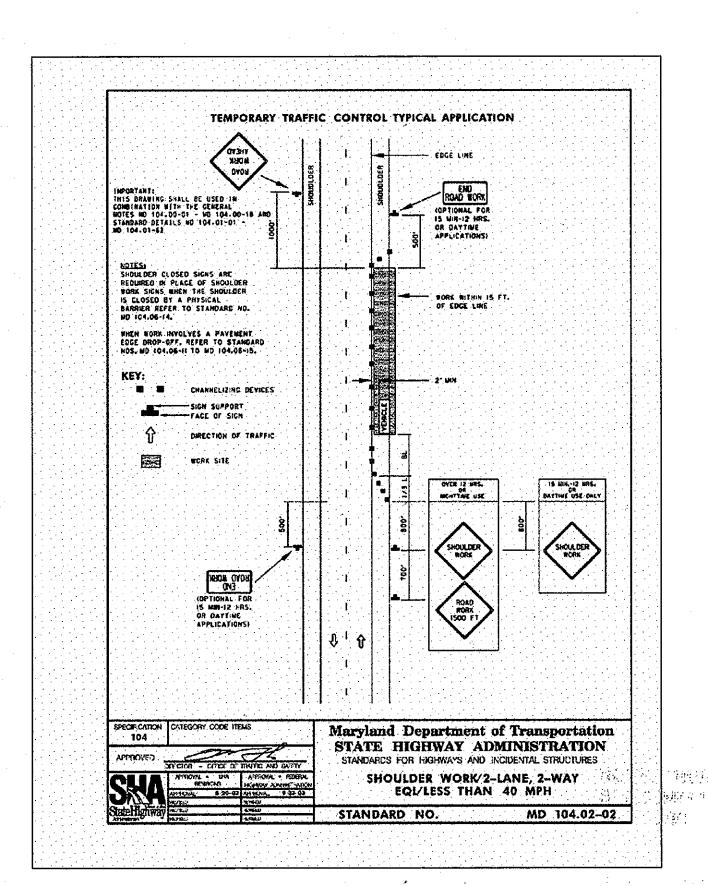
#4 REBAR-LOCATE 9' O.C.

