ROADWAYS AND STORM DRAINS

CHAPEL WOODS III

LOTS 28 – 36 & PARCEL A

A RESUBDIVISION OF LOTS 7 AND 8

5th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE OF CHAPEL ESTATES DRIVE
3	GRADING AND SEDIMENT CONTROL PLAN
4	DRAINAGE AREA MAP, DRIVEWAY PROFILE & LANDSCAPE PLAN
5	PROFILES AND DETAIL SHEET
6	FOREST CONSERVATION PLAN
7	FOREST CONSERVATION DETAILS

GENERAL NOTES

1. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
2. PERCOLATION AREAS AND WATER WELLS FOR ADJOINING LOTS ARE SHOWN WHERE PERTINENT.
3. SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S: S-94-37, WP-94-39.
4. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT OF WAY AND NOT ONTO THE FLAG OR PIPESTEM DRIVEWAY.
5. DE-FACTO SWM FOR THE PROPOSED ROADWAY IS TO BE PROVIDED IN THE EXISTING POND AS PER LETTER DATED APRIL 15, 1994 BY MR. JAMES IRVIN.
6. UNDER S-94-37 DPW APPROVED REQUEST TO ALLOW THE LENGTH OF CUL-DE-SAC TO BE GREATER THAN 1200' AND ALLOW A 200' RADIUS FOR THE ROAD.
7. THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
8. TOPOGRAPHIC SURVEY BASED ON FIELD RUN SURVEY PERFORMED BY RIEMER MUEGGE & ASSOCIATES, INC. IN JUNE, 1994. THE CONTOUR INTERVAL IS 2'.
9. THE 100-YEAR FLOODPLAIN SHOWN IS BASED ON THE CLYDE BRANCH STUDY PERFORMED BY HOWARD COUNTY AND DELINEATED ON F-88-231.
10. WETLANDS HAVE BEEN FIELD DELINEATED BY RIEMER MUEGGE & ASSOCIATES, INC. IN SEPTEMBER, 1994.
11. NO GEOTECHNICAL STUDY WAS PERFORMED FOR THIS DEVELOPMENT.
12. THE PRIMARY PURPOSES FOR PRESERVATION PARCEL 'A' ARE FOREST CONSERVATION AND OPEN SPACES.
13. ALL WELLS ARE TO BE DRILLED PRIOR TO RECORD PLAT.
14. WP-94-39 – A REQUEST TO WAIVE SECTION 16.120(b)(6)(i) OF THE HOWARD COUNTY SUBDIVISION & LAND DEVELOPMENT REGULATIONS WAS DENIED DECEMBER 14, 1993.
15. WETLANDS DISTURBANCE AUTHORIZED UNDER NON-TIDAL WETLANDS PERMIT NT-94-1127, TRACKING # 1995G010, LETTER OF AUTHORIZATION.

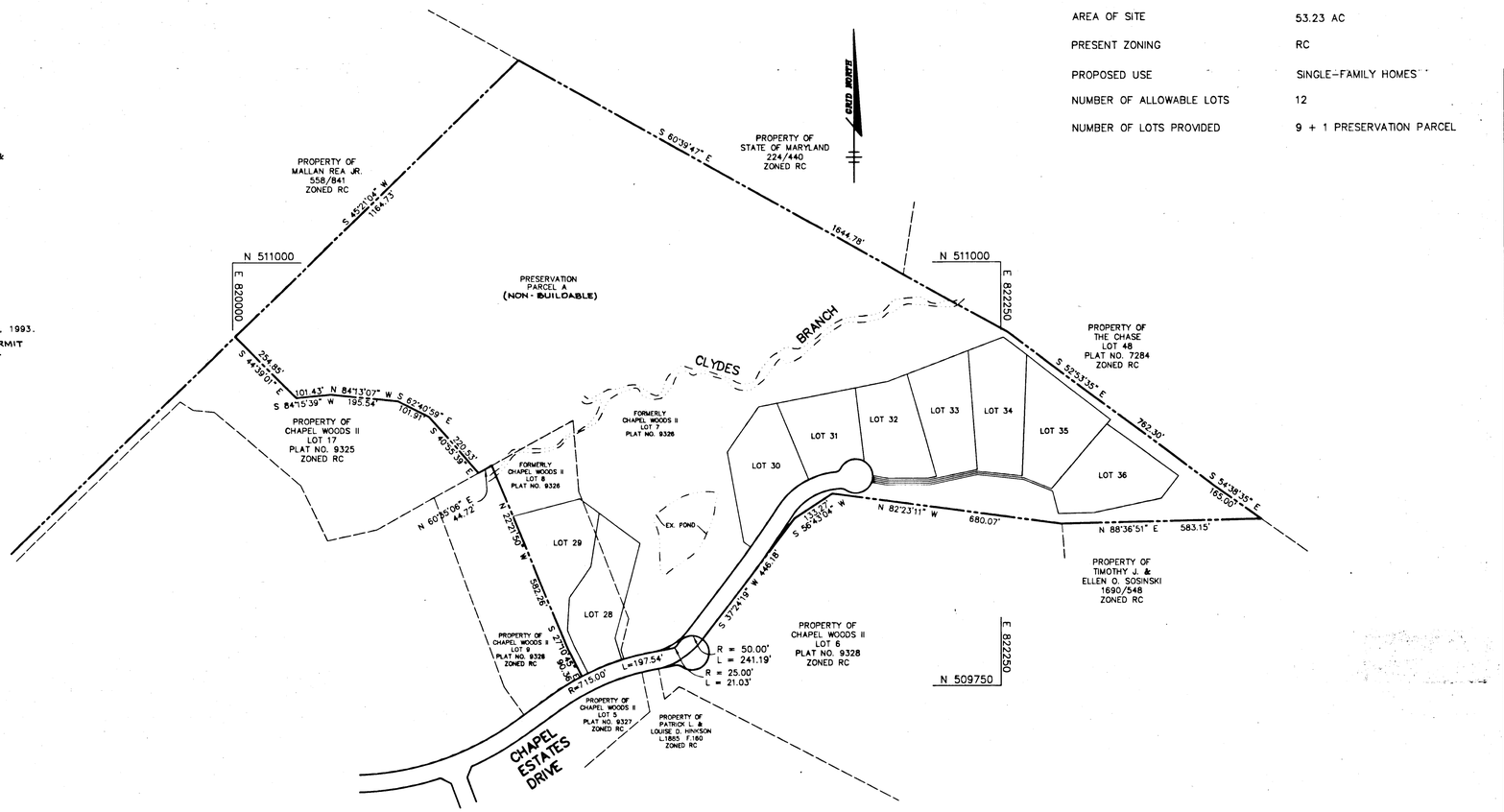
OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY WET DETENTION POND

ROUTINE MAINTENANCE

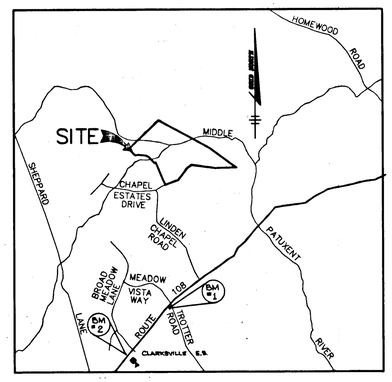
1. Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
2. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side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

NON-ROUTINE MAINTENANCE

1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components should be inspected during routine maintenance operations.
2. Sediment should be removed when its accumulation significantly reduces the design storage, interfere with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary by the Howard County's Department of Public Works.



PLAN
SCALE: 1" = 200'



VICINITY MAP
SCALE: 1" = 2000'

BENCHMARKS

BM#1
2737001
N 506189.520 E 820993.367

BM#2
2737002
N 504681.048 E 819776.534

SITE ANALYSIS

AREA OF SITE	53.23 AC
PRESENT ZONING	RC
PROPOSED USE	SINGLE-FAMILY HOMES
NUMBER OF ALLOWABLE LOTS	12
NUMBER OF LOTS PROVIDED	9 + 1 PRESERVATION PARCEL

AS BUILT CERTIFICATE

_____ DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 2-6-96

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA — DATE 2/15/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/6/96

DATE	NO.	REVISION

OWNER / DEVELOPER

ERIC MIKOLASKO
c/o JJM, INC.
5570 STERRETT PLACE
SUITE 205
COLUMBIA, MARYLAND 21044
410-740-4466

PROJECT
CHAPEL WOODS III
LOTS 28 – 36 & PARCEL A
A RESUBDIVISION OF LOTS 7 AND 8

AREA
TAX MAP NO. 29 PARCEL 86
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
TITLE SHEET

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, MD 21045
410-997-8900 FAX : 410-997-9282

1-17-96
DATE

STATE OF MARYLAND — JAYKANT D. PAREKH #19148

S-94-37 P-95-19 WP-94-39

DESIGNED BY : C.J.R.

