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

TAX MAP 47, GRID 8, 6TH ELECTION DISTRICT

HOA OPEN SPACE

PARCEL P/0 1053 HOWARD COUNTY, MD

1. General Site Data a. Present Zoning: PEC MXD-3

b. Applicable DPZ File References: S-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.

BENCHMARK

DESCRIPTION

BENCHMARK #1 536615.0157

<u>BENCHMARK #2</u> N. 536212.7456

ELEV.

ELEV.

47DC

343.249

354,296

1353679.1226

1354833.6403

BENCHMARK#18 N538184.56

E 1351577.43

BENCHMARK #12 N535808 AI

ELEY, 359,41

E1353001.41 BM 12 ELEV.327.90

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%)

CURVE TABLE

 CURVE
 RADIUS
 LENGTH
 DELTA
 CHORD BRG.
 CHORD DIST.
 TANGENT

 CI
 440.00'
 45.64'
 05'56'36"
 N59'19'27"E
 45.62'
 22.84

C2 60.00' 48.02' 45"51"26" S79"16"52"W 46.75' 25.38

C5 83.00' 20.60' 14*13'26" S56*17'15"E 20.55' 10.36

 C6
 67.00¹
 22.81¹
 19°30¹18¹
 N58°55¹41¹W
 22.70¹
 11.52

 C7
 705.00¹
 104.06¹
 08°27¹24¹
 N72°54¹33¹W
 103.96¹
 52.12

 C8
 53.82¹
 46.61¹
 49°37¹22¹
 N51°41¹37″E
 45.17¹
 24.88

C9 59.00' 69.97' 67'56'39 S19'55'16"W 65.94' 39.75

CI5 85.00' 93.32' 62*54'04' 545*41'12"E 88.70' 51.99

C18 83.00' 25.06' 17'18'10" N75'39'03"W 24.97' 12.63

C3 25.00' 23.46' 53°46'17' N75°20'05"E 22.61'

C4 478.10' 540.31' 64'45'02' S16'05'57"W 512.01'

C10 125.00' 25.34' 11'36'46" 520'02'33"E 25.29'

CII 17.00' 21.74' 73*15'29" N50*51'55"W 20.29'

C12 58.00' 45.78' 45*13'12" \$64*53'03"E 44.60'

CI3 58.00' 46.45' 45.52'56' NI9'19'59"W 45.22'

CI4 42.00' 13.08' 17'50'39" S05'18'51"E 13.03'

C16 745.00' 113.57' 08'44'04' N72'46'13"W 113.46'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING

C17 67.00' 18.59' 15'53'58" \$76'21'10"E 18.53'

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: 0

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

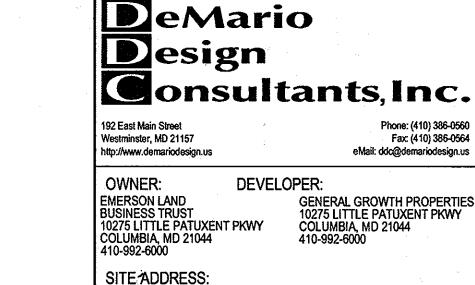
(45 Units x 2.0 spaces/units = 90 spaces) b. Parking Provided: 104 spaces

DRAWING INDEX 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 LANDSCAPE PLAN DETAILS, NOTES AND STREET TREE PLAN

BM#12

VICINITY MAP SCALE: 1"=2000"

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



PALACE HALL DRIVE

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

eMail: ddc@demariodesign.u

COVER SHEET

(CHOUSERCENOSTE 3/6/2	6TH ELECTION DISTRIC	CT HOWARD
SURVEY DAGES WISS RELIGION	(1) (AG-BUILT)	VISIONS (CLF)
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 No25420_, Expiration Date: 07-20-08	NO. DESCRIPTION OF CO. FILE #: F-07-169 TAX ACC #: N/A TAX MAP: 47	CHANGES DRN. DES. BY: JCO DRN. BY: TPM/SDS CHK. BY: JCO
	B t	

PARCEL# 3 ZONE / USE: PEC-MXD-3 DWG. SCALE:1"=100'

REV. DATE BLOCK / GRID: 8 DATE: 4-09-2007 DDC JOB#: 06127.1

F-07-169

SHEET NUMBER:

POINT	NORTH	EAST									
300	536061.7292	1353029.3361	312	536610.8990	1352553.0974	324	536235.8860	1352878.0197	336	536264.2530	1352784.448
301	536092.2481	1352905.2819	313	536612.5704	1352587.8172	325	536297.8499	1352814.5525	337	536260.0636	1352783.373
302	536057.4023	1352746.6950	314	536693.2823	1352675,1122	326	536383.2423	1352792.8876	338	536198.0711	1352760.906
303	536103.2974	1352736.6106	315	536267.7309	1353069.5836	327	536396.2140	1352791,6810	339	536145.1716	1352774.327
304	536228.7220	1352630.1979	316	536291.0058	1353108.8207	328	536418.0444	1352793.0575	340	536159.4600	1352830.644
305	536290.3538	1352652,3338	317	536299.7009	1353154.7550	329	536460.7097	1352778.0886	341	536187.4565	1352866.086
306	536398.2438	1352567.4318	318	536305.4253	1353176.6290	330	536576.5550	1352672.7728	342	536194.5173	1352879.504
307	536438.6193	1352573.2322	319	536188.5874	1353080.7365	331	536511.6750	1352601.4061	343	536188.7409	1352904.801
308	536445.0184	1352528.6895	320	536183.5683	1353064.2757	332	536405.5332	1352697.9006	344	536158.1879	1353004.1710
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	1353040.708
311	536575,5876	1352525.5917	323	536227.7371	1352913.7058	335	536288.0132	1352775.7809	347	536119,0041	1353047.310

EXISTING MINOR CONTOUR (2' INTERVAL) EXISTING MAJOR CONTOUR (10' INTERVAL) ADJACENT PROPERTY LINE --- EX. SEWER LINE \$ MANHOLES, CLEAN-OUTS - EX. OVERHEAD ELECTRIC & UTILITY POLES PROPOSED MINOR CONTOUR (2' INTERVAL) PROPOSED MAJOR CONTOUR (10' INTERVAL) PROP. STANDARD CURB & GUTTER PROP. REVERSE CURB & GUTTER PROP. MOUNTABLE CURB & GUTTER/ PROP. REVERSE/MOUNTABLE CURB & GUTTER PROPOSED HOUSE PROPOSED SPOT ELEVATION & FLOW ARROW EXISTING TREES

MISTING TREELINE

PROPOSED INLET PROTECTION MEASURES

DRAWING LEGEND

PROPOSED PRIVATE ROAD/DRIVE CENTERLINE

Proposed water line 4 hydrant

LOCATION MAP: SCALE: 1"=100'

40.1 (41%

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%)

7. 58 (26.3%)

140.9(37.7%)

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

(E) Proposed density tabulations arehown for informational purposes only. Those tabulations will be

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.

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

EMERSON, SECTION 2 & 3 OVERALL DEVELOPMENT TRACKING CHART

12.0 (64.9%)

9.4 (90.4%) -0-

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET G. SCOTT SHANABERGER SHANABERGER & LANE

9.4 D.U./Ac.

10 D.U./A

11.4 D.U./A

13.8 D.U/A

395 (34.5%

33 SFA (OR)

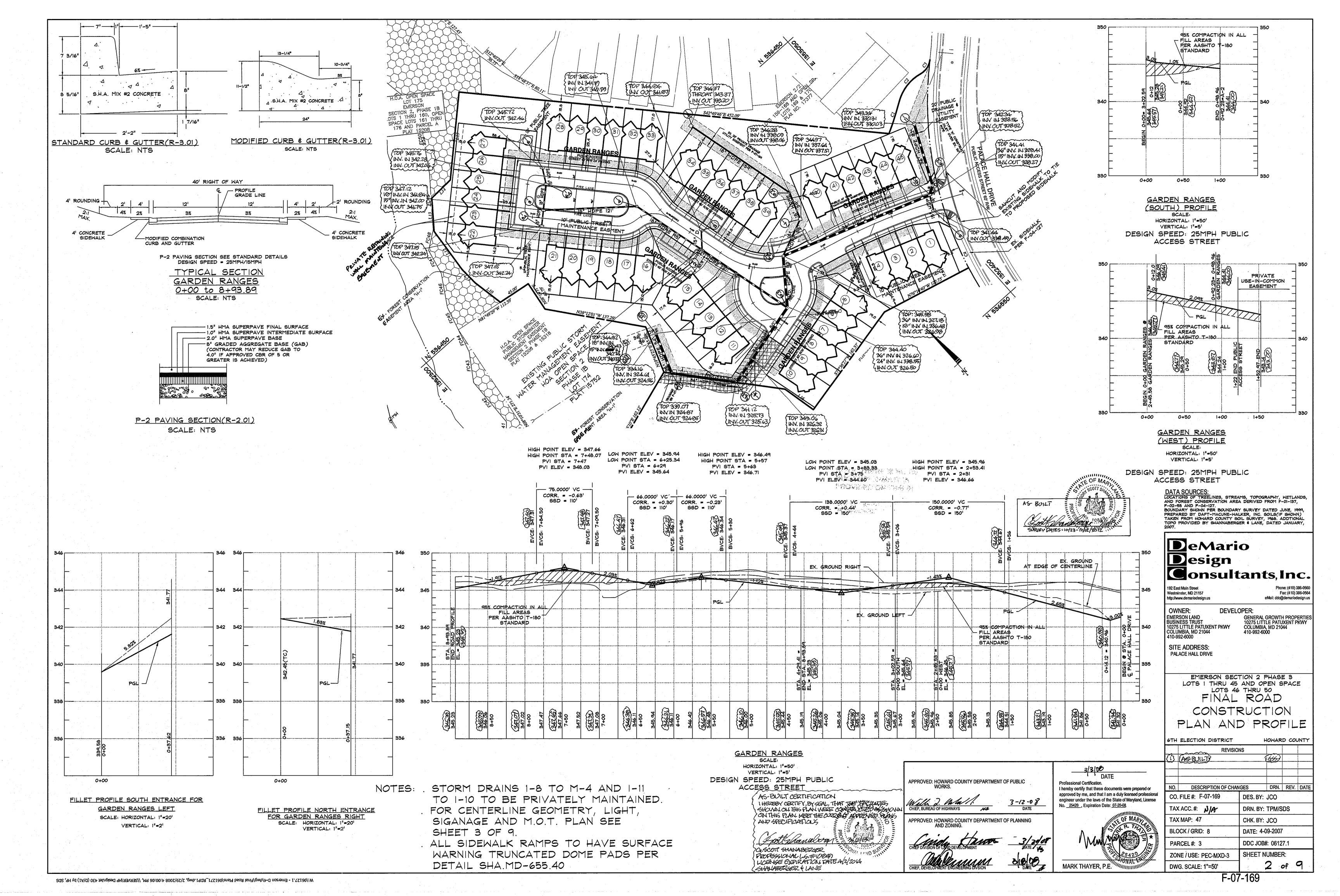
450 (37.5%)

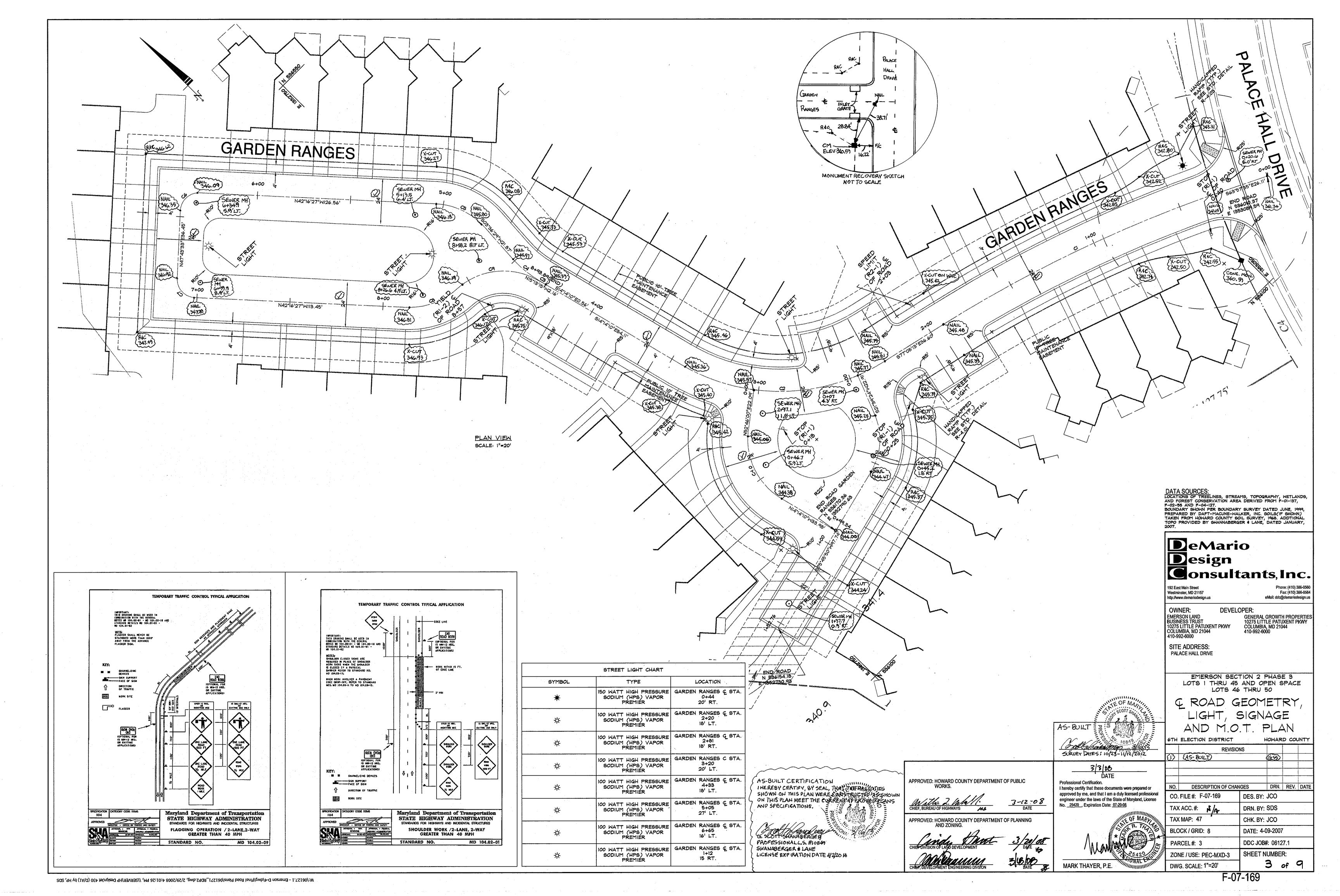
W:\06127.1 - Emerson D-4\dwa\Einsl Rosd Pisns\061271_CVR1.dwg, 3\3/2008 10:16:54 AM, DDC_HPD1430.pc3, LIC

