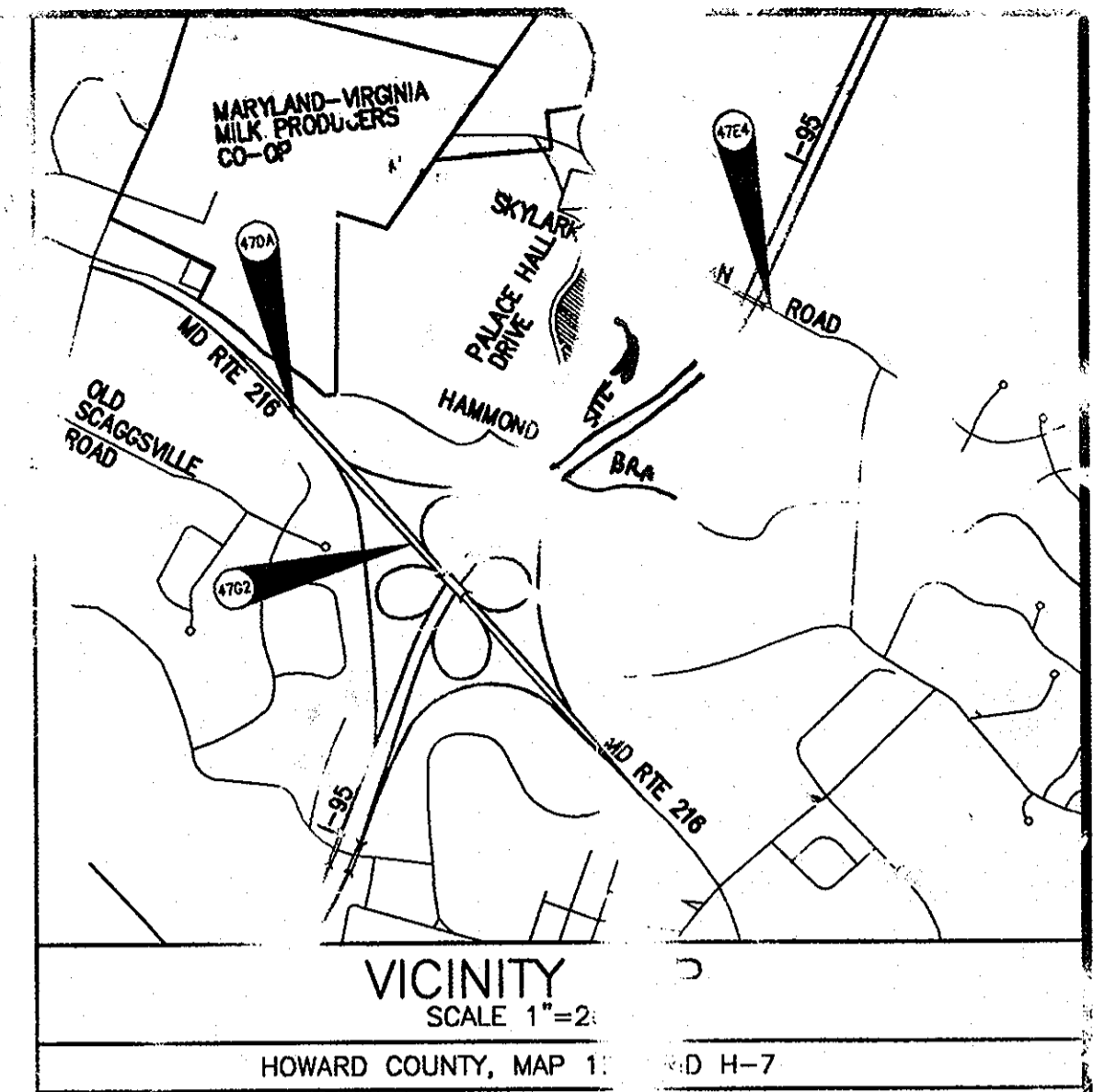


SHEET INDEX

NO.	TITLE
1	COVER SHEET
2	ROAD PLAN & PROFILE
3	TYPICAL ROAD SECTIONS & DETAILS
4	STORM DRAIN PROFILES
5	STORM DRAINAGE AREA MAPS
6	EIS DRAINAGE AREA MAPS
7	FINAL GRADINA AND SEDIMENT EROSION CONTROL PLAN
8	SEDIMENT & EROSION CONTROL DETAIL SHEET
9	STREET TREE AND LIGHTING PLAN

ROAD AND STORM DRAIN CONSTRUCTION PLANS JUNE FLOWERS WAY EMERSON TOWNHOMES

SECTION 2, PHASE 6A, LOTS 92-124
A RESUBDIVISION OF PARCEL 'B-1'
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

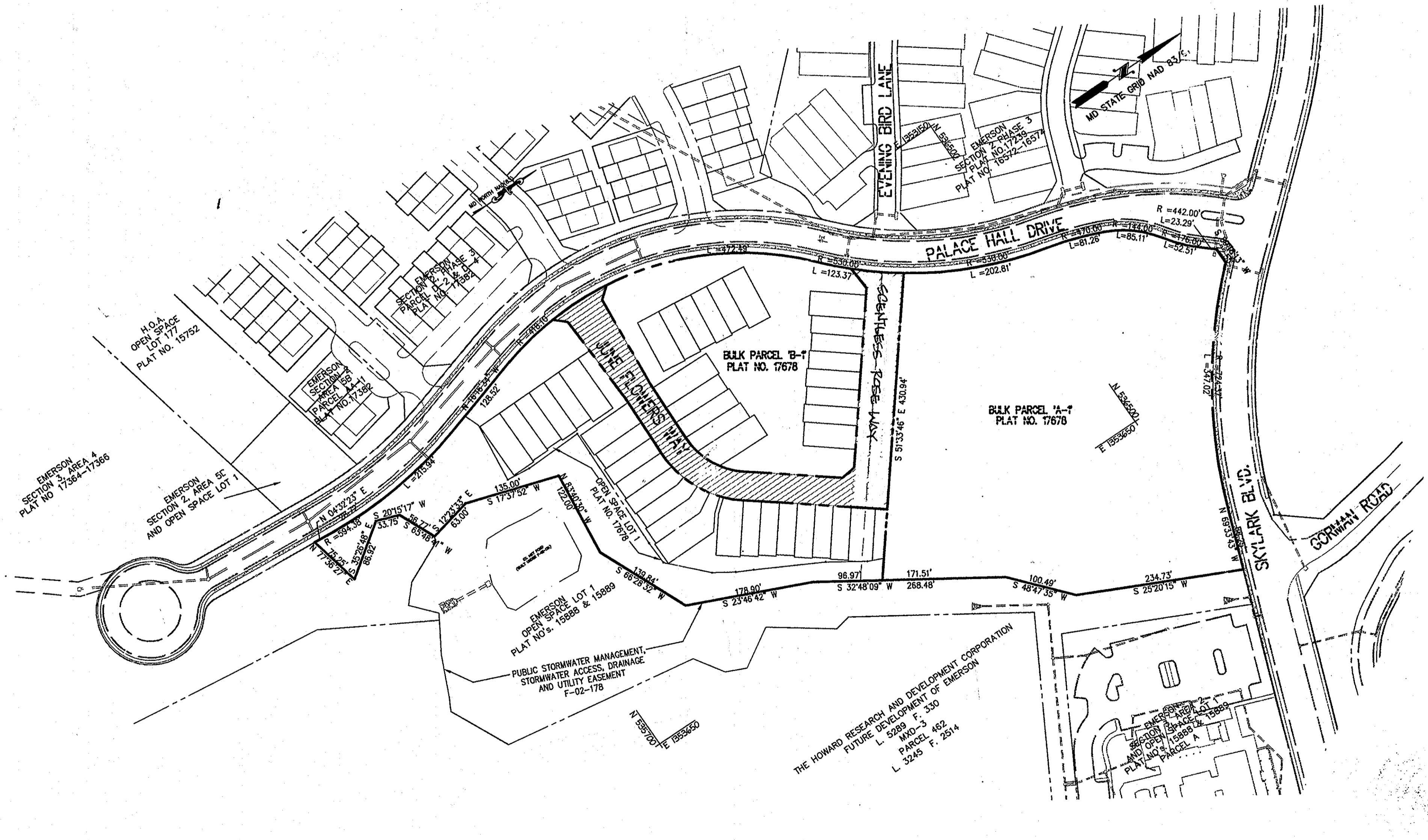


BENCHMARK:
Horizontal Datum: Maryland State Plane, NAD 83/91
Vertical Datum: NAD 83/91
Howard County Monument 47DA
N535405.46, E134932.71, Elev. 39.0
Howard County Monument 47E2
N535239.96, E1351224.09, Elev. 39.0
Howard County Monument 47E4
N595846.14, E1355431.19, Elev. 398.9

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITIES" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORMED TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET AND REGULATORY SIGNS LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)".
- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD SURVEY WITH 2' FOOT CONTOUR INTERVALS COMPLETED BY christopher consultants, ltd. ON DECEMBER 2004.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM MONUMENT NOS 47DA, 47G2, AND 47E4 WERE USED FOR THIS PROJECT (NAD 1983/91).
- WATER IS TO BE PUBLIC (CONTRACT # 14-4318-D).
- SEWER IS TO BE PUBLIC (CONTRACT # 14-4318-D).
- THE PUBLIC STORMWATER MANAGEMENT FOR THIS SITE WILL BE PROVIDED BY PRIVATE WET POND(S) PREVIOUSLY BUILT UNDER F-01-145 & F-02-178.
- EXISTING UTILITIES ARE BASED ON FIELD RUN TOPOGRAPHY BY christopher consultants, ltd. ON DECEMBER 2004 AND SUPPLEMENTED WITH HOWARD COUNTY RECORDS.
- THERE IS NO FLOODPLAIN ON THIS SITE.
- THERE IS NO WETLANDS ON THIS SITE.
- THE TRAFFIC STUDY FOR THIS SITE WAS PREPARED BY WELLS & ASSOCIATES, DATED FEBRUARY 2000, HAS BEEN APPROVED WITH S-99-12.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY SIZE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND TEST FIT ALL UTILITIES, INCLUDING PROPOSED TIE IN LOCATIONS AT LEAST 5 DAYS PRIOR TO STARTING ANY WORK ON THESE DRAWINGS. DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND IN ADVANCE OF CONSTRUCTION START.
- ANY DAMAGE CAUSED BY THE CONTRACTOR TO EXISTING PUBLIC RIGHT-OF-WAY, EXISTING ROADWAY, EXISTING CURB AND GUTTER, EXISTING UTILITIES, ETC. SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ALL FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED AND VERIFIED IN ACCORDANCE WITH ASTM D-1557-00 STANDARD.
- CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES WITHIN THE LIMITS OF THE SITE DURING CONSTRUCTION OF THE SITE IMPROVEMENTS. CONTRACTOR SHALL PROVIDE A FINAL EROSION AND SEDIMENTATION CONTROL MEASURES AS MAY BE NECESSARY DURING CONSTRUCTION AND AS DIRECTED BY GOVERNING AGENCIES.
- THERE ARE NO KNOWN WETLANDS OR BURIAL GROUNDS ON THIS SITE. HOWEVER, UPON DISCOVERY OF ANY EVIDENCE OF BURIAL OR GRAVES, THE DEVELOPER SHALL BE SUBJECT TO SECTION 16.1305 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- THE SUBJECT PROPERTY IS ZONED RMD-3 "OTHER RESIDENTIAL" PER THE 2/2/04 COMPREHENSIVE ZONING PLAN & ZB-979M.
- THE CONTRACTOR SHALL TEST FIT ALL EXISTING UTILITIES AT LEAST FIVE (5) DAYS PRIOR TO STARTING ANY WORK SHOWN ON THESE DRAWINGS.
- OPENING EXISTING VALVES, SWITCHES, SERVICES OR START UP OF NEW SERVICES SHALL BE COORDINATED WITH THE OWNERS REPRESENTATIVE.
- FORFEIT & REMEDIATION OBLIGATIONS AND OPEN SPACE REQUIREMENTS FOR THIS PHASE OF EMERSON AND PALACE HALL ARE ADDRESSED UNDER F-04-68.

SCENTLESS ROSE WAY FROM CURB TO CURB WILL BE CONSTRUCTED UNDER F-02-142. THE SUPERSTRAIN IN THE RIGHT-OF-WAY WILL BE CONSTRUCTED UNDER THIS CONTRACT. THE STREET TREES, LIGHTS AND SIGNS WILL REMAIN IN THIS CONTRACT.



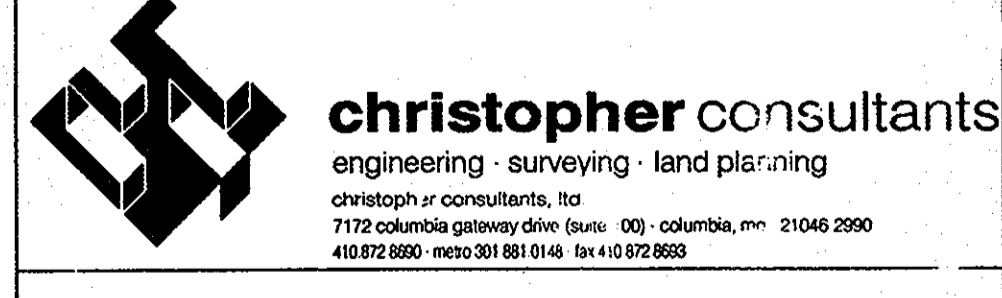
OVERALL VIEW
SCALE: 1"=100'

LEGEND

PROPOSED BUILDING	[Symbol]
EXISTING BUILDING	[Symbol]
EXISTING SIDEWALK	[Symbol]
EXISTING CURB & GUTTER	[Symbol]
EXISTING STORM DRAIN	[Symbol]
EXISTING WATER	[Symbol]
EXISTING SEWER	[Symbol]
EXISTING CONTOUR	[Symbol]
PROPOSED CONTOUR	[Symbol]
PROPOSED LOT LINE	[Symbol]
PROPERTY LINE	[Symbol]
EXISTING TREELINE	[Symbol]
SUPER SILT FENCE	[Symbol]
LIMIT OF DISTURBANCE	[Symbol]
STABILIZE CONSTRUCTION ENTRANCE	[Symbol]

APPROVED: DEPARTMENT OF PUBLIC WORKS	
<i>William J. ...</i>	12-28-06
Chief, Bureau of Highways	Date
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>Chris ...</i>	12/10/06
Chief, Division of Land Development	Date
LOT NUMBERS ARE BEING REVISED TO REFLECT CHANGES MADE TO F-12-024	
12/10	1 REMOVE SCENTLESS ROSE WAY FROM CONTRACT
Date	No. Revision Description

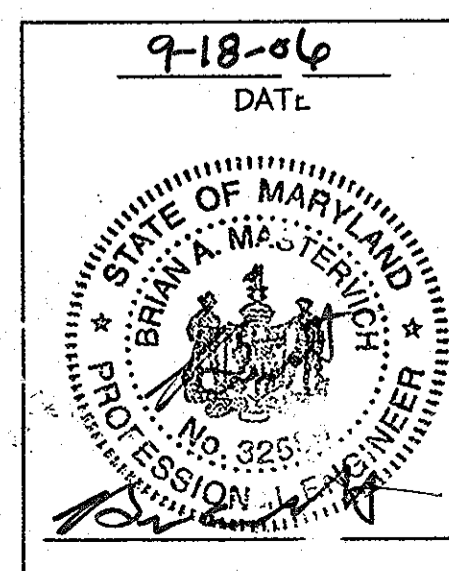
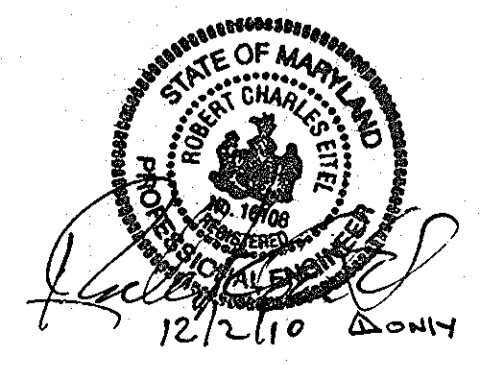
OWNER / DEVELOPER
EMERSON TOWNHOMES @ EMERSON II
10705 CHARTER DRIVE, SUITE 320
COLUMBIA, MD 21044
TEL: (410) 997-7400 FAX: (410) 997-6305