TIMBER PILING TO BE NOTCHED
3" DEEP TO FIT BOTTOM TIE

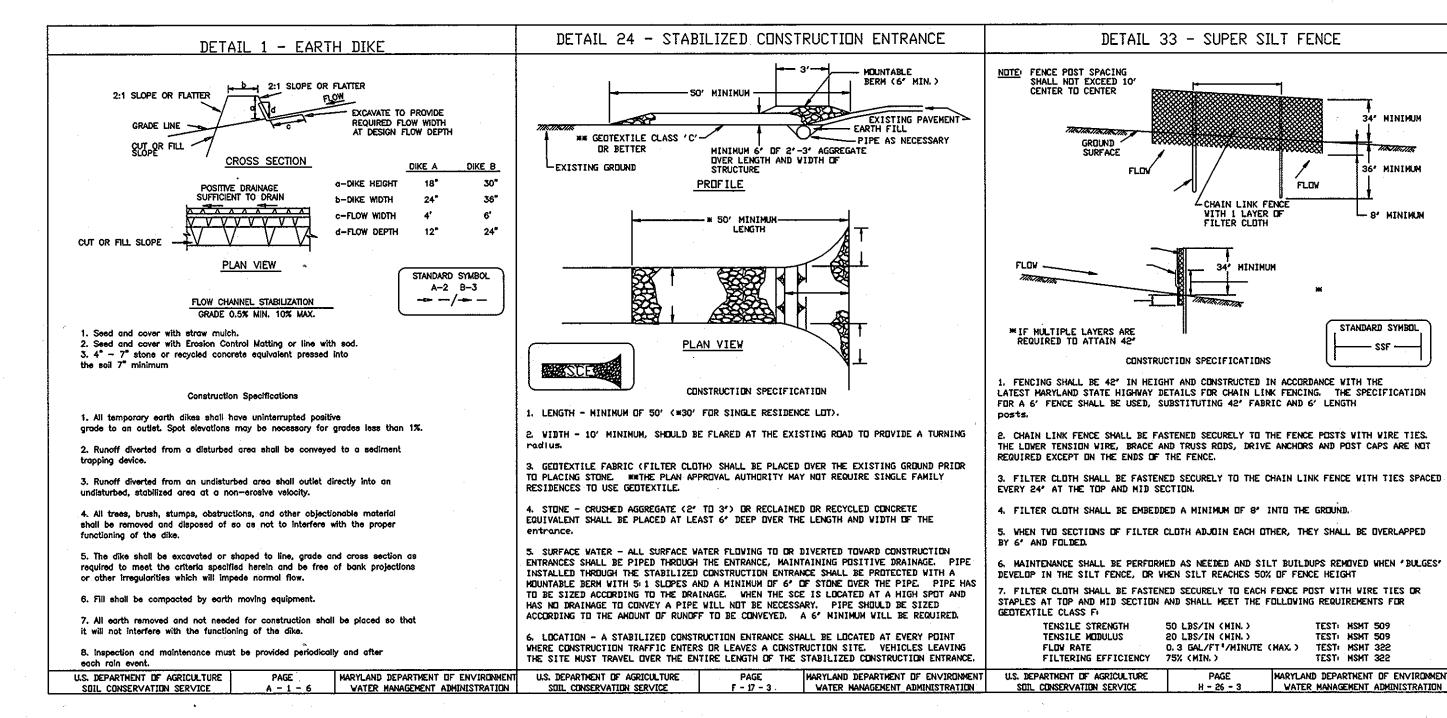


USE TRUNCATED DOME AT ALL ACCESS RAMPS DETECTABLE SURFACE WARNING DETAIL

TRUNCATED DOME PLAN VIEW



NOTE: THEREIS NO AS-**BUILT INFORMATION** PROVIDED ON THIS SHEET SHANABERGER & LANE



#### SEDIMENT CONTROL GENERAL NOTES

- 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).
- 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
- SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPE AND ALL SLOPES STEEPER THAN 3:1.
- B. FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. 4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE "HOWARD
- COUNTY DESIGN MANUAL", STORM DRAINAGE 5. ALL DISTURBED AREA MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINESS (SEC. 51), SODS (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND
- ESTABLISHMENT OF GRASSES. 6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM
- THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR 7. SITE ANALYSIS: TOTAL AREA OF SITE = 4.65 acres AREA DISTURBED = 4.87 acres
  - AREA TO BE ROOFED OR PAVED 2.31 acres AREA TO BE VEGETATIVELY STABILIZED = 2.56 acres TOTAL CUT = 1350 cu yd TOTAL FILL = 1350 cu yd
- 8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE. 9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT
- CONTROL INSPECTOR. 10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS
- II. 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
- 12. WASTE/BORROW AREA LOCATION TO BE DETERMINED BY CONTRACTOR. LOCATION POINT MUST HAVE OPEN GRADING

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING

3-/2-08 DATE

DATA SOURCES:
LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, WETLANDS, AND FOREST CONSERVATION AREA DERIVED FROM F-01-137, Boundary Shown Per Boundary Survey Dated June, 1999 PREPARED BY DAPT-MACUNE-WALKER, INC. SOILS(IF SHOWN)
TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1968. ADDITIONAL TOPO PROVIDED BY SHANNABERGER & LANE, DATED JANUARY



192 East Main Street Westminster, MD 21157 http://www.demariodesign.us

**DEVELOPER:** 

Fax: (410) 386-0564

eMail: ddc@demariodesign.us

OWNER: EMERSON LAND BUSINESS TRUST GENERAL GROWTH PROPERTIES 0275 LITTLE PATUXENT PKWY 10275 LITTLE PATUXENT PKWY COLUMBIA, MD 21044 COLUMBIA, MD 21044 410-992-6000

SITE ADDRESS: PALACE HALL DRIVE

> EMERSON SECTION 2 PHASE 3 LOTS | THRU 45 AND OPEN SPACE LOTS 46 THRU 50 AND SITE DETAILS

6TH ELECTION DISTRICT HOWARD COUNTY **REVISIONS** (G55) B (AS-BUILT) DESCRIPTION OF CHANGES CO. FILE #: F-07-169 DES. BY: JCO TAX ACC.#: 🞝 🙈 DRN. BY: SDS TAX MAP: 47 CHK. BY: JCO DATE: 4-09-2007 BLOCK / GRID: 8 DDC JOB#: 06127.1 PARCEL#: 3 SHEET NUMBER: ZONE / USE: PEC-MXD-3

DATE DRN. REV. DATE DWG. SCALE: N/A

W:\06127.1 - Emerson D-4\dwg\Final Road Plans\061271\_SEC\_DT.dwg, 2\29\2008 4:02:31 PM, \/SERVER\HP Designlet 4:30 (D\A1) by HP, SDS

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL

CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION

ATURAL RESOURCES CONSERVATION SERIVCE

	SEED MIX	PLAN	TING		USDA								
VIX.	USE CERTIFIED MATERIAL IF AVAILABLE		·	SITE	ZONES	3/1- 5/15	3/15 -5/15	5/16- 8/14	6/2- 7/31	8/1- 10/1	8/15- 10/15	8/15- 11/15	
l	TALL FESCUE (75%) CANADA BLUEGRASS (10%) KENTUCKY BLUEGRASS (10%) REDTOP (5%)	150	3.4	MOIST TO DRY	5b 6a 6b	×		2		$\geq$	$\times$		Α
2	KENTUCKY BLUEGRASS (50%) CREEPING RED FESCUE OR A HARD FESCUE (40%) REDTOP (10%)	150	3.4	MOIST TO MODERATELY DRY TO DRY	5b 6a 6b	×	×			$\bigotimes$	$\times$		В
3	TALL FESCUE (85%) PERENNIAL RYEGRASS (10% KENTUCKY BLUEGRASS (5%)	125 15 10	2.9 .34 .23	MOIST TO DRY	5b 6a 6b						$\times$		С
4	RED FESCUE OR CHEWING FESCUE (80%) PERENNIAL RYEGRASS (20%)	60 60 15	.92 .92 .34	MOIST TO DRY	5b 6a	<b>X</b>	$\geq$			$\bigotimes$	$\times$		۵
5	TALL FESCUE (85%) OR, PERENNIAL RYEGRASS (50%) PLUS CROWNVETCH OR FLATPEA	110 20 20 20 20	2.5 .46 .46 .46	MOIST TO DRY	5b 6a 6b	X				$\geq$	$\times$		E
6	WEEPING LOVEGRASS (17%) SERECIA LESPEDEZA (83%)	4 20	.09 .46	DRY TO VERY DRY	5b	$\times$		$\times$					F
7	TALL FESCUE (83%) WEEPING LOVEGRASS (2%) SERECIA LESPEDEZA(15%)	110 3 20	2.5 .07 .46	DRY TO VERY DRY	5b 6a 6b			X	$\bigotimes$	$\geq$	<u> </u>		G
8	REEDY CANARYGRASS (75%) REDTOP (6%) PLUS BIRDSFOOT TREEFOIL (19%)	40 3 10	.92 .07 .23	WET TO MODERATELY DRY	5b 6a 65					$\geq$	×		Н
9	TALL FESCUE (86%) POA TRIVIALIZE (7%) BIRDSFOOT TREEFOIL (7%)	125 10 10	2.9 .23 .23	WET TO MODERATELY DRY	5b 6a_ 6b	<b>&gt;</b>	$\bigotimes$			$\bigotimes$	×		1
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3.4	WET TO DRY	5b 6a 6b	X				$\stackrel{>}{\succeq}$	×		J
11	HARD FESCUE (100%)	.75	3.4	MOIST TO DRY	5b 6a_ 6b		$\propto$			$\bigotimes$	×		K