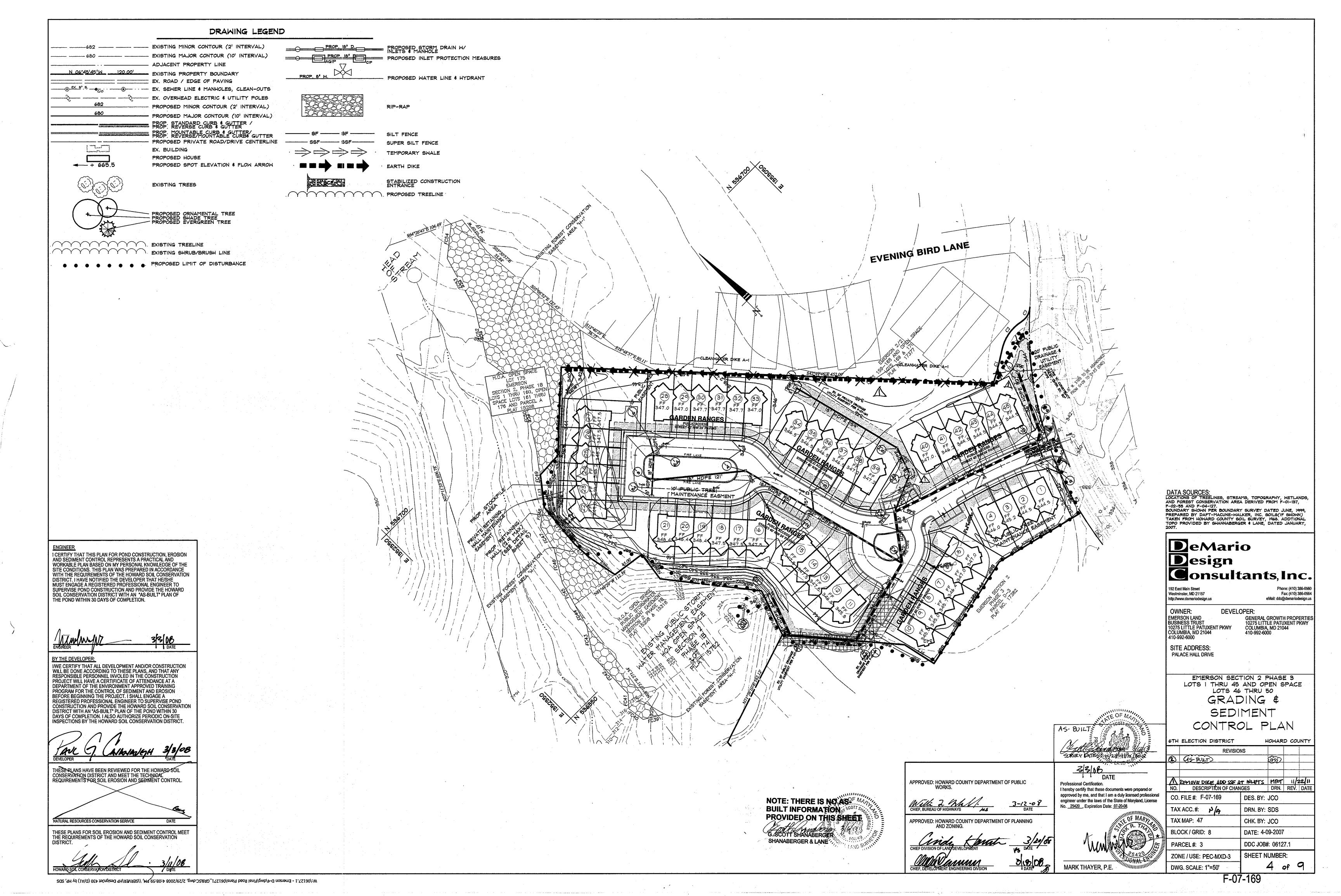
Overall OR Density

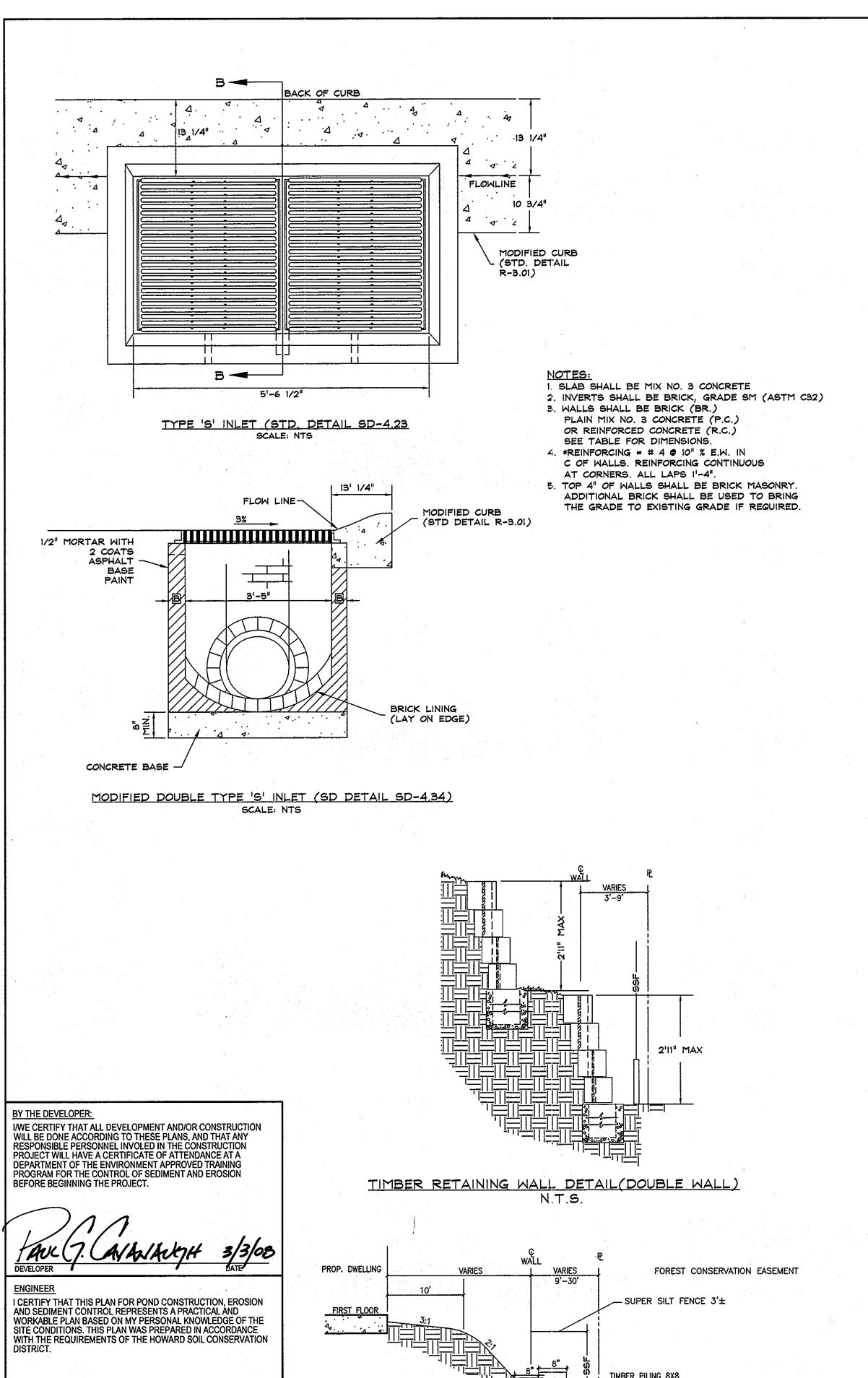
(A) SFD acreage includes Common Open Areas (COA Lots). (B) Overall allowed density based on maximum number of units allowed per

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









____TIMBER TIE 8X8

EACH TIE SET BACK 2"

SUBMERGE PILING 4' MINIMUM BELOW GRADE

TYPICAL DIMENSIONS

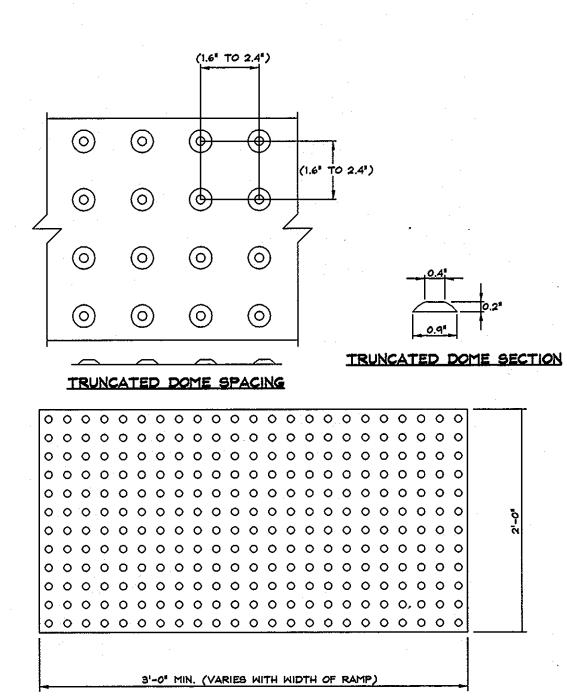
TIMBER RETAINING WALL(SINGLE) N.T.S.

COMPACTED SUBGRADE __

#4 REBAR-LOCATE 9" O.C.

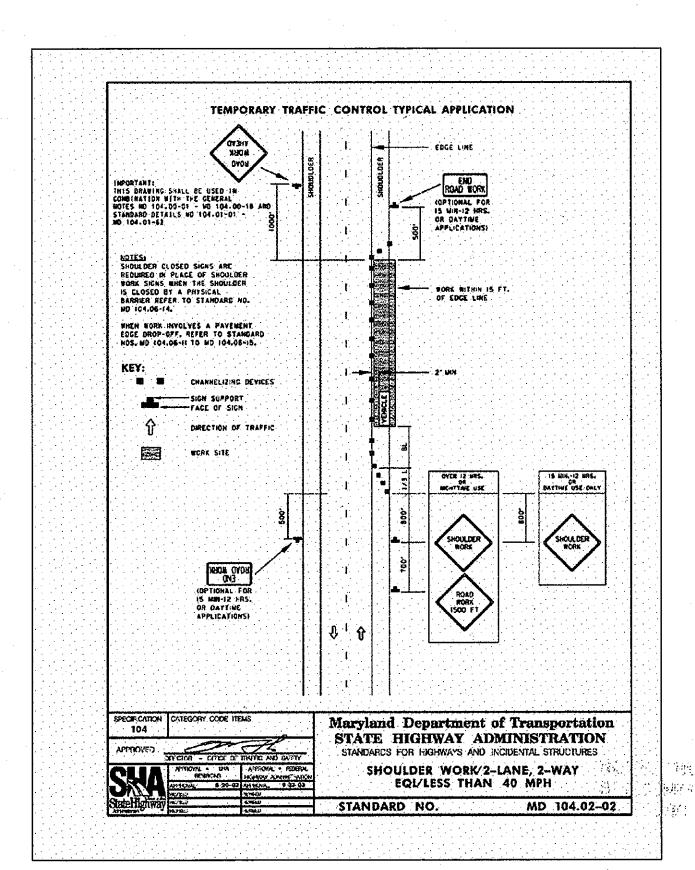
#4 REBAR-LOCATE 9' O.C.

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

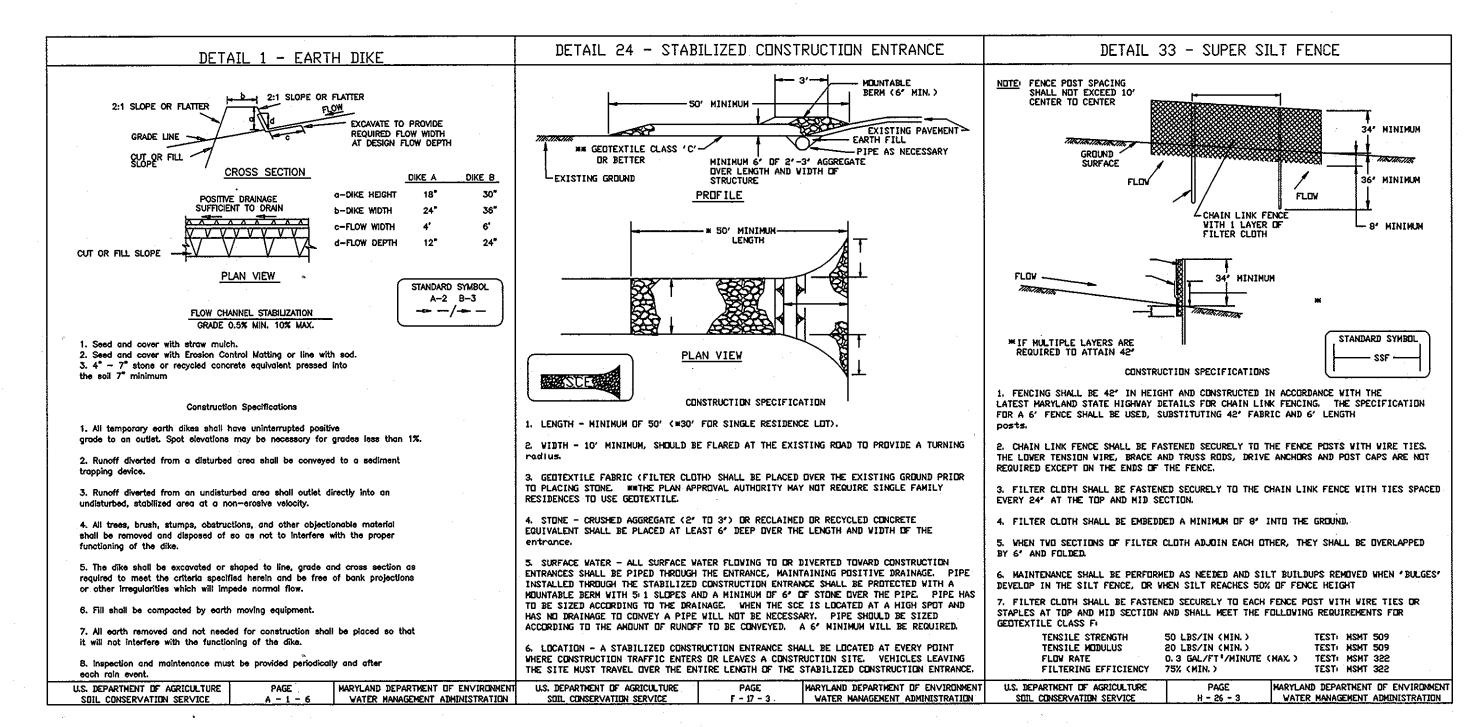


USE TRUNCATED DOME AT ALL ACCESS RAMPS DETECTABLE SURFACE WARNING DETAIL

TRUNCATED DOME PLAN VIEW



NOTE: THERE IS 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:

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

Fax: (410) 386-0564

eMail: ddc@demariodesign.us

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) DATE DESCRIPTION OF CHANGES DRN. REV. DATE 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

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	X	\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	>	\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	TEMPOR	ARY SEE	DING I	RATES	, DEP	THS,	AND D	ATES
SPECIES	MINIMUM S RATE		PLANTING DEPTH		(6b)		60	and 5	5b
	PER ACRE	LBS/1000 SQ.FT.	INCHES	3/1- 4/30	' <i>,</i>		3/15- 5/3\	6/1- 7/31	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	×××	111	BY 10/15 - X	×	Ž	BY 10/1 - X
BARLEY OR RYE PLUS FOXTAIL MILLET	150 lbs	3.45	1	×	××	10/15 X	×	/ <u>*</u> \	10/1 X
WEEPING LOVEGRASS	4 lbs	.09	1/4-1/2	1	×	_	-/-	X	7
ANNUAL RYEGRASS	50 lbs	1.15	1/4-1/2	Х	1	11/1	_/X	_	8/15
MILLET	50 lbs	1.15	1/2	-	X	-	/	X	\

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

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

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

BY THE DEVELOPER:

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 J. Incremental Stabilization -- Fill Slopes -- See G-20-7 21.0 STANDARDS & SPECIFICATIONS FOR TOPSOIL

Construction and Material Specifications

Definition - Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation. Purpose - To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation. Conditions Where Practice Applies

. This practice is limited to areas having 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.