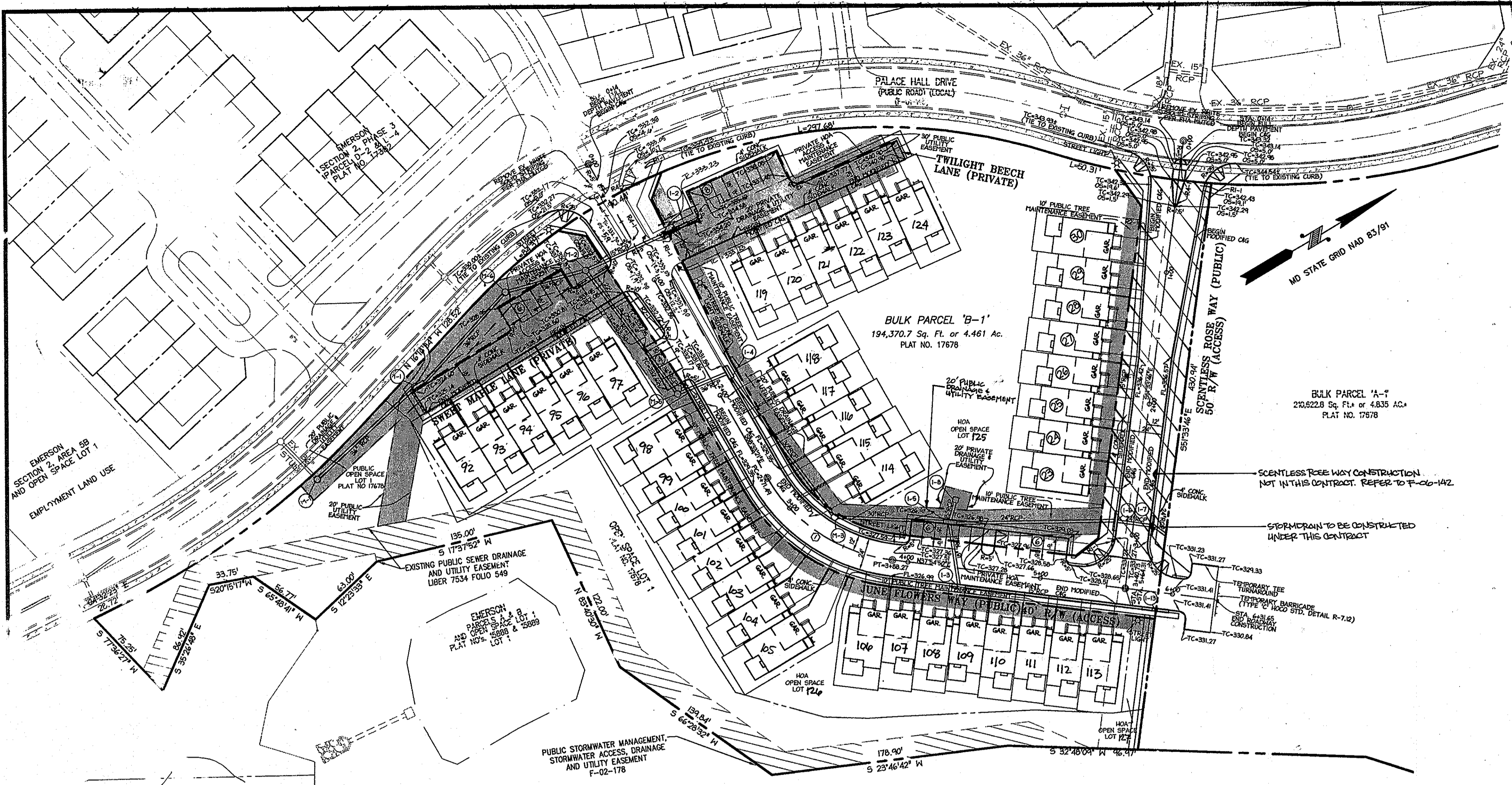


JUNE FLOWERS WAY
EMERSON
SECTION 2, PHASE 6A
BUILDABLE LOTS 92 THRU 124, HOA OPEN SPACE LOTS 125-127
A RESUBDIVISION OF BULK PARCEL B-1 AND A REVISION OF OPEN SPACE PLAT NO. 17678

TITLE:
COVER SHEET

DESIGN: XDF	SCALE: AS SHOWN	PROJECT: 049101.00
DRAWN: ADL	DATE: 9-18-06	
CHECKED: SAM	APPROVED:	1 OF 9





PLAN
SCALE: 1" = 50'

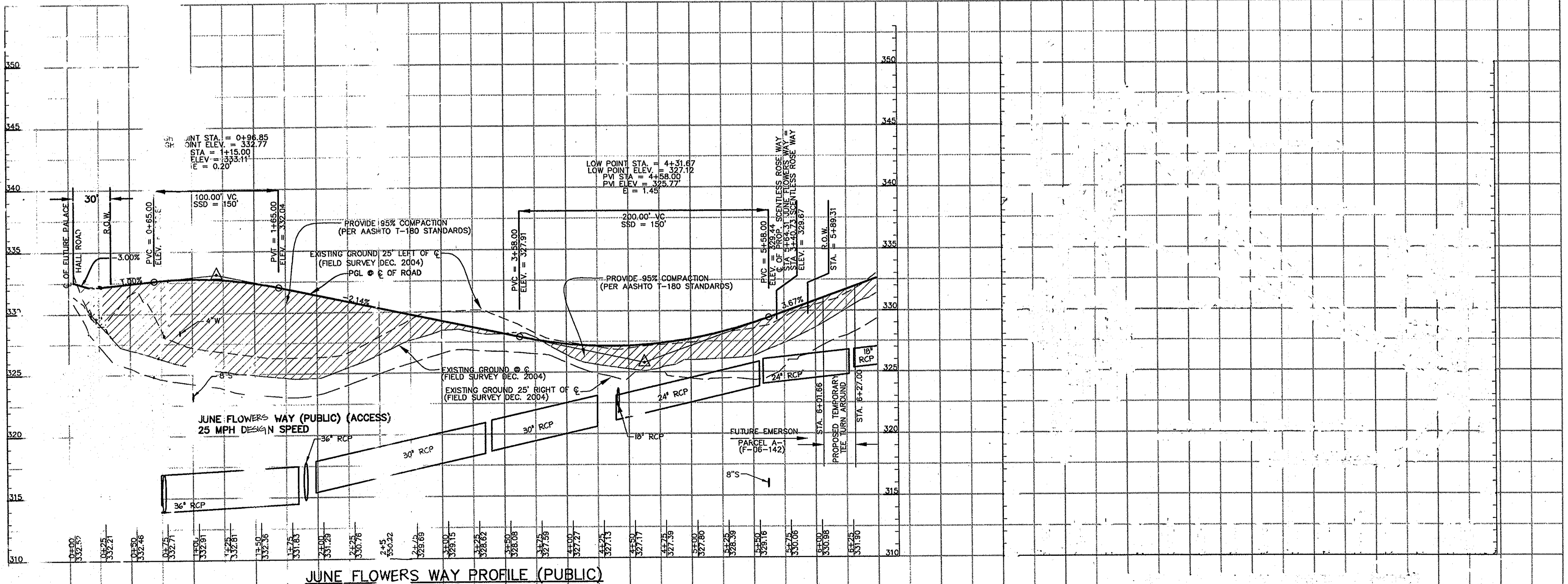
CURVE DATA TABLE						
NUMBER	ROAD NAME	STA. TO STA.	RADIUS	LENGTH	DELTA	TANGENT
(1)	JUNE FLOWERS WAY	2+71.49 TO 3+88.27	125.00'	116.78'	53°31'41"	63.05'

ROAD INFORMATION CHART				
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS
JUNE FLOWERS WAY	PUBLIC ACCESS	25 M.P.H.	R-2	0+00 TO 3+65

STREET LIGHT TABLE			
ROAD NAME	STATION	OFFSET	TYPE
JUNE FLOWERS WAY	0+29	50.1 R	#
JUNE FLOWERS WAY	1+19	28.7 L	#
JUNE FLOWERS WAY	1+80	20.4 R	#
JUNE FLOWERS WAY	3+49	20.1 L	#
JUNE FLOWERS WAY	5+76	22.6 R	#

NOTE: # - 150 WATT HPS VAPOR PREMIER POST-TOP
- 100 WATT HPS VAPOR PREMIER POST-TOP

TRAFFIC CONTROL SIGN				
ROAD NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE
JUNE FLOWERS WAY	0+29	18.8 L	STOP	R1-1
JUNE FLOWERS WAY	1+35	13.4 R	SPEED LIMIT 25	R2-1
JUNE FLOWERS WAY	0+73	6.5 R	KEEP RIGHT	R4-1
JUNE FLOWERS WAY	0+64	4.0 R	KEEP RIGHT	R4-1
JUNE FLOWERS WAY	0+75	20.0 L	STOP	R1-1
JUNE FLOWERS WAY	1+08	32.3 R	STOP	R1-1



JUNE FLOWERS WAY PROFILE (PUBLIC)

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

APPROVED: DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Division of Land Development
Date 10/10/06

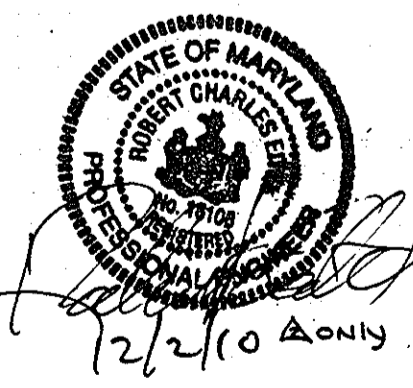
Chief, Development Engineering Division
Date 10/10/06

9/14/07 1 REVISE THE RADIUS AT JUNE FLOWERS WAY AND PALACE HALL DRIVE AND CONCRETE BAND BETWEEN ST. 0+20 AND 0+70
10/10 2 REMOVE SCENTLESS ROSE WAY FROM CONTRACT
LOT NUMBERS ARE BEING REVISED TO REFLECT CHANGES MADE TO F-10-02A

Date No. Revision Description

PERTINENT INFO:
TAX MAP NO. 47 GRID NO. 8 & 9.
ELECTION DISTRICT: 6 HOWARD COUNTY, MARYLAND

OWNER / DEVELOPER
SK HOMES @ EMERSON II
10705 CHARTER DRIVE, SUITE 320
COLUMBIA, MD 21044
TEL: (410) 947-7400 FAX: (410) 947-6305



9-18-06
DATE

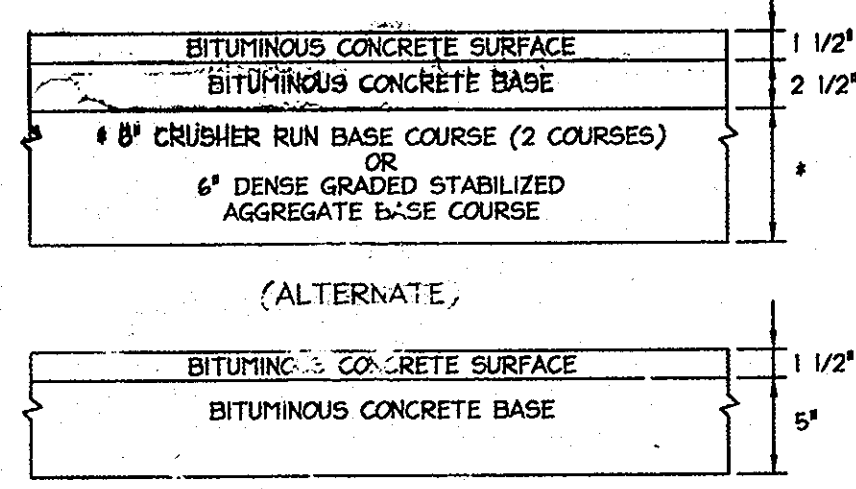
STATE OF MARYLAND
BRUNN & MAS
1000
1000

christopher consulta. s
engineering surveying land planning
christopher consult:
7172 columbia gateway suite 103 columbia, md 21046 2999
410.872.8800 mext: 501 410.872.8889

JUNE FLOWERS WAY
EMERSON
SECTION 2, PHASE 6A
BUILDABLE LOTS 92 THRU 124, HOA OPEN SPACE LOTS 125-127
A RESUBDIVISION OF BULK PARCEL B-1 AND A REVISION OF OPEN SPACE LOT 1
PLAN NO. 17876

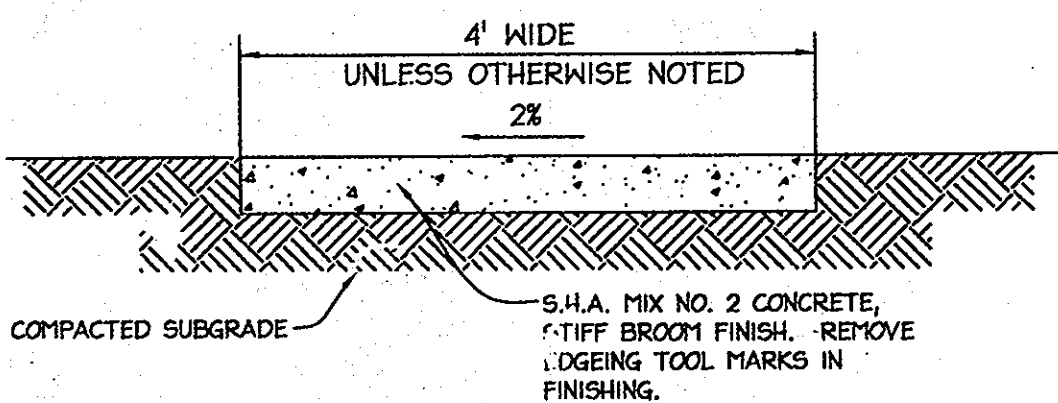
TITLE:
ROAD PLAN & PROFILES

DESIGN: ADF	SCALE: 1" = 50'	PROJECT: 049101.00
DRAWN: ADL	DATE: 9-18-06	
CHECKED: BAF		



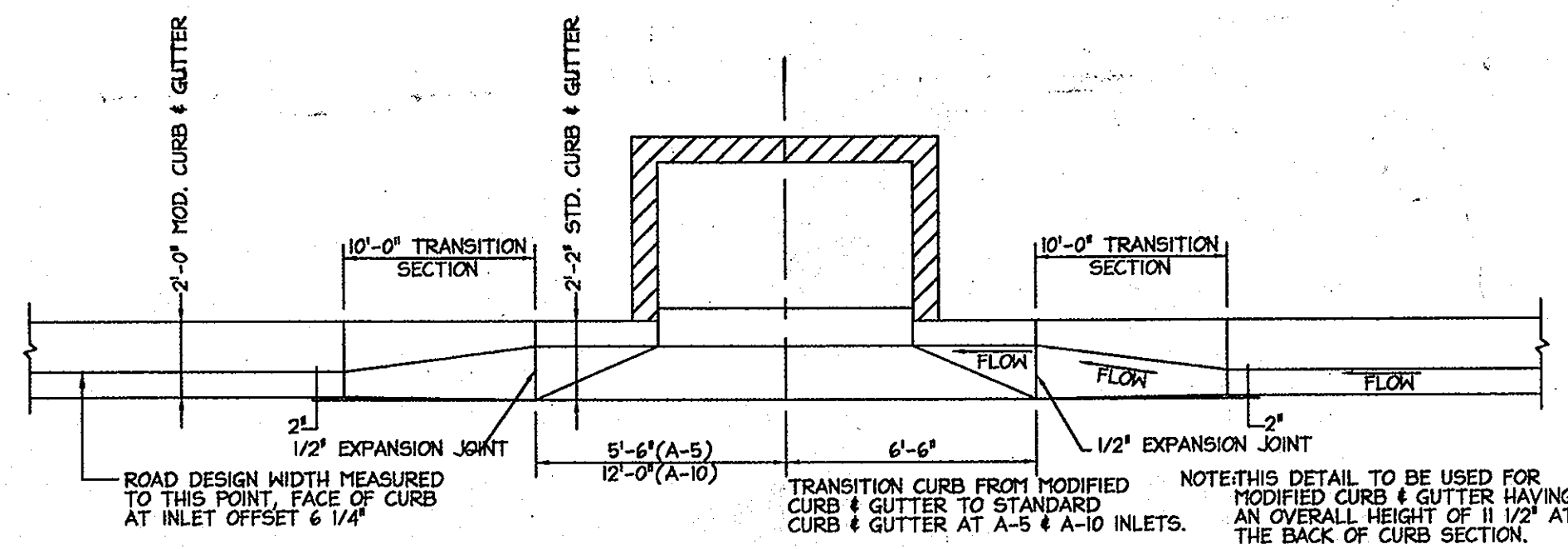
HOWARD COUNTY DESIGN MANUAL VOLUME IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

P-2 PAVING NOT TO SCALE

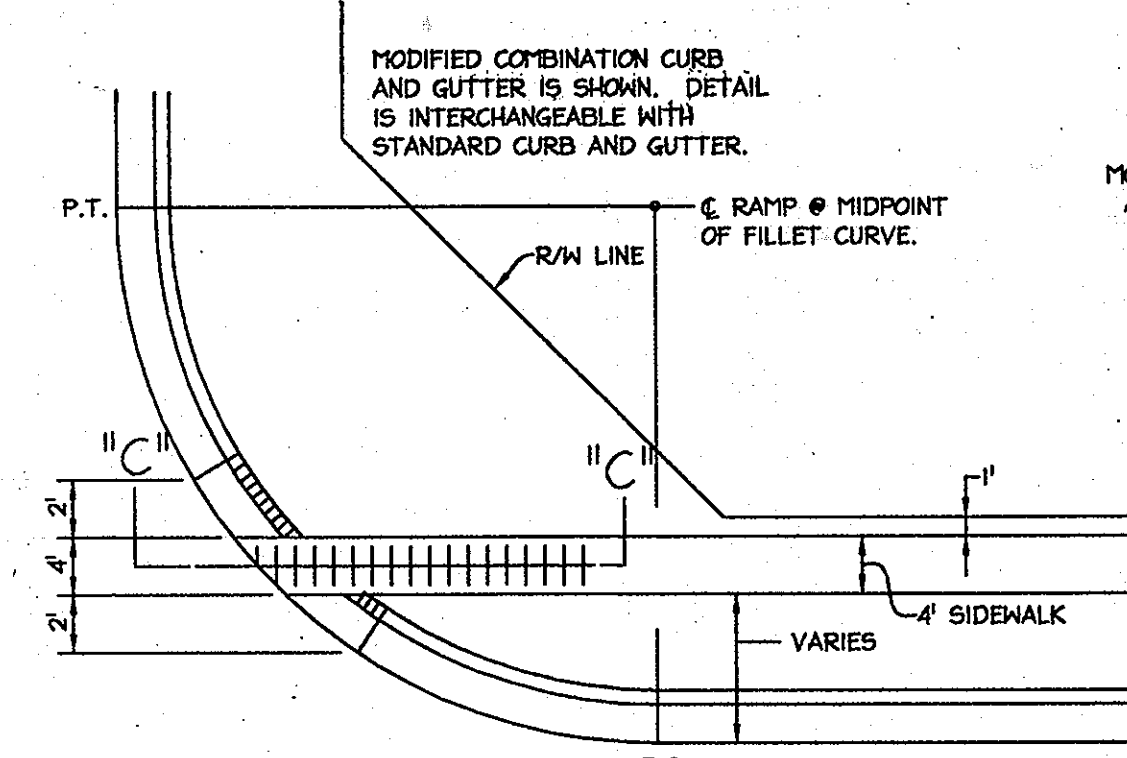


NOTE: PROVIDE LONGITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.) PROVIDE CONTRACTION (DUMMY) JOINTS AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 1" MAX. SQUARES.