- MOTES: 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 TREEFOIL IS BEST FOR ZONES
  - I/ USE IN AREAS OF MOIST SHADE. POA TRIVIALIZE THRIVES IN WET SHADY AREAS J/ TALL FESCUE MAY BE SEEDED 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 TEMPODARY SEEDING DATES DEPTHS AND DATES

	TABLE 26	TEMPOR	CARY SEE	DING	KAILS	, DEF	'IHS,	AND L	AIES
SPECIES	MINIMUM S RATE		PLANTING DEPTH		(6b)		6	a and 5	5b /
	PER ACRE	LBS/1000 SQ.FT.	INCHES	3/1- 4/30	I - / . ·		7	I -/ :	8//1- 10/31
CHOOSE ONE: BARLEY OATS RYE	122 lbs 96 lbs 140 lbs	2.80 2.21 3.22	1-2 1-2 1-2	×××		BY 10/15 - X	X	Ž	BY 10/1 - X
BARLEY OR RYE PLUS FOXTAIL MILLET	150 lbs	3.45	1	X	X	10/15 X	×	/ <u> </u>	10/1 X
WEEPING LOVEGRASS	4 lbs	.09	1/4-1/2	1	X	_	-/-	·X	7
ANNUAL RYEGRASS	50 lbs	1.15	1/4-1/2	X	-	11/1	/x	_	8/15
MILLET	50 lbs	1.15	1/2	. –	Х	_	/	X	- /

Note: Select one or more of the species or mixtures listed on Table 26 for the appropriate plant hardiness zone. = 68

BY THE DEVELOPER: I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLED 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 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

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL. DATE NATURAL RESOURCES CONSERVATION SERIVCE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET

THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION

HOWARD SOIL CONSERVATION DISTR

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, berms, waterways, or sediment control basins. ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
- iii. Schedule required soil 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 on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses. ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.
- iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98 100% will pass through a #20 mesh sieve.
- iv. Incorporate lime and fertilizer into the top 3 5" of soil by disking or other suitable means. C. Seedbed Preparation
- i. Temporary Seeding a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the counter 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

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 saits shall be less than 500 parts per million (ppm).
- 3. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia 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 21 Standard and Specification for Topsoil.
- b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
- c. Apply soil amendments as per soil test or as included on the plans.
- i. 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 ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

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 later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80 F. can weaken bacteria and make the innoculant less effective.

E. Methods of Seeding

Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), proadcast or drop seeder, or a cultipacker seeder.

a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous): 200 lbs/ac.; K20 (potassium): 200 lbs/ac. b. Lime — use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.

c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption. ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders

a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed soil contact. b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each directions 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 musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law. ii. Wood Cellulose Fiber Mulch (WCFM)

a. MCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry. c. WCFM, including dye, shall contain no germination or growth inhibiting factors.

d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedings.

e. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic. f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

Note: Only sterile straw much 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 until the seeding season returns and seeding can be performed in accordance with these specifications.

ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre. iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of following methods (listed by preference), depending upon size of area and erosion hazard: i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.

ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of

iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys or on crest of banks. The remainder of area should appear uniform after binder application. Synthetic binders – such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the

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.