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 I – Vegetative Stabilization Methods and Materials.

V. Topsoil Application

. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope 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

等"我了物物工物解决"。 医

NOTE: THERE IS NO ASCOT

BUILTINFORMATION

SHANABERGER & LANE

PROVIDED ON THIS SHEET

G. SCOTT SHANABERGER ON AND AND THE

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

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

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

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.

INSPECTION OF THE COMPLETED SITE WITH THE INSPECTORS APPROVAL REMOVE REMAINING SEDIMENT CONTROL DEVICES TOPO PROVIDED BY SHANNABERGER & LANE, DATED JANUARY, DeMario Design

Fax: (410) 386-0564

eMail: ddc@demariodesign.us

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

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

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

SITE ADDRESS: PALACE HALL DRIVE

10-992-6000

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

	6TH	ELECTION DISTRICT	10WARI	o cou	NTY			
		REVISIO	NS					
	3	(AS-BUILT)		હિંક્ક્ર				
						-		
or	NO.	PEMOVE DIKE, APP SSF A DESCRIPTION OF CHAN	T INLETS	MRT DRN.	II 2			
ssional cense	CO.	FILE#: F-07-169	DES. BY: JCO					
	TAX	(ACC.# ALA	DRN. BY: SDS					
11/1/2	TA)	(MAP: 47	CHK. BY:	JCO				
3	BLC	OCK / GRID: 8	DATE: 4-09-2007					
WEER * ON WILL	PAI	RCEL# 3	DDC JOB#, 06127.1					
	70	ME / HIGE: DEC MYD 2	SHEET NUMBER					

No. <u>25420</u>, Expiration Date: <u>07-20-08</u>

MRT 11/22/11 DRN. REV. DATE JCO SDS JCO 9-2007 06127.1 NUMBER: ZONE / USE: PEC-MXD-3 6 of. DWG. SCALE: N/A

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

HOURS BEFORE STARTING ANY WORK

APPROVAL, CLEAR & GRADE SITE (I WEEK)

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)

NOTES: . NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL

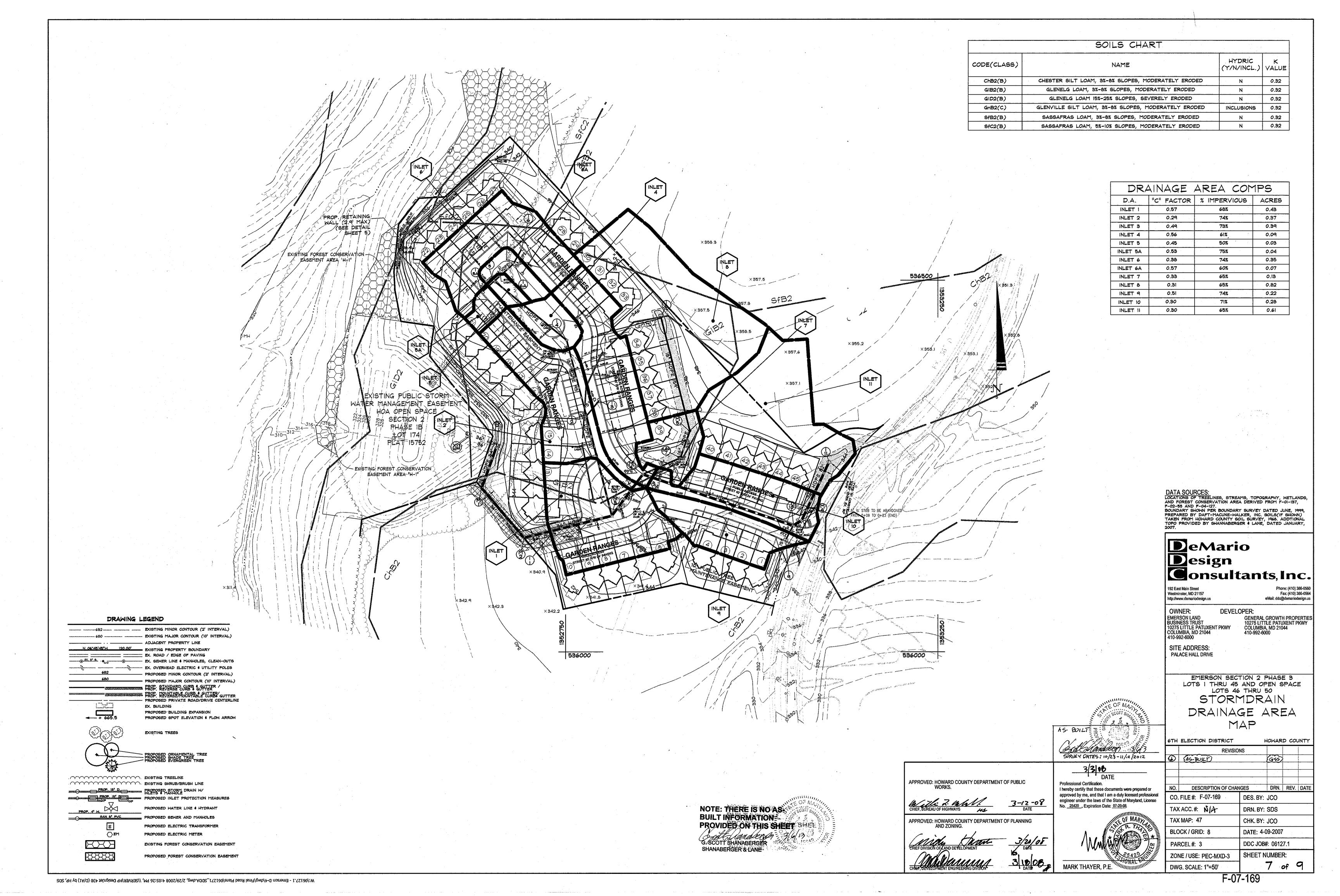
THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL DEVICES SHOWN ON THE PLAN. THE INSPECTION SHALL BE ON A DAILY BASIS AND AFTER EACH RAINFALL. AS- BUILT

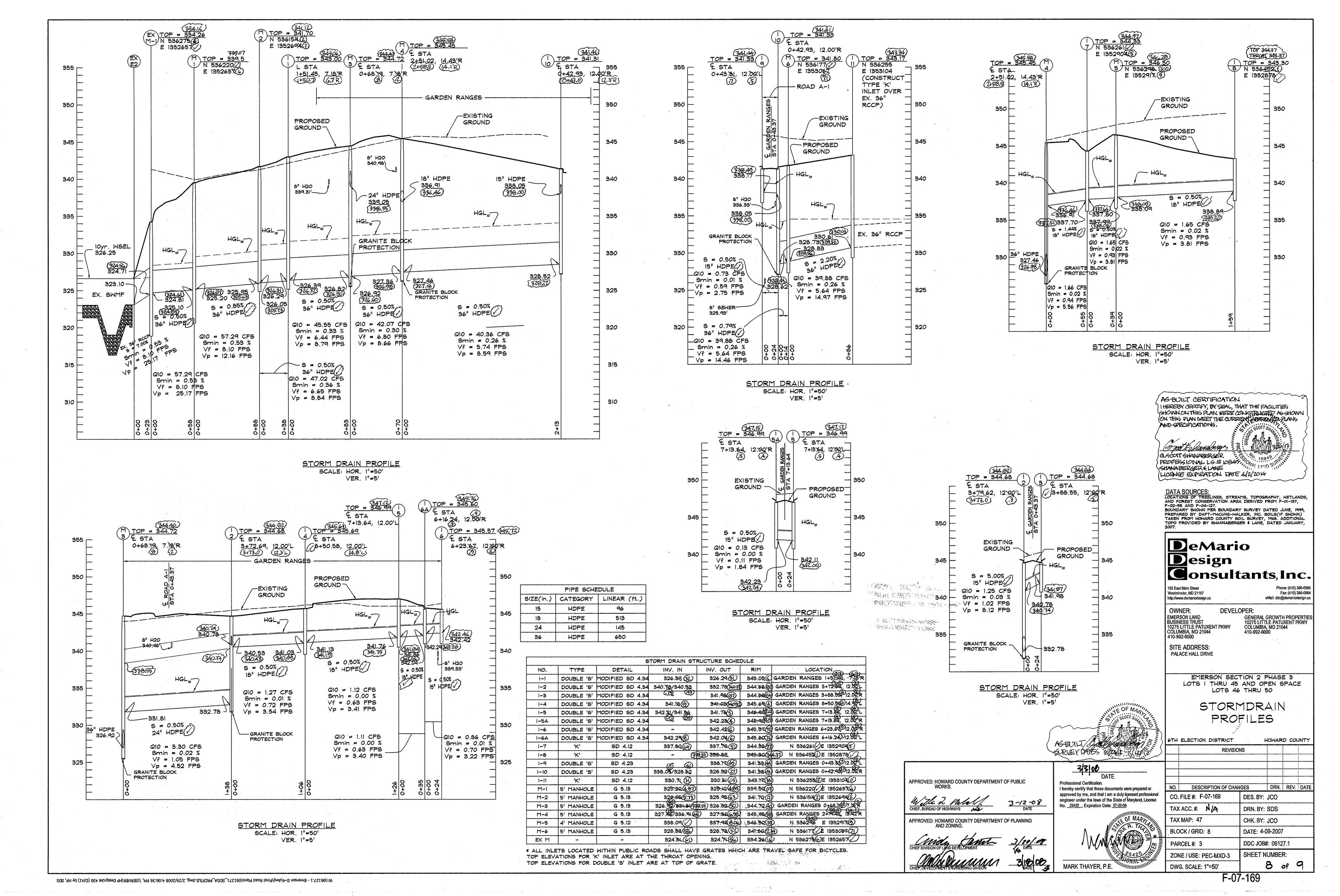
Select one or more of the species or mixtures listed in Table 25 and enter Permanent Seeding Summary Below, along with application rates and dates lawn maintenance areas, see Sections IV, Sod and V, Turfgrass. SEED MIXTURE (HARDINESS ZONE) FROM TABLE 26 FERTILIZER RATE LIME RATE NO. | SPECIES RATE (LB/AC) **DEPTHS** Q.

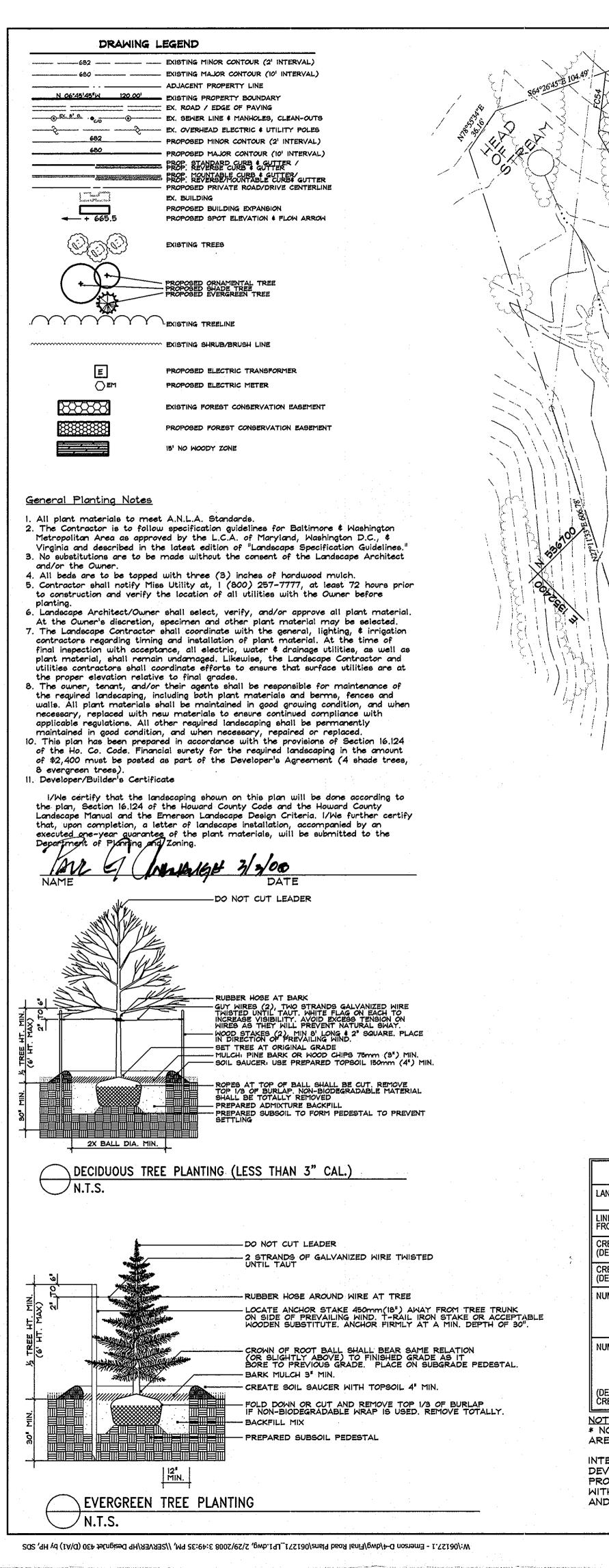
DATE APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC Professional Certification. I hereby certify that these documents were prepared approved by me, and that I am a duty licensed profes Malla 2. Mall // CHIEF, BUREAU OF HIGHWAYS engineer under the laws of the State of Maryland, Lice