DRAWN BY : DAM

PROJECT NO : HOCO\28810 RD1.DWG

DATE : JANUARY 17, 1996

SCALE : AS SHOWN

DRAWING NO. 1 OF 7

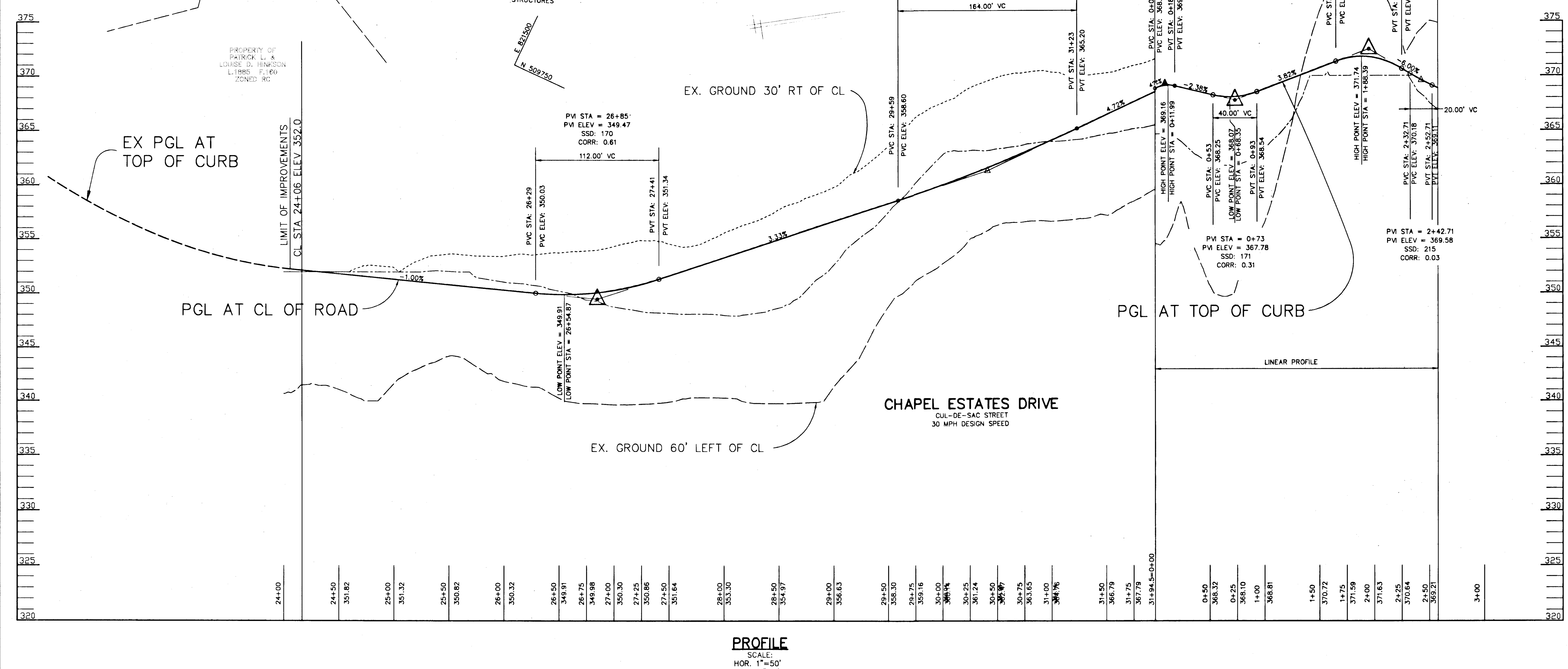
F-96-65


PLAN
SCALE: 1" = 50'
GRID NORTH
LOT 28
LOT 29
LOT 30
LOT 31
LOT 32
LOT 33
LOT 34
LOT 35
LOT 36
PARCEL A
CHAPEL ESTATES DRIVE
HOWARD COUNTY
CUL-DE-SAC STREET
PROPERTY OF CHAPEL WOODS II LOT 9 PLAT NO. 9326 ZONED RC
PROPERTY OF CHAPEL WOODS II LOT 5 PLAT NO. 9327 ZONED RC
PROPERTY OF CHAPEL WOODS II LOT 6 PLAT NO. 9328 ZONED RC
S 27°10'45" E
90.36'
CL CURVE DATA
FROM CL STA 24+16.56 TO CL STA 25+60.53
Δ = 41°14'44"
R = 200.00'
T = 75.27'
L = 143.97'
CHD = N 58°01'41" E, 140.89'
24' PRIVATE USE-IN-COMMON ACCESS EASEMENT FOR LOTS 28 & 29
EX. DRAINAGE AND UTILITY EASEMENT
RIP-RAP OUTLET PROTECTION SEE DETAIL, SHT. 5
LIMITS OF WETLANDS
25' WETLANDS BUFFER
EX. PIPES AND INLETS TO BE REMOVED
EX. BITUMINOUS CURB
NOSE DOWN CURB
EX. 36" BCCMP
LIMIT OF IMPROVEMENTS STA 24+06
EX. PAVEMENT AND CURB TO BE REMOVED
EX. FENCE TO BE REMOVED
EX. CONCRETE STRUCTURES
E-1
I-1
I-2
I-3
I-4
M-2
44
AS
20' DRAINAGE & UTILITY EASEMENT
78LF-24"RCCP, CL III
100LF-15"RCCP, CL III
70LF-15"RCCP, CL III
35 LF-15"RCCP CL III
155 LF-18"RCCP CL III
P-2 PAVING
PC = 24+16.56
PT = 25+60.53
PC = 27+94.76
PT = 29+14.30
PC = 30+14.30
PT = 32+14.75
S 78°39'03" W
S 37°24'19" W
215.20'
N 56°43'04" E
133.27'
S 82°23'11" E
680.07'
E 821500
N 510250
N 509750
E 822250
SEE CUL-DE-SAC DETAIL, SHEET 5
CL CURVE DATA
FROM CL STA 30+14.30 TO CL STA 32+14.75
Δ = 57°25'25"
R = 200.00'
T = 109.55'
L = 200.45'
CHD = N 62°41'33" E, 192.16'
CL CURVE DATA
FROM CL STA 27+94.76 TO CL STA 29+14.30
Δ = 3°25'28"
R = 2000.00'
T = 59.79'
L = 119.54'
CHD = N 35°41'35" E, 119.52'
CURVE TRANSITION – LEFT SIDE
FROM CL STA 24+15.17 TO CL STA 25+64.14
Δ = 41°52'40"
R = 192.00'
T = 73.47'
L = 137.23'
CHD = N 58°20'39" E, 137.23'
CURVE TRANSITION – RIGHT SIDE
FROM CL STA 24+16.74 TO CL STA 25+56.91
Δ = 41°14'44"
R = 206.36'
T = 77.66'
L = 148.55'
CHD = N 58°01'41" W, 145.36'
PC = 0+38.20
PT = 0+53.41
18' PAVING
S 88°35'45" E
24' USE IN COMMON EASEMENT FOR LOTS 32 THRU 36
PC = 1+33.50
PT = 2+03.66
P-1 PAVING
S 78°00'16" W
PC = 2+66.16
R=400.00'
L=257.99'
PT = 5+24.16
S 65°02'21" E
R=10'
20.00'
42.27'
PROPERTY OF PATRICK L. & LOUISE D. HINKSON L.1885 F.160 ZONED RC

PLANT LIST *

KEY	QTY.	NAME	SIZE	REMARKS
AS	44	ACER SACCHARUM "GREEN MOUNTAIN" GREEN MOUNTAIN SUGAR MAPLE	2 1/2" – 3" CAL.	B & B

* SEE SHEET 4 OF 7 FOR TREE PLANTING DETAIL.


EX PGL AT TOP OF CURB
LIMIT OF IMPROVEMENTS
CL STA 24+06 ELEV 352.0
PGL AT CL OF ROAD
EX. GROUND 30' RT OF CL
EX. GROUND 60' LEFT OF CL
PGL AT TOP OF CURB
LINEAR PROFILE
CHAPEL ESTATES DRIVE
CUL-DE-SAC STREET
30 MPH DESIGN SPEED
-1.00%
3.33%
4.72%
-2.38%
3.82%
-6.00%
PVI STA = 26+85
PVI ELEV = 349.47
SSD: 170
CORR: 0.61
112.00' VC
PVC STA: 26+29
PVC ELEV: 350.03
PVT STA: 27+41
PVT ELEV: 351.34
LOW POINT ELEV = 349.91
LOW POINT STA = 26+54.87
PVI STA = 30+41
PVI ELEV = 361.33
SSD: 190
CORR: 0.28
164.00' VC
PVC STA: 29+59
PVC ELEV: 358.60
PVT STA: 31+23
PVT ELEV: 365.20
PVI STA = 0+9.02
PVI ELEV = 369.30
SSD: 198
CORR: -0.16
18.04' VC
PVC STA: 0+00
PVC ELEV: 368.87
PVT STA: 0+18.04
PVT ELEV: 369.08
HIGH POINT ELEV = 369.16
HIGH POINT STA = 0+11.99
PVI STA = 0+73
PVI ELEV = 367.78
SSD: 171
CORR: 0.31
40.00' VC
PVC STA: 0+53
PVC ELEV: 368.25
LOW POINT ELEV = 368.07
LOW POINT STA = 0+68.35
PVT STA: 0+93
PVT ELEV: 368.54
PVI STA = 1+95.05
PVI ELEV = 372.44
SSD: 180
CORR: -0.74
60.00' VC
PVC STA: 1+65.05
PVC ELEV: 371.29
PVT STA: 2+25.05
PVT ELEV: 370.64
HIGH POINT ELEV = 371.74
HIGH POINT STA = 1+88.39
PVI STA = 2+42.71
PVI ELEV = 369.58
SSD: 215
CORR: 0.03
20.00' VC
PVC STA: 2+32.71
PVC ELEV: 370.18
PVT STA: 2+52.71
PVT ELEV: 369.11
375
370
365
360
355
350
345
340
335
330
325
320
24+00
24+50 351.82
25+00 351.32
25+50 350.82
26+00 350.32
26+50 349.91
26+75 349.98
27+00 350.30
27+25 350.86
27+50 351.64
28+00 353.30
28+50 354.97
29+00 356.63
29+50 358.30
29+75 359.16
30+00
30+25 361.24
30+50
30+75 363.65
31+00
31+50 366.79
31+75 367.79
31+94.5=0+00
0+50 368.32
0+25 368.10
1+00 368.81
1+50 370.72
1+75 371.59
2+00 371.63
2+25 370.64
2+50 369.21
3+00

PROFILE
SCALE:
HOR. 1"=50'
VERT. 1"=5'

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

[illegible] 2-6-96
CHIEF, BUREAU OF HIGHWAYS HS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[illegible] 2/15/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA DATE

[illegible] 2/8/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE	NO.	REVISION

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LOTS 28 – 36 & PARCEL A
A RESUBDIVISION OF LOTS 7 AND 8

AREA
TAX MAP NO. 29 PARCELS 86
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
PLAN AND PROFILE OF CHAPEL ESTATES DRIVE

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410-997-8900 FAX : 410-997-9282

1.17.'96
DATE

STATE OF MARYLAND JAYKANT D. PAREKH NO. 19148 REGISTERED PROFESSIONAL ENGINEER

J. Parekh
JAYKANT D. PAREKH #19148

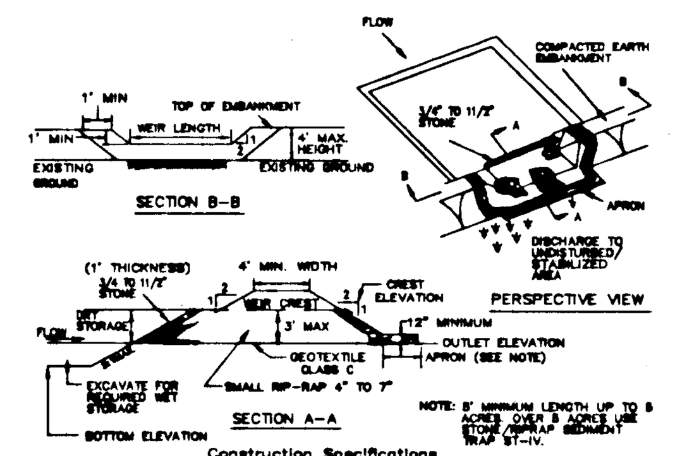
S-94-37 P-95-19 WP-94-39

DESIGNED BY : C.J.R.
DRAWN BY : DAM
PROJECT NO : HOCO\28810 RD2.DWG
DATE : JANUARY 17, 1996
SCALE : AS SHOWN
DRAWING NO. 2 OF 7

F-96-65

717

DETAIL-STONE OUTLET SEDIMENT TRAP



Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.

2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.

3. All cut and fill slopes shall be 2:1 or flatter.

4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of 3/4" to 11/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

6. The structure shall be inspected periodically and after each rain and repairs made as needed.

7. Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes shall be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.