Incremental Stabilization -- Cut Slopes -- See G-20-6

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 concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

- . 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
- 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

Conditions Where Practice Applies

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 Maryland Agricultural Experimental 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 soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils shall contain loss than 5% by volume of cinders, at the state of contrasting and states. stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
- Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
- iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square fed) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- III. For sites having disturbed areas 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:
- a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
- b. Organic content of topsoil shall be not less than 1.5 percent by weight.
- c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
- d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization Section 1 Vegetative Stabilization Methods and Materials.
- V. Topsoil Application
- . When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4"-8" higher in elevation.
- iii. Topsoil shall be uniformly distributed in a 4" 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with 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.
- iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation. VI. Alternative for Permanent Seeding – Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
- i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
- a. Composted sludge: shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
- b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use. c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
- ii. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application

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

<u>SECTION V - TURFGRASS ESTABLISHMENT</u>

Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium high level of maintenance. Areas to receive seed shall be tilled by disking or other approved methods to a depth of 2 to 4 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 1 1/2 inches in diameter shall be removed. The resulting and the property of the property of charges will be removed. The resulting proper seedbed. Stones and debris over 1 1/2 inches in diameter shall be removed. The seedbed should be in such condition that future mowing of grasses will pose no difficulty Note: Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

A. Turfgrass Mixtures i. Kentucky Bluegrass – Full sun mixture – For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and eastern shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds/1000 square feet. A minimum of three bluegrass cultivars should be chosen ranging from a minimum of 10% to a maximum of 35% of the mixture by weight. ii. Kentucky Bluegrass/Perennial Rye - Full sun mixture - For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding rate: 2 pounds mixture/1000 square feet. A minimum of 3 Kentucky Bluegrass Cultivars must be chosen, with each cultivar ranging from 10% to 35% of the mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: certified Tall Fescue Cultivars 95 - 100%, certified Kentucky Bluegrass Cultivars 0 - 5%. Seeding rate: 5 to 8 lb/1000 sf. One or more cultivars may be blended. iv. Kentucky Bluegrass/Fine Fescue – Shade Mixture – For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; certified Kentucky Bluegrass Cultivars 30–40% and certified Fine Fescue and 60–70%. Seeding rate: 1 1/2 – 3 lbs/1000 square feet. A minimum of 3 Kentucky Bluegrass cultivars must be chosen, with each cultivar ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

Note: Turfgrass varieties should be selected from those listed in the most current University of Maryland Publication, Agronomy Mimeo #77, "Turfgrass Cultivar Recommendations for Maryland" B. Ideal times of seeding:

Western MD: March 15 - June 1, August 1 - October 1 (Hardiness Zones - 5b, 6a)
Central MD: March 1 - May 15, August 15 - October 15 (Hardiness Zone - 6b)
Southern MD, Eastern Shore: March 1 - May 15, August 15 - October 15 (Hardiness Zones - 7a, 7b)

C. Irrigation

If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/2"-1" every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on

Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings

i. Once the vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.

ii. if the stand provides less than 40% ground coverage, reestablish following original lime, fertilizer, seedbed preparation and seeding recommendations. iii. If the stand provides between 40% and 94% ground coverage, overseeding and fertilizing using half of the rates originally applied may be necessary.

iv. Maintenance fertilizer rates for permanent seedings are shown in Table 24. For lawns and other medium high maintenance turfgrass areas, refer to the University of Maryland publication "Lawn Care in Maryland" Bulletin No. 171.

#### SEQUENCE OF CONSTRUCTION

I. OBTAIN A GRADING PERMIT

- 2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-287-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST 24 HOURS BEFORE STARTING ANY WORK
- 3. INSTALL STABILIZED CONSTRUCTION ENTRANCE. (1 DAY)
- 4. INSTALL PERIMETER CLEANWATER DIKES AND SUPER SILT FENCE. (9 DAYS)
- 5. WITH SEDIMENT CONTROL DEVICES INSTALLED AND WITH INSPECTORS APPROVAL, CLEAR & GRADE SITE (I WEEK)
- 6. INSTALL STORM DRAIN SYSTEM FROM EX M-1 TO PROPOSED 1-11 OVER EX. 30" PIPE AND BLOCK ALL FLOW INTO INLETS. (MAINTAIN FLOW THROUGH EX. 30" PIPE)
- 7. FINE GRADE AREA FOR THE NEW ROAD AND INSTALL WATER, SEWER & REMAINING STORMDRAIN SYSTEM. REMOVE 30" PIPE AND PROVIDE BLOCKING OF FLOW INTO ALL INLETS. (4 WEEKS)
  74. INSTALL SEF AT INLETS 1-7, 1-8 AND 1-11, THEN PENOVE FARM DIKES ALONG NIZTHEAST PROPERTY LINE.
  8. BEGIN INSTALLATION OF CURB & GUTTER. (8 WEEKS)
- 9. WITH CURB & GUTTER IN PLACE PAVE ROAD AND INSTALL SIDEWALKS. (2 WEEKS)
- 10. FINE GRADE SITE AND STABILIZE ALL DISTURBED AREAS. (2 WEEKS)
- 11. INSTALL SITE LANDSCAPING & STREET TREES. (2 WEEKS)
- 12. WITH ALL DISTURBED AREAS STABILIZED REMOVE INLET BLOCKING AND FLUSH STORM DRAIN SYSTEM. CONTRACTOR SHALL CLEAN THE RECEIVING SWM POND OF SEDIMENT.

NOTES: . NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE COMPLETED SITE

WITH THE INSPECTORS APPROVAL REMOVE REMAINING SEDIMENT CONTROL DEVICES THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL DEVICES SHOWN ON THE PLAN. THE INSPECTION SHALL BE ON A DAILY BASIS AND AFTER EACH RAINFALL.