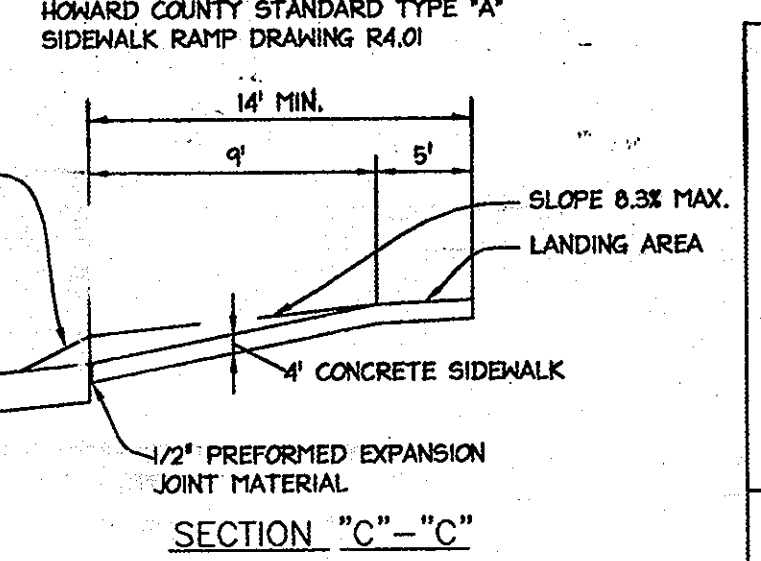
SIDEWALK DETAIL NOT TO SCALE



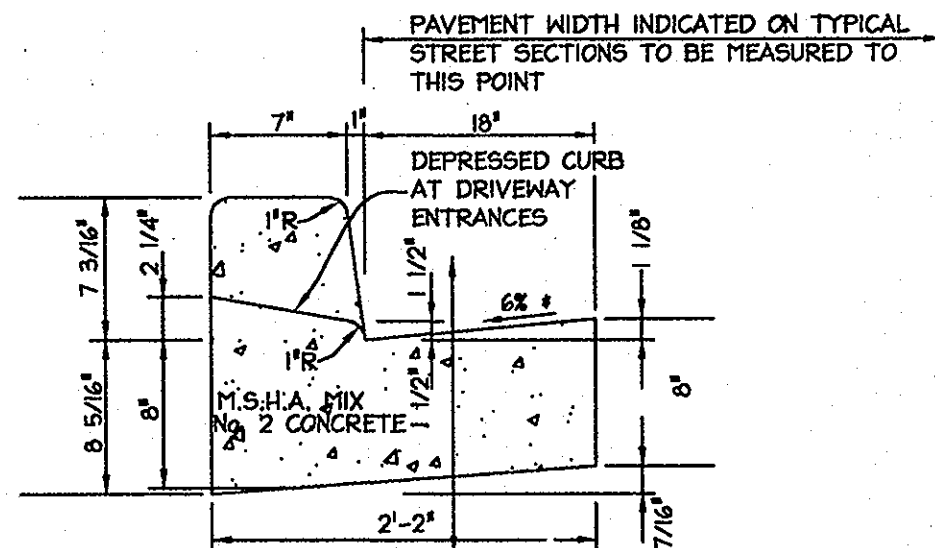
MODIFIED COMBINATION CURB AND GUTTER TRANSITION CURB SECTION AT "A" TYPE INLETS NOT TO SCALE



HANDICAP RAMP DETAIL NOT TO SCALE

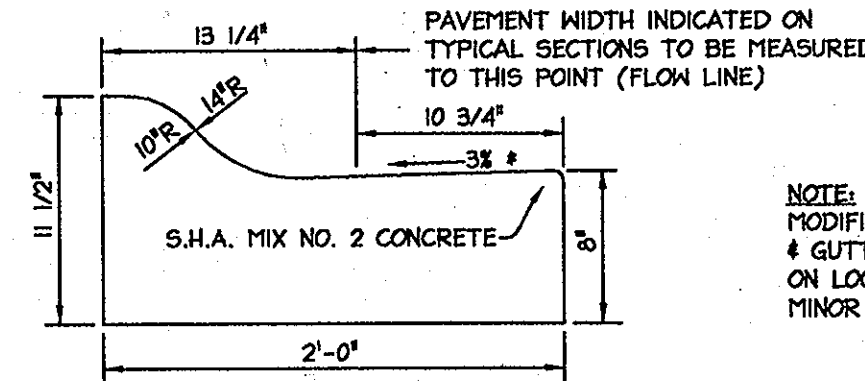


SIGN DETAIL N.T.S.



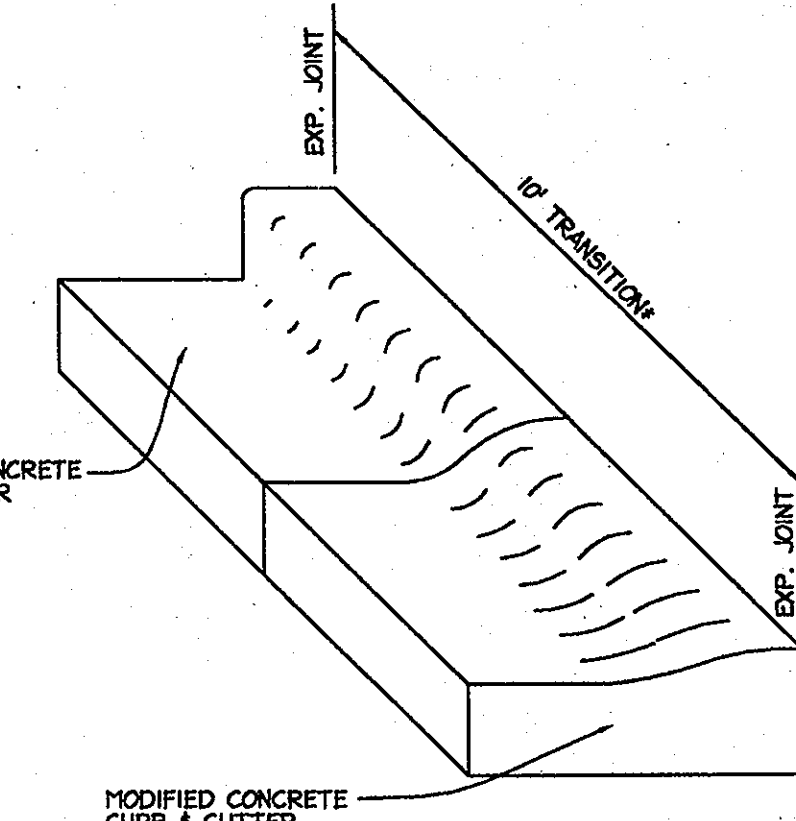
HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWINGS R-3.01). * GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

STANDARD 7" COMBINATION CURB AND GUTTER NOT TO SCALE



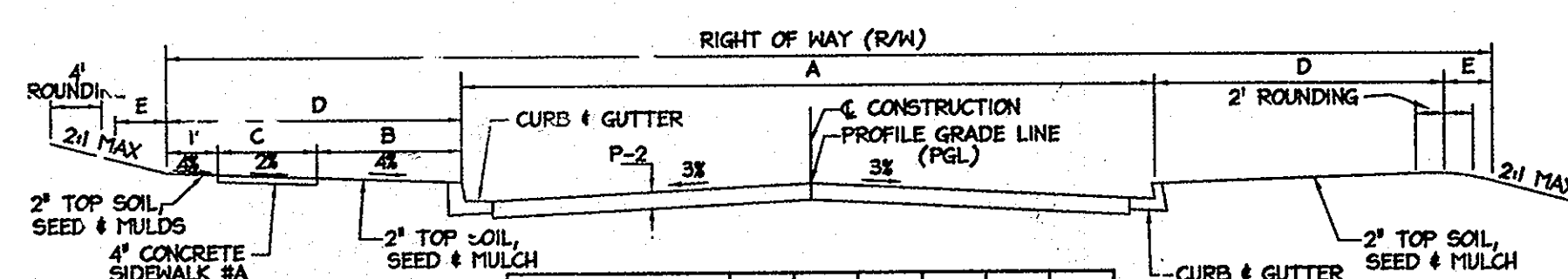
MODIFIED COMBINATION CURB AND GUTTER

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.



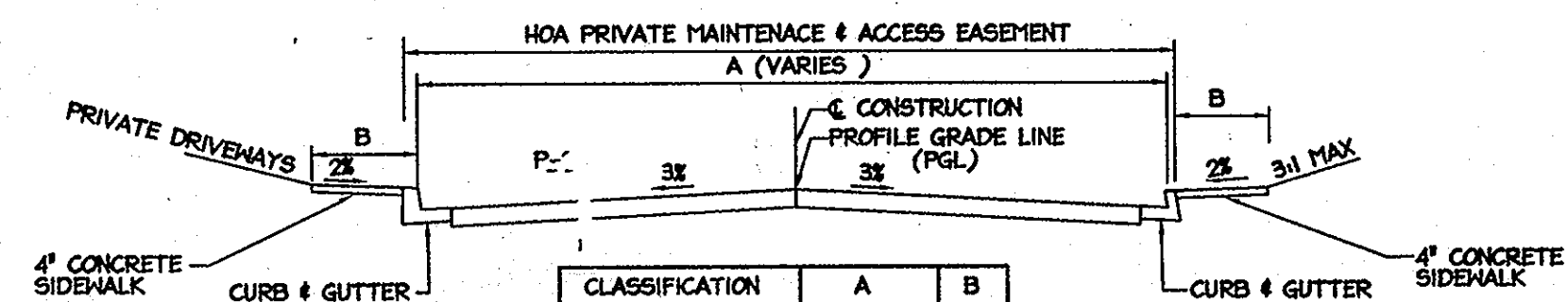
CONCRETE CURB AND GUTTER TRANSITION NOT TO SCALE

* TYPICAL FOR ALL TRANSITIONS, UNLESS NOTED OTHERWISE



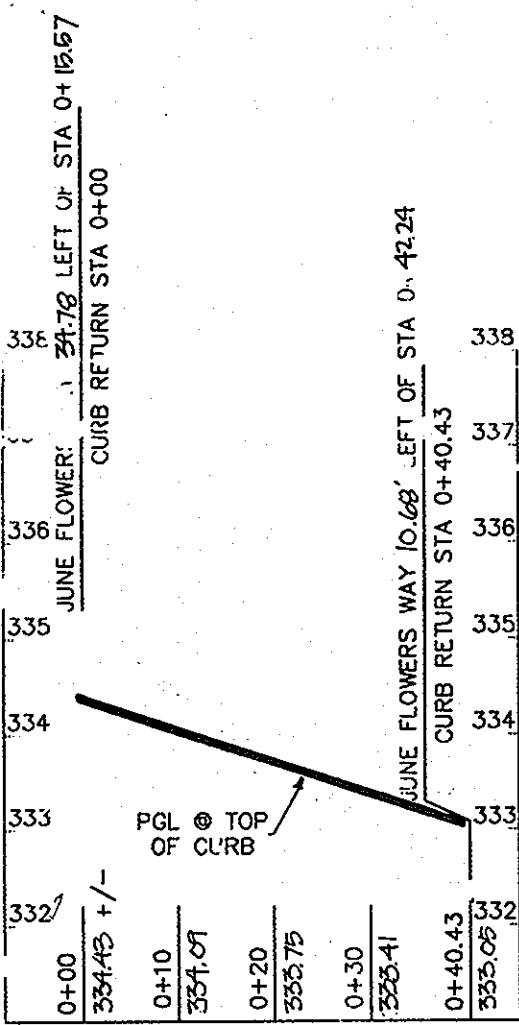
CLASSIFICATION	A	B	C	D	E	R/W
ACCESS STREET	24'	31'	41'	81'	0'	40'
	24'	7'	4'	12'	1'	50'

TYPICAL SECTION ACCESS STREET NOT TO SCALE

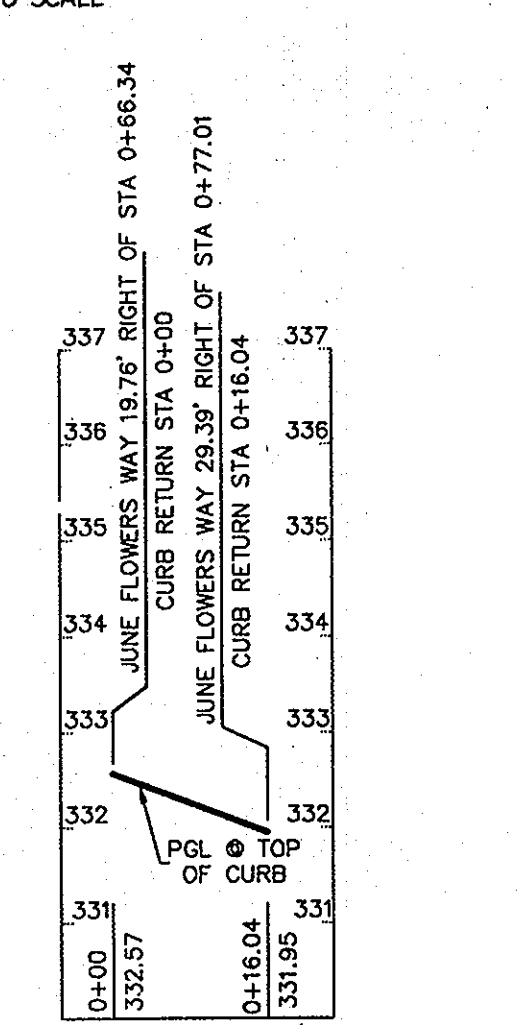


CLASSIFICATION	A	B
PRIVATE STREET	15'-22'	4'

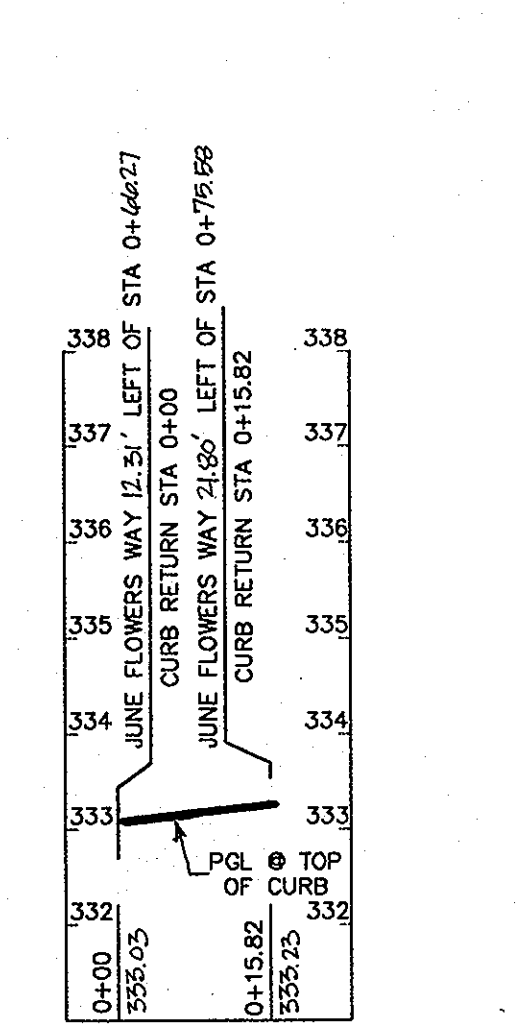
TYPICAL SECTION PRIVATE STREET NOT TO SCALE



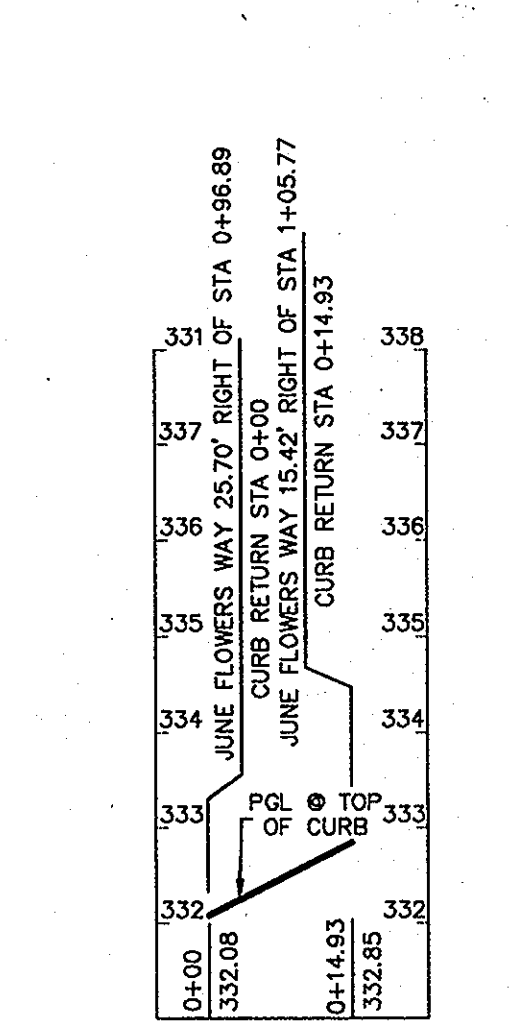
NE CORNER JUNE FLOWERS WAY & EX. PALACE HALL DRIVE INTERSECTION SCALE: 1" = 20' H, 1" = 2' V