8. The structure shall be dewatered by approved methods, removed and the area staboilized when the drainage area has been properly stabilized.

9. Refer to Section D for specifications concerning trap dewatering.

10. Minimum trap depth shall be measured from the weir elevation.

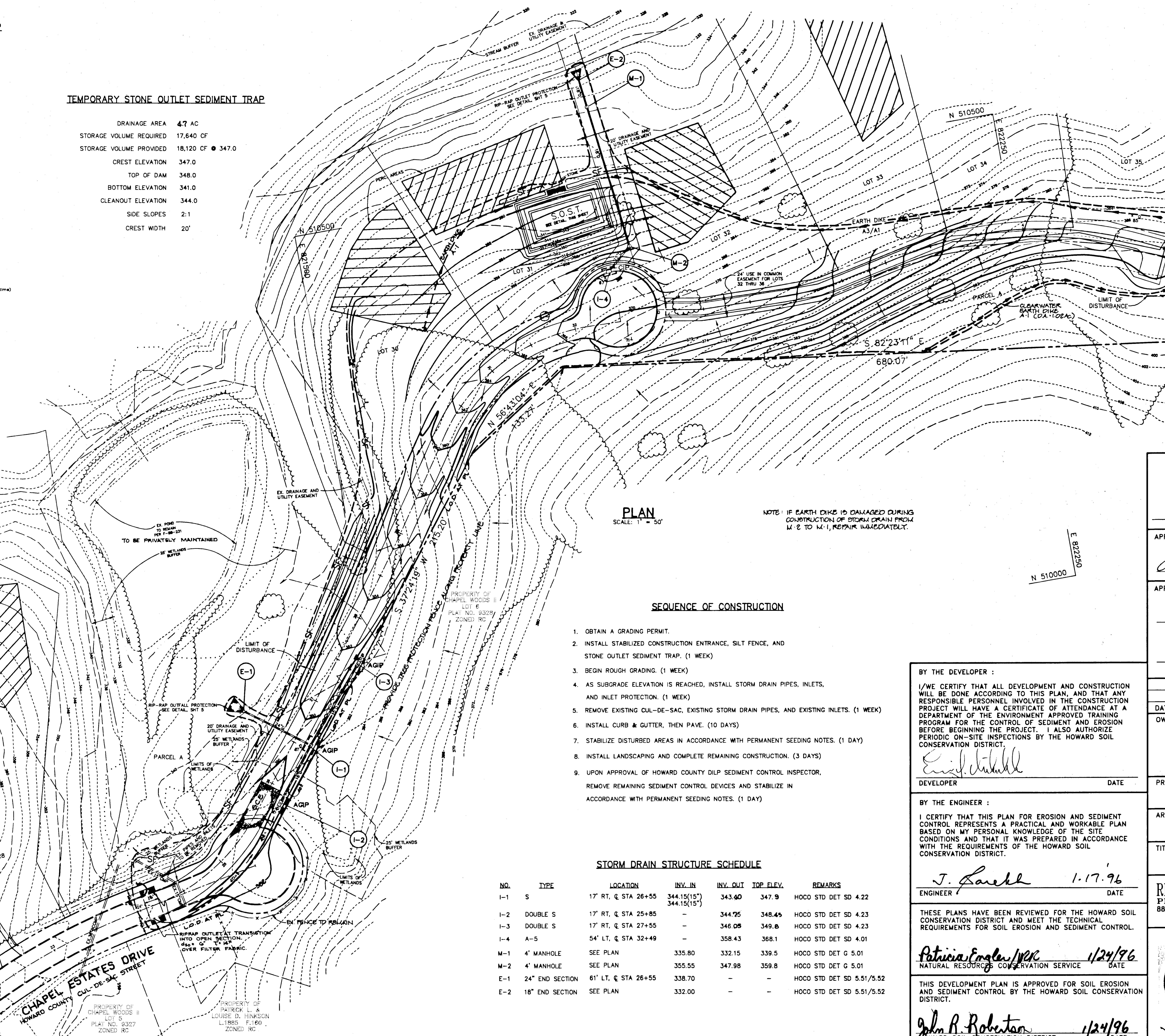
11. The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.

12. Geotextile class C shall be over the bottom sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The entrance of the outlet channel.
Filter cloth shall be enbedded at least 6" into existing ground at the

13. Outlet – An outlet shall be provided, including a means of conveying the discharge in an erosion free manor to an existing stable channel.

TEMPORARY STONE OUTLET SEDIMENT TRAP

DRAINAGE AREA	4.7 AC
STORAGE VOLUME REQUIRED	17,640 CF
STORAGE VOLUME PROVIDED	18,120 CF @ 347.0
CREST ELEVATION	347.0
TOP OF DAM	348.0
BOTTOM ELEVATION	341.0
CLEANOUT ELEVATION	344.0
SIDE SLOPES	2:1
CREST WIDTH	20'



NOTE: GRADING ON LOTS 28 & 29 IS SCHEMATIC ONLY.

PLAN
SCALE: 1" = 50'

NOTE: IF EARTH DIKE IS DAMAGED DURING CONSTRUCTION OF STORM DRAIN FROM M-2 TO M-1, REPAIR IMMEDIATELY.

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, AND STONE OUTLET SEDIMENT TRAP. (1 WEEK)
3. BEGIN ROUGH GRADING. (1 WEEK)
4. AS SUBGRADE ELEVATION IS REACHED, INSTALL STORM DRAIN PIPES, INLETS, AND INLET PROTECTION. (1 WEEK)
5. REMOVE EXISTING CUL-DE-SAC, EXISTING STORM DRAIN PIPES, AND EXISTING INLETS. (1 WEEK)
6. INSTALL CURB & GUTTER, THEN PAVE. (10 DAYS)
7. STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)
8. INSTALL LANDSCAPING AND COMPLETE REMAINING CONSTRUCTION. (3 DAYS)
9. UPON APPROVAL OF HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR, REMOVE REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)

STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INV. IN	INV. OUT	TOP ELEV.	REMARKS
I-1	S	17' RT, ℄ STA 26+55	344.15(15") 344.15(15")	343.40	347.9	HOCO STD DET SD 4.22
I-2	DOUBLE S	17' RT, ℄ STA 25+85	–	344.75	348.45	HOCO STD DET SD 4.23
I-3	DOUBLE S	17' RT, ℄ STA 27+55	–	346.05	349.8	HOCO STD DET SD 4.23
I-4	A-5	54' LT, ℄ STA 32+49	–	358.43	368.1	HOCO STD DET SD 4.01
M-1	4' MANHOLE	SEE PLAN	335.80	332.15	339.5	HOCO STD DET G 5.01
M-2	4' MANHOLE	SEE PLAN	355.55	347.98	359.8	HOCO STD DET G 5.01
E-1	24" END SECTION	61' LT, ℄ STA 26+55	338.70	–	–	HOCO STD DET SD 5.51/5.52
E-2	18" END SECTION	SEE PLAN	332.00	–	–	HOCO STD DET SD 5.51/5.52

BY THE DEVELOPER :

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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

[illegible]
DEVELOPER DATE

BY THE ENGINEER :

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.

J. Parekh 1.17.96
ENGINEER DATE

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

Patricia Engler/VRK 1/24/96
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Robertson 1/24/96
HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

[illegible] HS 2-6-96
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[illegible] 2/15/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA DATE

[illegible] 2/8/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE	NO.	REVISION

OWNER / DEVELOPER

ERIC MIKOLASKO
c/o JJM, INC.
5570 STERRETT PLACE
SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT
CHAPEL WOODS III
LOTS 28 – 36 & PARCEL A
A RESUBDIVISION OF LOTS 7 AND 8

AREA
TAX MAP NO. 29 PARCELS 86
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX : 410-997-9282

1.17.96
DATE

STATE OF MARYLAND
JAYKANT D. PAREKH
NO. 19148
REGISTERED
PROFESSIONAL ENGINEER

J. Parekh
JAYKANT D. PAREKH #19148

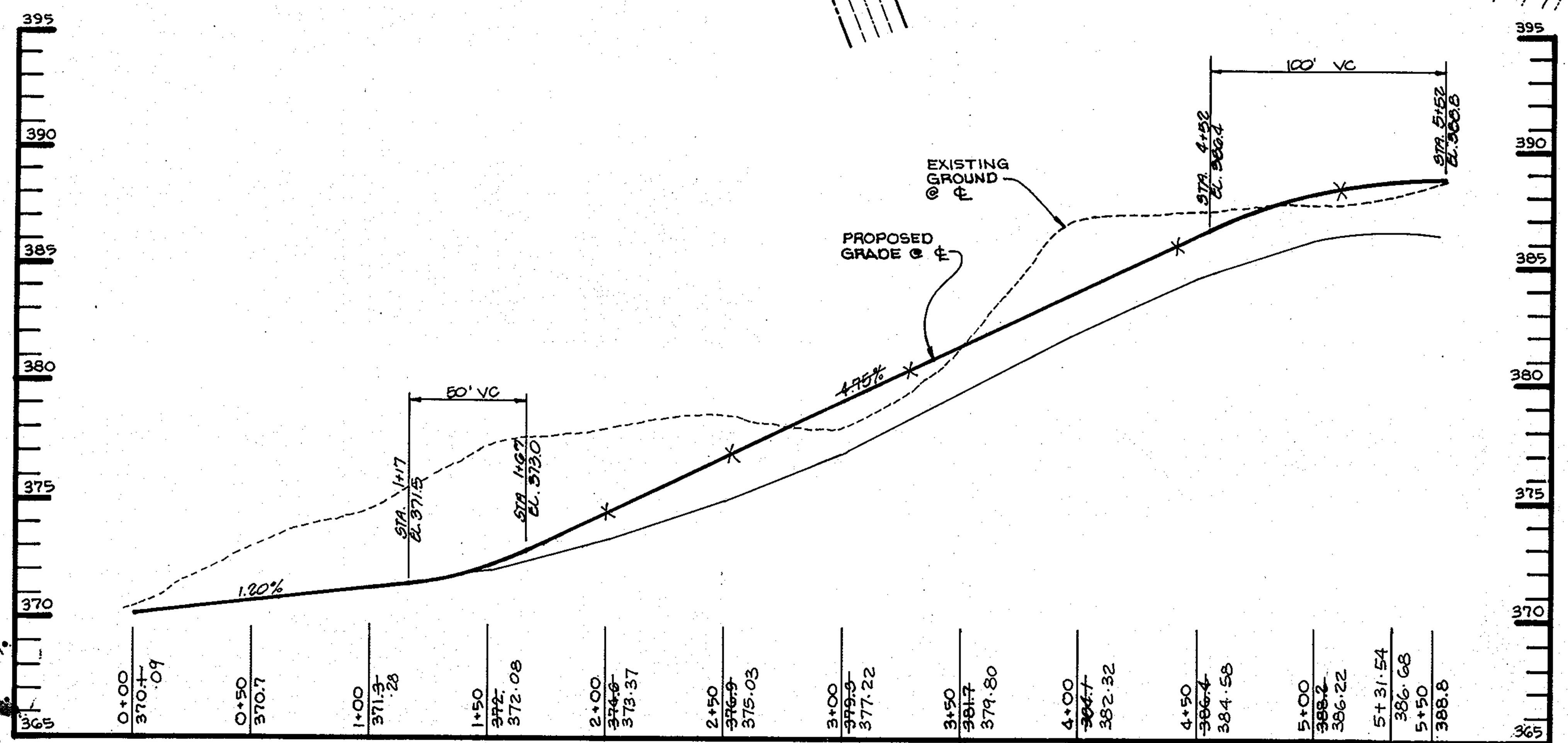
S-94-37 P-95-19 WP-94-39

DESIGNED BY : C.J.R.
DRAWN BY : DAM
PROJECT NO : HOCO\28810 RD3.DWG
DATE : JANUARY 17, 1996
SCALE : AS SHOWN
DRAWING NO. 3 OF 7

F-96-65

217

PLAN
SCALE: 1" = 100'



CHAPEL WOODS III - DRIVEWAY PROFILE

SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'

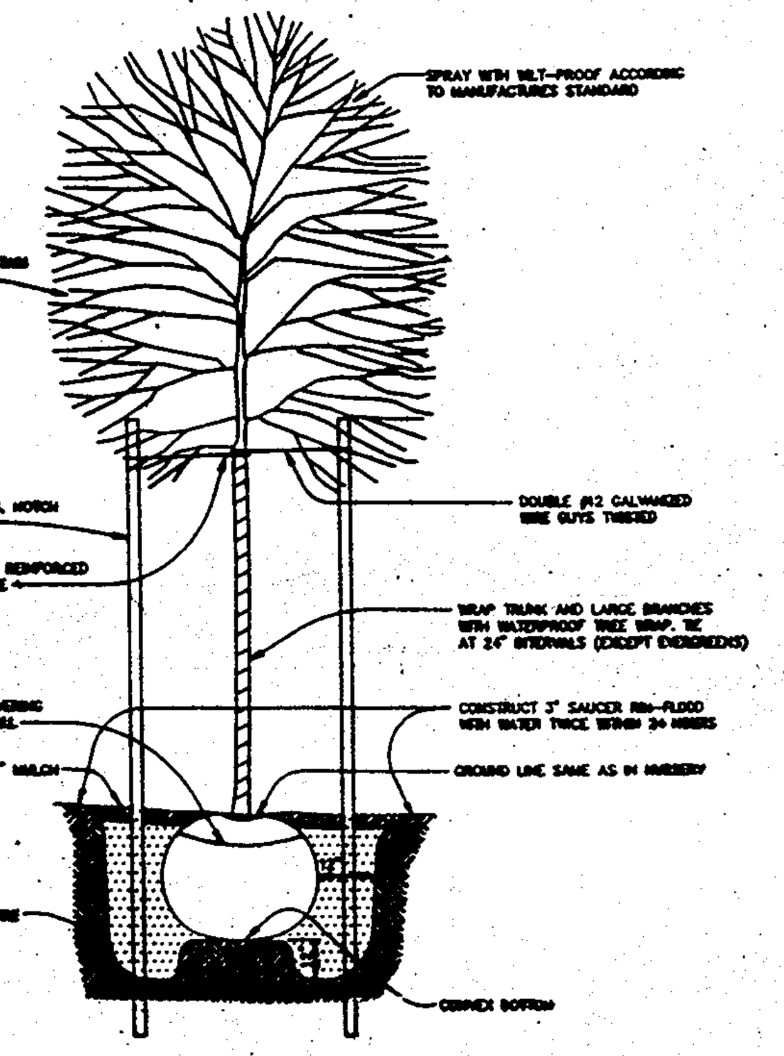
SCHEDULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES			
PERIMETER EDGE	1	2	3	4
LANDSCAPE TYPE	A	A	A	A
LINEAR FEET OF PERIMETER	580	920	1200	775
CREDIT FOR EXISTING VEGETATION YES NO LINEAR FEET DESCRIBE BELOW IF NEEDED	YES 580	YES 920	YES 1200	YES 775
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	9 *2	15 *2	20 *1	12 *2
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SHRUBS DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED				

*1. CREDIT FOR EXISTING WOODS TO REMAIN AND AREAS OF WETLAND MITIGATION (F-88-231 & WP-03-76, CHAPEL WOODS II & F-89-29, THE FOREST). SEPARATING LOTS 28-34 AND THE PRESERVATION PARCEL A.

*2. CREDIT FOR EXISTING WOODS TO REMAIN.

3. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY COUNTY CODE AND THE LANDSCAPE MANUAL.



TREE PLANTING DETAIL
NO SCALE

STATE OF MARYLAND PAUL M. SILL No. 32025 PROFESSIONAL ENGINEER
FOR REV. #1 ONLY

AS BUILT CERTIFICATE

STATE OF MARYLAND CHRISTOPHER J. REID No. 19949 REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER J. REID # 19949 — 10.18.00 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS HS — 2-6-96 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA — 2/15/96 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 2/8/96 DATE

DATE	NO.	REVISION
24 APR.12	1	REVISE DRAINAGE DIVIDES PER F-12-041

OWNER / DEVELOPER

ERIC MIKOLASKO
c/o JJM, INC.
5570 STERRETT PLACE
SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT
CHAPEL WOODS III
LOTS 28 – 36 & PARCEL A
A RESUBDIVISION OF LOTS 7 AND 8

AREA
TAX MAP NO. 29 PARCELS 86
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
DRAINAGE AREA MAP, DRIVEWAY PROFILE AND LANDSCAPE PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX : 410-997-9282

1.17.96
DATE

STATE OF MARYLAND JAYKANT D. PAREKH NO. 19148 REGISTERED PROFESSIONAL ENGINEER

JAYKANT D. PAREKH #19148

S-94-37 P-95-19

DESIGNED BY : C.J.R.

DRAWN BY : DAM

PROJECT NO : HOCO\28810 RD4.DWG

DATE : JANUARY 17, 1996

SCALE : AS SHOWN

DRAWING NO. 4 OF 7

AS-BUILT 10/17/00 F-96-65

717

TEMPORARY SEEDING NOTES

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

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

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

Seeding : For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per 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 per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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, discing or other acceptable means before seeding, if not previously loosened.

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

1) Preferred – Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).

2) Acceptable – Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding : For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options :

1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.

2) Use sod.

3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

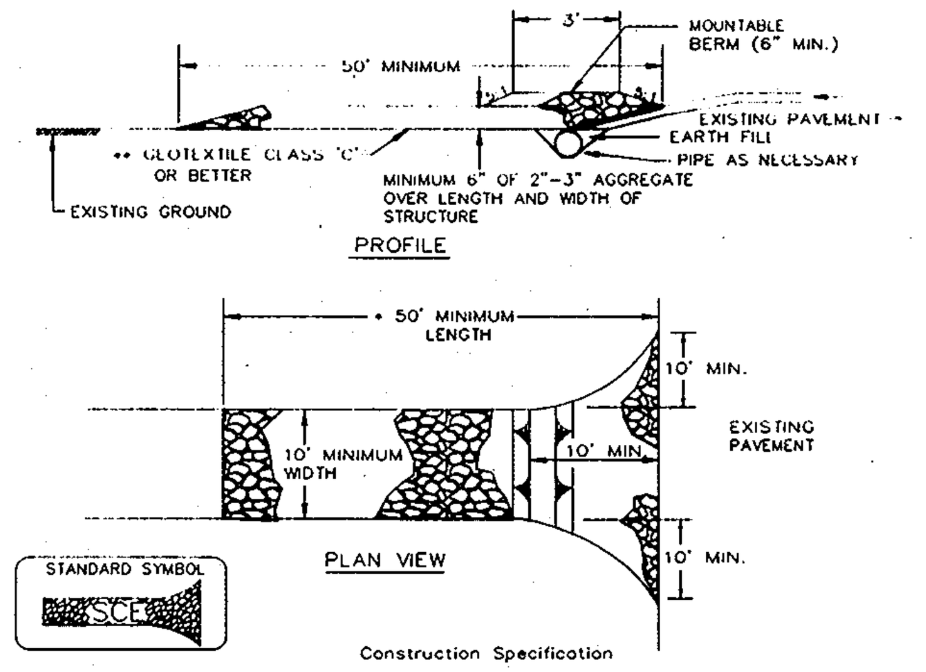
Maintenance : Inspect all seeded areas and make needed repairs, replacements and reseedings.

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (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 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL, AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A)7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL FOR PERMANENT SEEDINGS (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONG 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	59.25	ACRES
AREA DISTURBED	9.21	ACRES
AREA TO BE ROOFED OR PAVED	0.74	ACRES
AREA TO BE VEGETATIVELY STABILIZED	8.47	ACRES
TOTAL CUT	5800	CU.YDS.
TOTAL FILL	5800	CU.YDS.

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. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
11. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
12. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.
13. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., 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.
14. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.



Construction Specification

1. Length – minimum of 50' (*30' for single residence lot).

2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.

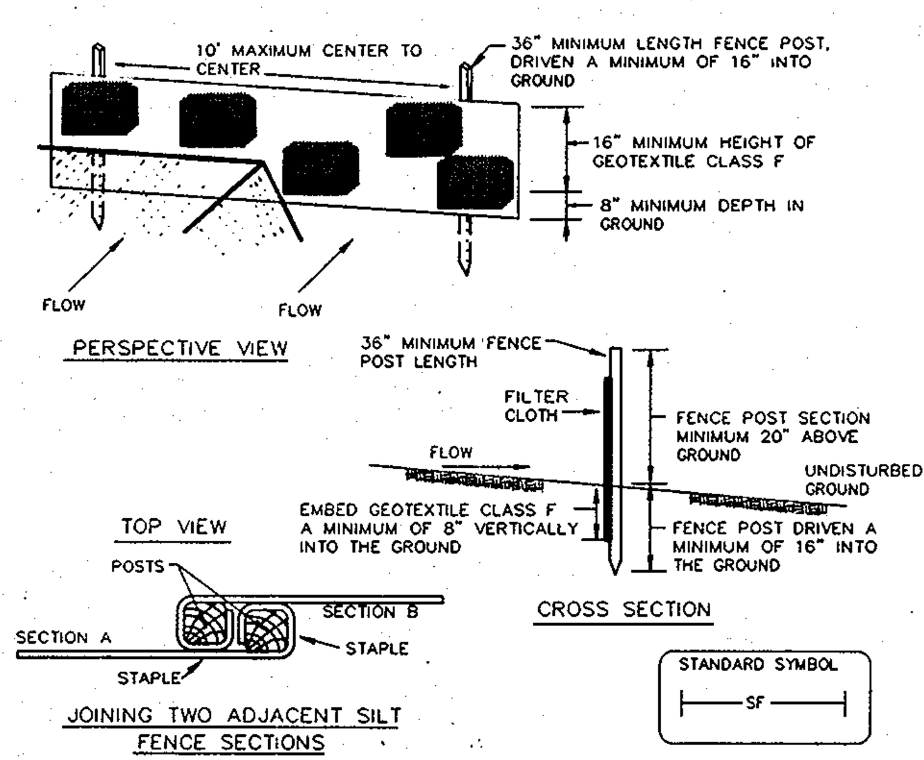
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe 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. Pipe has to 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. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. 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.

STABILIZED CONSTRUCTION ENTRANCE
NO SCALE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

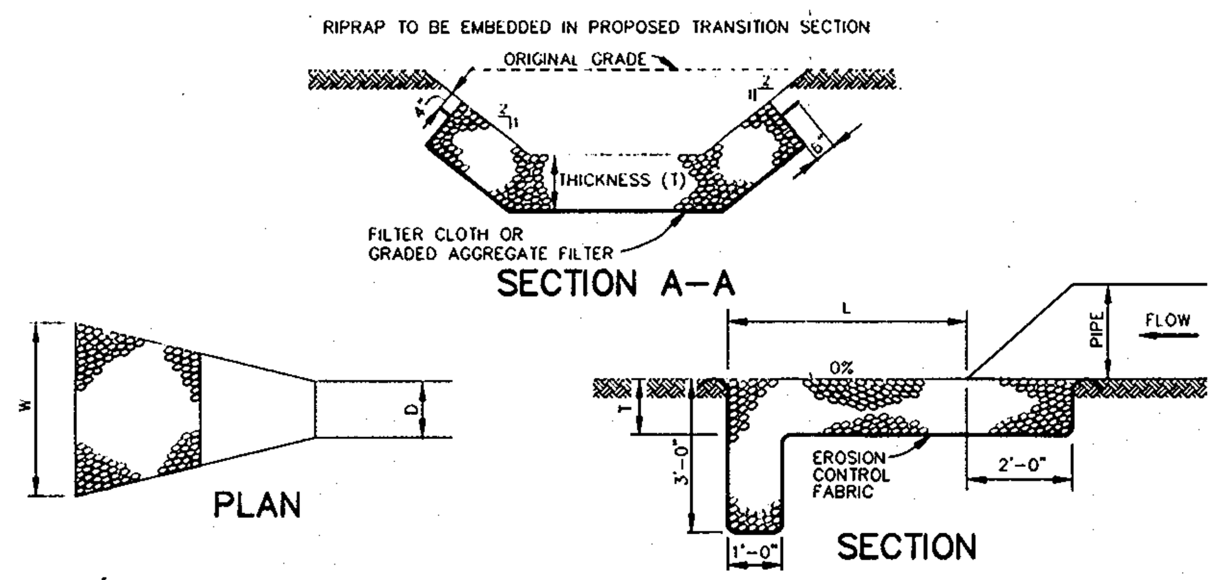
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ^{2}/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

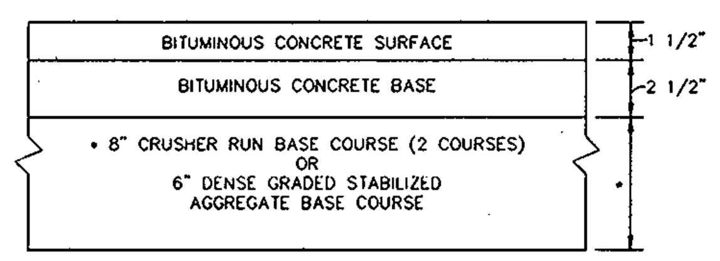
SILT FENCE DETAIL
NO SCALE



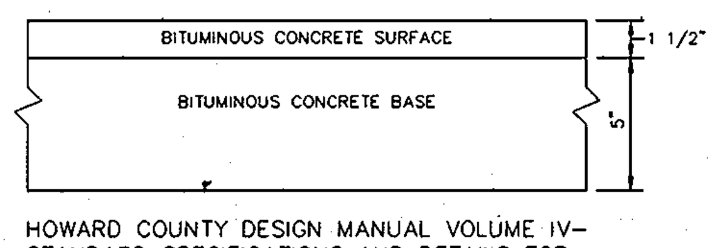
NOTE: Q_{10}, V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

STRUCTURE	MEDIAN STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)	Q_{10}	V	DEPTH
E-1	16"	15'	17'	32"	20.1 cfs	15.6 fps	1.9 ft
E-2	9.5"	10'	12'	19"	1.1 cfs	2.9 fps	0.4 ft

RIPRAP OUTLET PROTECTION DETAIL
NO SCALE

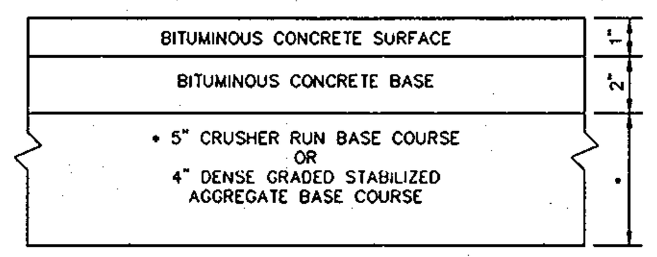


(ALTERNATE)



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

P-2 PAVING
NO SCALE



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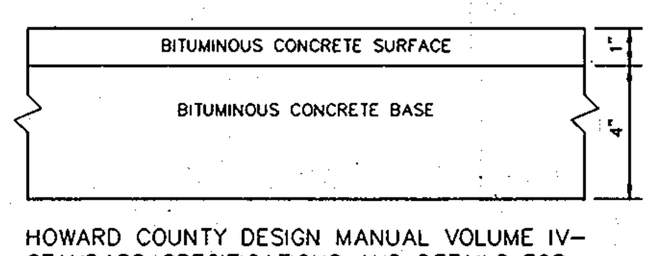
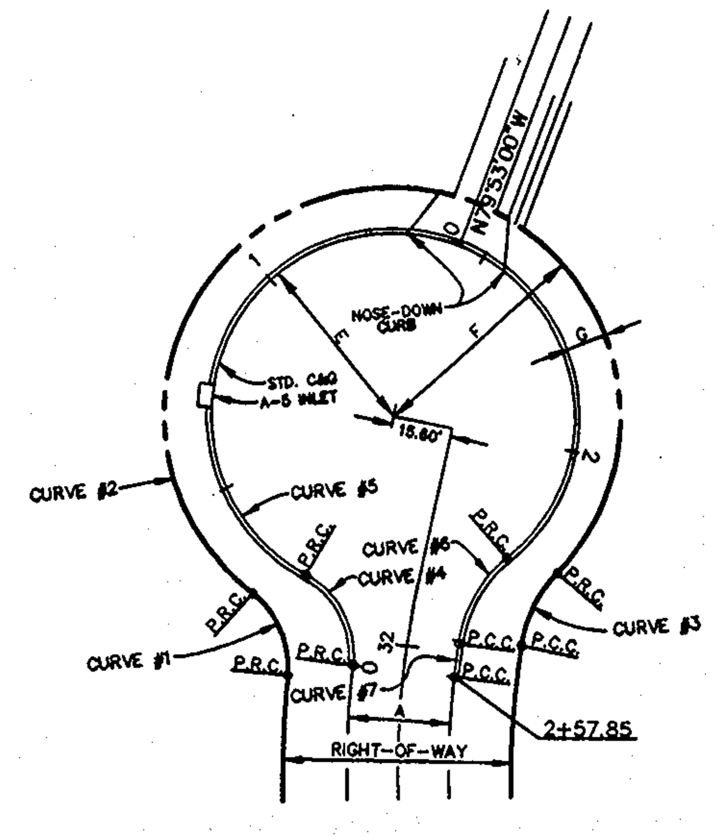


HOWARD COUNTY DESIGN MANUAL VOLUME IV– STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

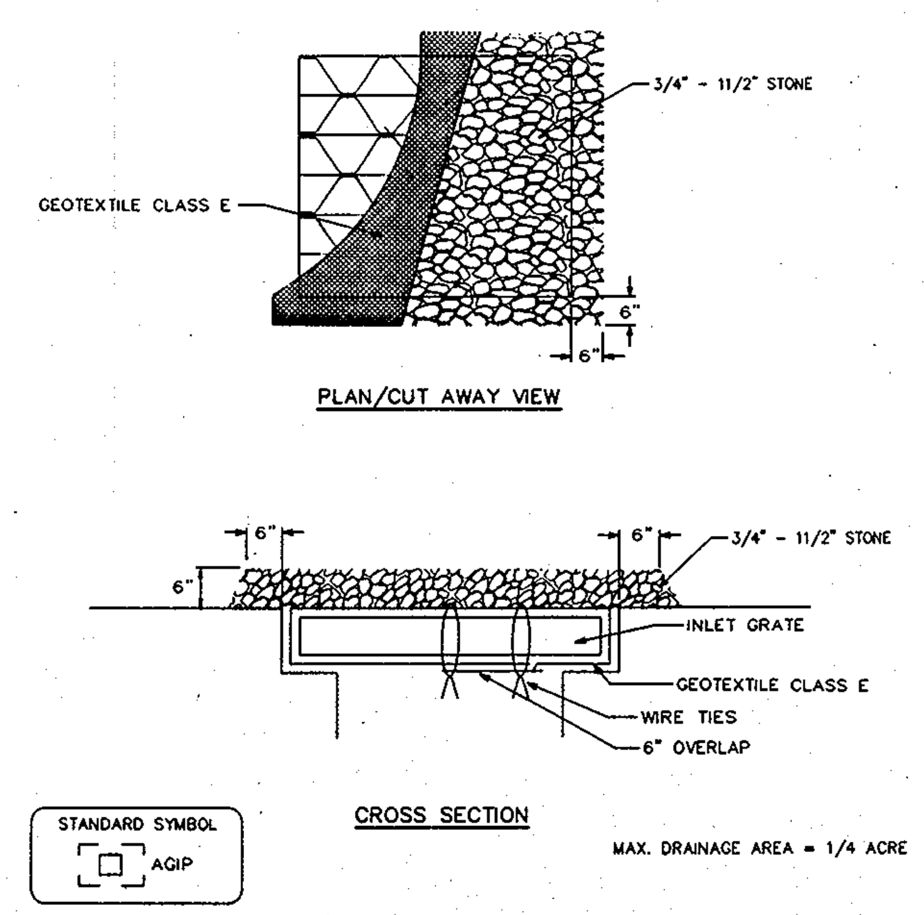
P-1 PAVING
NO SCALE



ZONING DISTRICTS	E	F	G	H	R/W	A
RESIDENTIAL	40'	50'	10'	--	50'	22'

CURVE DATA							
RESIDENTIAL (22' APPROACH) L.P.=257.85'							
	1	2	3	4	5	6	7
Δ	57°35'33"	275°52'28"	34°30'38"	67°55'22"	292°50'25"	42°41'31"	2°13'32"
R	20.00'	50.00'	30.00'	20.00'	40.00'	30.00'	189.00'
T	10.99'	45.12'	9.32'	13.47'	26.56'	11.72'	3.67'
L	20.10'	240.75'	18.07'	23.71'	204.44'	22.35'	7.34'
L.C.	19.27'	66.99'	17.80'	22.35'	44.25'	21.84'	7.34'

CHAPEL ESTATES DRIVE CUL-DE-SAC DETAIL
NO SCALE



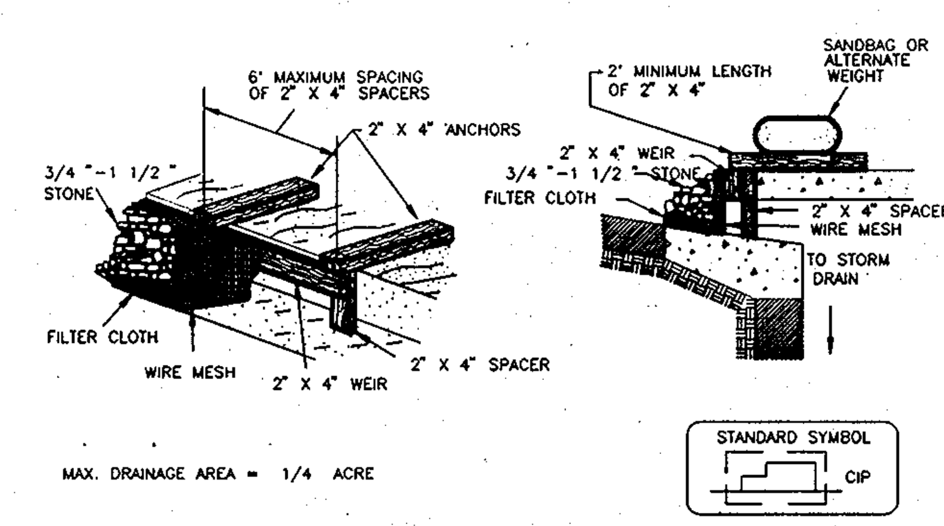
MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.

2. Place 3/4" to 11/2" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

AT-GRADE INLET PROTECTION
NO SCALE



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.

2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.

3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).

4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.

5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.

6. Form the 1/2" x 1/2" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4" x 1 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

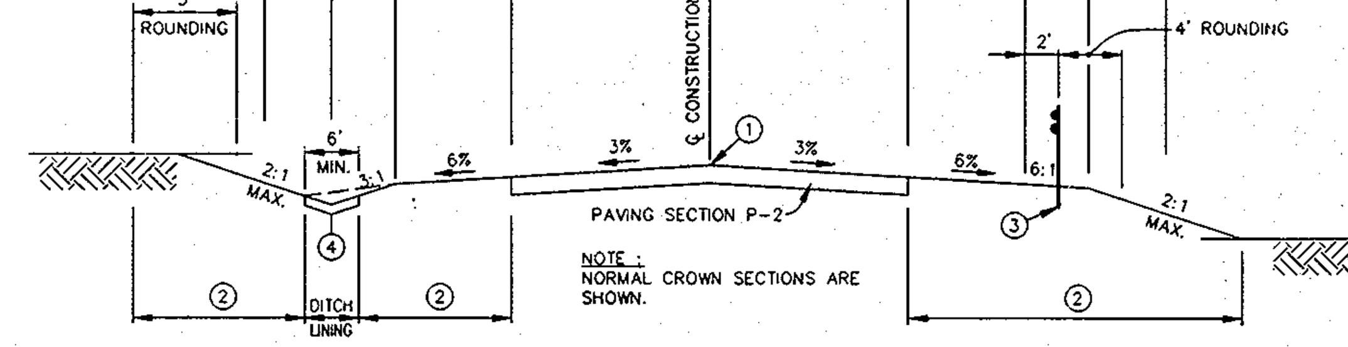
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.

8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

CURB INLET PROTECTION
NO SCALE

STATE OF MARYLAND PROFESSIONAL ENGINEER NO. 22025

FOR REVISION #1 ONLY



OPEN SECTION

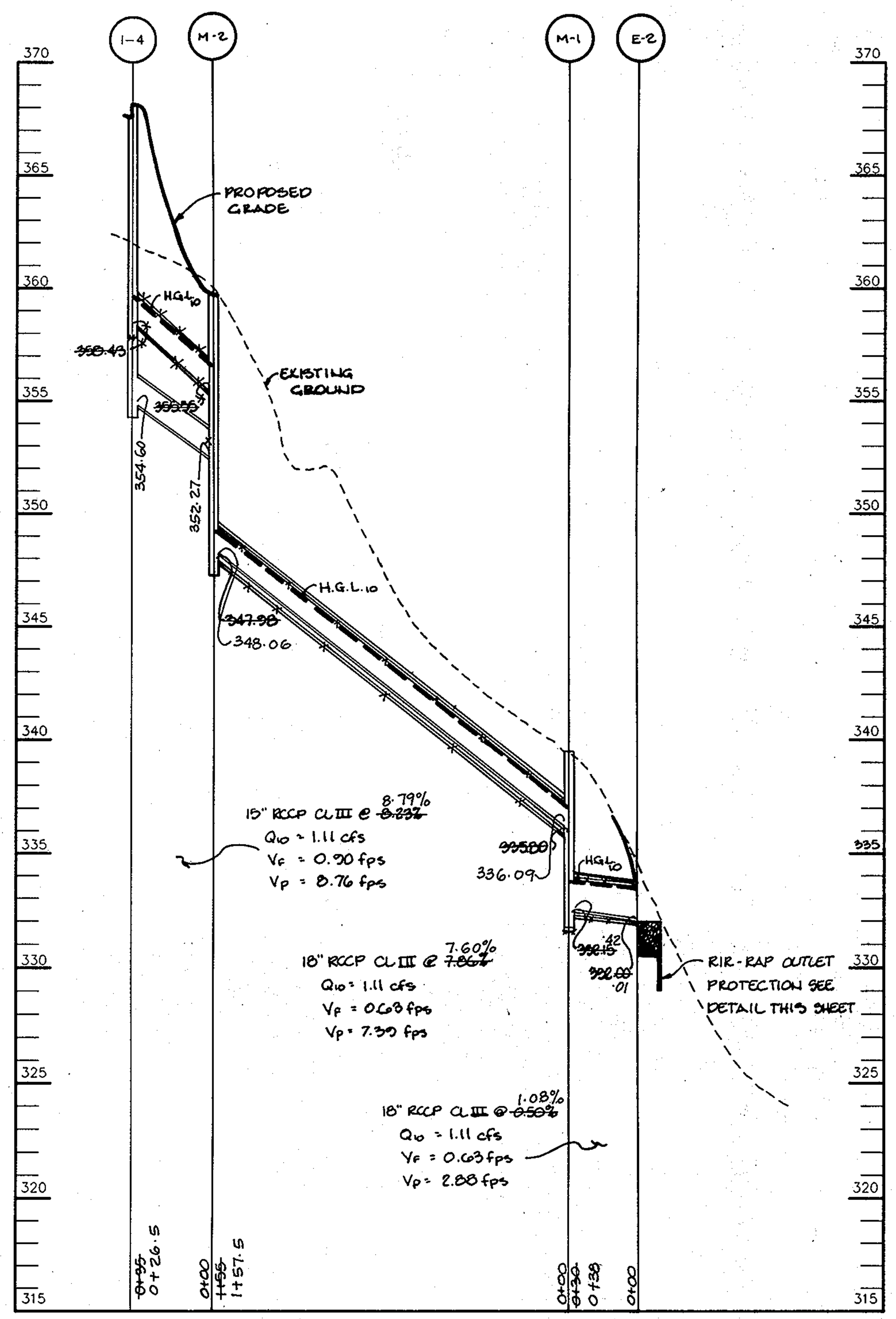
① PROFILE GRADE LINE (PGL), @ ℄

② INDICATES 2" TOPSOIL, SEED AND MULCH.

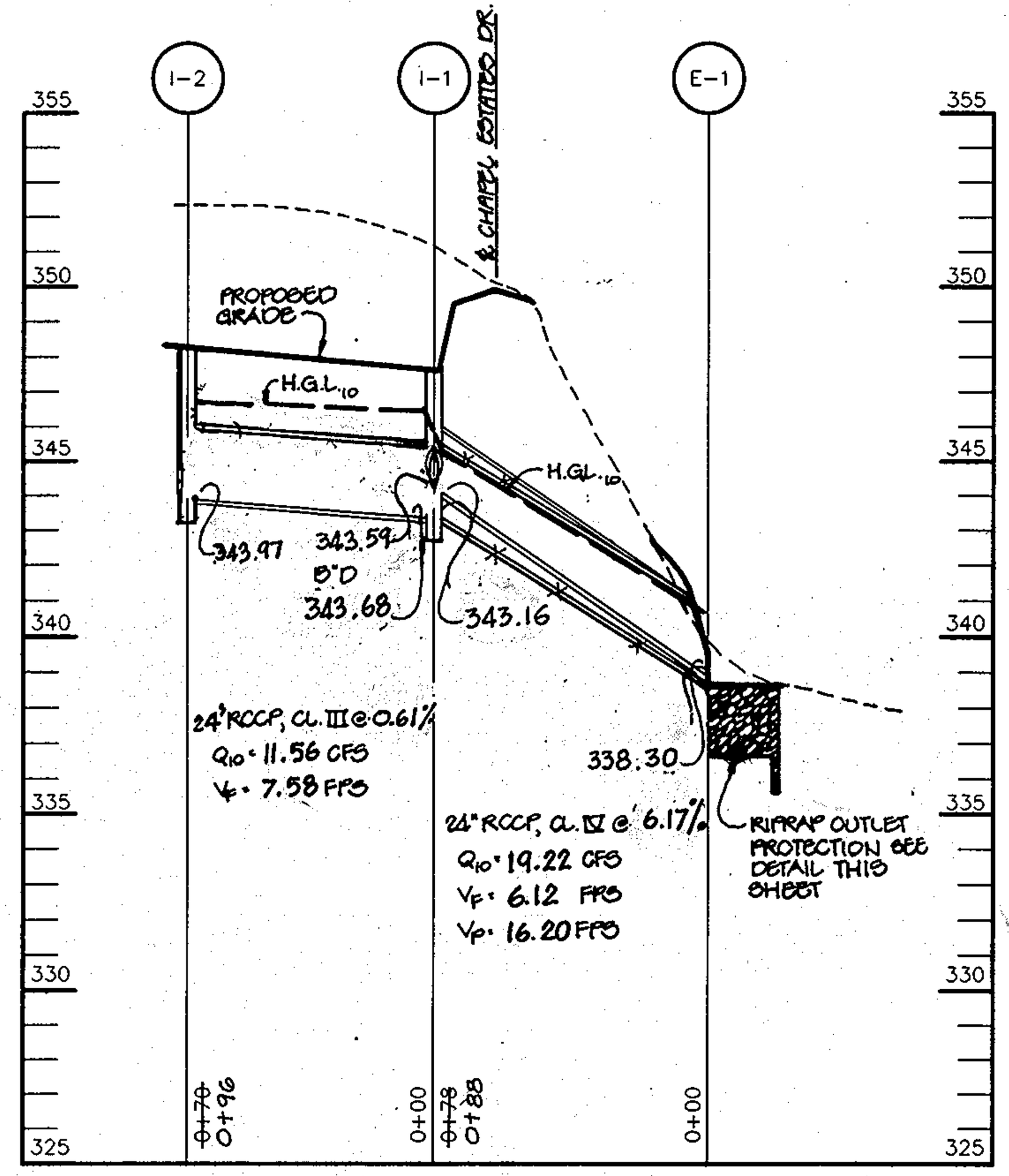
③ GUARDRAIL WHERE REQUIRED BY THE DESIGN MANUAL.(N/A)