AS- BUILT Select one or more of the species or mixtures listed in Table 25 and enter Permanent Seeding Summary Below, along with application rates and dates lown maintenance areas, see Sections IV, Sod and V, Turfgrass.

PREPARED BY DAFT-MACUNE-WALKER, INC. SOILS(IF SHOWN)
TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1968. ADDITIONAL TOPO PROVIDED BY SHANNABERGER & LANE, DATED JANUARY, DeMario Design

Fax: (410) 386-0564

eMail: ddc@demariodesign.us

HOWARD COUNTY

DATA SOURCES:
LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, WETLANDS,

BOUNDARY SHOWN PER BOUNDARY SURVEY DATED JUNE, 1999

AND FOREST CONSERVATION AREA DERIVED FROM F-01-137,

Consultants, Inc.

192 East Main Street Westminster, MD 21157 http://www.demariodesign.us

> **DEVELOPER:** OWNER: MERSON LAND SENERAL GROWTH PROPERTIE USINESS TRUST 10275 LITTLE PATUXENT PKWY 0275 LITTLE PATUXENT PKWY COLUMBIA, MD 21044 DLUMBIA, MD 21044 410-992-6000 10-992-6000

SITE ADDRESS: PALACE HALL DRIVE

6TH ELECTION DISTRICT

EMERSON SECTION 2 PHASE 3 LOTS 1 THRU 45 AND OPEN SPACE LOTS 46 THRU 50 SEDIMENT & EROSION CONTROL NOTES

**REVISIONS** 

AS-BUILT

(G55) DREMOVE DIKE, ADD SSF AT INLETS MRT 11/22/11 DESCRIPTION OF CHANGES DRN REV. DATE CO. FILE #. F-07-169 DES. BY: JCO TAX ACC.# A DRN. BY: SDS TAX MAP: 47 CHK. BY: JCO BLOCK / GRID: 8 DATE: 4-09-2007 PARCEL# 3 DDC JOB#, 06127.1 ZONE / USE: PEC-MXD-3 SHEET NUMBER: 6 of. DWG. SCALE: N/A

J. Incremental Stabilization -- Fill Slopes -- See G-20-7

等"我了物物工物解决"。 医

NOTE: THERE IS NO ASCOT BUILTINFORMATION

PROVIDED ON THIS SHEET

SHANABERGER & LANE

G SCOTTSHANABERGER OF LANDS

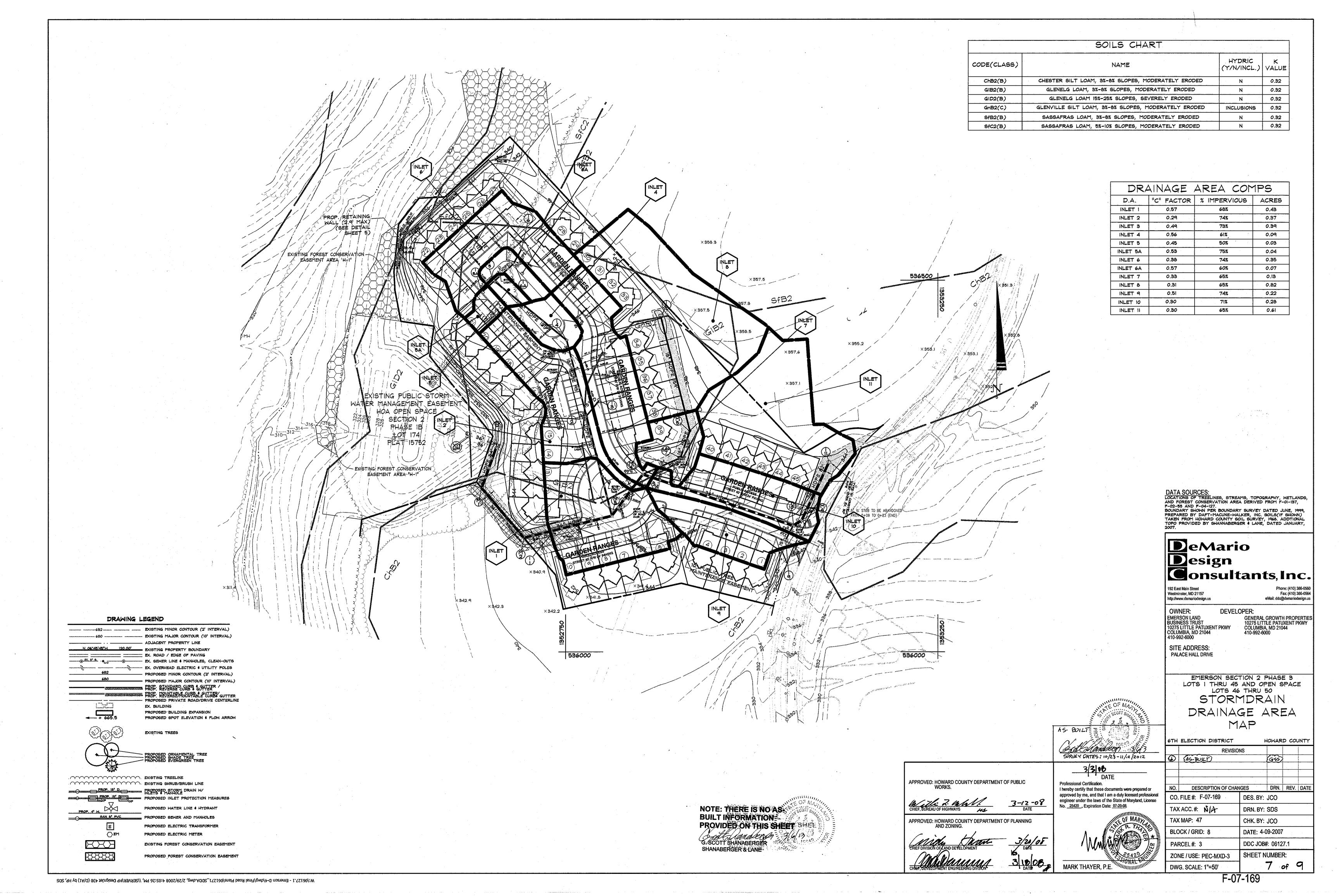
SEED MIXTURE (HARDINESS ZONE) FROM TABLE 26 FERTILIZER RATE LIME RATE SEEDING NO. | SPECIES RATE (LB/AC) **DEPTHS** (ag,