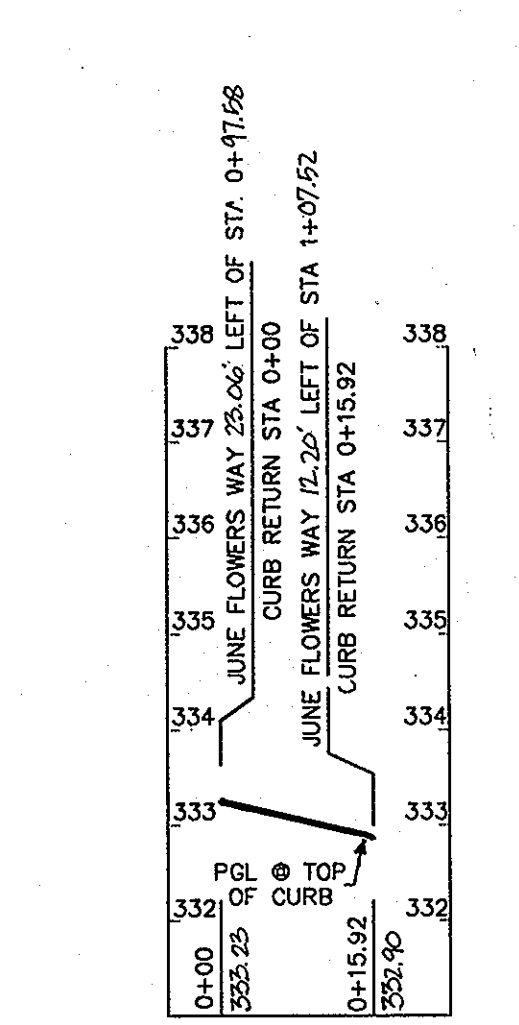
SW CORNER JUNE FLOWERS WAY & SWEET MAPLE LANE INTERSECTION SCALE: 1" = 20' H, 1" = 2' V



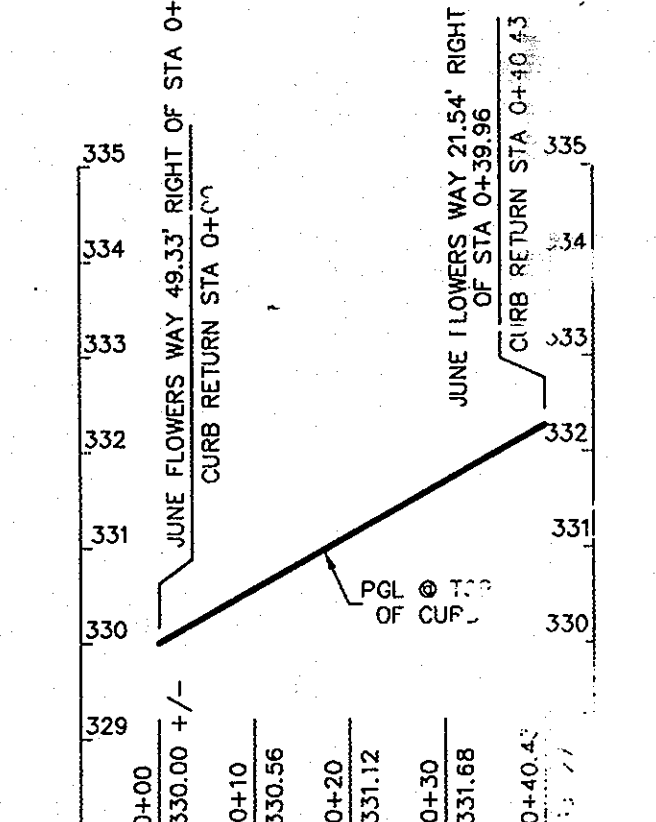
NW CORNER JUNE FLOWERS WAY & TWILIGHT BEECH LANE INTERSECTION SCALE: 1" = 20' H, 1" = 2' V



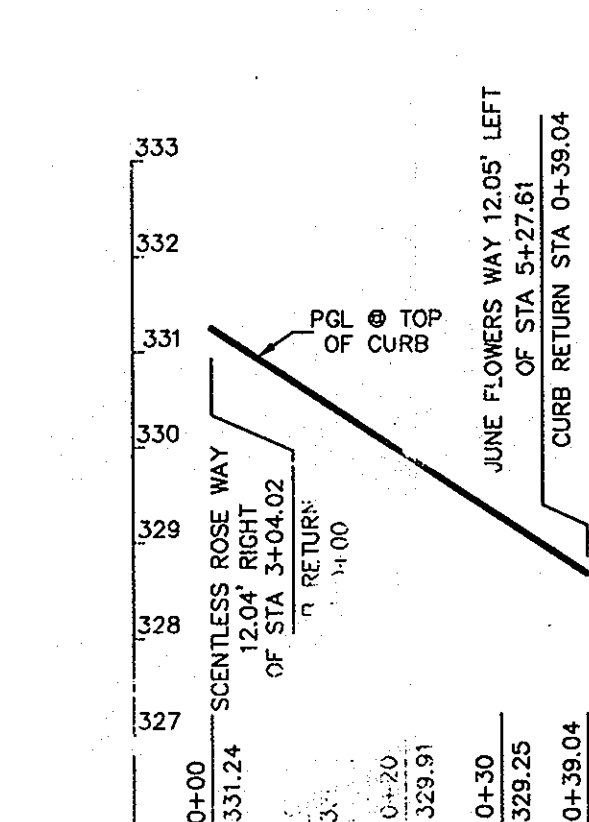
SE CORNER JUNE FLOWERS WAY & SWEET MAPLE LANE INTERSECTION SCALE: 1" = 20' H, 1" = 2' V



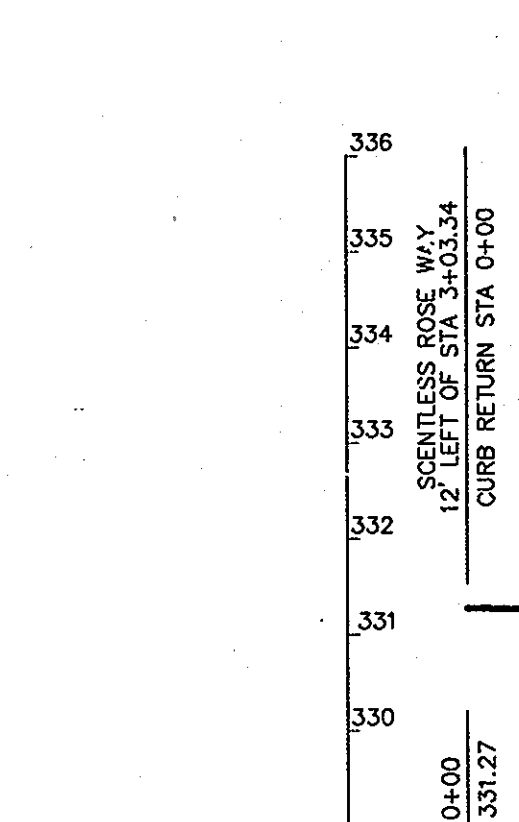
NE CORNER JUNE FLOWERS WAY & TWILIGHT BEECH LANE INTERSECTION SCALE: 1" = 20' H, 1" = 2' V



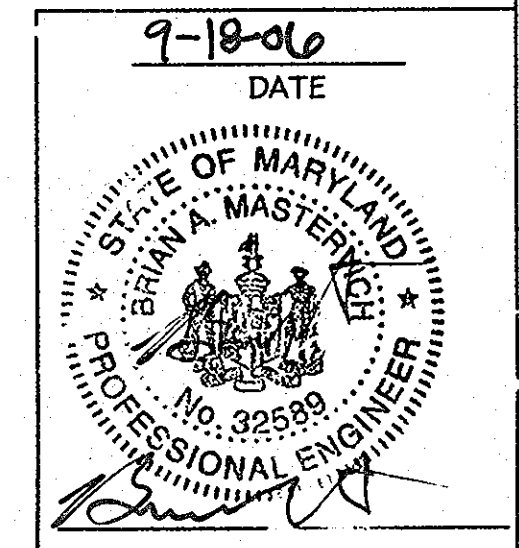
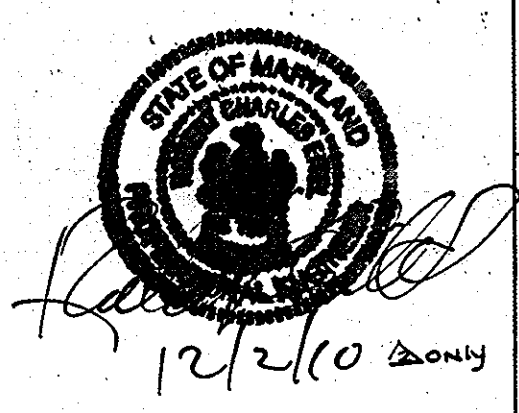
SE CORNER JUNE FLOWERS WAY & EX. PALACE HALL DRIVE INTERSECTION SCALE: 1" = 20' H, 1" = 2' V



SW CORNER SCENTLESS ROSE WAY & JUNE FLOWERS WAY INTERSECTION SCALE: 1" = 20' H, 1" = 2' V



NW CORNER SCENTLESS ROSE WAY & JUNE FLOWERS WAY INTERSECTION SCALE: 1" = 20' H, 1" = 2' V



APPROVED: DEPARTMENT OF PUBLIC WORKS	
Chief, Bureau of Highways	Date
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
Chief, Division of Land Development	Date 10/10/06
Chief, Development Engineering Division	Date 10/10/06
Date	Revision Description
9/14/07	1 REVISE THE PAVING AT JUNE FLOWERS WAY AND PALACE HALL DRIVE AND CONCRETE ISLAND BETWEEN SP. 0470 AND 0470
10/10	2 REMOVE SCENTLESS ROSE WAY FROM CONTRACT
	LOT NUMBERS REVISED TO REFLECT CHANGES
	MADE TO F-10-024
PERTINENT INFO:	
TAX MAP NO. 47	GRID NO. 8 & 9.
ELECTION DISTRICT: 6	HOWARD COUNTY, MARYLAND

OWNER / DEVELOPER
SK HOMES @ EMERSON II
10705 CHARTER DRIVE, SUITE 320
COLUMBIA, MD 21044
TEL: (410) 997-7400 FAX: (410) 997-6305

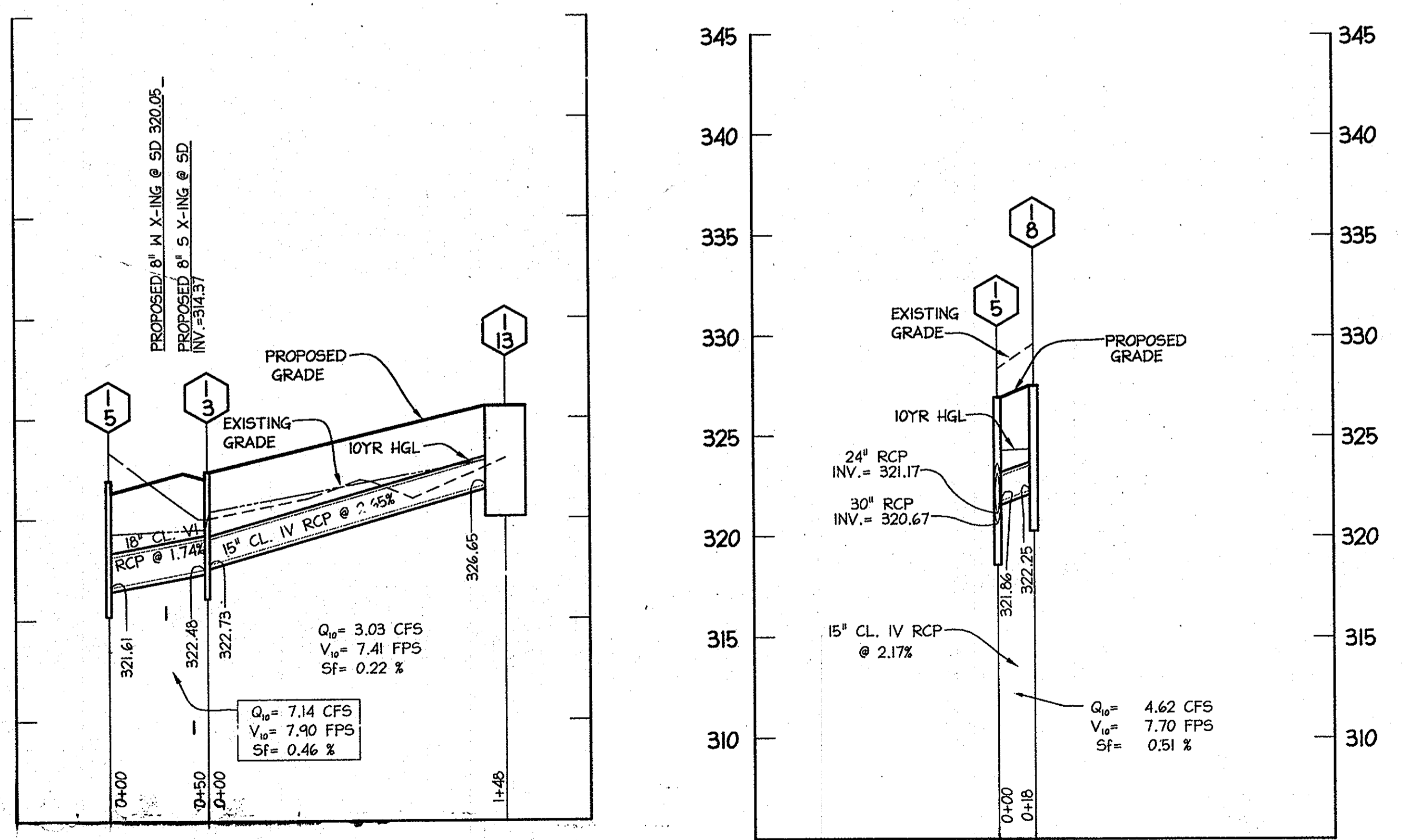
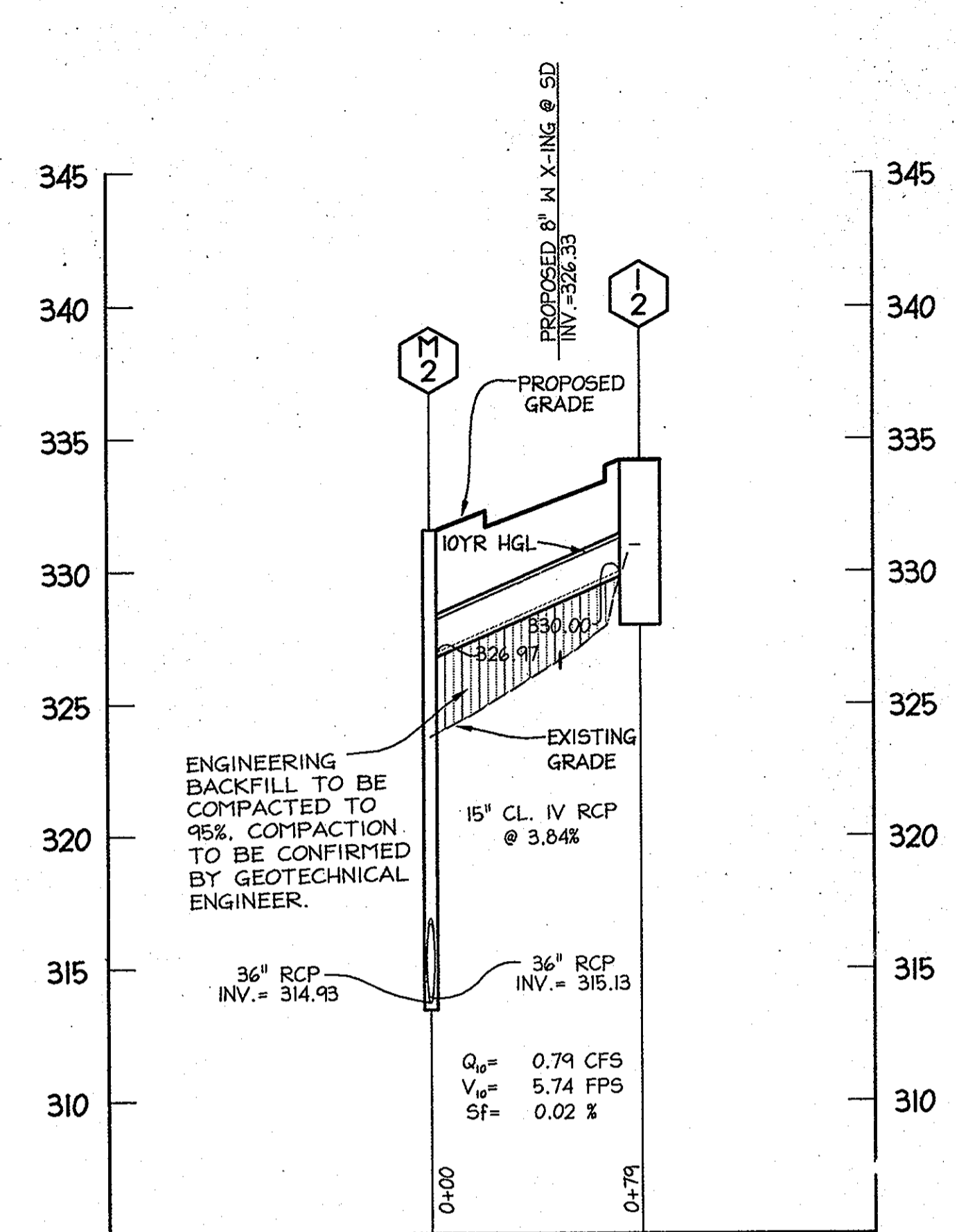
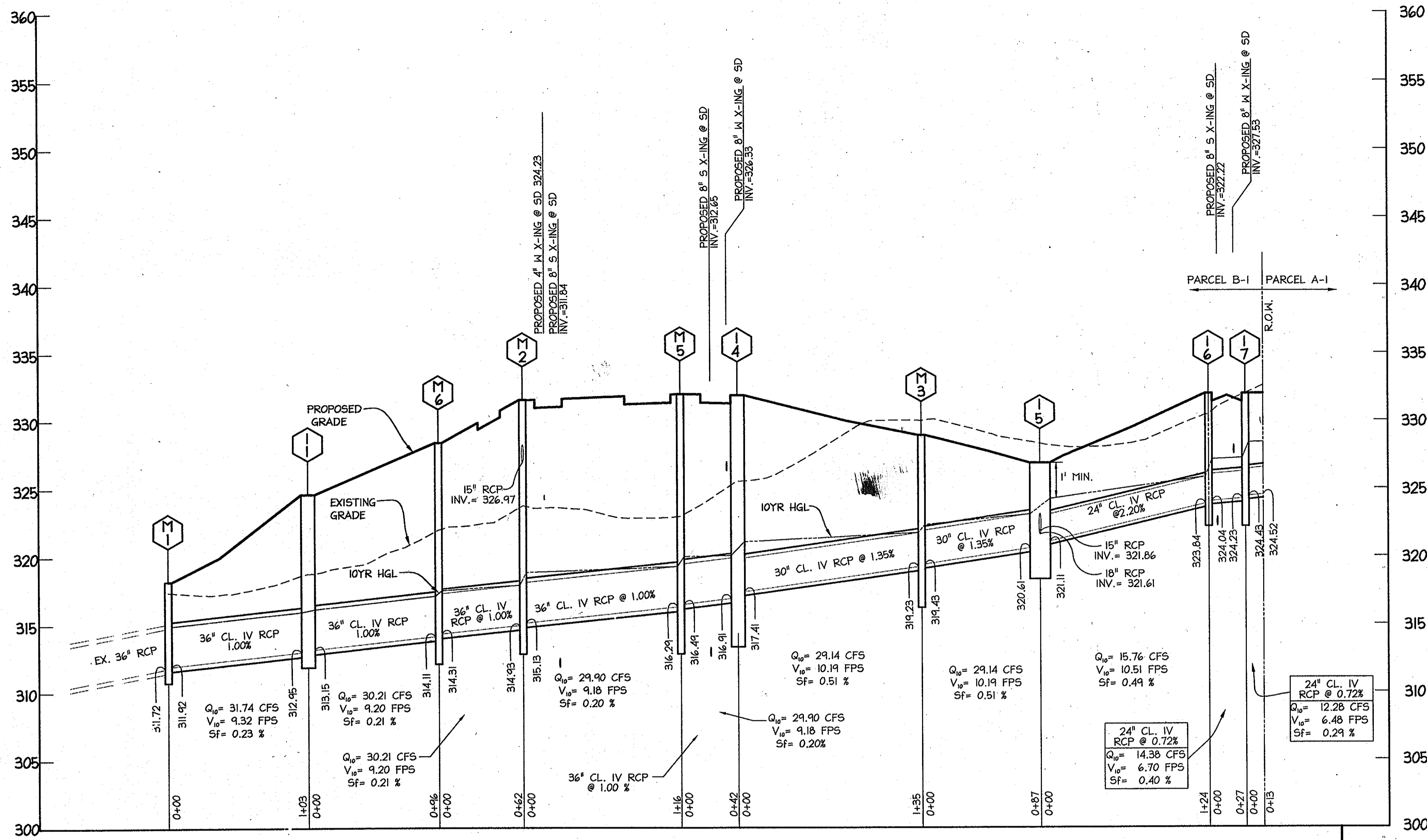
christopher consultants
engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbiana, md. 21046-2990
410.872.8950 · memo 301.881.0148 · fax 410.872.8922