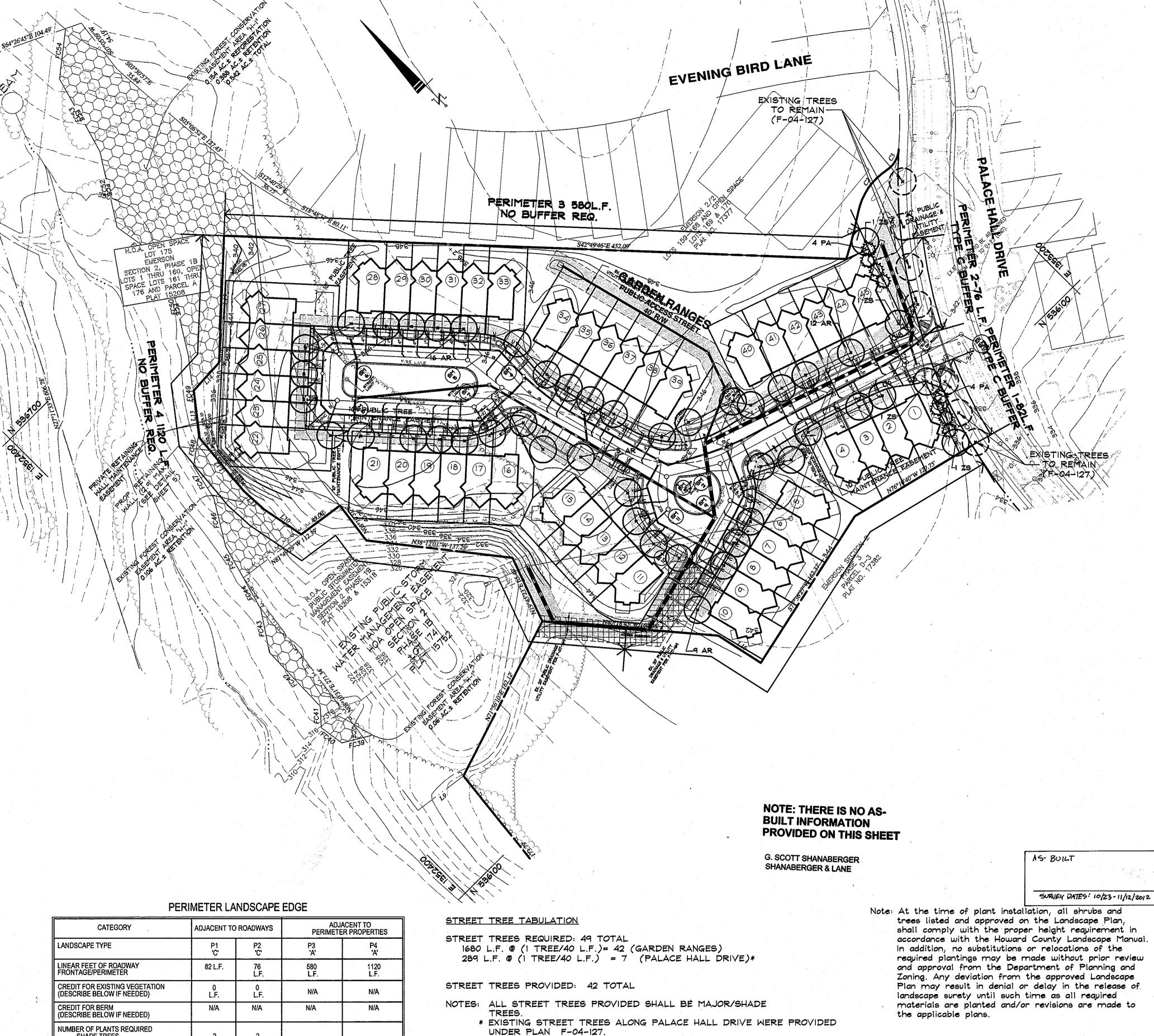
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

MARK THAYER, P.E.









CATEGORY	ADJACENT TO	O ROADWAYS		ACENT 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	2 4 0 0	2 4 0 0	N/A	N/A
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)			*	*

* 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.

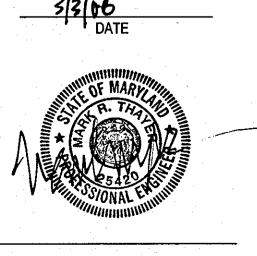
QTY ——	´SYM	BOTANICAL NAME/ COMMON NAME	SIZE	REMAR
LARG	E TR	EES	•	
LARG 42	E TRI AR	EES ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY' MAPLE ZELKOVA SERRATA VILLAGE GREEN'	2 1/2 -3" CAL.	

PA PICEA APIES

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-01-137, 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 eMail: ddc@demariodesign.ur

Fax: (410) 386-0564

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

rH	ELECTION DISTRICT	. ‡	IOMAR	D COL	YTNL		
	REVISIO	NS					
}_	(15-BUILT)		<u>(455)</u>				
		 					
			<u>. </u>				
0.	DESCRIPTION OF CHAN	GES	DRN.	REV.	DATE		
Ю.	FILE #: F-07-169	DES.BY: CVL					
ΑX	ACC.#: NA	DRN. BY: CVL					
ΆΧ	(MAP: 47	CHK. BY: AJS					
LC	OCK / GRID: 8	DATE: 4-09-2007					
PAF	RCEL#: 3	DDC JOB#: 06127.1					
<u>'</u> 01	NE / USE: PEC-MXD-3	SHEET NUMBER:					
W	G. SCALE: 1"=50'	(9 (of (7		

GENERAL NOTES

- 1. Existing Zoning: PEC-MXD-3 per April 2004 Comprehensive Zoning Plan and ZB Case
- No. 979-m.

 2. Deed Reference: M.D.R. 5289, FOLIO 330; M.D.R. 8548, FOLIO 334

 3. Plat Reference: 17382

 4. Gross Area of Tract: 8.1295 ac.

 5. Area of 100 Year Floodplain: N/A

 6. Area of Steep Slopes: 0.00 ac.

 7. Net Area of Tract: 8.1295 ac.

 8. Number of Proposed Lots/Parcels: 85

 9. Area of Proposed Lots/Parcels: 6.5330 \$c.

- a) Buildable Lots: 78
 b) Open Space Lots: 2.5480 ac.(31.4% of This Resubdivision)
 38.5% Provided Under F-03-13
- c) Minimum open space required is 35% d) Area of proposed public roads: 1.5965 ac±
- 10. Land for a Public Road will be dedicated under this final plan.
 11. This project is in conformance with the latest Howard County Standards unless waivers have

- Land for a Public Road will be dedicated under this final plan.
 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.
 Landscaping for this development and landscaping surety is provided as part of the Developers Agreement, at final plan stage, in accordance with the latest edition of the Howard County Landscape Manual and the approved Emerson Landscape and Street Tree Design criteria. It shade trees, 30 evergreen trees are required and \$9,000 surety to be paid with a DPW(Developer's Agreement).
 The Forest Conservation Easement has been established to fulfill the requirements of section 16.1200 of the Howard County Code and Forest Conservation Act. 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. This project complies with the requirements of Section 16.1200 of the Howard County Code for Forest Conservation. Forest Conservation act compliance for Emerson Section 2 Phases 1, 2 and 3, was previously addressed under F-01-137, F-01-145, and F-02-55 and for Phase 5B under F-05-49 Plat number 17381 established Forest Conservation area H-1(7.581 acres) and area J-1 (2.329 acres). The total Forest Conservation surety amount is \$52,533.36 paid under F-05-049.
 The coordinates shown hereon are based upon the Howard County Monument No's 47DC & 47EB were used for this project.
 This property is within the Metropolitan District.
 This property is within the Metropolitan District.
 Stormwater management for this development is provided under F-02-55 & F-01-145. Quality & quantity stormwater management for section 2, phase 2 is provided by one wet pond facility. The wet pond facility is via Pal

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

 There is no floodplain onsite, there are no steep slopes, streams or buffers onsite.

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

 Traffic study prepared by Wells & Associates, inc., dated February, 2006...
- 22. The geotechnical study for this project was prepared by Hillis Carnes Engineering Associates, Inc. in February, 2006.
 23. Project Background Information:

- a) Subdivision Name: Emerson Parcels D3/AA-1.
 b) Tax Map/Block/Parcel: 47/8/3 \$ 837
 c) Zoning: PEC-MXD-3
 d) Election District: 6th
 e) Total (Gross) Tract Area: 8.1295 ac.
 f) Number of Proposed Lots/Parcels: 85
 g) Applicable Department of Planning \$ Zoning File Nols:: S-99-12(Key Property), F-03-13, P-02-15, WP-03-46, WP-99-96, PB-339, PB359, ZB-979M, SP-06-05, F-05-49, F-07-169.

- 24. There are no existing dwellings on the site.
 25. The proposed access streets shall be public.
 26. BRL denotes the Building Restriction Line.
 27. Sediment and erosion control measures are provided on the final plan in accordance with the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control.
 28. Street trees are 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. 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.
 32. 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).
- 33. There are no historic structures or cemeteries located on the subject property.
 34. 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
- 35.All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.

- if applicable.

 36. 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.

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

 38. 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 applied.
- placement of any asphalt.
 39.All sign posts used for traffic control signs installed in the County
- Right-of-way shall be mounted on a 2" galvanized steel, perforated, square tube post (14 gauge) inserted into a 2-1/2" galvanized steel, perforated, square tube sleeve(12 gauge)-3' long. A galvanized steel pole cap shall be mounted on top of each post.
- 40. 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.

 41.Water is public. Contract # 24-4493-D

 42.Sewer is public. Contract # 24-4493-D

 43.Parcel D-3 & AA-I were each allocated 39 units with the recordation of F-05-49, Plat Nos. 17381
- through 17383.

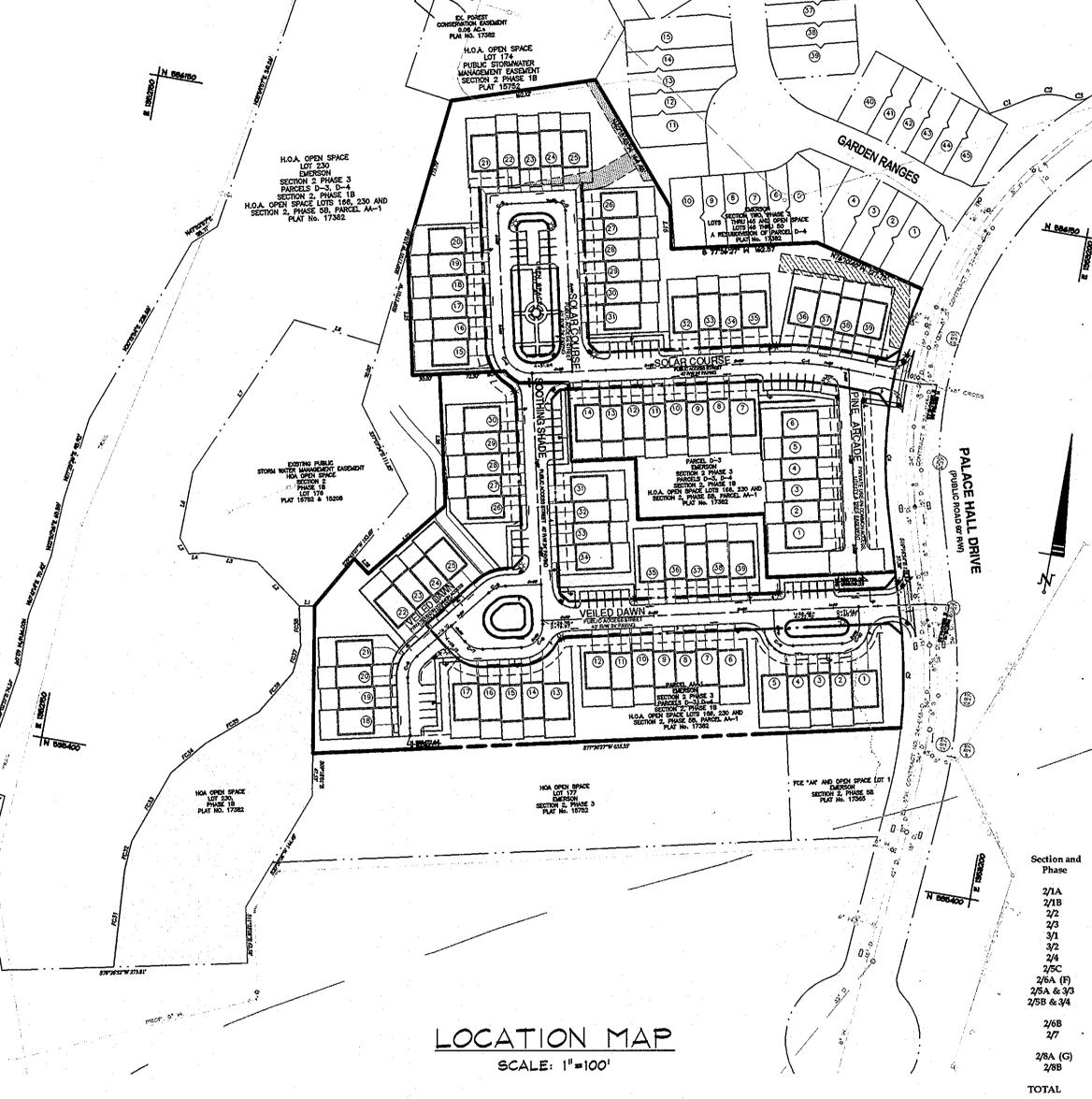
 44.Provide sidewalk ramps at all intersections with truncated dome pad per current ADA standards.

 45.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.(a), 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.

FINAL ROAD CONSTRUCTION PLANS EMERSON SECTION D3 & A

EMERSON, SECTION 2, PHASE 3, LOTS 1 thru 39 and OPEN SPACE LOTS 40 thru 42, A RESUBDIVISION OF PARCEL "D-3" and EMERSON, SECTION 2, PHASE 5B, LOTS I thru 39 and OPEN SPACE LOTS 40 thru 43, A RESUBDIVISION OF PARCEL AA-1

TAX MAP 47, GRID 8, PARCELS 3 4 387 HOWARD COUNTY, MD 6TH ELECTION DISTRICT



			CUEV	E TABLE		
CURVE	RADIUS	LENGTH	DELTA	CHD. BRG.	CHD. DIST.	TANGENT
C1	478.101	251.17 ¹	30'06'01"	S 01"13"34" E	248.291	128.55
C2	534.381	117.11	12*33'22"	N 09°59'53" W	116,871	58.79
C3	25.00	5.851	13*24'51"	N 63°35'43" W	5.841	2.94
C4	39.00'	14.82 ¹	21*46'17"	S 59*25'00" E	14.731	7.50
C 5	310.00	74.66'	13*47'55"	5 84°30'25" W	74.48	37.51
C6	50.001	27.84'	31'54'26"	S 28'22'46" E	27.49'	14.29
C7	350.00	84.29'	13*47'55"	S 84'30'25" W	84.09'	42.35
C8	16.00	16,281	5817'01"	S 48'27'56" W	15.581	8.92
Cq	45.00'	45.781	5817'01"	N 48'27'56" E	43.83'	25.09
C10	45.00	40.031	50'58'09"	S 76'54'29" E	38.72	21.45
CII	50.001	34.061	39.01,21	S 58'05'32" W	33.41'	17.72
C12	17,001	16,881	56'53'45"	N 40'50'26" W	16.201	9.21
C13	50.001	21.781	24'57'19"	S 56*48'39" E	21.61	11.06
C14	12.00	29.521	140'58'09"	S 31'54'29" E	22.62'	33.86
C15	10.001	6.81	39'01'51"	S 58°05'32" W	6.681	3.54
C16	31.00	48.69'	90'00'00"	N 32'36'27" E	43.841	31.00
C17	31.001	48.691	90'00'00"	S 57*23'33" E	43.841	31.00
C18	43.00	29.31	39'03'01"	S 07'07'57" W	28.741	15.25

Site Analysis Data Chart

1. General Site Data a. Present Zoning: PEC MXD-3

b. Applicable DPA File References: S-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, F-07-169.

BENCHMARK

DESCRIPTION

536615.0157

47DC

BENCHMARK #2 N. 536212.7456

343.249

1353679.1226

1354833.6403

BENCHMARK #1

ELEV ..

BENCHMARK#1

N 536305,4177

E1353176.6228

ELEV. 345.49

BENCHMARK#2 N535436.0715

E 1352486.0664 BM REBAR &CAP #12

LELEY, 326.07

BM REBAR + CAP +76

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___

2. Area Tabulation a. Total Area of Site 8.1295 Ac.

- 1. Parcel D-3 = 4.1308 Ac.+/_ 2. Parcel AA-1 = 3.9887 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 8.1295 Ac.+/_
- e. Area of Proposed Building Lots: 3.9850 Acres
- f. Area of Proposed Open Space Lots: 2.5480 Acres
- g. Area of Bulk Parcels: O Acres
- h. Area of Proposed Public Roads: 1.5965 Ac.+/_
- i. Area of Proposed Private Roads: 0.273 Ac. (Included in proposed open space)

- 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-3/AA-1 = 78 Units
- b. Total Number of Residential units/Lots Proposed on this Submission
 1. Parcel D-3 = 39 2. Parcel AA-1 = 39
- c. Density of Project Per Gross Acre: 9.5 units
- d. Total number of Open Space lots proposed: "
- e. Total Number of Non Buildable Bulk Parcels Proposed: 0
- f. Total Number of Lots/ Parcels Proposed: 85
- 4. Open Space Tabulation
- a. Open Space Required: 35% b. Open Space Provided:
- F-02-55, Parcel D A=6.5 acres (35.1%) F-04-127, Parcel AA A=6.9 acres (28.9%) This Plan A=2.54 acres (31.4%)

5. Parking Tabulation

- a. Parking Required: 156 spaces (78 Units x 2.0 spaces/units = 156 spaces)
- b. Parking Provided: 203 spaces (47 overflow spaces)

EMERSON, SECTION 2 & 3 OVERALL DEVELOPMENT TRACKING CHART

Phase	Number	Acreage	Ac. (%) (A)	Ac. (%)	(%)	Āc.	(%)		Density (C)	(SFA/Apt/Condo)	Density (D)
2/1A	F-01-136	8.4	3.6 (43%)	- 0 -	- 0-	4.	.8 (57%)	-	•	-	
2/1B	F-01-137	97.8	49.7 (50.8%)	8.0 (8.2%)	- 0-		.1 (41%)	160	3.2	80 SFA	10 D.U./Ac.
2/2	F-01-145	12.7	-`0-	12.7 (100%)	- 0-		0-` ′	-	-	120 SFA	9.4 D.U/Ac.
2/3	F-02-55	18.5	- 0-	12.0 (64.9%)	- 0-	6.	.5 (35.1%)	-	-	120 SFA	10 D.U./Ac.
3/1	F-02-131	69.5	- 0 -	-0-	22.0 (31.7%)	47.	.5 (68.3%)	-	-	•	
3/2 2/4	F-02-178	12.3	- 0-	-0-	8.9 (72.4%)	3.	A (27.6%)	-	•	•	1
2/4	F-03-13	44.5	27.4 (61.5%)	- 0-	-`O-	17.	.1 (38.5%)	120	4.4	<u>-</u>	
2/5C	F-03-175	3.0	0.7 (23.3%)	- 0 -	0.2 (6.7%)		.1 (70%)	-	-	- ,	1
2/6A (F)	F-04-68	10.4	-0-	9.4 (90.4%)	- Ò-	1.	.0 (9.6%)	-		100 SFA	10.6 D.U/Ac. 🧠
2/5A & 3/3	F-04-53	29.2	22.7 (77.7%)	`-0-	3.9(13.4%)	2.	.6 (8.9%)	87	3.9	•	· · · · · · · · · · · · · · · · · · ·
2/5B & 3/4	F-04-127	23.9	-0-	2.9(12.1%)	14.1 (59%)		.9 (28.9%)	-	•	60 Apt (EMP) 33 SFA (OR)	11.4 D.U./Ac.
2/6B	F-05-89	6.2	4.9 (79.0%)	- 0-	- 0-	1.	.3 (21.0%)	20	4.1		•
2/7	F-05-93	8.5	-0-	8.5 (100%)	- 0-		0-`	-	. -	73 Apt 47 SFA	14.1 D.U/Ac.
2/8A. (G)	F-07-128	0.0	- 0 -	- 0-	- 0-	- (0-	. 3	-	•	
2/88	F-07-141	28.8	- 0-	8.5(29.5%)	12.72(44.2%)	7. 58	(26.3%)	-	•	117 Apt	13.8 D.U./Ac.
TOTAL		373.7	109 (29.2%)	62 (16.6%)	61.82 (16.5%)	140.	.9(37.7%)	390	3.6	250 Apt 500 SFA 750 Total	12.0 D.U/Ac.
								Max. Res.	Units Proposed	Max. Res. Unit	sAllowed
Overall Densit	y Tabs	(E) Proposed	(B) Allowed	Land U	se Acreages	Proposed	Allowed			ZB-979 M	5-99- 12
Overall SFD D		3.6	3.8	SF		109	117	390	SFD	450 (37.5%)	
Overall OR De	ensity	12.0	12.1	OI		62	62	. 250	APT	250 (20.8%)	
Overall Project	Density	2.21	2.32	E	MP	6 1.82	154.9	500	SFA	500 (41.7%)	
	-			O:	pen Space	140.9	183			1200	1145
				TÝ	OTAL	373.7	516.9	i			

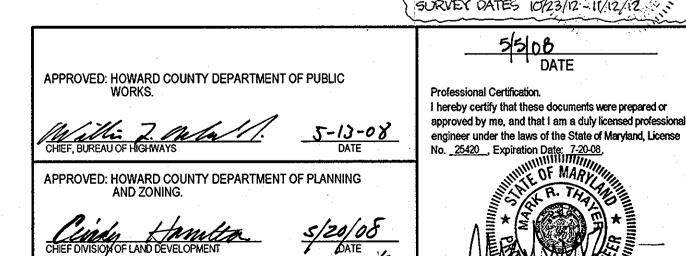
(A) SFD acreage includes Common Open Areas (COA Lots). reconciled against the maximum density tabulations with the last plat or phase. (B) Overall allowed densibased on maximum number of units allowed per ZB 979 M an Max. Allowed Land Use Acreages. F) Resubdivided by F06-25 to create 1.0 ac of credited Open Space (G) This is a reubdivision of SFD Land Use recorded with F-03-013 (C) Max. density for any individual SFD area is 5.0 units/acro D) Max. density for an individual OR area is 20.0 units/acre

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.

This subdivision plan represents the resubdivision of F-02-55 for Phase 2/3 and F-01-127 for Section 2, Phase 5B.

.This subdivision plan represents the resubdivision of F-02-55 for Phase 2/3 and F-04-127 for Section 2, Phase 5B. AS-BUILT SURVEY DATES 10/23/12-11/12/12

DATE



VICINITY MAP

DRAWING INDEX

SHEET	DESCRIPTION
. 1	COVER SHEET
2	FINAL ROAD PLAN & PROFILE
3	FINAL ROAD PLAN & PROFILE
4	FINAL ROAD PLAN & PROFILE
5	GRADING & SEDIMENT CONTROL PLAN
- 6	SEDIMENT CONTROL DETAILS AND SITE DETAILS
7	SEDIMENT EROSION CONTROL NOTES
8	STORM DRAIN DRAINAGE AREA MAP
9	STORM DRAIN DRAINAGE AREA MAP PROFILE
10	LANDSCAPE PLAN DETAILS, NOTES AND STREET

_,,	
1	COVER SHEET
2	FINAL ROAD PLAN & PROFILE
3	FINAL ROAD PLAN & PROFILE
4	FINAL ROAD PLAN & PROFILE
5	GRADING & SEDIMENT CONTROL PLAN
. 6	SEDIMENT CONTROL DETAILS AND SITE DETAILS
7	SEDIMENT EROSION CONTROL NOTES
8	STORM DRAIN DRAINAGE AREA MAP
9	STORM DRAIN DRAINAGE AREA MAP PROFILE
10	LANDSCAPE PLAN DETAILS, NOTES AND STREET TREE PLAN

NOTE: THERE IS NO AS

BUILT INFORMATION .

PROVIDED ON THIS SHEET G. SCOTT SHANABERGER

SHANABERGER & LANE

DATA SOURCES:
LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, WETLANDS, AND FOREST CONSERVATION AREA DERIVED

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, 2007.

DeMario Design Consultants, Inc.

192 East Main Street Westminster, MD 21157 Fax: (410) 386-0564 http://www.demariodesign.us eMail: ddc@demariodesign.u OWNER: DEVELOPER: **EMERSON LAND** GENERAL GROWTH PROPERTIES **BUSINESS TRUST** 10275 LITTLE PATUXENT PKWY 10275 LITTLE PATUXENT PKWY COLUMBIA, MD 21044

SITE ADDRESS: PALACE HALL DRIVE LAUREL, MD 20723

COLUMBIA, MD 21044

SPACE LOTS 40 thru 42, A RESUBDIVISION OF PARCEL D-3 and EMERSON, SECTION 2, PHASE 5B, LOTS 1 thru 39 and OPEN SPACE LOTS 40 thru 43, A RESUBDIVISION OF PARCEL AA-I

COVER SHEET

6TH ELECTION DISTRICT HOWARD COUNTY, M GSS GSS 4/5/ DESCRIPTION OF CHANGES DRN. | REV. | DAT CO. FILE #: F-07-182 DES. BY: JCO DRN. BY: SDS

TAX ACC.# TAX MAP: 47 CHK. BY: RBW DATE: 5-2-2008 BLOCK / GRID: 8 DDC JOB#: 06128.1 PARCEL# 3 & 837 ZONE / USE: PEC-MXD-3 SHEET NUMBER:

DWG. SCALE: 1"=100"

of 10

EXISTING MINOR CONTOUR (2' INTERVAL) EXISTING MAJOR CONTOUR (10' INTERVAL)

DRAWING LEGEND

EX. ROAD / EDGE OF PAVING EX. SEWER LINE & MANHOLES, CLEAN-OUTS EX. OVERHEAD ELECTRIC & UTILITY POLES PROPOSED MINOR CONTOUR (2' INTERVAL) PROPOSED MAJOR CONTOUR (10' INTERVAL)

COCCOMPANY EXISTING TREELINE CONTROL EXISTING SHRUB/BRUSH LINE

PROPOSED INLET PROTECTION MEASURES PROPOSED WATER LINE & HYDRANT

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

348	535990.0634	1353017.3866	
349	535925.0776	1353016.0130	
350	535813.4955	1353034.6485	CL
351	535745.2067	1353054.5867	
352	535714.5788	1352915.1960	<u> </u>
353	535783,9245	1352899.9588	<u> </u>
354	535753.6657	1352762.2480	ļ
355	535820.5697	1352747.5474	
356	535805.3325	1352678.2016	
357	535883.4220	1352661.0433	
358	535890.7743	1352659.4278	
359	535881.1999	1352605.0441	
360	535883.7969	1352599.8137	. (
361	535891.2915	1352587.1324	
362	535888.6765	1352575.2311	(
363	535869.2943	1352487.0206	
364	536005.7063	1352457.0473	
365	536178.4522	1352476.0686	. (
366	535937.8988	1353003.0811	
367	535939.0563	1352955.9295	.(
368	535931.9267	1352881.7935	
369	535912.8592	1352562.1668	
370	536088.2217	1352523.5281	
371	536112.9667	1352635.8339	
372	535937.5459	1352674.3831	
373	535929.9249	1352686.2962	
374	535970.9948	1352873,2092	
		1070074 0111	

NORTH EAST

536092.2481 | 1352905.2819

536057.4023 | 1352746.6950

300 536061.7292 1353029.3361

303 | 536103.2974 | 1352736.6106

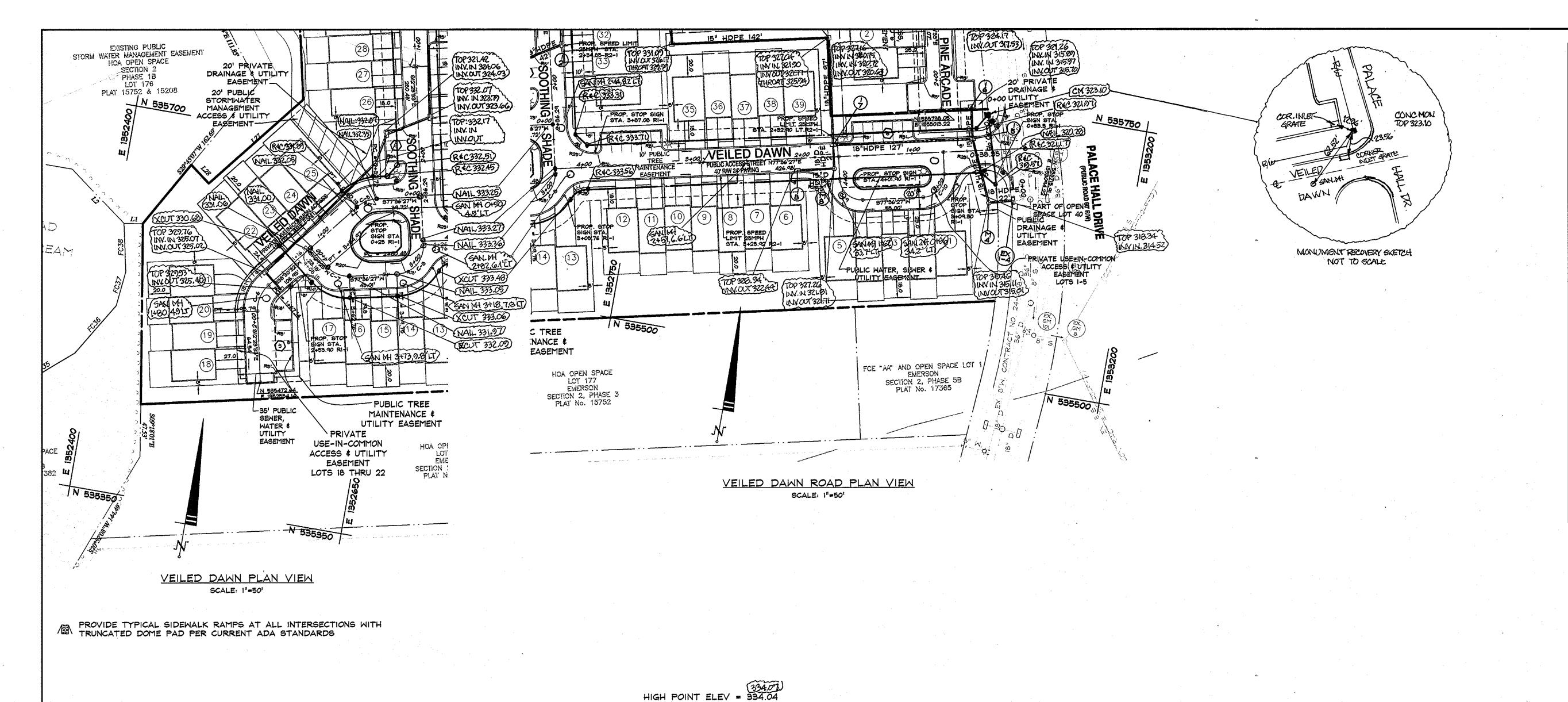
304 | 536228.7220 | 1352630.1979

57	535883.4220	1352661.0433
58	535890.7743	1352659.4278
39	535881.1999	1352605.0441
50	535883.7969	1352599.8137
61	535891.2915	1352587.1324
62	535888.6765	1352575,2311
63	535869.2943	1352487.0206
64	536005.7063	1352457.0473
6 5	536178.4522	1352476.0686
66	535937.8988	1353003.0811
57	535939.0563	1352955.9295
68	535931.9267	1352881.7935
69	535912.8592	1352562.1668
70	536088.2217	1352523.5281
71	536112.9667	1352635.8339
72	535937.5459	1352674.3831
73	535929.9249	1352686.2962
74	535970,9948	1352873.2092
75	535979.0442	1352956.9111
76	535977.8900	1353003.9301
77	535912.7791	1352608.2638
78	535916,5889	1352602.3045
79	536052.8828	1352572.2740
30	536058.8416	1352576.0810
81	536064.2168	1352600.4766
32	536060.4092	1352606.4325

384 535918.1215 1352632.5777 385 535917.8739 1352960.3962

386 535763.5926 1352994.2960

		Q OF ROAD CURVE TABLE									
CURVE	RADIUS	LENGTH	DELTA	CHORD BRG.	CHORD DIST.	TANGEN					
C-1	330.001	79.471	13*47'55"	584°30'25"W	79.281	39.93					
C-2	10.00	15.71	90'00'00"	957'23'33"E	14.14'	10.00					
C-3	10.00'	15.71	90'00'00"	N32*36'27"E	14.141	10.00					
C-4	30.001	47.12 ¹	90.00,00,1	N57*23'33"W	42.431	30.00					
C-5	30.001	20.47'	39*05'55"	558'03'30"W	20.081	10.65					
C-6	30.001	26.651	50*54'05"	S13*03'30"W	25.78 ¹	14.28					
C-7	25.00'	22.21	50*54'06"	N76*56'30"W	21.491	11.90					
C-8	25.00¹	39.271	90'00'00"	532'36'27"W	35.361	25.00					
C-9	20.00'	31.421	90'00'00"	N57*23'33"W	28.28 ¹	20.00					
C-10	20,001	31,421	90'00'00"	532°36'27"W	28.281	20.00					



HIGH POINT STA = 3+50.28PVI STA = 3+25 PVI ELEV = 335.72

	STREET LIGHT CHART					
SYMBOL	TYPE	LOCATION				
*	150 WATT PREMIER	VEILED DAWN & STA. 0+29, 26' RT.				
*	100 WATT PREMIER	VEILED DAWN & STA. 0+93, 16' LT.				
*	100 WATT PREMIER	VEILED DAWN & STA. 1+63, 19' RT.				
*	100 WATT PREMIER	VEILED DAWN & STA. 3+23, 19' RT.				
*	100 WATT PREMIER	VEILED DAWN & STA. 4+06, 20' LT.				
*	150 WATT PREMIER	SOLAR COURSE Ç STA. 0+20, 28' RT.				
*	100 WATT PREMIER	SOLAR COURSE & STA. 0+97, 16 LT.				
*	100 WATT PREMIER	SOLAR COURSE & STA. 1+63, 18' RT.				
*	100 WATT PREMIER	SOLAR COURSE & STA. 3+65, 18'RT.				
*	100 WATT PREMIER	SOLAR COURSE & STA. 6+20, 19' RT.				
*	100 WATT PREMIER	SOLAR COURSE & STA. 7+35, 17' RT.				
*	100 WATT PREMIER	SOOTHING SHADE & STA. 0+20, 20' RT.				
*	100 WATT PREMIER	500THING SHADE & STA. 2+16, 22' RT.				
*	100 WATT PREMIER	SOOTHING SHADE & STA. 3+90, 21' LT.				



I HEREBY CERTIFY, BY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONFITRACTED AS SHOWN ON THIS AS-BUILT PLAN MERTAPE DASKENT APPROVED PLANG AND SPECIFICATIONS!

kinnen min un

Soft Donoberry G.SCOTT SHANABERGER : 18 100 SHANATBERGER & LANE SLICENSE EXPIRATION DATE 4/2/2014

40' RIGHT OF WAY VARIES MODIFIED CURB AND GUTTER

> TYPICAL ROAD SECTION(FIG. 209a) VEILED DAWN PUBLIC ACCESS STREET SCALE: NTS

> > - 1.5" HMA SUPERPAVE FINAL SURFACE - 1.0" HMA SUPERPAVE INTERMEDIATE SURFACE - 2.0" HMA SUPERPAVE BASE -8" Graded aggregate base (GAB) (CONTRACTOR MAY REDUCE GAB TO 4.0" IF APPROVED CBR OF 5 OR GREATER IS ACHIEVED)

SCALE: NTS

AND ZONING.

P-2 PAVING SECTION(R-2.01) SURVEY DATES: 10/13/12AND TUA'S DATE 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 duly licensed professional engineer under the laws of the State of Maryland, License No. <u>25420</u>, Expiration Date: <u>7-20-08</u>.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING

DATA SOURCES: LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, WETLANDS, AND FOREST CONSERVATION AREA DERIVED FROM F-01-137, F-02-55 AND F-04-127. 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, 2007.
DeMario

Design Consultants, Inc.

192 East Main Street Westminster, MD 21157 eMail: ddc@demariodesign.us http://www.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 410-992-6000

Phone: (410) 386-0560 Fax: (410) 386-0564

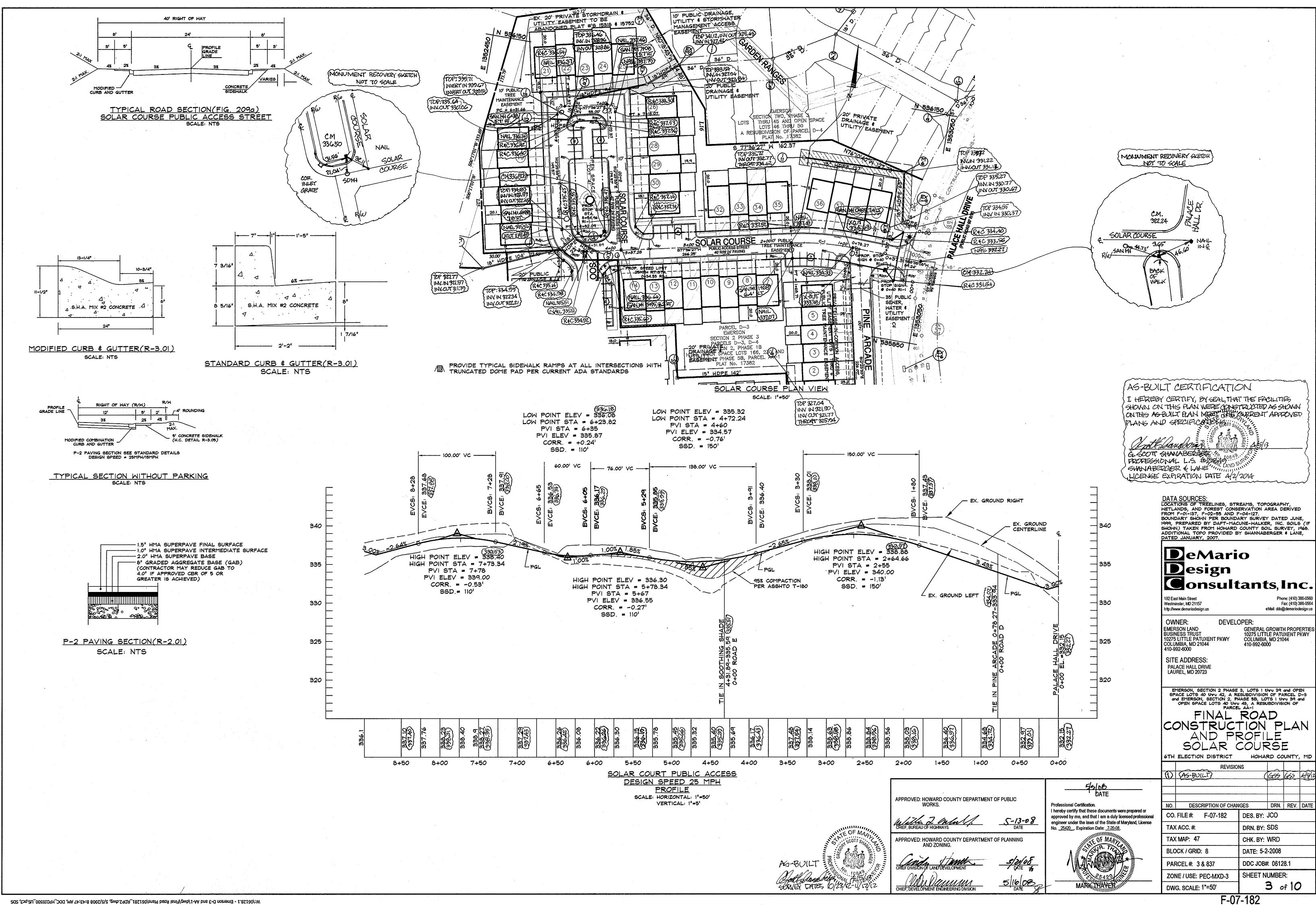
SITE ADDRESS: PALACE HALL DRIVE LAUREL, MD 20723

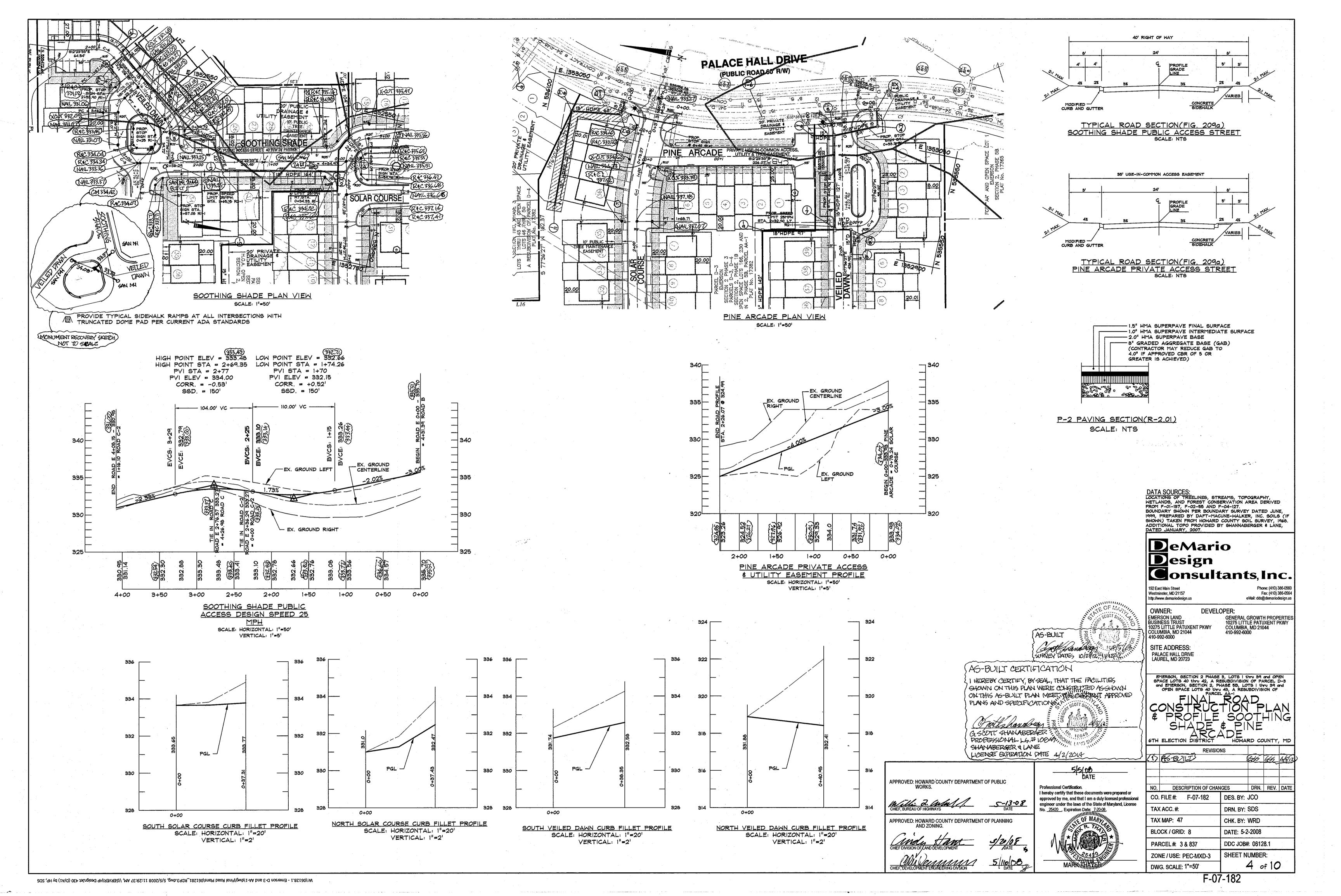
EMERSON, SECTION 2 PHASE 3, LOTS 1 thru 39 and OPEN SPACE LOTS 40 thru 42, A RESUBDIVISION OF PARCEL D-3 and EMERSON, SECTION 2, PHASE 5B, LOTS 1 thru 39 and OPEN SPACE LOTS 40 thru 43, A RESUBDIVISION OF PARCEL AA-1 FINAL ROAD CONSTRUCTION PLAN