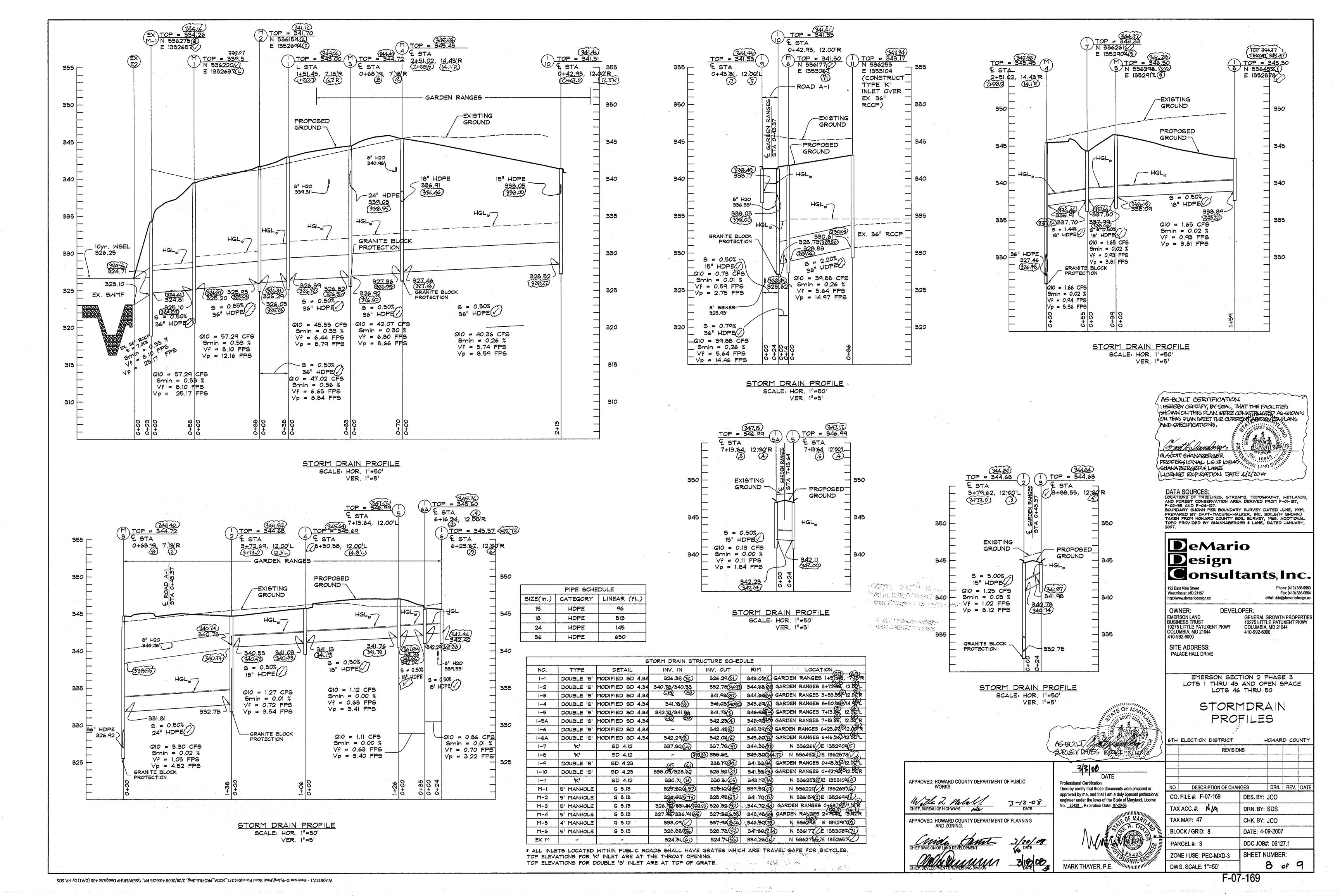
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duty licensed professional Malla 2. Mall // CHIEF, BUREAU OF HIGHWAYS engineer under the laws of the State of Maryland, License No. \_25420\_, Expiration Date: 07-20-08 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