JUNE FLOWERS WAY
EMERSON
SECTION 2, PHASE 6A
BUILDABLE LOTS 2 THRU 24 HOA OPEN SPACE LOTS 125-127
A RESUBDIVISION OF BULK PARCEL B-1 AND A REVISION OF OPEN SPACE 1071
PLAT NO. 17878

TITLE: TYPICAL ROAD SECTIONS AND DETAILS

DESIGN: XDF	SCALE: AS SHOWN	PROJECT: 049101.00
DRAWN: ADL	DATE: 9-18-06	
CHECKED: BAM	APPROVED:	3 OF 9

TDC-309



STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-1	A-10 4' WIDE	193.13 RT OF E 0+54.65 JUNE FLOWERS WAY	313.15 (36")	312.95 (36")	324.60	MODIFIED HOCO STD. DETAIL SD-4.41
I-2	A-10 4.0' WIDE	37.62 LT OF E 0+76.35 JUNE FLOWERS WAY	-	330.00 (15")	333.76	MODIFIED HOCO STD. DETAIL SD-4.41
I-3	A-10 2.5' WIDE	12.00 RT OF E 4+40.02 JUNE FLOWERS WAY	322.73 (15")	322.40 (18")	327.32	HOCO STD. DETAIL SD-4.41
I-4	A-10 4.0' WIDE	12.00 LT OF E 1+88.02 JUNE FLOWERS WAY	317.41 (30")	316.91 (36")	331.74	MODIFIED HOCO STD. DETAIL SD-4.41
I-5	A-10 4.0' WIDE	32.00 LT OF E 4+27.88 JUNE FLOWERS WAY	321.11 (15") 321.06 (15") 321.61 (18")	320.61 (30")	326.90	MODIFIED HOCO STD. DETAIL SD-4.41
I-6	SHA COG 4.0' WIDE	12.00 RT OF E 2+91.02 SCENTLESS ROSE WAY	324.04 (24")	323.84 (24")	331.76	SHA 15' COG INLET DETAIL MD 374.51
I-7	SHA COG 4.0' WIDE	12.00 LT OF E 2+91.02 SCENTLESS ROSE WAY	324.43 (24")	324.23 (24")	331.76	SHA 15' COG INLET DETAIL MD 374.51
I-8	TYPE "D" INLET	N 536064.53 E 1953404.03	-	322.25 (15")	327.50	HOCO STD DETAIL SD-4.39 (4 THROATS OPEN)
I-13	SHA COG 4.0' WIDE	12.00 RT OF E 5+88.29 JUNE FLOWERS WAY	-	326.65 (15")	330.76	SHA 20' COG INLET DETAIL MD 374.51
M-1	5' MANHOLE	N 536442.46 E 1953144.46	311.92 (36")	311.72 (EX. 36")	318.21	HOCO STD DETAIL G-5.13
M-2	5' DROP MANHOLE	N 535915.84 E 1953113.22	315.13 (36") 326.97 (15")	314.93 (36")	331.57	SHA STD DROP MANHOLE DETAIL MD 383.11
M-3	5' MANHOLE	N 535479.80 E 1953368.62	319.43 (30")	319.23 (30")	328.66	HOCO STD DETAIL G-5.13
M-5	5' MANHOLE	N 535926.91 E 1953220.34	316.49 (36")	316.29 (36")	332.40	HOCO STD DETAIL G-5.13
M-6	5' MANHOLE	N 535825.64 E 1953096.42	314.31 (36")	314.11 (36")	328.40	HOCO STD DETAIL G-5.13

NOTES: 1. LOCATION OF TYPE "D" INLET AND MANHOLES ARE AT THE CENTER OF TOP COVER; FOR "A" INLETS LOCATION GIVEN FOR CENTER OF OPENING AT FACE OF CURB.
2. SEE SHEET 6 FOR MODIFIED HOCO PRECAST STANDARD TYPE A-10 INLET (SD-4.41).

PIPE SCHEDULE

SIZE	PIPE LENGTH	TYPE
15"	245'	CL. IV RCP
18"	50'	CL. IV RCP
24"	164'	CL. IV RCP
30"	222'	CL. IV RCP
36"	419'	CL. IV RCP

APPROVED: DEPARTMENT OF PUBLIC WORKS

 Chief, Bureau of Highways Date

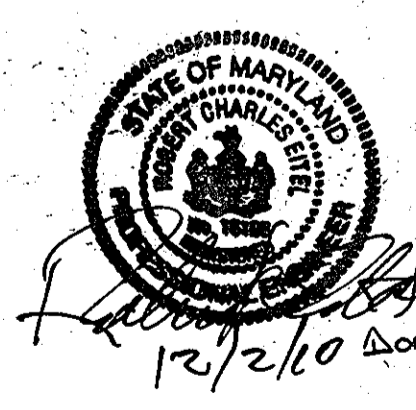
APPROVED: DEPARTMENT OF PLANNING AND ZONING

 Chief, Division of Land Development Date

Gen'l. Development Engineering Division
 LOT NUMBERS REVERSED TO REFLECT CHANGES
 MADE TO F-10-024
 10/10 1 REMOVE SCENTLESS ROSE WAY FROM CONTRACT
 Date No. Revision Description

PERTINENT INFO:
 TAX MAP NO. 47 GRID NO. 8 & 9
 ELECTION DISTRICT: 6 HOWARD COUNTY, MARYLAND

OWNER / DEVELOPER
 SK HOMES @ EMERSON II
 10705 CHARTER DRIVE, SUITE 320
 COLUMBIA, MD 21044
 TEL: (410) 997-7400 FAX: (410) 997-6305



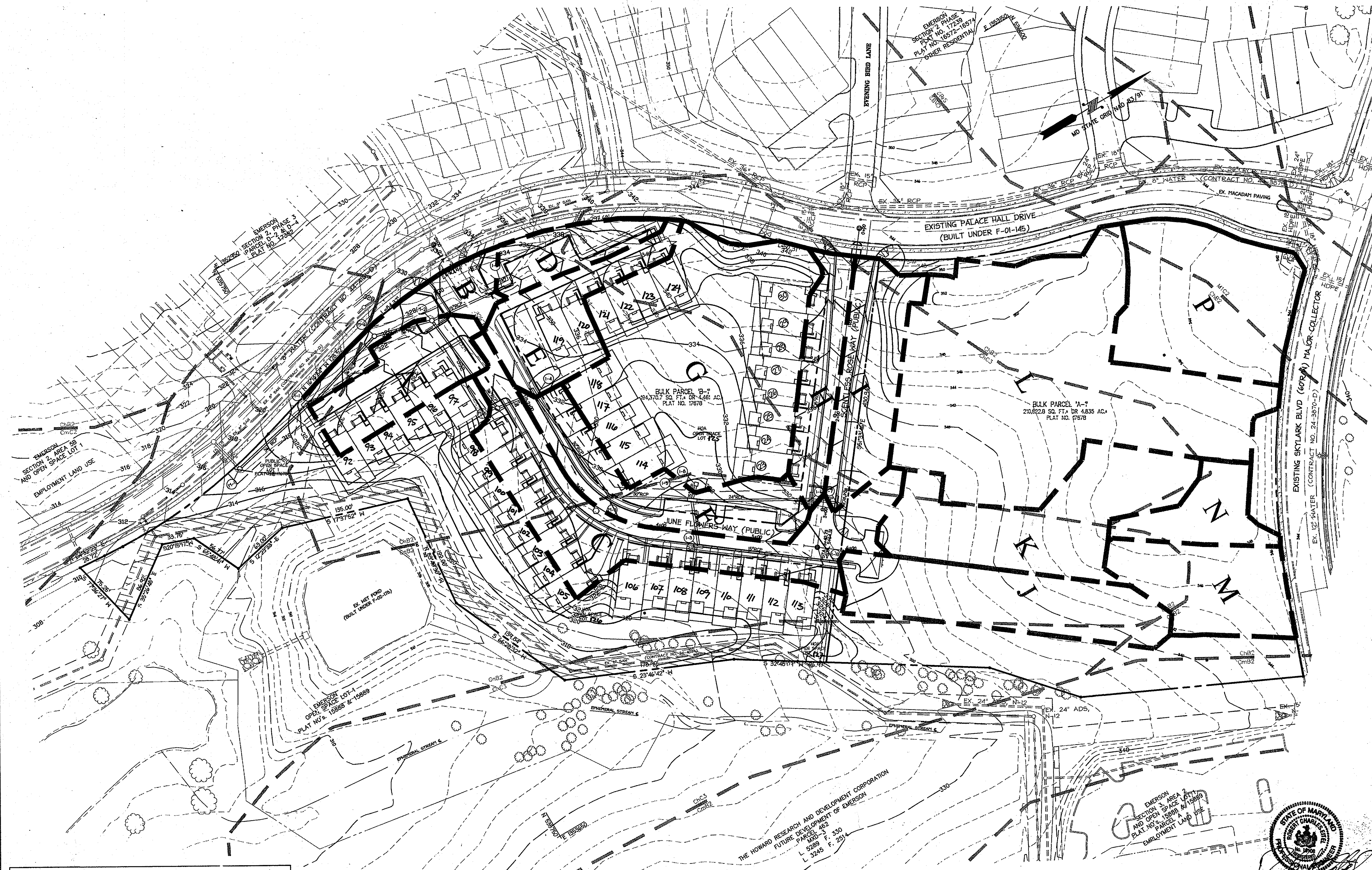
9-18-06
 DATE
 STATE OF MARYLAND
 BRUNNIA MASTER
 PROFESSIONAL ENGINEER
 No. 32559

JUNE FLOWERS WAY
 EMERSON II
 SECTION 2, PHASE 6A
 BUILDABLE LOTS 92 THRU 124, OPEN SPACE LOTS 125-127
 A RESUBDIVISION OF BULK PARCEL 3 1 AND A REVISION OF OPEN SPACE LOTS
 PLAN NO. 17873

TITLE:
STORMDRAIN PROFILES

DESIGN: XDF SCALE: 1/2" = 1'-0"
 DRAWN: ADL DATE: 9-18-06 PROJECT: 049101.00
 CHECKED: BAM APPROVED: 4 OF 9

MDC-304



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED STORM DRAIN
- OFF-SITE DRAINAGE AREA DIVIDE
- PROPOSED DRAINAGE AREA DIVIDE PARCEL 'B-1'
- * STREET LIGHT
- GnB2 SOIL BOUNDARY
- ChB2 SOIL BOUNDARY

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways _____ Date _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development _____ Date 10/10/06

Chief, Development Engineering Division _____ Date 4/5

9/14/07	1	REVISE THE RADIUS AT JUNE FLOWERS WAY AND PALACE HALL DRIVE AND CONCRETE ISLAND BETWEEN STA 0+20 AND 0+27
10/10	2	REMOVE SCENTLESS ROSE WAY FROM CONTRACT
		LOT NUMBERS REVISED TO REFLECT CHANGES MADE TO F-10-02A

Date No. _____ Revision Description _____

PERTINENT INFO:
 TAX MAP NO. 47 GRID NO. 8 & 9
 ELECTION DISTRICT: 6 HOWARD COUNTY, MARYLAND

OWNER / DEVELOPER
 SK HOMES EMERSON II
 10705 CHARTER DRIVE, SUITE 320
 COLUMBIA, MD 21044
 TEL: (410) 997-7400 FAX: (410) 997-6305



JUNE FLOWERS WAY
 EMERSON
 SECTION 2, PHASE 6A
 BUILDABLE LOTS 92-THRU 124 HOA OPEN SPACE; LOTS 125-127 & 1
 A RESUBDIVISION OF BULK PARCEL B-1 AND A REVISION OF OPEN SPACE LOT 1
 PLAT NO. 1787B

TITLE:
STORM DRAINAGE AREA MAP

DESIGN: XDF	SCALE: 1"=50'	PROJECT: 049101.00
DRAWN: ADL	DATE: 9-18-06	5 OF 9
CHECKED: BAM	APPROVED:	

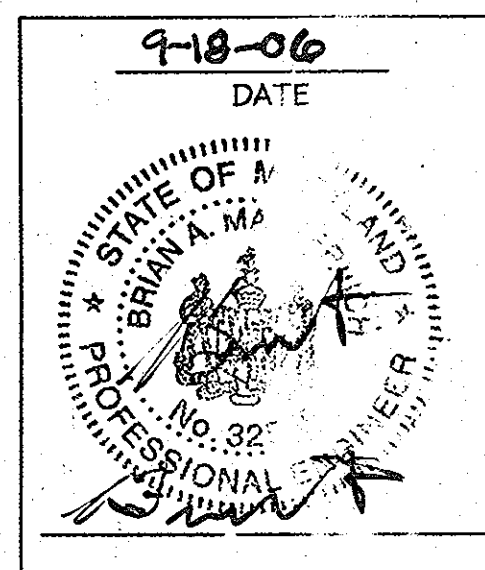
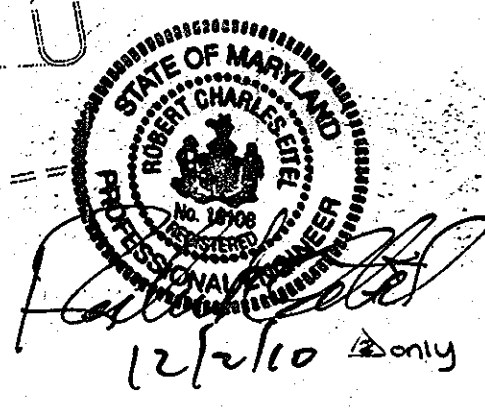
SOIL ANALYSIS (HO. CO. SOILS MAP #33)

SYMBOL	SOIL NAME	SLOPE	ERODABILITY	GROUP
Ba	BAILLE SILT LOAM	0% TO 3%	MODERATELY	D
BaB2	BELTSVILLE FINE SANDY LOAM	2% TO 5%	MODERATELY	C
ChB2	CHESTER SILT LOAM	3% TO 8%	MODERATELY	B
ChC3	CHESTER SILT LOAM	8% TO 15%	SEVERELY	B
CmB2	CHILLUM SILT LOAM	1% TO 5%	MODERATELY	B
CmC2	CHILLUM SILT LOAM	5% TO 10%	MODERATELY	B
CnB2	CHILLUM-FAIRFAX LOAMS	1% TO 5%	MODERATELY	B
GnB2	GLENVILLE SILT LOAM	3% TO 8%	MODERATELY	C
MnC2	MANOR LOAM	8% TO 15%	MODERATELY	B
SfB2	SASSAFRAS GRAVELLY SANDY LOAM	1% TO 5%	MODERATELY	B

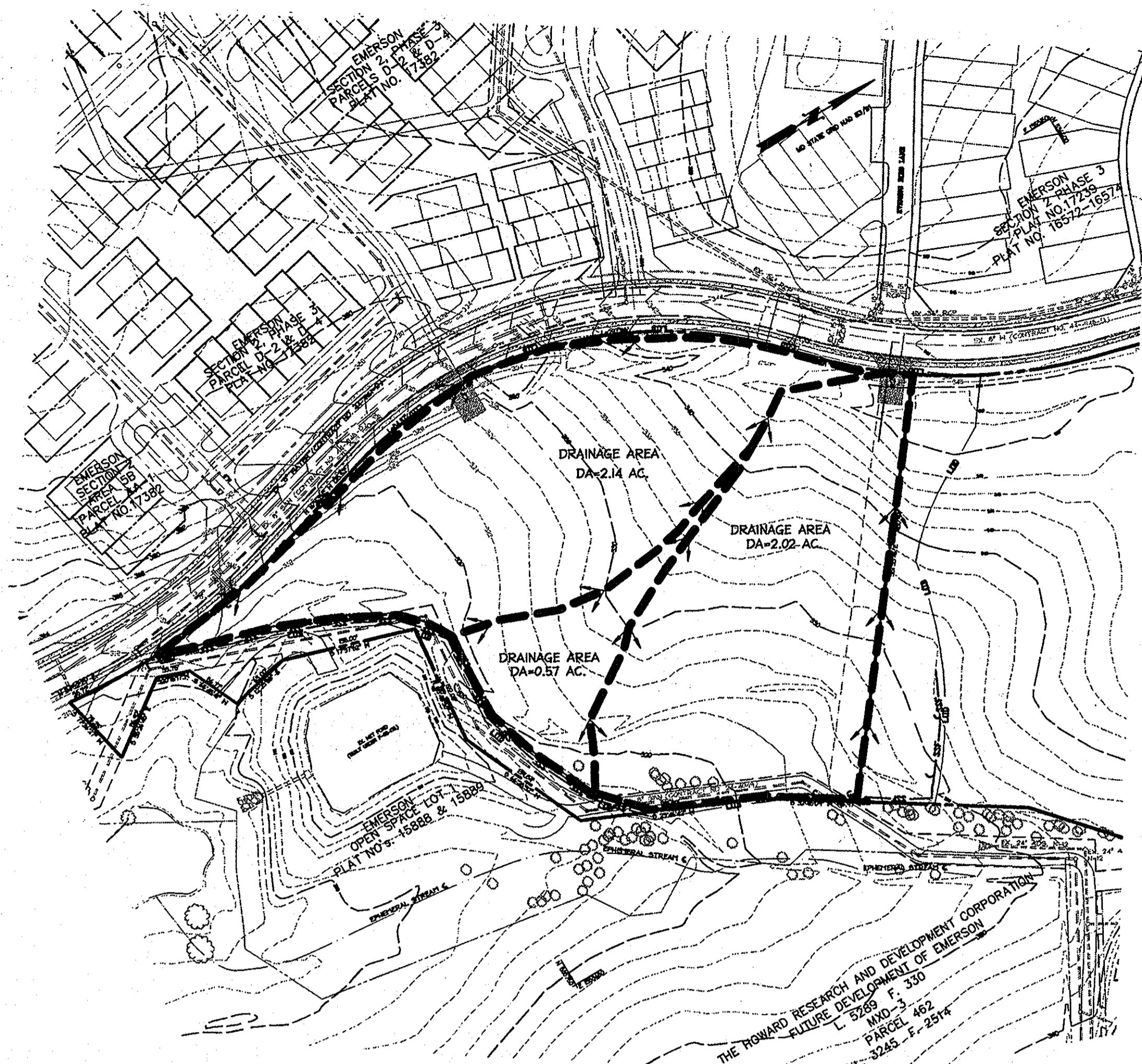
DRAINAGE CHART

INLET #	D.A.# DESIGNATION	D.A. (ACRES)	C FACTOR	PERCENT IMPERVIOUS (%)
1-1	A	0.30	0.73	80
1-2	D	0.17	0.54	53
1-3	C	0.70	0.62	64
1-4	E	0.32	0.55	53
1-5	F	0.39	0.59	56
1-6	H	0.24	0.73	79
1-7	I	0.36	0.73	81
OFF-SITE	B	0.19	0.40	16
1-8	G	1.24	0.44	31
1-13	J	0.49	0.73	80

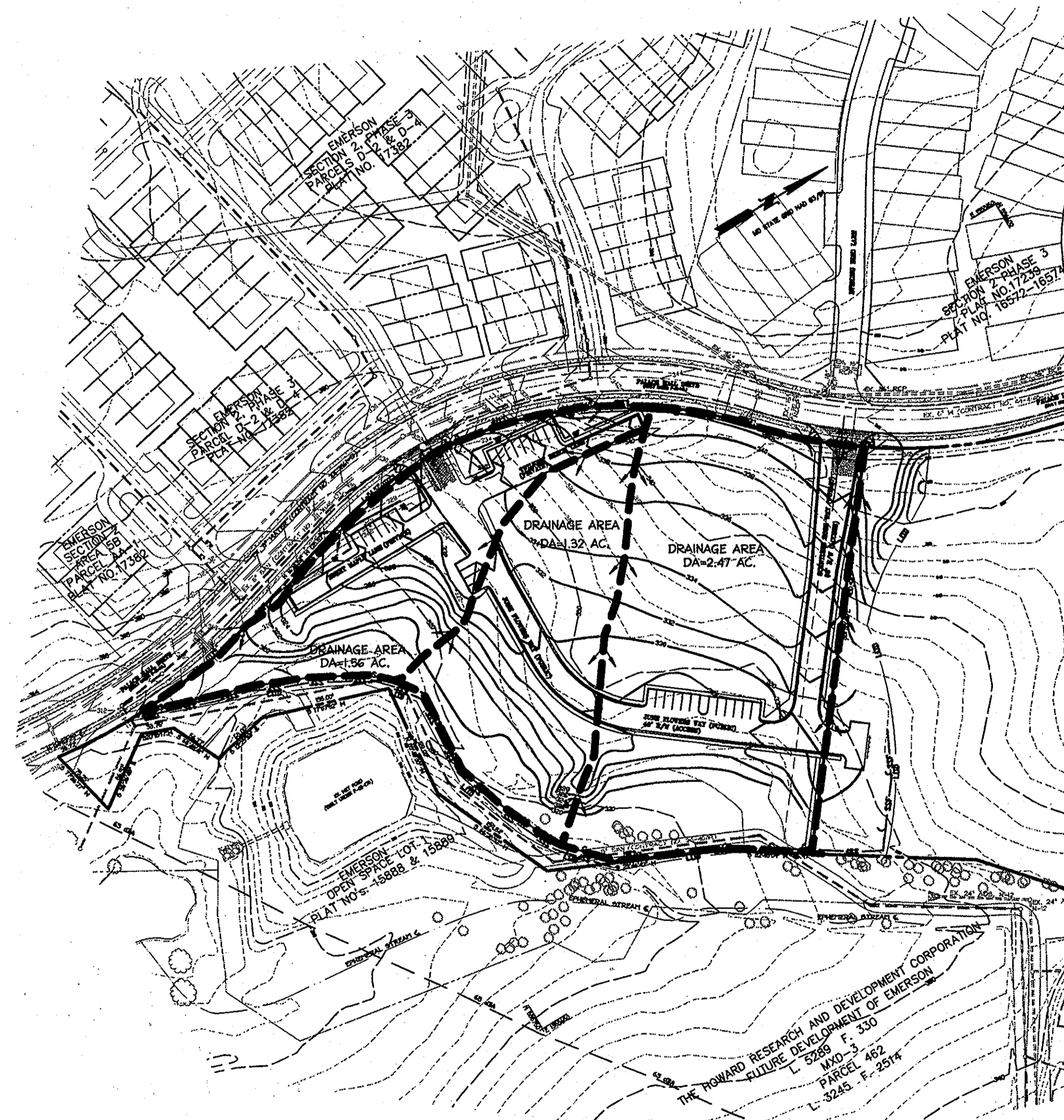
D.A. = DRAINAGE AREA



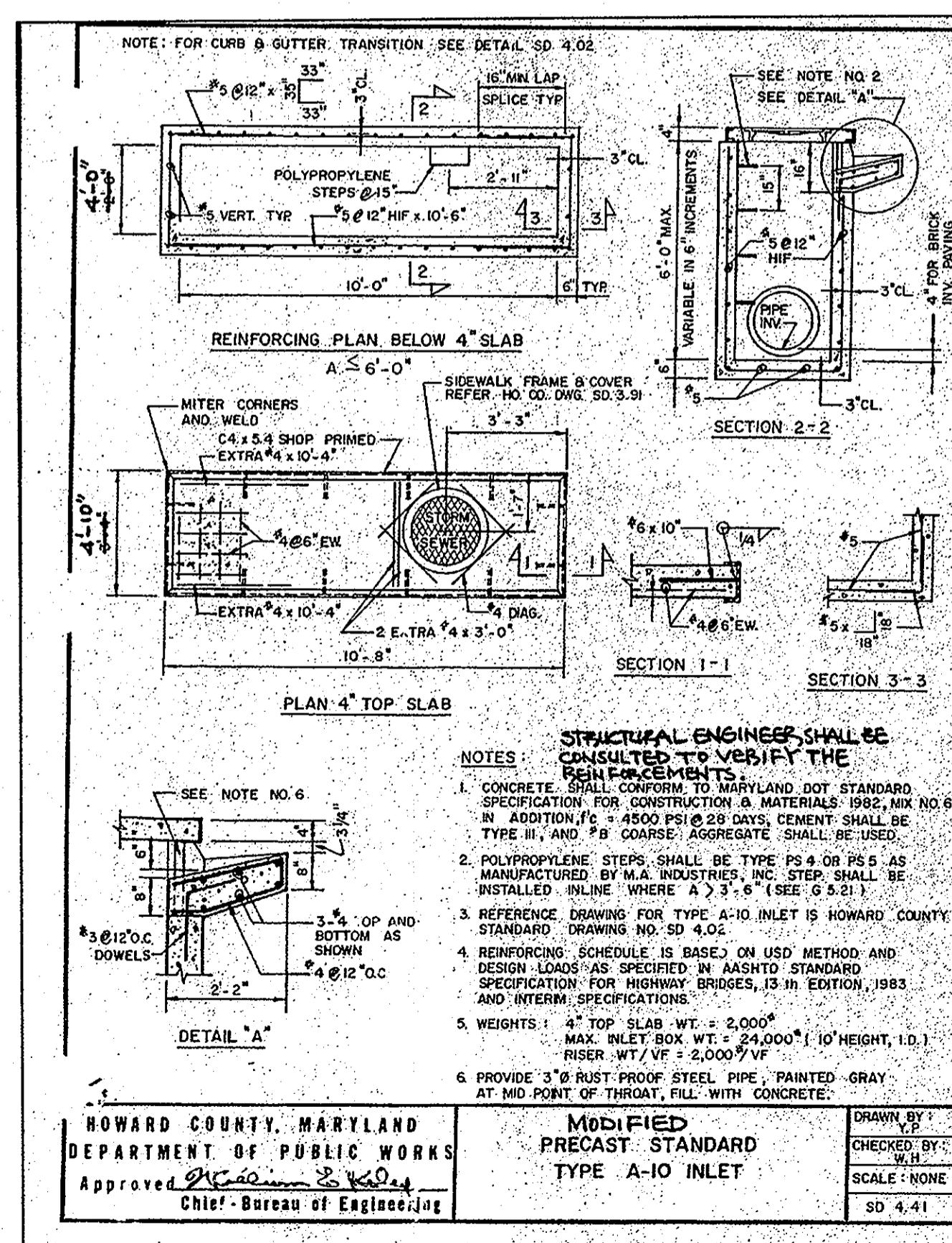
MDC-309



E&S PRE DEVELOPMENT DRAINAGE AREA MAP
SCALE: 1" = 100'



E&S POST DEVELOPMENT DRAINAGE AREA MAP
SCALE: 1" = 100'



APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature]
Chief, Bureau of Highways Date: *[Blank]*

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature]
Chief, Division of Land Development Date: 10/10/06

Chief, Development Engineering Division Date: 10/10/06

Date	No.	Revision Description
9/14/07	1	REVISE THE PAVES AT JUNE FLOWERS WAY AND PALACE HOLL DRIVE AND CONCRETE ISLAND BETWEEN STP. 0+70 AND 0+70
10/10	2	REMOVE SCENTLESS ROSE WAY FROM CONTRACT

PERTINENT INFO:
TAX MAP NO. 47 GRID NO. 8 & 9.
ELECTION DISTRICT: 6 HOWARD COUNTY, MARYLAND

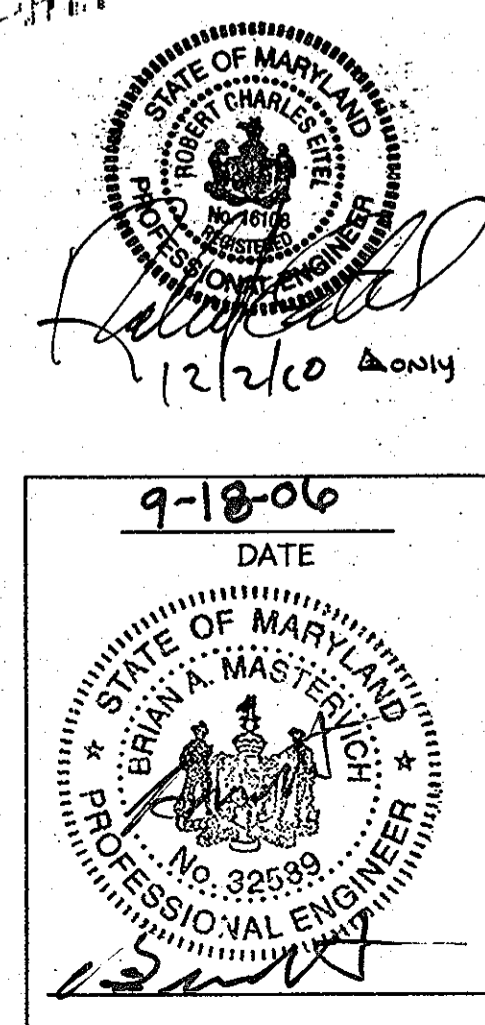
OWNER / DEVELOPER
SK HOMES @ EMERSON II
10705 CHARTER DRIVE, SUITE 320
COLUMBIA, MD 21044
TEL: (410) 997-7400 FAX: (410) 997-6305



JUNE FLOWERS WAY
EMERSON
SECTION 2, PHASE 6A
BUILDABLE LOTS 92 THRU 124, HOA OPEN SPACE LOTS 125-127
A RESUBDIVISION OF BULK PARCEL B-1 AND A REVISION OF OPEN SPACE LOT 1
PLAT NO. 17678

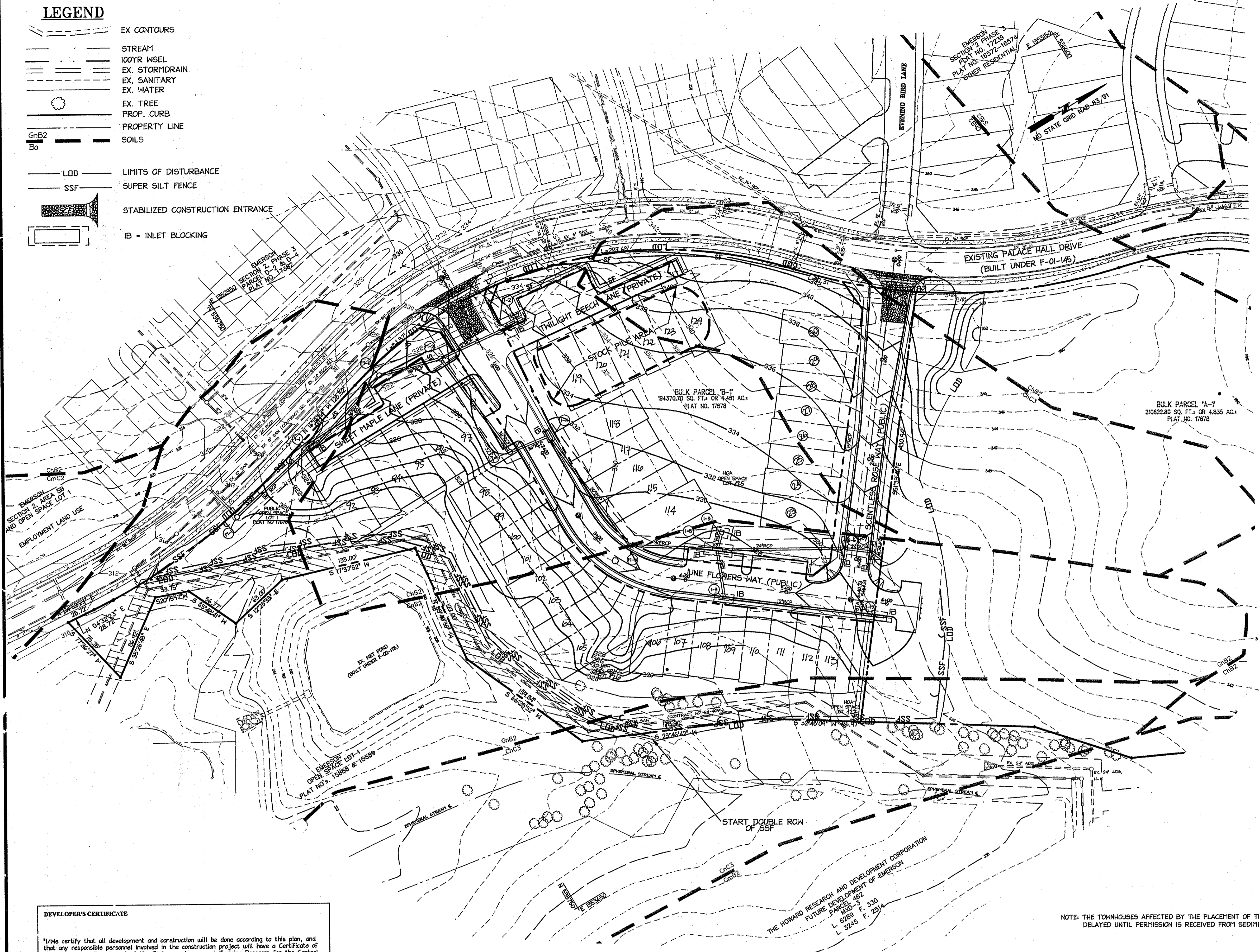
TITLE: **EROSION & SEDIMENT CONTROL DRAINAGE AREA MAPS**

DESIGN: XDF	SCALE: 1"=100'	PROJECT: 049101.00
DRAWN: ADL	DATE: 9-18-06	6 of 9
CHECKED: BAM	APPROVED:	



LEGEND

- EX CONTOURS
- STREAM
- 100YR WSEL
- EX. STORMDRAIN
- EX. SANITARY
- EX. WATER
- EX. TREE
- PROP. CURB
- PROPERTY LINE
- SOILS
- LDD - LIMITS OF DISTURBANCE
- SSF - SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- IB - INLET BLOCKING



DEVELOPER'S CERTIFICATE

"We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

M. Steven Apple
Signature of Developer
Date: 9-19-06

M. STEVEN APPLE
Print name below signature

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Brian A. Mastervich, P.E.
Signature of Engineer
Date: 9-18-06

BRIAN A. MASTERVICH, P.E.
Print name below signature

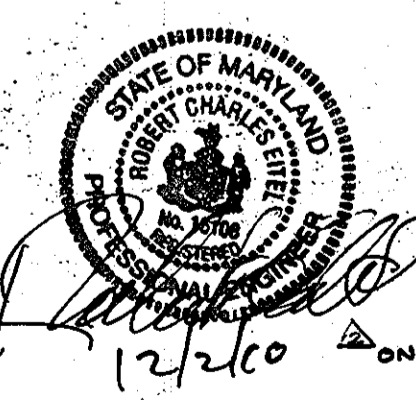
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

Lina Nguyen
Signature
Date: 9/25/06

John C. Whitton
Signature
Date: 9/25/06

Howard SCD

NOTE: THE TOWNHOUSES AFFECTED BY THE PLACEMENT OF THE STOCKPILE ARE TO BE DELAYED UNTIL PERMISSION IS RECEIVED FROM SEDIMENT CONTROL INSPECTOR.



APPROVED: DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways _____ Date _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development *Chris Hamon* Date: 11/10/06

Chief, Development Engineering Division _____ Date: 11/10/06

Date	No.	Revision Description
9/14/07	1	REVISE THE RADIUS AT JUNE FLOWERS WAY AND PALACE HALL DRIVE AND CONCRETE BAND BETWEEN STA. 0+70 AND 0+72
10/20/06	2	REMOVE SCENTLESS ROSE-WAY FROM CONTRACT LOT NUMBERS REVISED TO REFLECT CHANGES MADE TO F-10-02A

PERTINENT INFO:

TAX MAP NO. 47 GRID NO. 8 & 9.

ELECTION DISTRICT: 6 HOWARD COUNTY, MARYLAND

OWNER / DEVELOPER

EMERSON HOMES @ EMERSON II
10705 CHARTER DRIVE, SUITE 320
COLUMBIA, MD 21044
TEL: (410) 997-7400 FAX: (410) 997-6305



JUNE FLOWERS WAY
EMERSON
SECTION 2, PHASE 6A
BUILDABLE LOTS 92 THRU 124 HOA OPEN SPACE LOTS 125 - 127
A RESUBDIVISION OF BULK PARCEL B-1 AND A REVISION OF OPEN SPACE LOT 1
PLAT NO. 17-78

TITLE:
FINAL GRADING AND SEDIMENT EROSION CONTROL PLAN

DESIGN: XDF	SCALE: 1"=50'	PROJECT: 049101.00
DRAWN: ADL	DATE: 9-18-06	
CHECKED: BAM	APPROVED:	7 OF 9

20.0 Standards and Specifications For Land Grading

Definitions
 Reestablishing of the existing land surface in accordance with a plan as determined by engineering survey and layout.

Purpose
 The purpose of a land grading specification is to provide for erosion control and vegetative establishment on those areas where the existing land surface is to be reshaped by grading according to plan.

Design Criteria
 The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surrounding to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measured for drainage and water removal and vegetative treatment, etc.

Many countries have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they should be followed. The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (including grade and cross-section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into the plan:

- Provisions shall be made to safely conduct surface runoff to storm drains, protected outlets or to stable water courses to insure that surface runoff will not damage slopes or other graded areas.
- Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. (Where the slope is to be mowed the slope should be no steeper than 3:1. 4:1 is preferred because of safety factors related to mowing steep slopes.)
- Reverse benches shall be provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slopes it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slopes face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.

- Benches shall be a minimum of six-feet wide to provide ease of maintenance.
- Benches shall be designed with a reverse slope of 6:1 of flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanied by appropriate design and computations.
- The flow length within a bench shall not exceed 800' unless accompanied by appropriate design and computations. For flow channel stabilization see temporary suales.

- Surface water shall be diverted from the face of all cut and/or fill slopes by the use of earth dikes, ditches and suales or conveyed downslope by the use of a designated structure, except where:
 - The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected for surface runoff until they are stabilized.
 - The face of the slope shall not be subjected to any concentrated flows of surface water such as from natural drainways, graded suales, downspouts, etc.
 - The face of the slope will be protected by special erosion control materials, to include, but not limited to approved vegetative stabilization practices (see section G), rip-rap or other approved stabilization methods.

- Cut slopes occurring in ripable rock shall be serrated as shown on the following diagram. These serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and will have steps cut as nominal two-foot intervals with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is shown in dashed lines. These steps will weather and hold moisture, lime, fertilizer and seed thus producing a much quicker and longer lived vegetative cover and better slope stabilization. Over land flow shall be diverted from the top of all serrated cut slopes and carried to a suitable outlet.

- Surface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.

- Slopes shall not be created to close to property lines as the danger of adjoining properties without adequately protecting such properties against sediment, erosion, slippage, settlement, subsidence or other related damages.

- Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.

- Stockpiles, borrow areas and spoil shall be shown on the plans and shall be subjected to the provisions of the Standard and Specifications.

All disturbed areas shall be stabilized structurally or vegetatively in compliance with 20.0 Standards and Specifications for Vegetative Stabilization.

21.0 Standard and Specifications For Topsoil

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

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

Conditions Where Practice Applies
 This practice is limited to areas having 2:1 or flatter slopes where:

- The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
- The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
- The original soil to be vegetated contains materials toxic to plant growth.
- The soil is so acidic that treatment with limestone is not feasible.

For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

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 Experiment Station.

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

- Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1" in diameter.
- Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or other as specified.
- Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread to the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked in to the soil in conjunction with tillage operations as described in the following procedures.

For sites having disturbed areas under 5 acres:
 Place topsoil (if required) and apply soil amendments as specified in 20.0 vegetative stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

For sites having disturbed areas over 5 acres:
 On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

- ph for topsoil shall be between 6.0 and 7.5. If tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise pH to 6.5 or higher.
- Organic content of topsoil shall be not less than 1.5 percent by weight.
- Topsoil having soluble salt content greater than 500 parts per million shall not be used.
- No soil 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 day min.) to permit dissipation of phytotoxic materials.

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

Place topsoil (if required) and apply soil amendments as specified in 20.0 vegetative stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

Topsoil Application

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

Grades in the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 6" higher in elevation.

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.

Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

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 Materials 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:

- Composted sludge shall be supplied by, or originated 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.
- 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.
- 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 rate.

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

2. Vegetative Cover - See standards for temporary vegetative cover.

3. Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12' apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.

4. Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.

5. Barriers - Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar materials can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.

6. Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

Permanent Methods

- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with seed. Existing trees or large shrubs may afford valuable protection if left in place.
- Topsoil - Covering with less erosive materials. See Standards for topsoiling.
- Stone - Cover surface with crushed stone or coarse gravel.

References

- Agriculture Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
- Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA - ARS.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- Preferred--Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding apply 400 lbs/acre 30-0-0 urea form fertilizer (9 lbs/1000 sq. ft.)
- Acceptable--Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding -- For the periods March 1 -- April 30 and August 1 -- October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) Kentucky 31 Tall Fescue. For the period May 1 -- July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 -- February 28, protect site by Option 1 -- Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2 -- Use sod. Option 3 -- Seed with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrolled weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 216 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance -- Inspect all seeding areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

Seedbed Preparation -- Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments -- Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).

- Seeding -- For periods March 1 -- April 30 and from August 15 -- October 15, seed with 2-1/2 bushel per acre of annual ryegrass (3.2 lbs/1000 sq. ft.). For the period May 1 -- August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16 -- February 28 protect the site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching -- Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrolled weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 216 gal. per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gal. per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

DEVELOPER'S CERTIFICATE

I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

M. Steven Appler
 Signature of Developer
 M. STEVEN APPLER
 Print name below signature
 Date: 9/19/06

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

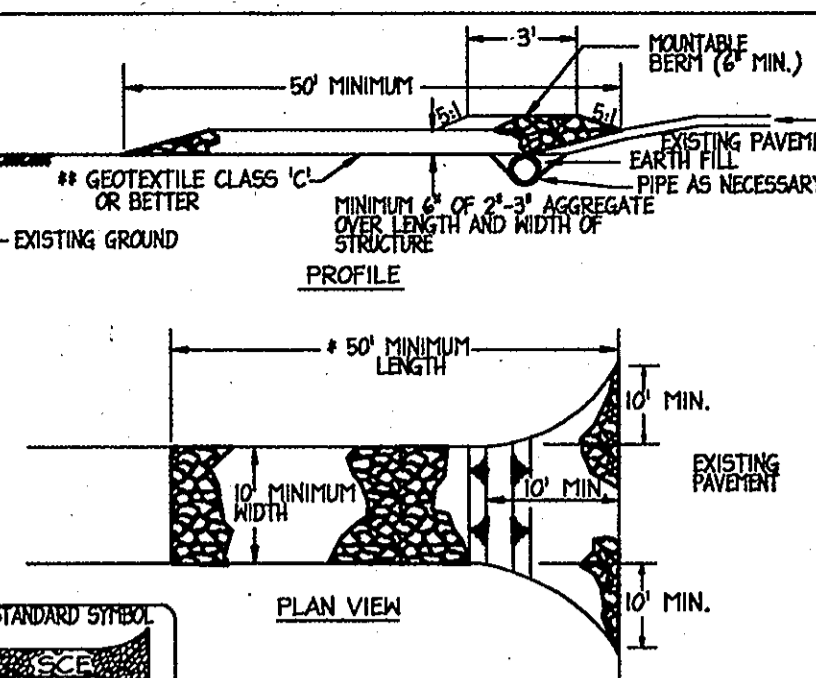
Brian A. Mastervich, P.E.
 Signature of Engineer
 BRIAN A. MASTERVICH, P.E.
 Print name below signature
 Date: 9/18/06

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

Jim Meyer
 Signature of Reviewer
 JIM MEYER
 Print name below signature
 Date: 9/25/06

John R. Robertson
 Signature of Reviewer
 JOHN R. ROBERTSON
 Print name below signature
 Date: 9/25/06

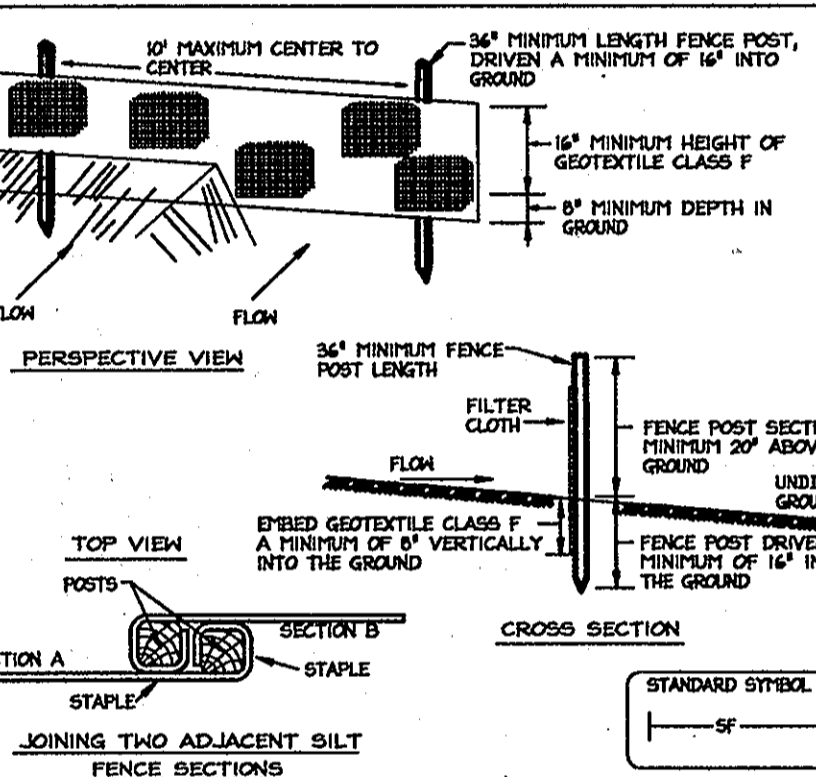
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specifications

- Length - minimum of 50' (#30 for single residence lot).
- Width - 12' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. *The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 4" deep over the length and width of the entrance.
- Surface Water - all surface water flowing or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipes installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipes shall be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipes should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

DETAIL 22 - SILT FENCE



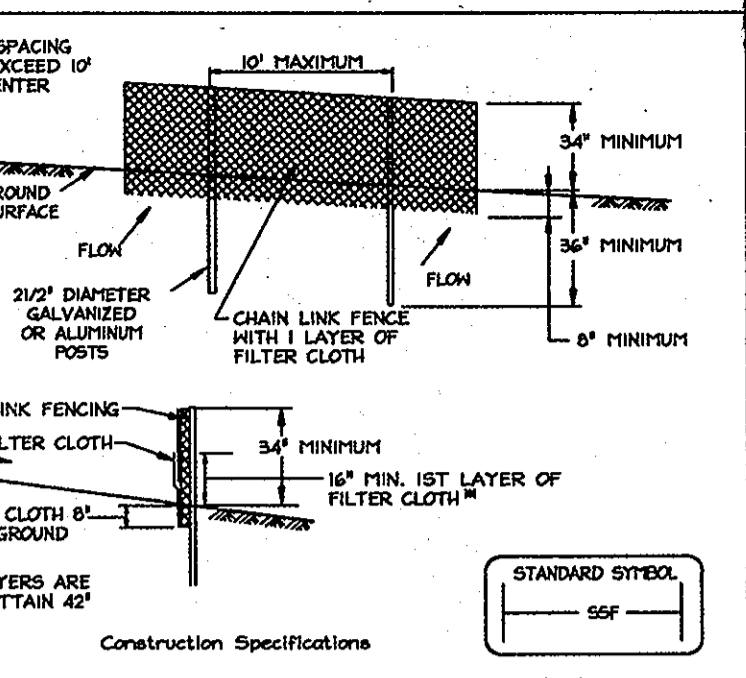
Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Head posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round steel pipe of sound steel. Head posts shall be standard T or U section weighing not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
 Tenacity Strength 50 lbs/in (min.) Test MSMT 509
 Tenacity Modulus 20 lbs/in (min.) Test MSMT 509
 Flow Rate 0.3 gal/ft²/minute (max.) Test MSMT 322
 Filtering Efficiency 75% (min.) Test MSMT 322
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when necessary.

HOWARD COUNTY SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
- 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 and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shall be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specific above in accordance with the 1995 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Section 52). Temporary stabilization with mulch along can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained by the Howard County Sediment Control Inspector.
- Site Analysis:
 Total Area of Site 5.51 Acres
 Area Disturbed 4.47 Acres
 Area to be roofed or paved 0.89 Acres
 Area to be vegetatively stabilized 4.08 Acres
 Total Cut 6,754 Cu. Yds.
 Total Fill 18,510 Cu. Yds.
 Offsite waste/borrow area location: N/A
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all site 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 made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized any construction as shown on these plans by the end of each work day, whichever is shorter.

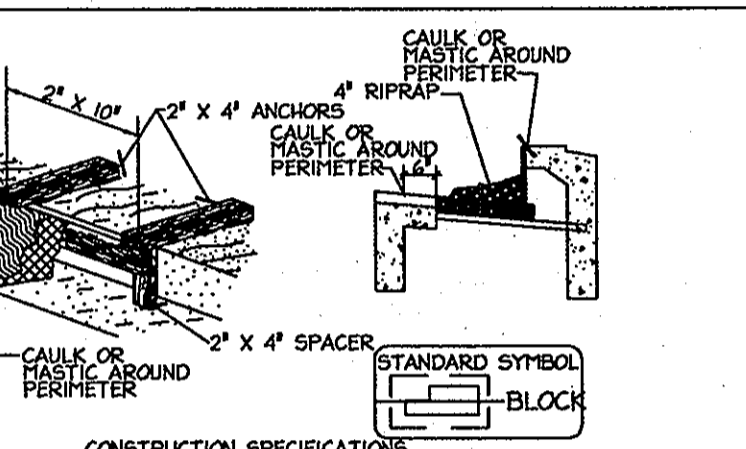
DETAIL 33 - SUPER SILT FENCE



Construction Specifications

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and true rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
 Tenacity Strength 50 lbs/in (min.) Test MSMT 509
 Tenacity Modulus 20 lbs/in (min.) Test MSMT 509
 Flow Rate 0.3 gal/ft²/minute (max.) Test MSMT 322
 Filtering Efficiency 75% (min.) Test MSMT 322

CURB INLET BLOCKING



Construction Specifications

- ATTACH A CONTINUOUS PIECE OF PLYWOOD MEASURING THROAT LENGTH PLUS 4\"/>

SEQUENCE OF CONSTRUCTION

- OBTAIN THE GRADING PERMIT FROM HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS DIVISION. (1 DAY)
- ARRANGE AN ON-SITE PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTORS, THE CONTRACTOR, AND ENGINEER PRIOR TO THE START OF CONSTRUCTION OF THIS PLAN. (1 DAY)
- CONTACT A PRIVATE UTILITY LOCATING COMPANY TO ADEQUATELY MARK ALL KNOWN EXISTING UTILITIES. (2 DAYS)
- INSTALL THE STABILIZED CONSTRUCTION ENTRANCES PER THE PLAN. (1 DAY)
- CLEAR AND GRUB FOR PERIMETER CONTROL. INSTALL SUPER SILT FENCE PER PLAN SPECIFICATIONS. (7 DAYS)
- ONCE ALL SEDIMENT CONTROL DEVICES ARE IN PLACE, OBTAIN INSPECTOR'S APPROVAL PRIOR TO GRADING. (2 DAYS)
- ONCE INSPECTOR'S APPROVAL IS OBTAINED, BEGIN ON-SITE GRADING & INSTALLING STORM DRAIN SYSTEM. BLOCK ALL INLETS (35 DAYS)
- BEGIN ROAD CONSTRUCTION (48 DAYS)
- IMMEDIATELY UPON COMPLETION OF GRADING, PROVIDE STABILIZATION PER THE SEEDING TABLES PROVIDED ON THE PLANS. (7 DAYS)
- ONCE ALL GRADING, PAVEMENT, CURBS AND GUTTERS ARE COMPLETED AND SITE IS STABILIZED, OBTAIN INSPECTOR'S APPROVAL PRIOR TO REMOVAL OF ANY SEDIMENT CONTROL DEVICE. (2 DAYS)
- REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES EXCEPT THE INLET BLOCKINGS. (3 DAYS)
- STABILIZE ANY REMAINING DISTURBED AREAS ON-SITE. (4 DAYS)
- ONCE ALL SEDIMENT CONTROL DEVICES EXCEPT INLET BLOCKINGS ARE REMOVED AND SITE IS STABILIZED, OBTAIN FINAL APPROVAL FROM THE INSPECTOR. (2 DAYS)

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature]
 Chief, Bureau of Highways
 Date: 10/2/06

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature]
 Chief, Division of Land Development
 Date: 10/2/06

APPROVED: DEPARTMENT OF ENGINEERING
[Signature]
 Chief, Development Engineering Division
 Date: 10/2/06

10/2/06 1 REMOVE SCENTLESS ROSE WAY FROM CONTRACT

PERTINENT INFO:
 TAX MAP NO. 47 GRID NO. 8 & 9
 ELECTION DISTRICT: 6 HOWARD COUNTY, MARYLAND

OWNER / DEVELOPER
 SK HOMES @ EMERSON II
 10705 CHARTER DRIVE, SUITE 320
 COLUMBIA, MD 21044
 TEL: (410) 997-7400 FAX: (410) 997-6305

christopher consultants
 engineering surveying land planning
 christopher consultants, inc.
 7172 columbia gateway drive (suite 100) columbia, md 21046 2990
 410.872.8850 memo 301 811-0148 fax 410.872.8838

JUNE FLOWERS WAY
 EMERSON
 SECTION 2, PHASE 6A
 BUILDABLE LOTS 92 THRU 124 HOA OPEN SPACE LOTS 125-127
 A RESUBDIVISION OF BULK PARCEL B-1 AND A REVISION OF OPEN SPACE LOT 1
 PLAT NO. 17678

TITLE:
**EROSION & SEDIMENT CONTROL
 DETAIL SHEET**

DESIGN: XDF SCALE: AS SHOWN PROJECT: 049101.00
 DRAWN: ADL DATE: 9-19-06
 CHECKED: BAM APPROVED: 8 OF 9



GENERAL PLANTING NOTES:

1. ALL PLANT MATERIAL TO MEET A.A.N. STANDARDS.
2. LANDSCAPING CONTRACTOR TO FOLLOW LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METRO AREA APPROVED BY LCAPM.
3. NO SUBSTITUTIONS TO BE MADE WITHOUT CONSENT OF LANDSCAPE ARCHITECT OR OWNER.
4. IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES PRIOR TO THE COMMENCEMENT OF WORK. SOD QUANTITY TAKE-OFFS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING. THE CONTRACTOR SHALL FURNISH PLANT MATERIAL IN SIZES AS SPECIFIED IN THE PLANT LIST.
5. ALL BEDS TO BE TOPPED WITH THREE INCHES OF HARDWOOD MULCH.
6. LANDSCAPE CONTRACTOR TO VERIFY LOCATION OF UTILITIES WITH OWNERS BEFORE PLANTING.
7. LANDSCAPE ARCHITECT/OWNER SHALL SELECT, VERIFY AND/OR APPROVE ALL PLANT MATERIAL AT OWNER'S DISCRETION, SPECIMEN AND OTHER PLANT MATERIAL WILL BE SELECTED.
8. LANDSCAPE CONTRACTOR SHALL COORDINATE PLANT BED FILLING OPERATIONS AND PLANT MATERIAL INSTALLATION WITH GENERAL CONTRACTOR AND UTILITIES CONTRACTOR. AT THE TIME OF FINAL INSPECTION WITH ACCEPTANCE, ALL ELECTRIC, WATER DRAINAGE AND FOUNTAIN UTILITIES AS WELL AS ALL PLANT MATERIALS, SHALL REMAIN UNDISTURBED. LIKEWISE, LANDSCAPE CONTRACTOR AND UTILITIES CONTRACTOR SHALL COORDINATE EFFORTS TO ENSURE THAT SURFACE UTILITIES ARE AT THE PROPER ELEVATION RELATIVE TO FINAL GRADES.
9. CONTRACTOR SHALL NOTIFY MISS UTILITY 72 HOURS PRIOR TO CONSTRUCTION.
10. THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERTIS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
11. TOPSOIL MIX
 - a. Planting mix shall be prepared at approved on-site staging area using approved on-site existing soil. Mix minimum quantities of 20 cubic yards or sufficient mix for entire job if less than 20 cubic yards is required.
 - b. Thoroughly mixed in the following proportions for tree and shrub planting mix:
 - 5 cy existing soil
 - 2 cy sharp sand
 - 3 cy wood residuals
 - 4.5 lbs treble superphosphate
 - 5 lbs dolomite limestone (eliminate for acid loving plants)
 - c. For bed planting, shrubs and groundcover spaces 24 inches or closer, incorporate the following ingredients per 20 sf and incorporate into top 8 inches of existing soils by rototilling or similar method of incorporation.
 - 2 cy sharp sand
 - 3 cy organic material
 - 4.5 lbs treble superphosphate
 - 5 lbs dolomite limestone (eliminate for acid loving plants)
12. ALL INTERNAL AND PERIMETER LANDSCAPING REQUIREMENTS FOR THIS PROJECT ARE TO BE ADDRESSED AND PROVIDED UNDER SDP-06-90.

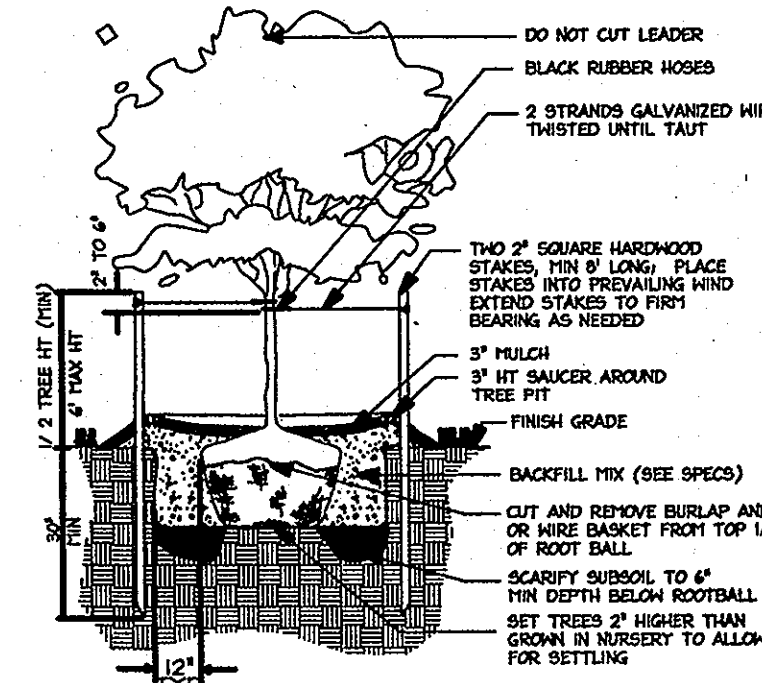
LEGEND

- EX CONTOURS
- STREAM
- 100YR WSEL
- EX STORM DRAIN
- EX SANITARY
- EX WATER
- EX TREE
- PROP. CURB
- PROPERTY LINE
- PROP. STREET LIGHT
- PROP. STREET TREE (34 - Z5)
- PROP. STREET TREE (25 - P5)
- EX STREET TREE (PALACE HALL DRIVE) (PER F-01-145)

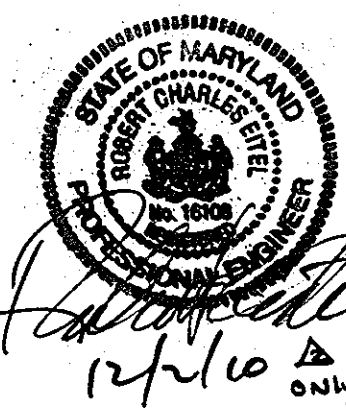
DEVELOPER'S/BUILDER'S CERTIFICATE

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

M. Chund 9-19-06
 NAME DATE



Tree Planting Detail
 Not To Scale



APPROVED: DEPARTMENT OF PUBLIC WORKS
W. Z. ... 9-28-06
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... 10/10/06
 Chief, Division of Land Development Date

Date	No.	Revision Description
9/14/07	1	REVISE THE ROUTES AT JUNE FLOWERS WAY AND PALACE HALL DRIVE AND CONCRETE ISLAND BETWEEN SPA 0420 AND 0470
10/20/06	2	REMOVE SCENTLESS ROSE WAY FROM CONTRACT LOT NUMBERS REVISED TO REFLECT CHANGES MADE TO F-10-024

PERTINENT INFO:
 TAX MAP NO. 47 GRID NO. 8 & 9
 ELECTION DISTRICT: 6 HOWARD COUNTY, MARYLAND

OWNER / DEVELOPER
 GK HOMES@ EMERSON II
 10705 CHARTER DRIVE, SUITE 320
 COLUMBIA, MD 21044
 TEL: (410) 997-7400 FAX: (410) 997-6305



JUNE FLOWERS WAY
 EMERSON SECTION 2, PHASE 6A
 BUZZABLE LOTS 92 THRU 124, HOA OPEN SPACE LOTS 125-127
 A RESUBDIVISION OF BULK PARCEL B-1 AND A REVISION OF OPEN SPACE LOT 1 PLAT NO. 17878

TITLE:
STREET TREE AND LIGHTING PLAN

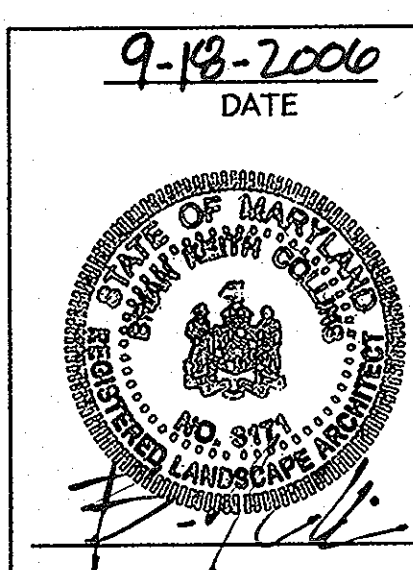
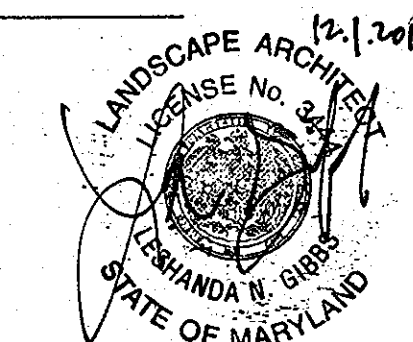
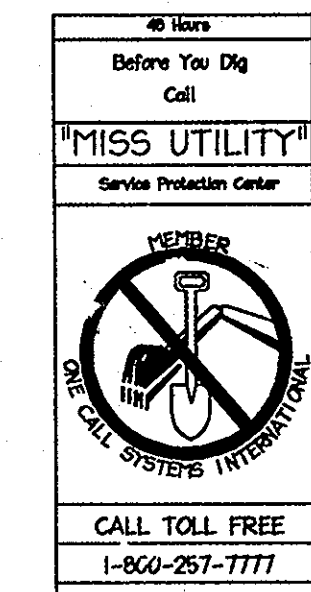
DESIGN:	SCALE: 1" = 50'	PROJECT: 049101.00
DRAWN:	DATE: 9-18-06	
CHECKED:	APPROVED:	9 OF 9

STREET TREE SCHEDULE

ROAD NAME	LENGTH OF ROAD (BOTH SIDES)	REQ. NO. OF TREES (1 TREE/40 L.F.)	NO. OF TREES PROVIDED
JUNE FLOWERS WAY	1045 L.F.	26	29
SCENTLESS ROSE WAY	580 L.F.	14	15
SWEET MAPLE LANE	3' O L.F.	10	10
TWILIGHT BEECH LANE	370 L.F.	10	10

PLANT LIST:

SYMBOL	LATIN NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
Z5	Zelkova Serrata 'Green Vase'	'Green Vase' Japanese Zelkova	39	2 1/2" - 3" caliper	B4B
PS	Prunus Sargentii 'Columnaris'	'Columnaris' Sargent Cherry	25	8" - 10' Hgt.	B4B



MDC-304