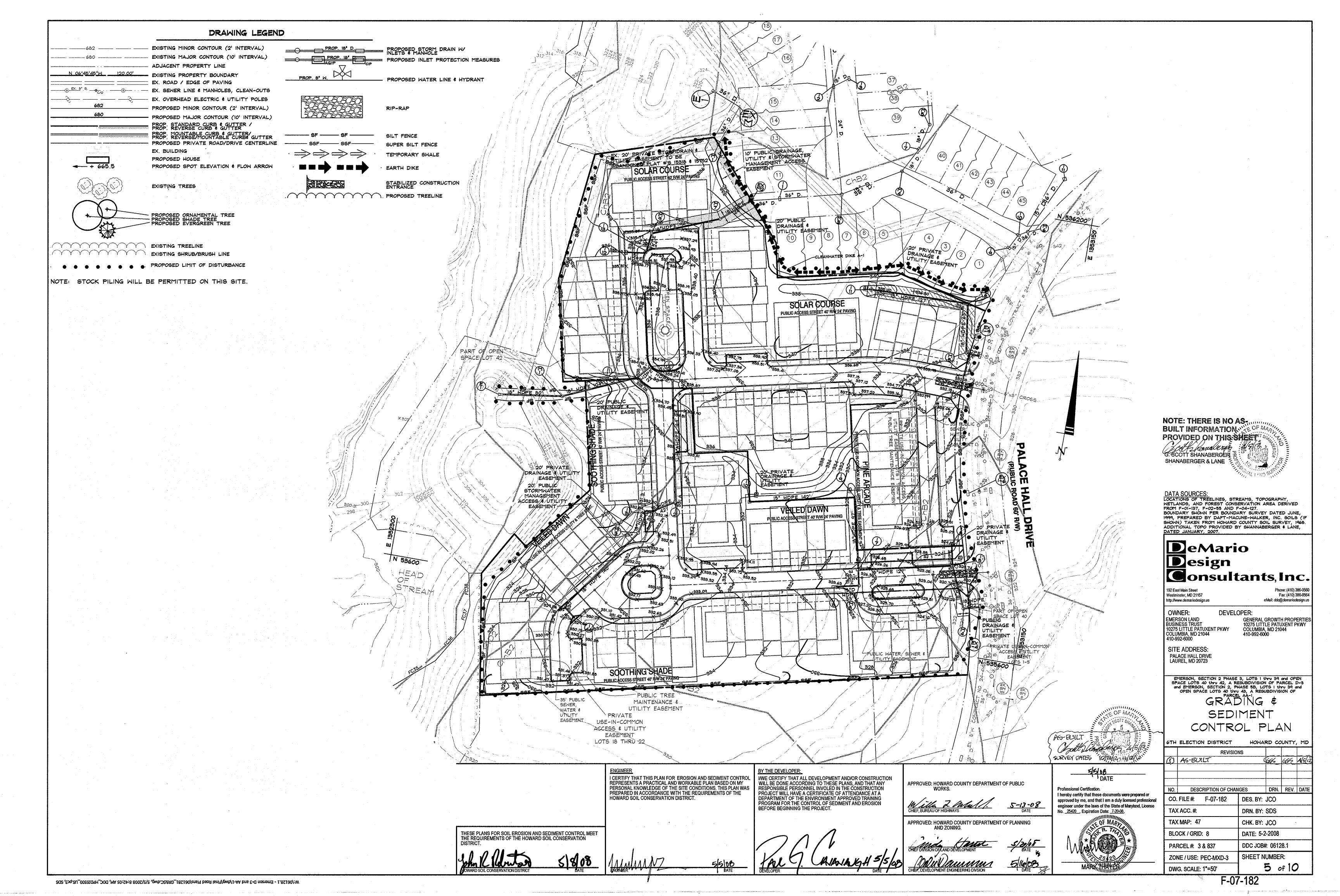
6TH ELECTION DISTRICT HOWARD COUNTY, MD

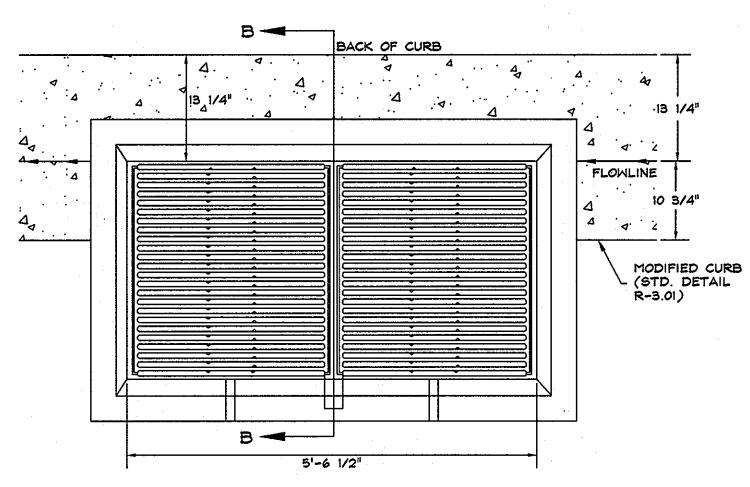
) (AS-BUILT) 645 645 NISI DESCRIPTION OF CHANGES DRN. | REV. | DATE CO. FILE # F-07-182 DES. BY: JCO TAX ACC. #: DRN. BY: TPM/SDS TAX MAP: 47 CHK. BY: WRD BLOCK / GRID: 8 DATE: 5-2-2008 DDC JOB#: 06128.1 PARCEL# 3 & 837 SHEET NUMBER: ZONE / USE: PEC-MXD-3 2 of 10 DWG. SCALE: 1"=50"

					- -	CORR. = -1.62' SSD. = 150'				
					_	174.00° VC				
	340	330.47 1+40 330.47 1+40 330.45 330.45 330.45 330.45	EX. GROUND LEFT	o 340 -	EVCS: 4+12 EVCE: 333.11	EX. GROUND TO CENTERLINE	5: 2+38 : 330.97 (331.05)	PVI STA = 1+0 PVI ELEV = 323 CORR. = 0.16 SSD. 150'	3.44	 340
	335 —	EVCE: BVCE:	X. GROUND STEPLINE 335		3003	EX. GROUND RIGHT	BVCE BVCE	VCS: 1+45 ZE: 325.90		335
	330 —	LOW POINT ELEV = 330.22 LOW POINT STA = 1+64.48 PVI STA = 1+65	330 WANN 0400 ROAD E	o 330 <u> </u>	9.47' (333.37) DE		EX. GROUND LEFT	E E	VCS: 0+55 /CE: 321,64	330
·	325	PVI ELEV = 329.97 0 0 0 0 0 0 0 0 0	EX. GROUND CORRESPOND AND AND AND AND AND AND AND AND AND A	5 325 <u> </u>	4+26.98, 33; OTHING SHA		-EX. GROUND LEFT	PGL		325
	320	STA. 1+36.(PRIVATE TIE IN VEILED D 330.	320 ————————————————————————————————————	o 320 - - - -	VEILED DAMN .= 2+76.57 SO			RIVE 1+66.46 RIVE 0+71.46		
		330.26 331.22 330.26 330.30 330.30 330.30 330.30	332.18 (333.27 (333.5)	310				で 		320
		2+50 2+00 1+50 1+00 VEILED DAWN PUBLIC ACCESS PLACE DESIGN SPEED 25MPH PROFILE	<u>1</u>		334 4 (373.71) 333.44	333.89 (374.01) 334.04 333.88 (373.82) 333.42	332.66 (2)(7)() 331.59 (322.02) 328.90	324.84 323.60	322.44 320.42 320.42 320.42	
		SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'			4+00	3+50 3+00	2+50 2+00 VEILED DAWN PROFIL PUBLIC ACCESS PLACE DESIGN SPEED 25 MI SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'	<u>CE</u> <u>PH</u>	0+50 0+00	
							ATIVIDATE: 1 -0			·









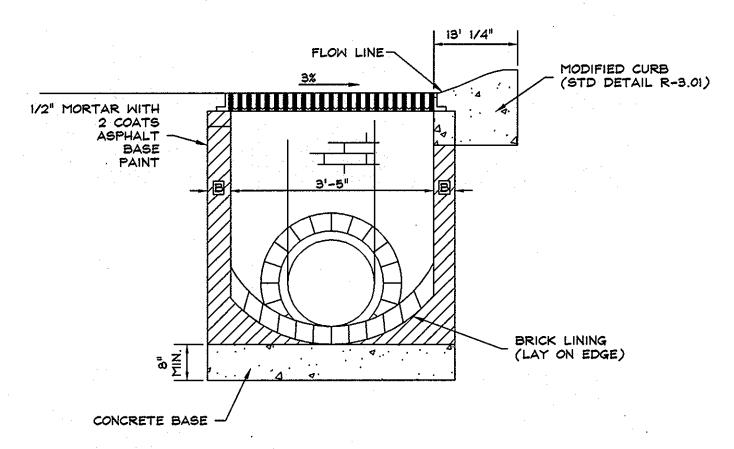
TYPE 'S' INLET (STD. DETAIL SD-4.23 SCALE: NTS

1. SLAB SHALL BE MIX NO. 3 CONCRETE 2. INVERTS SHALL BE BRICK, GRADE SM (ASTM C32) 3. WALLS SHALL BE BRICK (BR.)

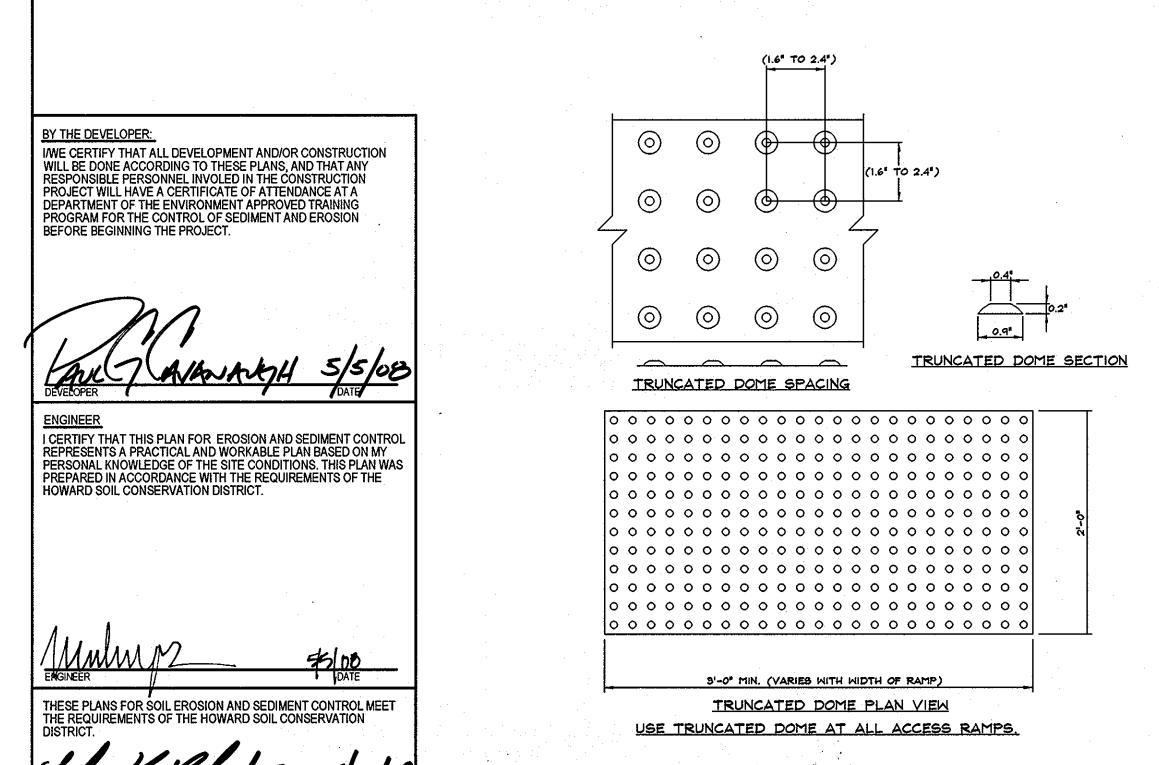
PLAIN MIX NO. 3 CONCRETE (P.C.) OR REINFORCED CONCRETE (R.C.) SEE TABLE FOR DIMENSIONS.

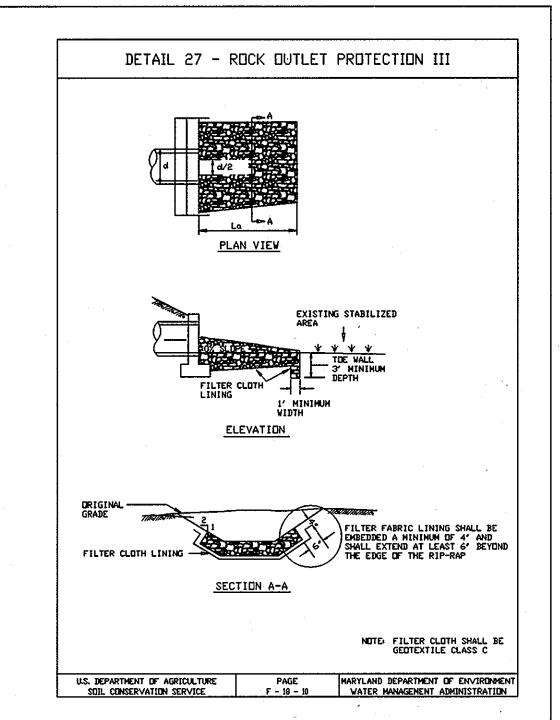
4. *REINFORCING = # 4 @ 10" % E.W. IN C OF WALLS. REINFORCING CONTINUOUS AT CORNERS. ALL LAPS 1'-4".

5. TOP 4" OF WALLS SHALL BE BRICK MASONRY. ADDITIONAL BRICK SHALL BE USED TO BRING THE GRADE TO EXISTING GRADE IF REQUIRED.



MODIFIED DOUBLE TYPE 'S' INLET (SD DETAIL SD-4.34) SCALE: NTS





ROCK DUTLET PROTECTION III

Construction Specifications

1. The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed

2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.

3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.

4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the void between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the

5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adacent to the stone will occur.

WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT

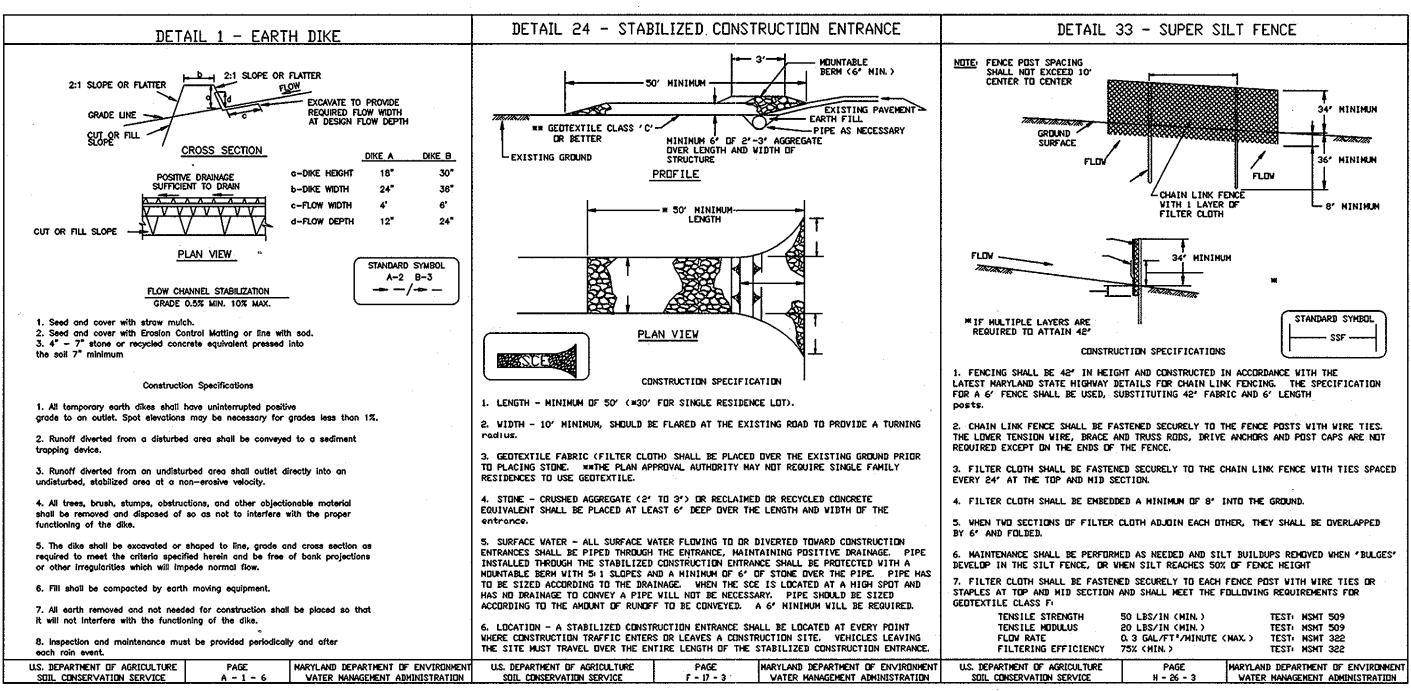
SEDIMENT CONTROL GENERAL NOTES

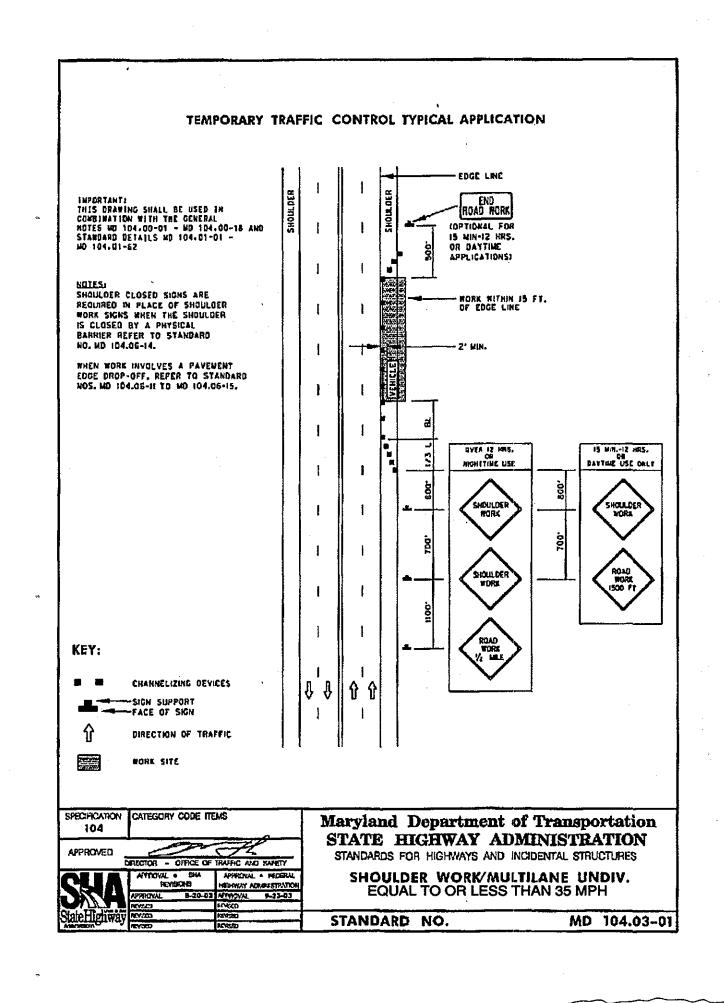
SDIL CONSERVATION SERVICE

- 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 VEGETATIVÈ 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
- 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 = 8.13 acres AREA DISTURBED = 8.13 acres AREA TO BE ROOFED OR PAVED = 4.65 acres AREA TO BE VEGETATIVELY STABILIZED = 3.48 acres TOTAL CUT = 12,600 cu yd = 000 cu yd TOTAL FILL WASTE/BORROW AREA
- (LOCATION TO BE DETERMINED BY CONTRACTOR. LOCATION POINT MUST HAVE OPEN GRADING PERMIT.) 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
- 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

CONTROL INSPECTOR.

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





APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING

NOTE: THERE IS NO AS-**BUILT INFORMATION PROVIDED ON THIS SHEET** Tell flanderg styl G. SCOTT SHANABERGER SHANABERGER & LANE DATA SOURCES: LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, WETLANDS, AND FOREST CONSERVATION AREA DERIVED FROM F-01-137, F-02-55 AND F-04-127. 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, 2007. **DeMario**

Design	
Consul	tants, Inc
192 East Main Street Westminster, MD 21157 http://www.demariodesign.us	Phone: (410) 386-05 Fax: (410) 386-05 eMail: ddo@demariodesign.
	ELOPER: GENERAL GROWTH PROPERTI 10275 LITTLE PATUXENT PKWY COLUMBIA, MD 21044

10275 LITTLE PATUXENT PKWY COLUMBIA, MD 21044 SITE ADDRESS: PALACE HALL DRIVE LAUREL, MD 20723

EMERSON, SECTION 2 PHASE 3, LOTS 1 thru 39 and OPEN SPACE LOTS 40 thru 42, A RESUBDIVISION OF PARCEL D-3 and EMERSON, SECTION 2, PHASE 5B, LOTS 1 thru 39 and OPEN SPACE LOTS 40 thru 43, A RESUBDIVISION OF SEDIMENT & EROSION AND SITE DETAILS

410-992-6000

AS-BUILT 6TH ELECTION DISTRICT HOWARD COUNTY, MD Specificandres 4/5/13 REVISIONS GSS GSS 4/5/0 (AS-EXILE) NO. DESCRIPTION OF CHANGES DRN. REV. DATE CO. FILE #: F-07-182 DES. BY: JCO TAX ACC. #: DRN. BY: SDS TAX MAP: 47 CHK. BY: JCO DATE: 5-2-2008 BLOCK / GRID: 8 DDC JOB#: 06128.1 PARCEL# 3 & 837 SHEET NUMBER: ZONE / USE: PEC-MXD-3 6 of 10

DWG. SCALE: N/A F-07-182

W:\06128.1 - Emerson D-3 and AA-1/dwg\Final Road Pians\061281_SEC_DT.dwg, 5\5\2008 8:46:02 AM, DDC_HPDJ5500_US,pc3, SDS

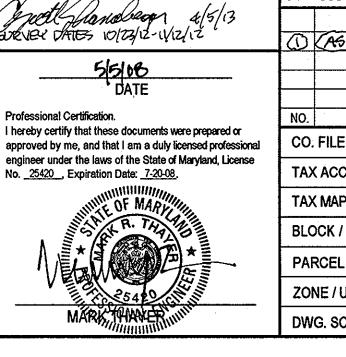


TABLE 25: PERMANENT SEEDING FOR LOW MAINTENANCE AREAS SEED MIX PLANTING LBS/AC. LBS/ NESS 3/1- 3/15 5/16- 6/2- 8/1- 8/15- 8/15-ZONES 5/15 -5/15 8/14 7/31 10/1 10/15 11/15 USE CERTIFIED MATERIAL SITE 1000 SF CONDITIONS IF AVAILABL 5b MOIST TO 150 3.4 TALL FESCUE (75%) CANADA BLUEGRASS (10%) 6b KENTUCKY BLUEGRASS (10%) 7a REDTOP (5%) KENTUCKY BLUEGRASS (50%) 5b \rightarrow 3.4 MOIST TO CREEPING RED FESCUE OR A MODERATEL 6a HARD FESCUE (40%) DRY TO 6b REDTOP (10%) 125 | 2.9 | MOIST TO TALL FESCUE (85%) 6a 15 PERENNIAL RYEGRASS (10% .34 .23 KENTUCKY BLUEGRASS (5%) 10 5b RED FESCUE OR .92 MOIST TO DRY 60 .92 CHEWING FESCUE (80%) 6a PERENNIAL RYEGRASS (20%) 15 .34 5b 110 2.5 TALL FESCUE (85%) OR, MOIST TO 6a 20 DRY PERENNIAL RYEGRASS (50%) .46 20 20 PLUS CROWNVETCH OR .46 70 FLATPEA .46 5b .09 DRY TO WEEPING LOVEGRASS (17%) 7a | >< VERY DR 20 SERECIA LESPEDEZA (83%) 5b 110 2.5 DRY TO TALL FESCUE (83%) 6a VERY DRY .07 |WEEPING LOVEGRASS (2%) 6b SERECIA LESPEDEZA(15%) 20 ,46 5b WET TO REEDY CANARYGRASS (75%) 6a MODERATELY .07 REDTOP (6%) PLUS 6b | > DRY 10 .23 BIRDSFOOT TREEFOIL (19%) 7a 7b 5b 🗀 TALL FESCUE (86%) 125 | 2.9 | WET TO MODERATELY 9 POA TRIVIALIZE (7%) 10 .23 6a -BIRDSFOOT TREEFOIL (7%) 10 6b | > 5b 6a WET TO 120 TALL FESCUE (80%) 3.4 6b DR\ 30 HARD FESCUE (20%) .69 7a 5b 6a MOIST TO 11 | HARD FESCUE (100%) .75 3.4 6b 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
- H/ USE ON POORLY DRAINED SOILS DITCHES OR WATERWAYS. BIRDSFOOT TREEFOIL IS BEST FOR ZONES
- / 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	TEMPOR	ARY SE	EDING	RATE	S, DE	PTHS,	AND	DATE	S _		
0050150	MINIMUM S RATE		PLANTING DEPTH	7a and 7b 6b 6a and 5b								ōb
SPECIES	PER ACRE	LBS/1000 SQ.FT.	INCHES			8/15- 11/30				3/15- 5/31		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	X X X	- -	BY 10/15 - X	X X X	- -	BY 10/15 - X	X X	- -	BY 10/1 - X
BARLEY OR RYE PLUS FOXTAIL MILLET	150 lbs	3.45	1	X	X	10/15 X	×	X	10/15 X	X	X X	10/1 X
WEEPING LOVEGRASS	4 lbs	.09	1/4-1/2	_	Х	_	_	X	_	_	Х	-
ANNUAL RYEGRASS	50 lbs	1.15	1/4-1/2	Х	_	11/1	х	_	11/1	Х	_	8/15

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

| 1.15 | 1/2 | - | X | - | - | X | - | - | X | -

CERTIFY THAT THIS PLAN FOR 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.

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

MWW

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

DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING

BEFORE BEGINNING THE PROJECT.

PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION

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 time and fertilizer into the top $3-5^{\circ}$ 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 salts 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 $3-5^{\circ}$ 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.

d. Mix soil amendments into the top $3-5^{\parallel}$ 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 $1-3^{\parallel}$ 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. 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.

i. <u>Hydroseeding:</u> Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast 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. Muich 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. WCFM 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. MCFM 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 the 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 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 J. Incremental Stabilization -- Fill Slopes -- See G-20-7 21.0 STANDARDS & SPECIFICATIONS FOR TOPSOIL

Definition – Placement of topsoil over a prepared subsoil prior to establishment

Purpose - To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation. Conditions Where Practice Applies

. This practice is limited to areas having 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.

11. 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 Maryland Agricultural Experimental Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

Topsoil shall be a loarn, sandy loarn, clay loarn, silt loarn, sandy clay loarn, loarny 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 and forestern less than 5% by volume of cinders, and the state of the sta stones, slag, coarse fragments, 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, auack 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:

and lime amendments required to bring the soil into compliance with the following: . On soil meeting Topsoil specifications, obtain test results dictating fertilizer

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

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 photo-toxic. materials.

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

. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization – Section I – Vegetative Stabilization Methods and Materials.

V. Topsoil Application

. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope 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:

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. I 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. 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 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 cultivate 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. Tunfgrass 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 Cultivates Seeding Rate: 1.5 to 2.0 pounds/1000 square feet. A minimum of three bluegrass cultivates 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 Cultivates/Certified Kentucky Bluegrass Seeding rate: 2 pounds mixture/1000 square feet. A minimum of 3 Kentucky Bluegrass Cultivates must be chosen, with each cultivate 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 Cultivates 95 – 100%, certified Kentucky Bluegrass Cultivates 0 – 5%. Seeding rate: 5 to 8 lb/1000 sf. One or more cultivates 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 Cultivates 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 cultivates must be chosen, with each cultivate 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 Cultivate 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)

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 an

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

1. OBTAIN A GRADING PERMIT

SEED MIXTURE (HARDINESS ZONE) _____

NO. I SPECIES

FROM TABLE 26

RATE (LB/AC)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC

PPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING

AND ZONING.

WELLINIAM

C. Irrigation

D. Repairs and Maintenance

2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777, 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. (I DAY)

4. INSTALL PERIMETER CLEANWATER DIKES AND SUPER SILT FENCE 5. WITH SEDIMENT CONTROL DEVICES INSTALLED AND WITH INSPECTORS

6. FINE GRADE AREA FOR THE NEW ROAD AND INSTALL WATER, SEWER

4 STORMDRAINS AND PROVIDE BLOCKING OF ALL INLETS. (4 WEEKS)

7. BEGIN INSTALLATION OF CURB & GUTTER. (3 WEEKS)

8. WITH CURB & GUTTER IN PLACE PAVE ROAD AND INSTALL SIDEWALKS. (2 WEEKS) 9. FINE GRADE SITE AND STABILIZE ALL DISTURBED AREAS. (2 WEEKS)

10. INSTALL SITE LANDSCAPING & STREET TREES. (2 WEEKS)

11. WITH ALL DISTURBED AREAS STABILIZED REMOVE INLET BLOCKING AND FLUSH STORM DRAIN SYSTEM. 12. WITH THE INSPECTORS APPROVAL REMOVE REMAINING SEDIMENT CONTROL DEVICES.

13. 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.

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

5-13-08

5/16/00

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED, ON THIS SHEET Costplanaleras 45/13 G. SCOTT SHANABERGER SHANABERGER & LANE

DATED JANUARY, 2007.

Westminster, MD 21157

http://www.demariodesign.u

DATA SOURCES: LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY WETLANDS, AND FOREST CONSERVATION AREA DERIVED FROM F-01-137, F-02-55 AND F-04-127. BOUNDARY SHOWN PER BOUNDARY SURVEY DATED JUNE, 1999 PREPARED BY DAFT-MACUNE-WALKER, INC. SOILS (1 SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY. 1968 additional topo provided by shannaberger & lane,



DEVELOPER:

Fax: (410) 386-0564

eMail: ddc@demariodesign.u

GENERAL GROWTH PROPERTIE 0275 LITTLE PATUXENT PKWY

HOWARD COUNTY, MD

COLUMBIA, MD 21044

OWNER: EMERSON LAND BUSINESS TRUST 0275 LITTLE PATUXENT PKWY

Gretty honoberg, 4/5/13 SURVEY DATES 10/23/12/11/12/12 Note: Select one or more of the species or mixtures listed in Table 25 and enter in the Permanent Seeding Summary Below, along with application rates and dates. For special lawn maintenance areas, see Sections IV, Sod and V, Turfgrass.

AG-BUILT

COLUMBIA, MD 21044 410-992-6000 410-992-6000 SITE ADDRESS: PALACE HALL DRIVE LAUREL, MD 20723

SPACE LOTS 40 thru 42, A RESUBDIVISION OF PARCEL D-3 and EMERSON, SECTION 2, PHASE 5B, LOTS I thru 39 and OPEN SPACE LOTS 40 thru 43, A RESUBDIVISION OF PARCEL AA-I EROSION CONTROL NOTES

6TH ELECTION DISTRICT

EMERSON, SECTION 2 PHASE 3, LOTS 1 thru 39 and OPEN

REVISIONS 13 LAG-BUILT DATE CO. FILE # F-07-182 TAX ACC.# TAX MAP: 47

G45 G45 451 DRN. REV. DATE DESCRIPTION OF CHANGES DES. BY: JCO DRN. BY: SDS CHK. BY: JCO BLOCK / GRID: 8 DATE: 5-2-2008 DDC JOB#: 06128.1 PARCEL# 3 & 837 SHEET NUMBER: ZONE / USE: PEC-MXD-3 7 of 10

F-07-182

W:\06128.1 - Emerson D-3 and AA-1\dwg\Final Road Plans\061281_SEC_NOTES.dwg, 5\5\5008 8:45:55 AM, DDC_HPDJ5500_US.pc3, SDS

FERTILIZER RATE LIME RATE SEEDING SEEDING DATES DEPTHS

> Professional Certification I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed profession engineer under the laws of the State of Maryland, License lo. 25420 Expiration Date: 7-20-08.

DWG. SCALE: N/A