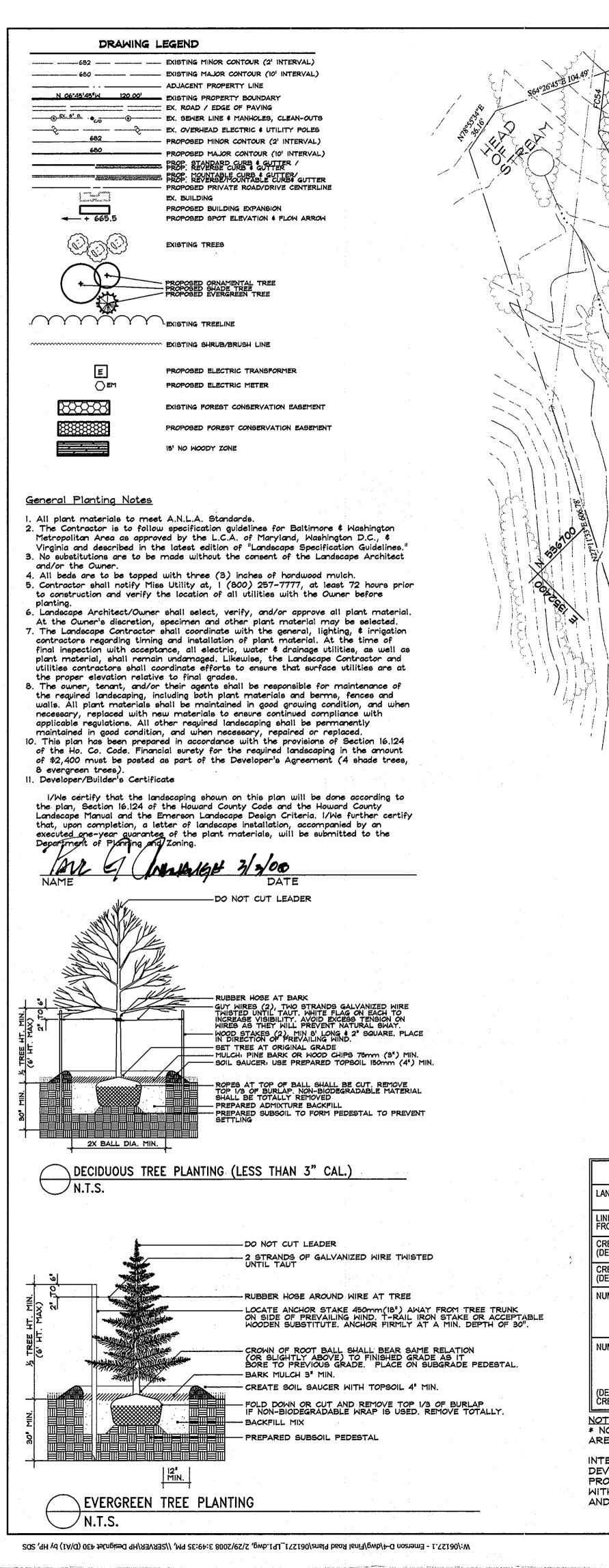
MARK THAYER, P.E.