④ DITCH CROSS SECTION SLOPE MAY BE FLATTENED TO PROVIDE A SWALE AT OR NEAR THE CREST OF VERTICAL CURVES WHERE QUANTITY OF SWALE FLOW IS SMALL, AS APPROVED BY DPW. (N/A)

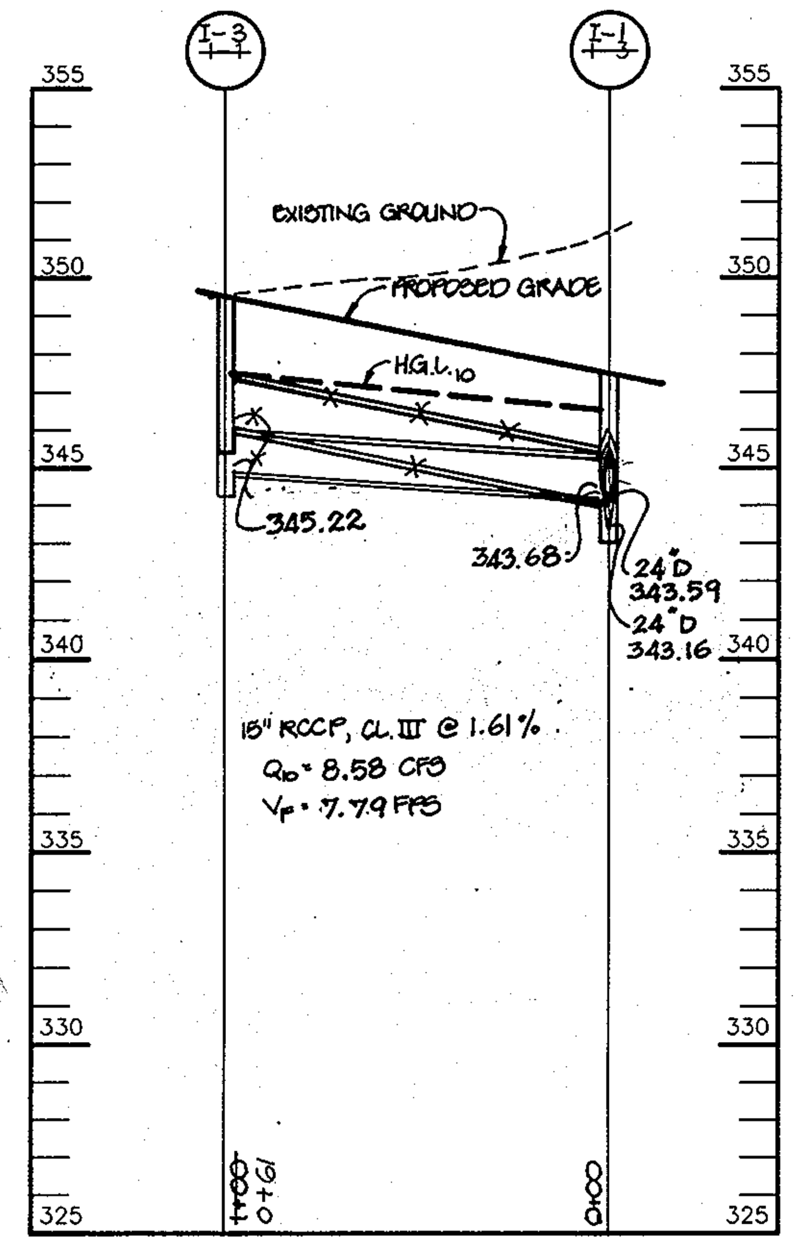
TYPICAL SECTION CUL-DE-SAC STREET
NO SCALE
FROM CL STA 24+06 TO CL STA 32+04



STORM DRAIN PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'



STORM DRAIN PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'



STORM DRAIN PROFILE
SCALE :
HOR.-1"=50'
VERT.-1"=5'

BY THE DEVELOPER :

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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

[illegible]
DEVELOPER DATE

BY THE ENGINEER :

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.

J. Parekh 1.17.96
ENGINEER DATE

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

Patricia Engler/JRR 1/24/96
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Robertson 1/24/96
HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE

STATE OF MARYLAND CHRISTOPHER J. REID REGISTERED NO. 19949 PROFESSIONAL ENGINEER

[illegible] 10.18.00
CHRISTOPHER J. REID # 19949 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

[illegible] 2-6-96
CHIEF, BUREAU OF HIGHWAYS HS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[illegible] 2/15/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA DATE

[illegible] 2/8/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE	NO.	REVISION
24 APR 12	1	REVISE SD TO SHOW AS-BUILT CONDITIONS

OWNER / DEVELOPER

ERIC MIKOLASKO
c/o JJM, INC.
5570 STERRETT PLACE
SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT
CHAPEL WOODS III
LOTS 28 – 36 & PARCEL A
A RESUBDIVISION OF LOTS 7 AND 8

AREA
TAX MAP NO. 29 PARCELS 86
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
STORM DRAIN PROFILES, NOTES AND DETAIL SHEET

RIEMER MUEGGE & ASSOCIATES, INC.
Planners • Engineers • Surveyors
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
410-997-8900 FAX : 410-997-9282

1.17.96
DATE

STATE OF MARYLAND JAYKANT D. PAREKH NO. 19148 REGISTERED PROFESSIONAL ENGINEER

J. Parekh
JAYKANT D. PAREKH #19148

S-94-37 P-95-19

DESIGNED BY : C.J.R.

DRAWN BY : DAM

PROJECT NO : HOCO\28810 RD5.DWG

DATE : JANUARY 17, 1996

SCALE : AS SHOWN

DRAWING NO. 5 OF 7

AS-BUILT 10/17/00 F-96-65

717

NOTE:
WETLANDS ON DEVELOPMENT SIDE OF STREAM HAVE BEEN FIELD IDENTIFIED. WETLANDS ON UNDEVELOPED SIDE OF STREAM ARE APPROXIMATE.

SUPPLEMENTAL INFORMATION:

CONSERVATION AREA "A"	± 1.00 ACRES
CONSERVATION AREA "B"	± 12.10 ACRES
TOTAL SHOWN	± 13.10 ACRES
TOTAL REQUIRED TO MEET BREAK EVEN POINT	± 13.10 ACRES

CONSERVATION AREA "B"
± 12.1 ACRES

PROPERTY OF
STATE OF MARYLAND
224/440
ZONED RC

PROPERTY OF
MALLAN REA, JR.
558/841
ZONED RC

100 YEAR FLOODPLAIN
APPROXIMATE LIMIT OF NONTIDAL WETLANDS
NONTIDAL WETLANDS DELINEATED BY R.M.A.
25' WETLAND BUFFER

PROPERTY OF
THE CHASE
LOT 48
PLAT NO. 7284
ZONED RC

PROPERTY OF
CHAPEL WOODS II
LOT 17
PLAT NO. 9325
ZONED RC

CONSERVATION AREA "A"
± 1.00 ACRES

PROPERTY OF
CHAPEL WOODS II
LOT 9
PLAT NO. 9326
ZONED RC

LOT 27
55,093 sq.ft.
1.265 acres

LOT 28
56,419 sq.ft.
1.295 acres

EX. SWMF.

PROPERTY OF
CHAPEL WOODS I
LOT 6
PLAT NO. 9328
ZONED RC

PROPERTY OF
CHAPEL WOODS II
LOT 5
PLAT NO. 9327
ZONED RC

PROPERTY OF
PATRICK L. &
LOUISE D. WILKISON
L. 1883 F. 160
ZONED RC

PROPERTY OF
TIMOTHY L. &
ELLEN O. SOSINSKI
L. 2340 F. 548
ZONED RC

CHAPEL ESTATES DRIVE

BRANCH

CLYDES

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 2/15/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/8/96

LEGEND

- SOILS (GIA)
- EXISTING TREE LINE
- SLOPES 15% TO 25%
- SLOPES 25% OR GREATER
- PROPOSED TREE LINE
- WETLAND AND 25' BUFFER
- STREAM AND 75' BUFFER
- 100 YEAR FLOODPLAIN LIMIT
- FC — FOREST CONSERVATION AREA
- LIMIT OF DISTURBANCE

DATE	NO.	REVISION

OWNER / DEVELOPER
ERIC MIKOLASKO
C\O JJM, INC.
5570 STERRETT PLACE
SUITE 205
COLUMBIA, MARYLAND 21046

PROJECT
CHAPEL WOODS III
LOTS 28-36
A RESUBDIVISION OF LOTS 7 AND 8

AREA TAX MAP NO. 35 PARCEL 189
ZONED R-12
5TH ELECTION DISTRICT HOWARD COUNTY, MD

TITLE
FOREST CONSERVATION PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive • Suite 200 • Columbia, MD 21045
410-997-8900 FAX : 410-997-9282

1-17-96
DATE

COMAR 08.19.06.01
DOUGLAS R. KOPECK

DESIGNED BY :	CK
DRAWN BY :	CK
PROJECT NO :	28818
DATE :	JANUARY 17, 1996
SCALE:	AS SHOWN
DRAWING NO.	6 OF 7

F-96-65

HOWARD COUNTY FOREST CONSERVATION WORKSHEET

		BREAK–EVEN PT.
I. BASIC SITE DATA		
GROSS SITE AREA	53.30 AC.	
AREA WITHIN 100 YEAR FLOODPLAIN	15.70 AC.	
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)	0.00 AC.	
NET TRACT AREA	37.60 AC.	
LAND USE CATEGORY (R–RLD, R–RMD, R–S, C/I/O, I)	RC	
II. INFORMATION FOR CALCULATIONS		
NET TRACT AREA	37.60 AC.	
REFORESTATION THRESHOLD (25% X A)	9.40 AC.	
AFFFORESTATION MINIMUM (20% X A)	7.50 AC.	
EXISTING FOREST ON NET TRACT AREA	27.90 AC.	
FOREST AREAS TO BE CLEARED	5.50 AC.	
FOREST AREAS TO BE RETAINED	22.24 AC.	

III. DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION

1. REFORESTATION

IF EXISTING FOREST AREAS EQUAL OR EXCEED THE AFFORESTATION MINIMUM (IF D EQUALS OR IS MORE THAN C), AND CLEARING OF FOREST AREAS IS PROPOSED, REFORESTATION REQUIREMENTS MAY APPLY.

GO TO SECTION IV

IF EXISTING FORESTS EXCEED THE AFFORESTATION MINIMUM (IF D EQUALS OR IS MORE THAN C) AND NO CLEARING OF EXISTING FOREST RESOURCES IS PROPOSED, NO REFORESTATION IS REQUIRED. NO FURTHER CALCULATIONS ARE NEEDED.

2. AFFORESTATION

IF EXISTING FOREST AREAS ARE LESS THAN THE AFFORESTATION MINIMUM (IF D IS LESS THAN C), AFFORESTATION REQUIREMENTS APPLY.

GO TO SECTION V

IV. REFORESTATION CALCULATIONS

A. NET TRACT AREA	37.60 AC.	37.60 AC.
B. REFORESTATION THRESHOLD (25% X A)	9.40 AC.	9.40 AC.
D. EXISTING FOREST ON NET TRACT AREA	27.90 AC.	27.90 AC.
E. FOREST AREAS TO BE CLEARED	5.50 AC.	14.80 AC.
F. FOREST AREAS TO BE RETAINED	22.10 AC.	13.10 AC.
G. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD (D–F, IF F EQUALS OR IS GREATER THAN B, ALTERNATE 1) (D–B, IF F IS LESS THAN B, ALTERNATE 2)	5.50 AC.	14.80 AC.
H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (B–F, IF APPLICABLE)	0.0 AC.	0.0 AC.
I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD (F–B, RETENTION CREDIT, IF APPLICABLE)	13 AC.	3.7 AC.

SELECT THE ALTERNATIVE THAT APPLIES:

1. CLEARING ABOVE THE THRESHOLD ONLY

IF FOREST AREAS TO BE RETAINED EQUAL OR ARE GREATER THAN THE REFORESTATION THRESHOLD (IF F EQUALS OR IS GREATER THAN B), THE FOLLOWING CALCULATIONS APPLY:

REFORESTATION FOR CLEARING ABOVE THRESHOLD G X 1/4	1.40 AC.	3.70 AC.
CREDIT FOR FOREST AREAS RETAINED ABOVE THRESHOLD I = RETENTION CREDIT	13.0 AC.	3.70 AC.
TOTAL REFORESTATION REQUIRED (G X 1/4) – I	–11.6 AC.	0.00 AC.

IF THE TOTAL REFORESTATION REQUIREMENT IS EQUAL TO OR LESS THAN 0, NO REFORESTATION IS REQUIRED

2. CLEARING BELOW THE THRESHOLD

IF FOREST AREAS TO BE RETAINED ARE LES THAN THE REFORESTATION THRESHOLD (IF F IS LESS THAN B), THE FOLLOWING CALCULATIONS APPLY:

REFORESTATION FOR CLEARING ABOVE THRESHOLD G X 1/4	0.0 AC.	0.0 AC.
REFORESTATION FOR CLEARING BELOW THRESHOLD H X 2	0.0 AC.	0.0 AC.
TOTAL REFORESTATION REQUIRED (G X 1/4) + (H X 2)	0.0 AC.	0.0 AC.

*NOTE: THE BREAK–EVEN POINT (13.1 ACRES) IS SHOWN IN FOREST CONSERVATION EASEMENTS.

FOREST CONSERVATION PROGRAM

GENERAL NOTES:

1. *INSTALL PROTECTIVE TREE FENCING AND SIGNAGE ALONG FOREST RETENTION AREAS BEFORE ANY GRADING HAS COMMENCED ON SITE.*
2. *THERE WILL BE NO STAGING, STORING OR STOCKPILING OF EQUIPMENT WITHIN THE LIMIT OF THE THE LIMIT OF THE NONTIDAL WETLANDS OR THE 25' BUFFER.*
3. *INSTALL TREE PROTECTION SIGNAGE AND IMPLEMENT TREE PROTECTION METHODS AS SHOWN.*

POST CONSTRUCTION MANAGEMENT PRACTICE:

OBJECTIVE:

IT IS THE OBJECTIVE OF THE FOREST CONSERVATION PLAN FOR THE CHAPEL WOODS III PROPERTY TO RETAIN ENVIRONMENTAL INTEGRITY BY PRESERVING A PORTION OF THE EXISTING FOREST ON SITE.

MANAGEMENT PRACTICE SCHEDULE:

IT IS THE INTENT OF THE FOREST CONSERVATION PROGRAM FOR THE CHAPEL WOODS III PROPERTY TO PROTECT AREAS STATED IN THE OBJECTIVE.

THE FOLLOWING MANAGEMENT PRACTICES ARE RECOMMENDED:

1) *TRAIL SYSTEMS THROUGH FORESTED AREAS ARE ACCEPTABLE IN THE FOREST CONSERVATION EASEMENT. HOWEVER, IF A TRAIL SYSTEM IS IMPLEMENTED, IT SHOULD DISTURB AS LITTLE VEGETATION AS POSSIBLE. A TRAIL SYSTEM THROUGH A REFORESTATION AREA IS NOT ACCEPTABLE UNTIL THE FOREST BECOMES ESTABLISHED AS DETERMINED BY A REGISTERED FORESTER, LANDSCAPE ARCHITECT, OR OTHER STATE QUALIFIED PROFESSIONAL.*
2) *TREE CUTTING IS ALLOWED FOR SAFETY AND ROUTINE MAINTENANCE OF EXISTING FORESTED AREAS.*
3) *SENSITIVE AREAS SUCH AS STEEP SLOPES, WETLANDS, STREAMS AND THEIR ASSOCIATED BUFFERS AND WILDLIFE CORRIDORS ARE CONSIDERED INACCESSIBLE FOR SELECTIVE TIMBER HARVESTING AND SHOULD BE LEFT TO CONTINUE UNDER NATURAL FOREST SUCCESSION.*
4) *THE FOREST CONSERVATION AREAS SHOULD BE REASSESSED BY A REGISTERED FORESTER, LANDSCAPE ARCHITECT OR OTHER STATE QUALIFIED PROFESSIONAL TO DETERMINE ITS CONDITION AND MAKE RECOMMENDATIONS FOR CONTINUAL STRUCTURAL FOREST GROWTH.*

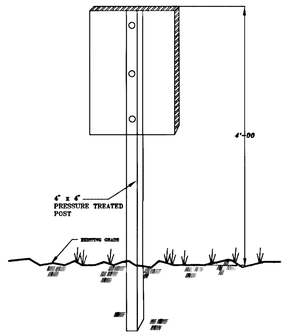
A TWO (2) YEAR POST–CONSTRUCTION AND MANAGEMENT PROGRAM TO ENSURE PROBABILITY OF A HIGH SURVIVAL RATE INCLUDES THE FOLLOWING:

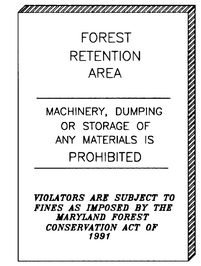
- *MAINTENANCE OF SIGNS, FENCES AND TREE PROTECTION DEVICES TO PREVENT UNWARRANTED INTRUSIONS AND DAMAGE.*
- *CAREFUL REMOVAL OF ALL TEMPORARY STRUCTURES AFTER CONSTRUCTION.*
- *ROUTINE INSPECTIONS OF FOREST CONSERVATION EASEMENTS.*
- *PROVIDE SUITABLE THINNING, WATERING AND FERTILIZING TO ENSURE PROPER GROWTH AND SURVIVAL.*
- *CERTIFICATION THAT THE REQUIRED SURVIVAL RATES HAVE BEEN MET.*

TREE PROTECTION

FOREST RETENTION & REFORESTATION SIGN DETAIL

N.T.S.



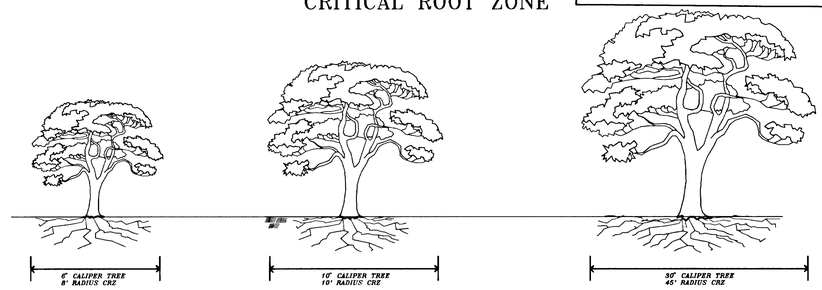


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 2/15/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/8/96

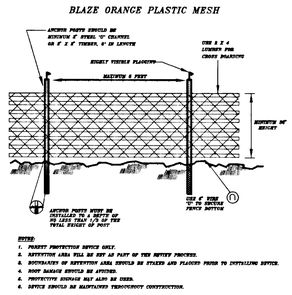
CRITICAL ROOT ZONE



* CRZ = CRITICAL ROOT ZONE

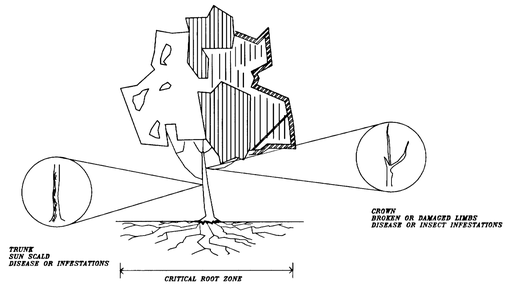
PROTECTIVE TREE FENCING

N.T.S.



NOTES:
1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE KEPT AS PART OF THE NATURE PRESERVE.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

CONSTRUCTION ACTIVITIES: POTENTIAL IMPACT TO TREES



DATE	NO.	REVISION

OWNER — DEVELOPER

ERIC MILOLASKO
C\O JJM, INC.
5570 STERRETT PLACE
COLUMBIA, MARYLAND 21046

PROJECT: CHAPEL WOODS III
LOTS 28–26
A RESUBDIVISION OF LOTS 7 AND 8

AREA: TAX MAP NO. 29 PARCEL 86
ZONED R–12
5TH ELECTION DISTRICT HOWARD COUNTY, MD

TITLE: FOREST CONSERVATION DETAILS

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive • Suite 200 • Columbia, MD 21045
410–997–8900 FAX : 410–997–9282

1-17-96 DATE

COMAR 08.19.06.01
DOUGLAS R. KOPECK

DESIGNED BY :	CK
DRAWN BY :	CK
PROJECT NO :	28018
DATE :	JANUARY 17, 1996
SCALE:	AS SHOWN
DRAWING NO.	7 OF 7

F-96-65

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