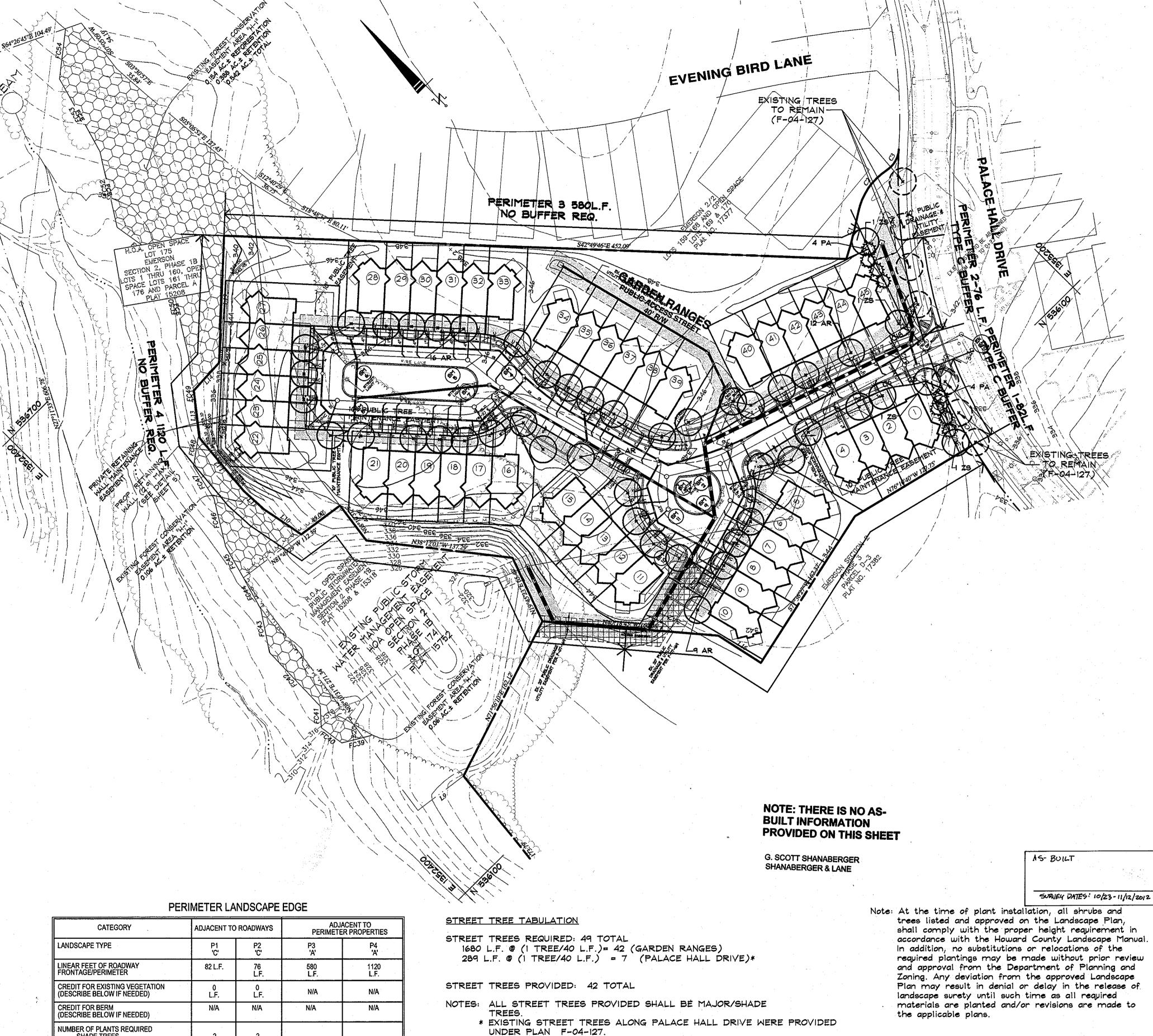
DATE

W:\06127.1 - Emerson D-4\dwg\Final Road Plans\061271\_SEC\_NOTES.dwg, 2\29\2008 4:04:18 PM, \/SERVER\HP DesignDet 430 (D/A1) by HP, SDS









		111000111		
CATEGORY	ADJACENT TO	ROADWAYS		CENT TO R PROPERTIES
LANDSCAPE TYPE	P1 'C'	P2 'C'	P3 'A'	P4 'A'
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	82 L.F.	76 L.F.	580 L.F.	1120 L.F.
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	0 L.F.	0 L.F.	N/A	N/A
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	2 4 0	2 4 0	N/A	N/A
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	2 4 0 0	2 4 0 0	N/A <b>≭</b>	N/A <b>★</b>

\* NO BUFFER REQUIRED FOR P3 AND P4 BECAUSE ADJACENT PROPERTIES ARE ALSO EMERSON SUBDIVISION.

INTERNAL LANDSCAPING FOR ALL UNITS WILL BE ADDRESSED AT THE SITE DEVELOPMENT STAGE, PERIMETER LANDSCAPING AND STREET TREES WILL BE PROVIDED AT THE FINAL PLAN STAGE OF DEVELOPMENT IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE. THE LANDSCAPE MANUAL AND THE APPROVED EMERSON LANDSCAPE DESIGN CRITERIA.

QTY	´SYM	BOTANICAL NAME/ COMMON NAME	SIZE	REMAR
			i e	
LARG	E TR	EES		
LARG 42	AR	EES  ACER RUBRUM 'OCTOBER GLORY'  OCTOBER GLORY MAPLE  ZELKOVA SERRATA VILLAGE GREEN'	2 1/2 -3" CAL.	·

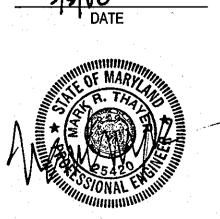
PA PICEA APLES SHARESTERS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC

3-12-08 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

STREET TREES WILL BE BONDED WITH A DPW, DEVELOPER'S AGREEMENT WITH THIS FINAL PLAN.



DATA SOURCES:
LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, WETLANDS, AND FOREST CONSERVATION AREA DERIVED FROM F-01-187, BOUNDARY SHOWN PER BOUNDARY SURVEY DATED JUNE, 1999 PREPARED BY DAFT-MACUNE-WALKER, INC. SOILS(IF SHOWN)
TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1968. ADDITIONAL
TOPO PROVIDED BY SHANNABERGER & LANE, DATED JANUARY,

VICINITY MAP SCALE: 1"=2000

# DeMario Design Consultants, Inc.

Westminster, MD 21157 http://www.demariodesign.us

Fax: (410) 386-0564 eMail: ddc@demariodesign.us

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

SITE ADDRESS: PALACE HALL DRIVE

> EMERSON SECTION 2 PHASE 3 LOTS I THRU 45 AND OPEN SPACE LOTS 46 THRU 50

LANDSCAPE PLAN DETAILS, NOTES AND STREET TREE PLAN

6TH ELECTION DISTRICT HOWARD COUNTY <u>(455)</u> 3 (15-BUILT) DRN. REV. DATE DESCRIPTION OF CHANGES CO. FILE #: F-07-169 DES. BY: CVL TAX ACC.#: NA DRN. BY: CVL TAX MAP: 47 CHK. BY: AJS BLOCK / GRID: 8 DATE: 4-09-2007 PARCEL#: 3 DDC JOB#: 06127.1 ZONE / USE: PEC-MXD-3 SHEET NUMBER:

