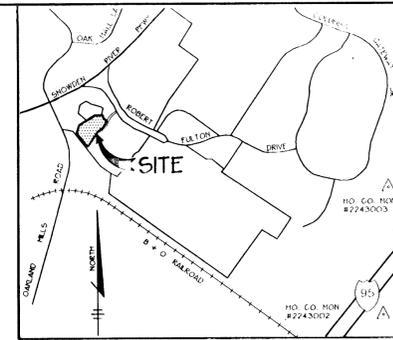


ROADWAYS AND STORM DRAINS SNOWDEN RIDGE SECTION 1 AREA 1 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE OF NATURE'S ROAD
3	PLAN AND PROFILE OF CONSTANT COURSE AND STRUCTURE SCHEDULE
4	GRADING AND SEDIMENT CONTROL PLAN AND DRAINAGE AREA MAP
5	DETAIL SHEET
6	PROFILE SHEET



VICINITY MAP
SCALE: 1" = 2000'

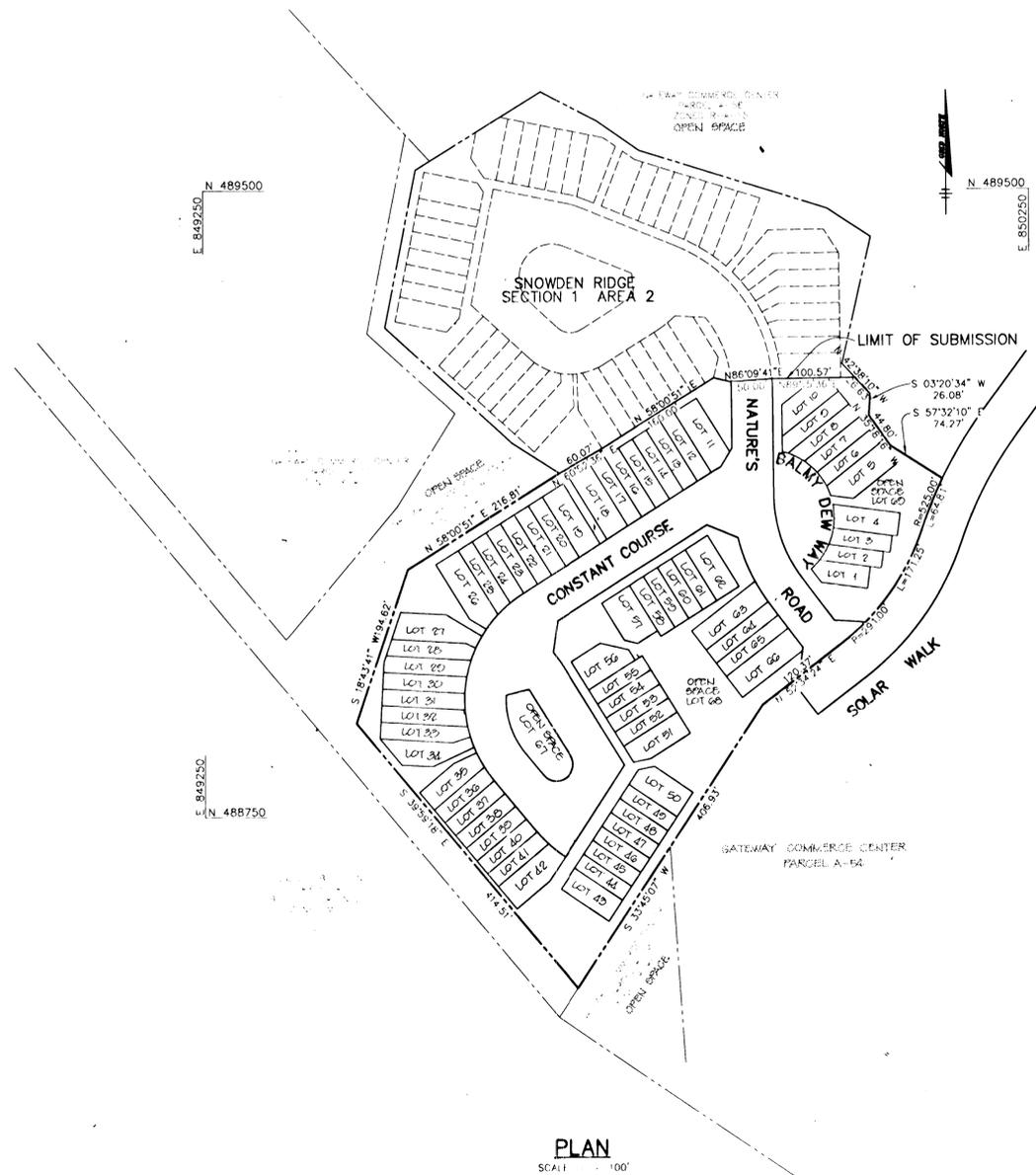
BENCHMARKS
 BM#1 X-CUT IN CONCRETE BASE OF TRAFFIC CONTROL ELEV. 368.16
 BM#2 NAIL IN BG&F POLE ELEV. 387.97

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS USMA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- APPROPRIATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.

DELAWARE TELEPHONE COMPANY	393-3649
LONG DISTANCE CABLE DIVISION	393-3543 OR 3554
BALTIMORE GAS AND ELECTRIC CO.	539-8000
HOWARD COUNTY BUREAU OF UTILITIES	313-4900
COLORED PIPELINE	795-1390
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL STREET CURB RETURNS SHALL HAVE 25' RADIUS UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:

ALL 50' RIGHT OF WAYS	25 AND 30 M.P.H.
-----------------------	------------------
- ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
- ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T80.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- SUBJECT PROPERTY ZONED R-A-15 PER 10-18-83 COMPREHENSIVE ZONING PLAN.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME I OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE NOS. SP-95-01, SP-95-09, SP-95-88, F-95-138.
- LIGHT POLES, ARMS AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME II AND GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS, JUNE 1993.
- STORMWATER QUANTITY AND QUALITY FOR THIS DEVELOPMENT IS PROVIDED UNDER F-92-1001.
- LANDSCAPING WILL BE PROVIDED IN ACCORDANCE WITH THE NEW TOWN ALTERNATIVE COMPLIANCE AND WILL BE CONSTRUCTED AND BONDED WITH THE SITE DEVELOPMENT PLANS.
- TOPOGRAPHY SHOWN HEREON IS FROM MASS GRADING PLANS SDP-95-88 BY GUTSCHICK LITTLE & MERER.
- PUBLIC WATER AND SEWER SYSTEMS AS PER CONTRACT NO. 34-3458-D ARE TO BE UTILIZED FOR THIS SITE. SEWER SERVICE DRAINAGE AREA: MOBILE PATUXENT.
- THERE IS NO 100 YEAR FLOODPLAIN ON-SITE.
- THIS DEVELOPMENT DOES NOT HAVE ANY NON-TIDAL WETLANDS ON SITE.
- ALL STREET LIGHTS SHALL BE LOCATED BETWEEN 2'-0" AND 4'-0" BEHIND FACE OF CURB.
- THE COORDINATES SHOWN HEREON ARE BASE ON NAD 27, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY MONUMENT NO. 2337001, 2337002 AND 2437003.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- A WAIVER HAS BEEN APPROVED DATED JULY 31, 1995 TO REDUCE MINIMUM ROAD RADI AND CUL-DE-SAC DESIGN STANDARDS ESTABLISHED IN TABLE 2.01.
- HOME OWNERS ASSOCIATION WILL BE RESPONSIBLE FOR MAINTENANCE OF OFF-STREET PARKING SPACES AND BALM DEN WAY.
- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.



PLAN
SCALE: 1" = 100'

AS BUILT CERTIFICATE	
DATE	
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
<i>Andrew M. Douke</i> (Signature) CHIEF, BUREAU OF HIGHWAYS	12-22-95 (DATE)
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Jino Swinmy</i> (Signature) CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	1/31/96 (DATE)
<i>Carl Dammann</i> (Signature) CHIEF, DEVELOPMENT ENGINEERING DIVISION	12/29/95 (DATE)
DATE	NO. REVISION
OWNER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044	
DEVELOPER <i>Westbrook</i> (Logo) WESTBROOK DEVELOPMENT, INC. Court Towers - Suite 300 210 West Pennsylvania Avenue Towson, Maryland 21204 (410) 823-4700 • Fax (410) 823-5009 Attn: Brian Flick	
PROJECT SNOWDEN RIDGE SECTION 1 AREA 1 LOTS 1 - 69	
AREA: GATEWAY COMMERCE CENTER - PARCEL 'A'-53 TAX MAP NO. 42 ZONED R-A-15 6th 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: 410-997-9202	
11/20/95 (DATE)	CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
<i>J. Farrell</i> (Signature) JAYKANT D. PAREKH #19148	DESIGNED BY: C.J.R. DRAWN BY: DAM PROJECT NO: HOCO\95H10600 PH1RD1.DWG DATE: NOVEMBER 20, 1995 SCALE: AS SHOWN DRAWING NO. 1 OF 6

1776

LANDSCAPING

REQ'D: 1580 L.F. OF ST. FRONTAGE - 30.5 MAJOR ST. @ 1/40 L.F.
OR 53 MINOR ST. @ 1/30 L.F.

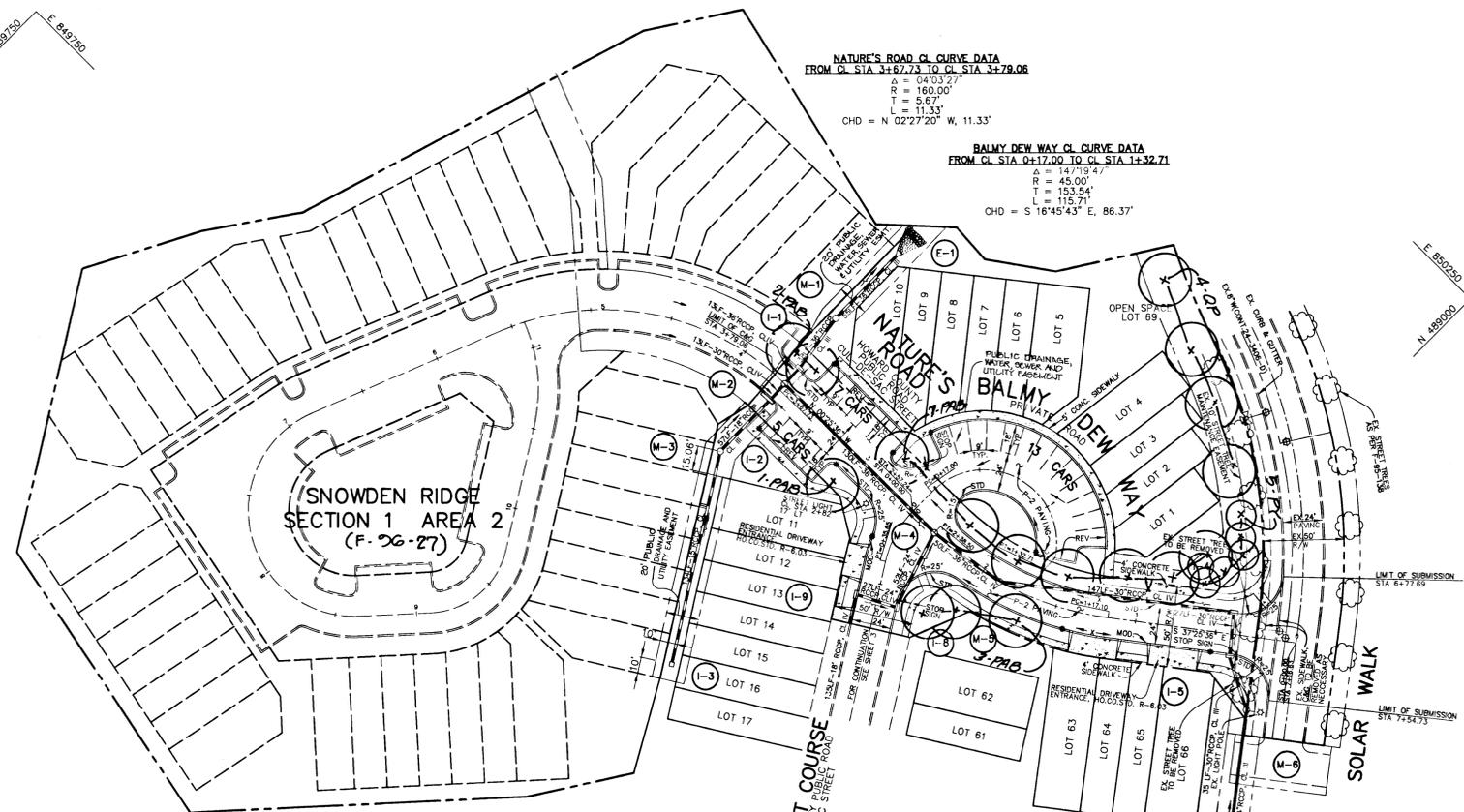
PROVIDED 20 MAJOR TREES X 40' = 800 L.F.
26 MINOR TREES X 30' = 780 L.F.
1580 L.F.

LEGEND

- MAJOR STREET TREE
- MINOR STREET TREE

PLANT LIST

KEY	QTY	POTENTIAL & COMMON NAME	SIZE	REMARKS
PAB	10	PLATANUS X ACERIFOLIA 'BLOODGOOD' 'BLOODGOOD' LONDON PLANT TREE	2 1/2" - 3" CAL.	D+D
PY	20	PRUNUS X YEDOENSIS YOSHINO FLOWERING CHERRY	1 1/2" - 2" CAL.	D+D
QF	4	QUERCUS PALUSTRIS PIN OAK	2 1/2" - 3" CAL.	D+D
WF	6	WALNUS FLORIDUNDA 'HARVEST GOLD' HARVEST GOLD GRAPPLICE	1 1/2" - 2" CAL.	D+D



NATURE'S ROAD CL CURVE DATA
FROM CL STA 3+167.73 TO CL STA 3+79.06
R = 147.15'
R = 160.00'
T = 5.67'
L = 11.33'
CHD = N 02°27'20" W, 11.33'

BALMY DEW WAY CL CURVE DATA
FROM CL STA 0+17.00 TO CL STA 1+32.71
R = 45.00'
R = 153.54'
T = 115.71'
L = 115.71'
CHD = S 16°45'43" E, 86.37'

CONSTANT COURSE CL CURVE DATA
FROM CL STA 0+00.00 TO CL STA 0+35.65
R = 37.00'
R = 188.00'
T = 65.90'
L = 121.40'
CHD = S 73°47'37" W, 35.20'

NATURE'S ROAD CL CURVE DATA
FROM CL STA 1+17.10 TO CL STA 2+38.50
R = 37.00'
R = 188.00'
T = 65.90'
L = 121.40'
CHD = N 18°55'36" W, 119.31'

PLAN
SCALE: 1"=50'

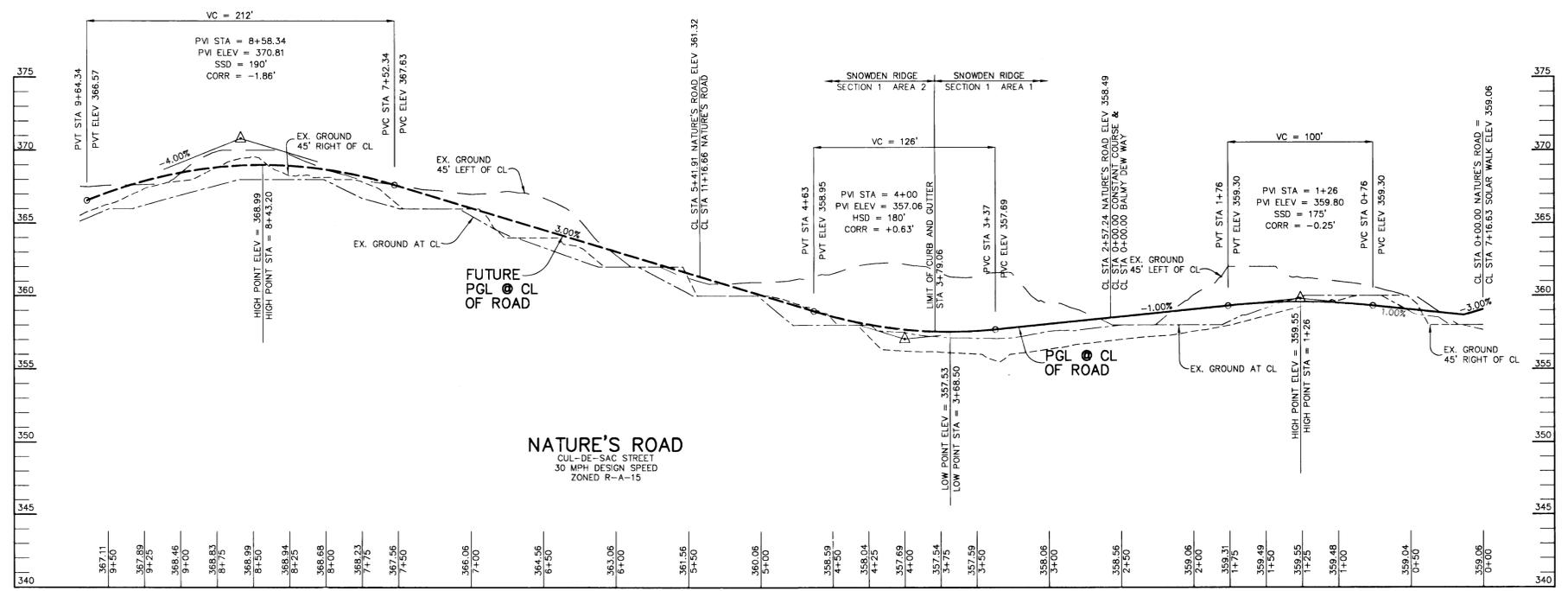
LOCATION	TYPE
17' LT OF 4' STA 2+82 NATURE'S ROAD	100 WATT HPS VAPOR TRADITIONAIRE MOUNTED ON A 14' BLACK FIBERGLASS POLE.

LEGEND

- DENOTES LIGHT POLE
- DENOTES CURB TRANSITION FROM STD TO MOD TO REV C&G
- DENOTES SIDEWALKS AND DRIVEWAY APRONS

NOTES

- CURB RADIUS IS 5' UNLESS OTHERWISE NOTED.
- STREET LIGHTS TO BE 100 WATT HPS VAPOR TRADITIONAIRE MOUNTED ON A 14 FOOT BLACK FIBERGLASS POLE.
- HOA WILL BE RESPONSIBLE FOR MAINTENANCE OF OFF-STREET PARKING SPACES AND BALMY DEW WAY.
- REQUIRED LANDSCAPING SHALL BE PROVIDED ON THE SITE DEVELOPMENT PLAN FOR LOTS 1-60.
- NO. OF SHADE TREES REQUIRED:
3 PER DWELLING UNIT (3+G) + 100
- A MINIMUM SPACING OF 80' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- FINANCIAL SURETY FOR THE REQ'D LANDSCAPING WILL BE POSTED AS PART OF THE SITE PLAN GRADING PERMIT IN THE AMOUNT OF \$2000.00 FOR 30 TREES.



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

AS BUILT CERTIFICATE

DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Richard M. Quack 12-22-95
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Gina J. Jaramila 1/31/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

John D. Hammer 12/29/95
CHIEF, DEVELOPMENT & ENGINEERING DIVISION DATE

DATE NO.	REVISION

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DEVELOPER
WESTBROOK DEVELOPMENT, INC.
Court Towers, Suite 300
210 West Pennsylvania Avenue
Towson, Maryland 21204
(410) 823-4700 • Fax (410) 823-5009
Attn: Brian Flick

PROJECT
SNOWDEN RIDGE SECTION 1 AREA 1
LOTS 1 - 69

AREA GATEWAY COMMERCE CENTER - PARCEL 'A'-53
TAX MAP NO. 42 ZONED R-A-15
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
PLAN AND PROFILE OF NATURE'S ROAD

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

11-30-95 DATE
SDP-95-88 F-95-138 SP-95-88 SP-95-09

DESIGNED BY: C.J.R.

DRAWN BY: DAM

PROJECT NO: H000\95H10600 PH1RD2.DWG

DATE: NOVEMBER 30, 1995

SCALE: AS SHOWN

DRAWING NO. 2 OF 6

J. D. Hammer
JAYKANT D. PAREKH #19148

1776

LEGEND

- DENOTES LIGHT POLE
- DENOTES CURB TRANSITION FROM STD TO MOD TO REV C&G
- DENOTES SIDEWALKS AND DRIVEWAY APRONS

NOTES

1. CURB RADII IS 5' UNLESS OTHERWISE NOTED.
2. STREET LIGHTS TO BE 100 WATT HPS VAPOR TRADITIONAL MOUNTED ON A 14 FOOT BLACK FIBERGLASS POLE.
3. HOA WILL BE RESPONSIBLE FOR MAINTENANCE OF OFF-STREET PARKING SPACES.
4. NO. OF SHADE TREES REQUIRED: 3 PER PARKING UNIT (3x60) = 108
5. REQUIRED LANDSCAPING SHALL BE PROVIDED ON THE SITE DEVELOPMENT PLAN FOR LOTS 1-60.
6. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

CL CURVE DATA
FROM CL STA 3+11.21 TO CL STA 5+25.02

R = 95.00'
T = 125.00'
L = 143.81'
L = 213.81'
CHD = S 09°00'51" W, 188.68'

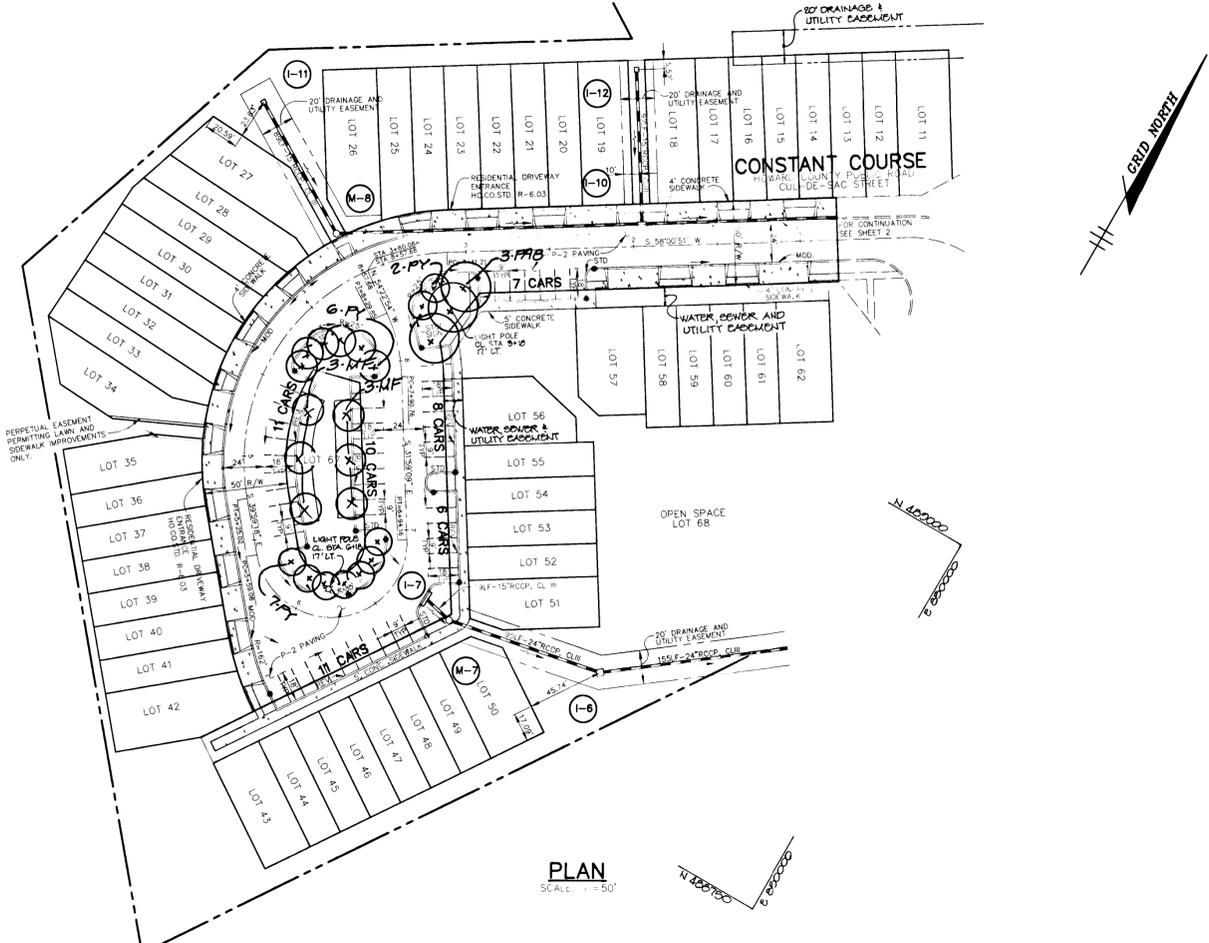
CL CURVE DATA
FROM CL STA 5+59.08 TO CL STA 6+94.16

R = 71.58'
T = 45.00'
L = 64.333'
L = 135.09'
CHD = N 54°00'47" E, 89.78'

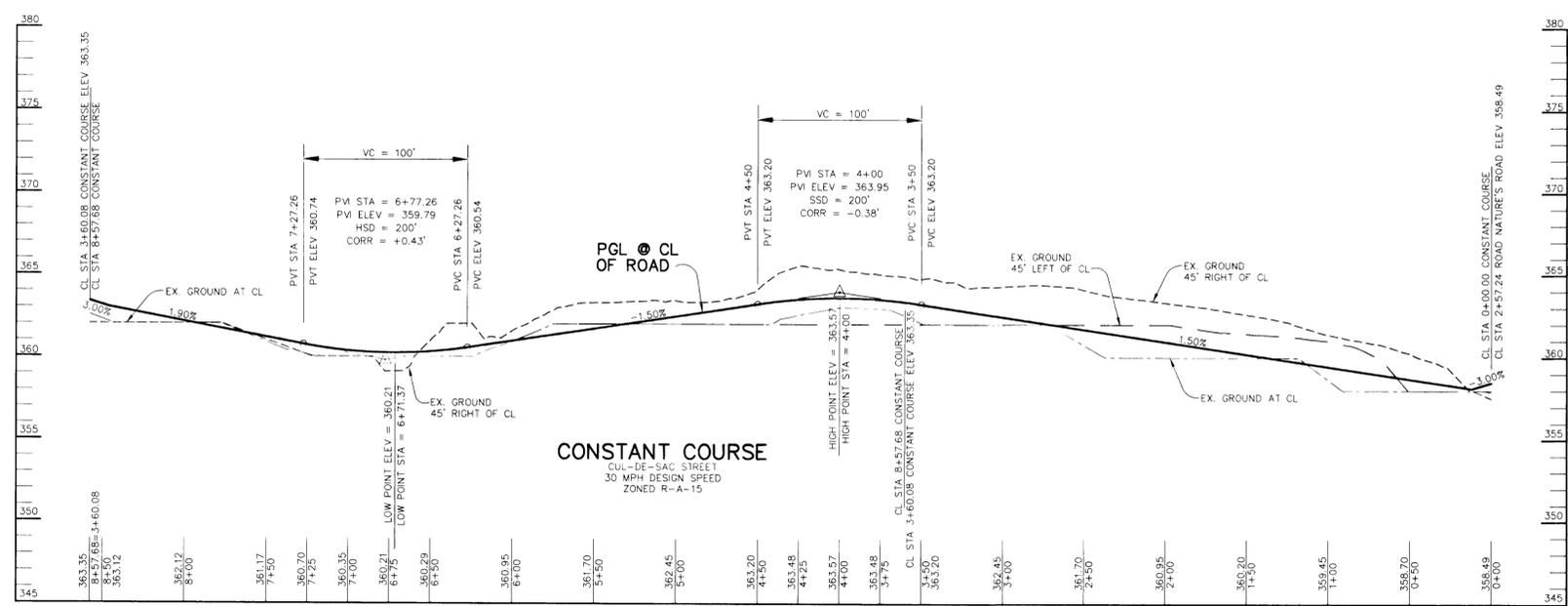
CL CURVE DATA
FROM CL STA 7+50.78 TO CL STA 8+29.85

R = 42.45'
T = 100.00'
L = 19.80'
L = 39.09'
CHD = S 43°11'02" E, 38.84'

STREET LIGHT SUMMARY TABLE	
LOCATION	TYPE
17' LT. OF S STA 3+10 CONSTANT COURSE	100 WATT HPS VAPOR TRADITIONAL MOUNTED ON A 14' BLACK FIBERGLASS POLE
17' LT. OF S STA 6+10 CONSTANT COURSE	100 WATT HPS VAPOR TRADITIONAL MOUNTED ON A 14' BLACK FIBERGLASS POLE



STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	INV. IN	INV. OUT	TOP ELEV	REMARKS
I-1	A-5	12.00' RT OF CL STA 3+68.50	348.09	347.99	357.77	HO. CO. STD. DETAIL SD-4.40 & SD-4.01
I-2	A-10 W/DEFLECTORS	12.00' LT OF CL STA 3+68.50	352.80 (80')	348.73	357.77	HO. CO. STD. DETAIL SD-4.41 & SD-4.02
I-3	S INLET	NATURE'S ROAD SEE SHEET 2	-	361.80	366.50	HO. CO. STD. DETAIL SD-4.22
I-4	A-5	12.00' RT OF CL STA 0+40.42	350.60	350.50	358.58	HO. CO. STD. DETAIL SD-4.40 & SD-4.01
I-5	A-5	12.00' LT OF CL STA 0+39.50	350.84	350.74	358.58	HO. CO. STD. DETAIL SD-4.40 & SD-4.01
I-6	S INLET	NATURE'S ROAD SEE SHEET 3	352.40	352.30	356.10	HO. CO. STD. DETAIL SD-4.22
I-7	A-10	19.20' RT OF CL STA 6+68.32	-	355.55	360.21	HO. CO. STD. DETAIL SD-4.41 & SD-4.02
I-8	A-5	12.00' LT OF CL STA 0+61.42	353.86	353.76	359.11	HO. CO. STD. DETAIL SD-4.40 & SD-4.01
I-9	A-5	12.52' RT OF CL STA 0+59.60	354.50	354.00	359.09	HO. CO. STD. DETAIL SD-4.40 & SD-4.01
I-10	A-5	12.52' RT OF CL STA 1+94.60	356.75 (80')	356.40	361.12	HO. CO. STD. DETAIL SD-4.40 & SD-4.01
I-11	S INLET	SEE SHEET 3	-	364.05	367.50	HO. CO. STD. DETAIL SD-4.22
I-12	S INLET	SEE SHEET 3	-	363.15	366.60	HO. CO. STD. DETAIL SD-4.22
M-1	4'-0" DIA MANHOLE	50.92' RT OF CL STA 3+72.40	347.80	347.70	356.00	HO. CO. STD. DETAIL G-5.11
M-2	4'-0" DIA MANHOLE	NATURE'S ROAD CL STA 3+68.50	348.66 (80')	348.16	357.53	HO. CO. STD. DETAIL G-5.11
M-3	4'-0" DIA MANHOLE	57.33' LT OF CL STA 3+68.50	359.45	353.94	363.10	HO. CO. STD. DETAIL G-5.11
M-4	4'-0" DIA MANHOLE	NATURE'S ROAD CL STA 2+38.50	349.01 (80')	348.91	358.67	HO. CO. STD. DETAIL G-5.11
M-5	4'-0" DIA MANHOLE	NATURE'S ROAD CL STA 1+88.10	353.50 (80')	349.76	359.18	HO. CO. STD. DETAIL G-5.11
M-6	4'-0" DIA MANHOLE	44.57' LT OF CL STA 0+25.00	351.52	351.02	358.89	HO. CO. STD. DETAIL G-5.11
M-7	4'-0" DIA MANHOLE	39.07' RT OF CL STA 6+66.31	355.35	354.60	361.01	HO. CO. STD. DETAIL G-5.11
M-8	4'-0" DIA MANHOLE	27.95' RT OF CL STA 3+66.47	360.45	360.20	363.98	HO. CO. STD. DETAIL G-5.11
E-1	36" CONCRETE END SECTION	SEE SHEET 2	-	347.42	-	HO. CO. STD. DETAIL SD-5.51



PROFILE
HOR. - 1"=50'
VERT. - 1"=5'

AS BUILT CERTIFICATE

DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Andrew M. Ducker 12-22-95
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Jim Summerville 1/3/96
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

Alb. Damman 12/29/95
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE	NO.	REVISION

OWNER: THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
 THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

DEVELOPER: WESTBROOK DEVELOPMENT, INC.
 210 West Pennsylvania Avenue
 Towson, Maryland 21204
 (410) 823-4700 • Fax (410) 823-5009
 Attn: Brian Flick

PROJECT: SNOWDEN RIDGE SECTION 1 AREA 1
 LOTS 1 - 69

AREA: GATEWAY COMMERCE CENTER - PARCEL A-1-3
 TAX MAP NO. 42 ZONED R-A-15
 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: PLAN AND PROFILE OF CONSTANT COURSE AND STRUCTURE SCHEDULE

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

DATE: 11-30-95
 DESIGNED BY: C.J.R.
 DRAWN BY: DAM
 PROJECT NO.: HOCO\95H10600 PHTRD3.DWG
 DATE: NOVEMBER 30, 1995
 SCALE: AS SHOWN
 DRAWING NO.: 3 OF 6

JAYKANT D. PAREKH #19148

2211

SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SILT FENCE. CONTRACTOR TO INSPECT EXISTING CONTROLS PER SDP-95-88 AND REPAIR AS NECESSARY. (2 DAYS)
- BEGIN ROUGH GRADING. (1 WEEK)
- AS SUBGRADE ELEVATION IS REACHED, INSTALL STORM DRAIN PIPES, INLETS, INLET PROTECTION, AND TEMPORARY OUTFALL TO SEDIMENT TRAP 3B. (3 WEEKS)
- INSTALL CURB & GUTTER, THEN PAVE. (3 WEEKS)
- STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)
- COMPLETE FINAL GRADING. (1 WEEK)
- UPON APPROVAL OF HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR, REMOVE REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)

DRAINAGE AREA TABLE

INLET NO.	AREA (ACRES)	FC FACTOR	% IMP.
I-1	0.92	0.72	77
I-2	1.25	0.90	77
I-3	1.00	0.62	60
I-4	0.08	0.70	75
I-5	0.09	0.72	78
I-6	1.16	0.44	31
I-7	2.00	0.69	73
I-8	0.33	0.73	79
I-9	0.23	0.67	70
I-10	0.43	0.66	67
I-11	0.94	0.62	60
I-12	0.53	0.62	60

EX. RIPRAP OUTLET SEDIMENT TRAP 3A

DRAINAGE AREA	4.3 ACRES
STORAGE VOLUME REQUIRED	7740 CF
STORAGE VOLUME PROVIDED	10240 CF
CREST ELEVATION	356.0
TOP OF DAM	359.3
BOTTOM ELEVATION	351.0
CLEANOUT ELEVATION	353.0
SIDE SLOPES	2:1
CREST WIDTH	12'

EX. RIPRAP OUTLET SEDIMENT TRAP 3B

DRAINAGE AREA	6.8 ACRES
STORAGE VOLUME REQUIRED	12240 CF
STORAGE VOLUME PROVIDED	14063 CF
CREST ELEVATION	350.2
TOP OF DAM	353.5
BOTTOM ELEVATION	344.0
CLEANOUT ELEVATION	346.5
SIDE SLOPES	2:1
CREST WIDTH	14'

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 TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE CONSERVATION ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

J. Parikh 11/16/95
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. Parikh 11.30.95
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/PCR 12/4/95
NATURAL RESOURCE CONSERVATION SERVICE DATE

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

John R. Robertson 12/9/95
HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE

DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Richard M. Ruck 12-22-95
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Anna Zimmman 1/3/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

Bill Demmer 12/29/95
CHIEF, DEVELOPMENT M.K. ENGINEERING DIVISION DATE

DATE	NO.	REVISION

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DEVELOPER
WESTBROOK DEVELOPMENT, INC.
Court Towers, Suite 300
210 West Pennsylvania Avenue
Towson, Maryland 21204
(410) 823-4700 • Fax (410) 823-5009
Attn: Brian Flick

PROJECT
SNOWDEN RIDGE SECTION 1 AREA 1
LOTS 1 - 69

AREA GATEWAY COMMERCE CENTER - PARCEL 'A-53'
TAX MAP NO. 42 ZONED R-A-15
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
GRADING AND SEDIMENT CONTROL PLAN AND DRAINAGE AREA MAP

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

11.30.95
DATE

DESIGNED BY : C.J.R.

DRAWN BY : DAM

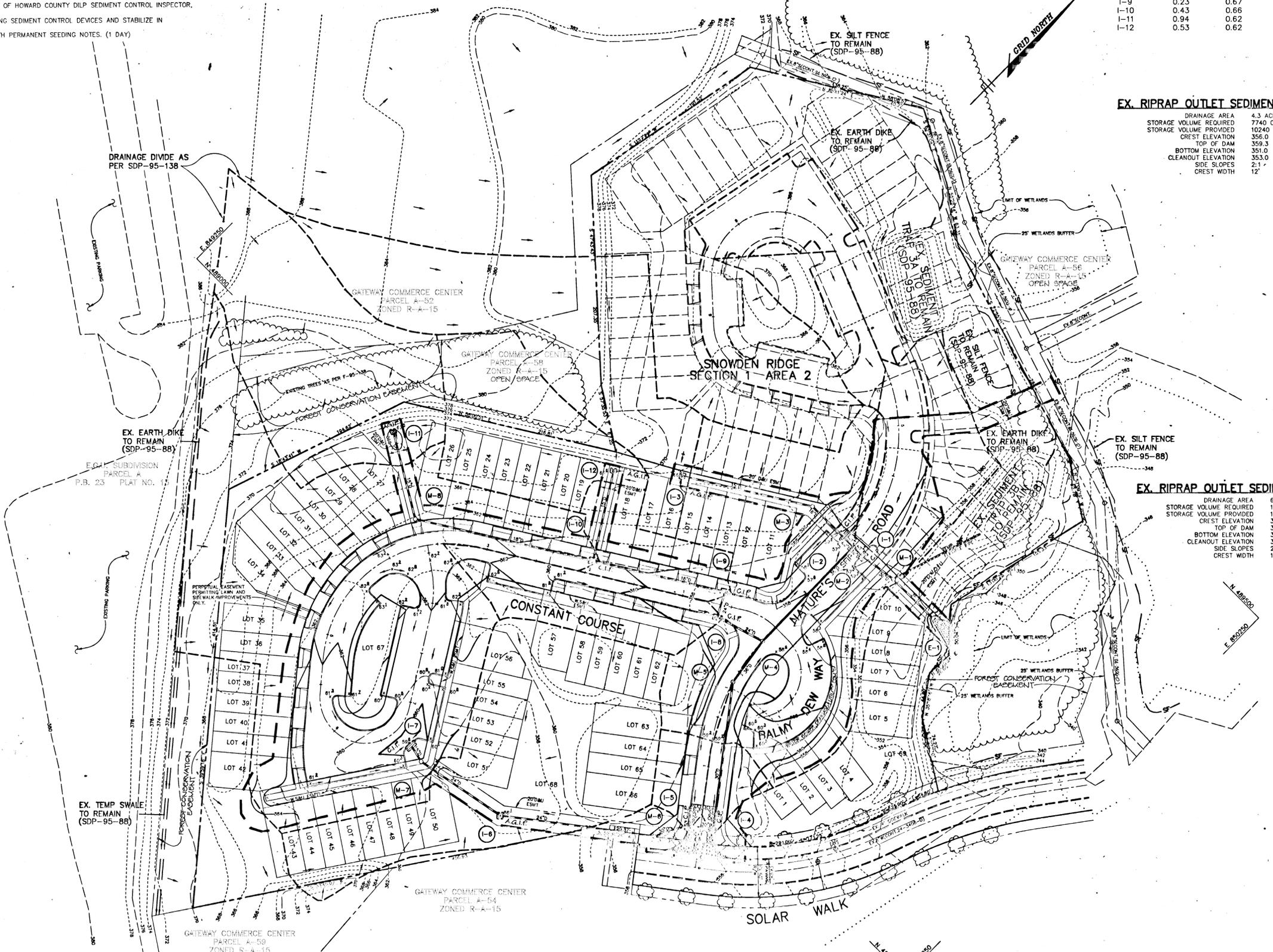
PROJECT NO : HOC095H10600
PHTR04.DWG

DATE : NOVEMBER 30, 1995

SCALE : 1" = 50'

DRAWING NO. 4 OF 6

J. Parikh
JAYKANT D. PAREKH #19148



1776

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

Soil Amendments: Apply 800 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:

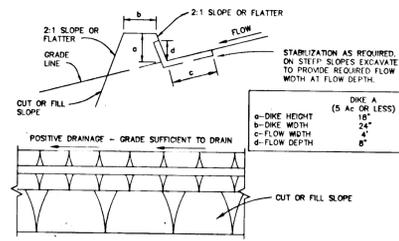
- 1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
- 2) Use sod.
- 3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

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 THERE TO.
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 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL FOR PERMANENT SEEDINGS (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 52) AND MULCHING (SEC. 53). 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: 6.25 ACRES
 - AREA DISTURBED: 4.12 ACRES
 - AREA TO BE ROOFED OR PAVED: 1.10 ACRES
 - AREA TO BE VEGETATIVELY STABILIZED: 3.02 ACRES
 - TOTAL CUT: 800 CU.YDS.
 - TOTAL FILL: 1222 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 WITH ONE WORKING DAY, WHICHEVER IS SHORTER.



CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

LOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5-3.0%	SEED & STRAW MULCH	SEED & STRAW MULCH
2	3.1-5.0%	SEED & STRAW MULCH	SEED USING AJTE, OR EXCELSDR, 500:2" STONE
3	5.1-8.0%	SEED WITH AJTE, OR 500:2" STONE	SEED USING AJTE, OR EXCELSDR, 500:2" STONE
4	8.1-20%	LINEE RIPRAP 4-8"	ENGINEERED DESIGN

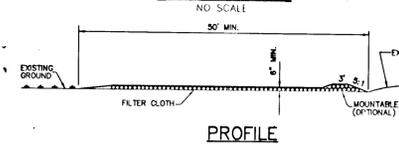
A. STONE TO BE 3" MIN. STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3" THICKNESS AND BE COMPRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.

B. RIPRAP TO BE 4-8" INCHES IN A LAYER AT LEAST 8" THICKNESS AND COMPRESSED INTO THE SOIL.

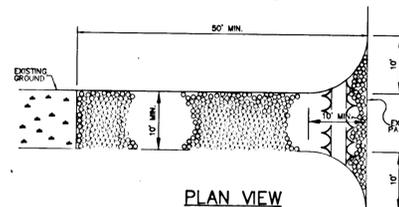
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.

7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

EARTH DIKE



PROFILE

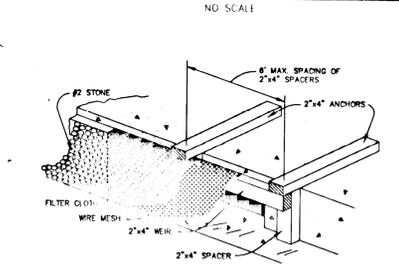


PLAN VIEW

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. LENGTHS AS REQUIRED, BUT NOT LESS THAN 30 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM WOULD APPLY).
2. THICKNESS - NOT LESS THAN SIX (6) INCHES.
3. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCURS.
4. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE RESIDENCE LOT.
5. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTAIN BERM 5:1 SLOPES WILL BE PERMITTED.
6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS NEEDED TO MAINTAIN DEMAND AND REPAIR AND/OR CLEANING OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
7. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
8. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

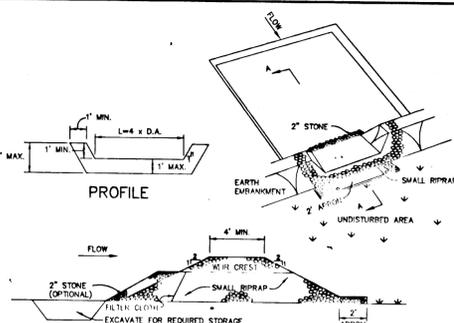
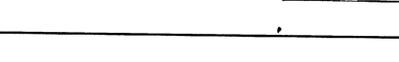
STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION SPECIFICATIONS

- A. WOODEN FRAME IS TO BE CONSTRUCTED OF 2"x4" CONSTRUCTION GRADE LUMBER.
 - B. WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC AND STONE, WITH WATER FULLY WOUND AGAINST IT.
 - C. FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE, RESISTANT TO SUNLIGHT WITH A SEIVE SIZE (60-80) TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
 - D. STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE CLOTH.
- B. ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MIN. WIDTH BY THROAT LENGTH PLUS 4") TO THE 2"x4" WIRE (MEASURING THROAT LENGTH PLUS 2") AS SHOWN ON THE STANDARD DRAWING.
 - B. PLACE A PIECE OF APPROVED FILTER CLOTH (40-85 SEIVE) OF THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH TO THE 2"x4" WIRE.

CURB INLET PROTECTION



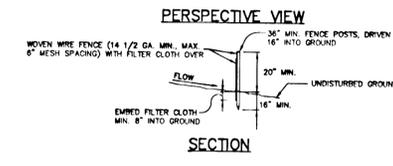
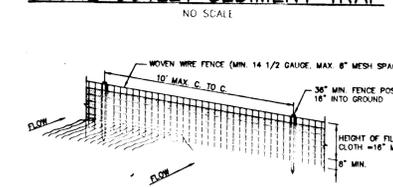
CROSS SECTION A-A

NOTE: Q₂, V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

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-SOIL STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRACKING 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 RIPRAP 4"-8" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE OF THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

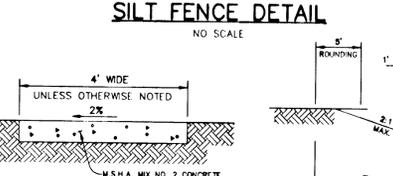
STONE OUTLET SEDIMENT TRAP



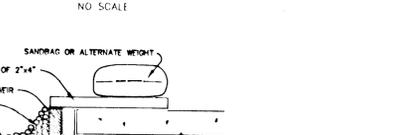
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES AND STAPLES.
2. FILTER CLOTH TO BE FASTENED TO WOVEN WIRE FENCE WITH THIS SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES (6") AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

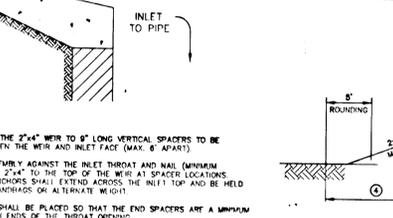
SILT FENCE DETAIL



SIDEWALK DETAIL



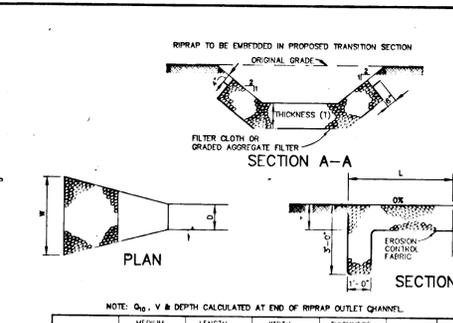
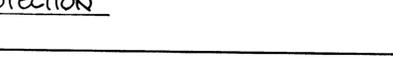
TYPICAL SECTION CUL-DE-SAC STREET w/ DRIVEWAYS



CLOSED SECTION

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (MODIFIED, REVERSE CURB AND STANDARD CURB & GUTTER - SEE ROAD PLAN).
3. 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 30 MPH.
6. RESIDENTIAL DRIVEWAY ENTRANCE PER HO. CO. STD DETAIL R-6-01.

TYPICAL SECTION WITH PARKING STALLS



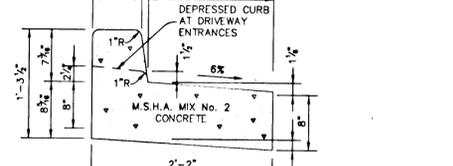
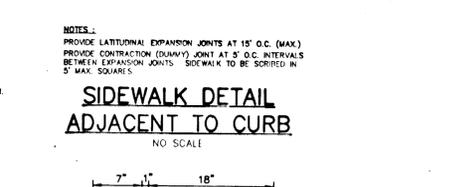
CROSS SECTION A-A

NOTE: Q₂, V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

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-SOIL STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRACKING 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 RIPRAP 4"-8" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE OF THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

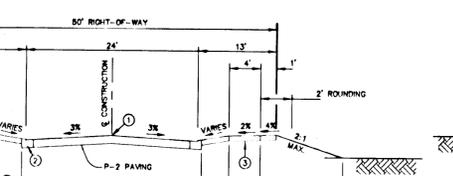
STONE OUTLET SEDIMENT TRAP



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES AND STAPLES.
2. FILTER CLOTH TO BE FASTENED TO WOVEN WIRE FENCE WITH THIS SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES (6") AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

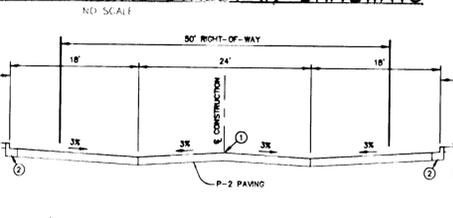
SILT FENCE DETAIL



SIDEWALK DETAIL



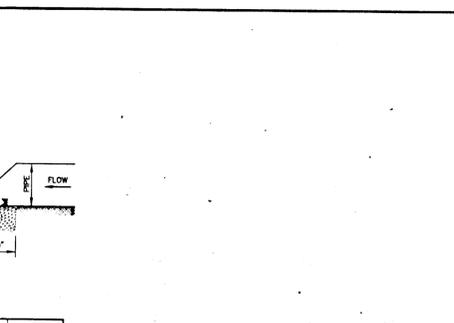
TYPICAL SECTION CUL-DE-SAC STREET w/ DRIVEWAYS



CLOSED SECTION

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (MODIFIED, REVERSE CURB AND STANDARD CURB & GUTTER - SEE ROAD PLAN).
3. 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 30 MPH.
6. RESIDENTIAL DRIVEWAY ENTRANCE PER HO. CO. STD DETAIL R-6-01.

TYPICAL SECTION WITH PARKING STALLS



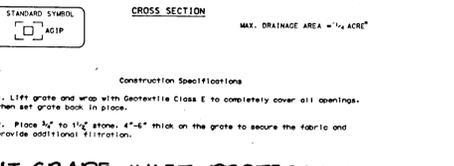
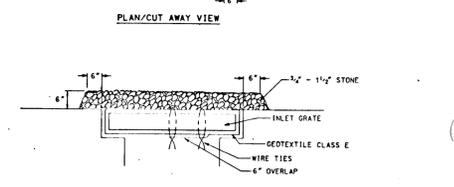
CROSS SECTION A-A

NOTE: Q₂, V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

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-SOIL STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRACKING 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 RIPRAP 4"-8" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE OF THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

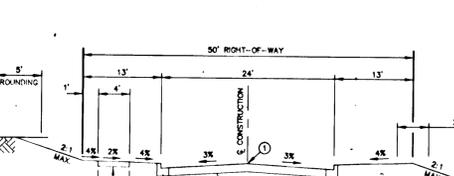
STONE OUTLET SEDIMENT TRAP



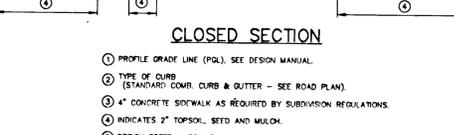
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES AND STAPLES.
2. FILTER CLOTH TO BE FASTENED TO WOVEN WIRE FENCE WITH THIS SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES (6") AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

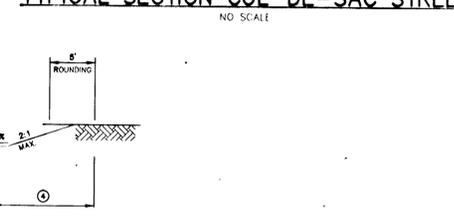
SILT FENCE DETAIL



SIDEWALK DETAIL



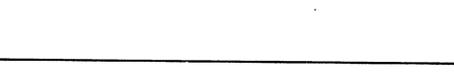
TYPICAL SECTION CUL-DE-SAC STREET w/ DRIVEWAYS



CLOSED SECTION

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (MODIFIED, REVERSE CURB AND STANDARD CURB & GUTTER - SEE ROAD PLAN).
3. 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 30 MPH.
6. RESIDENTIAL DRIVEWAY ENTRANCE PER HO. CO. STD DETAIL R-6-01.

TYPICAL SECTION WITH PARKING STALLS



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.

David P. P... 11/26/95
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 11.30.95
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 Eng... 12/4/95
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Robinson 12/4/95
HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Richard M. D... 12-22-95
CHIEF, BUREAU OF HIGHWAYS DATE

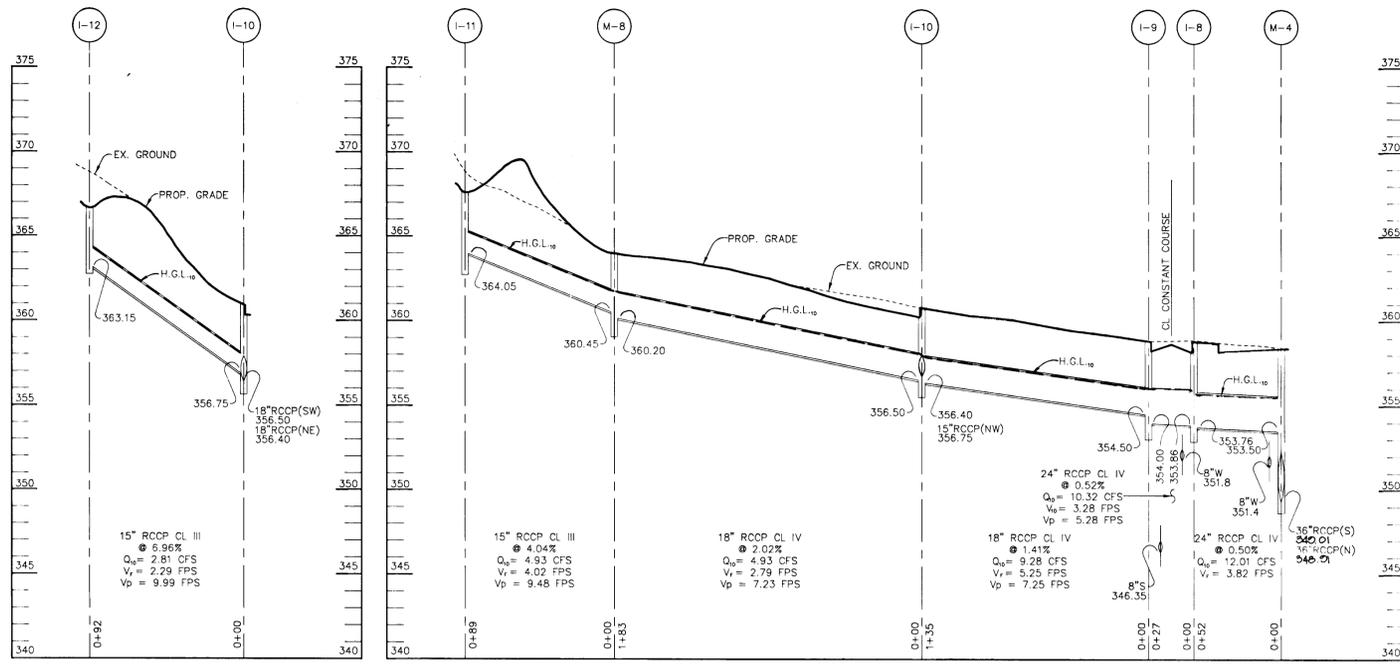
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Gina... 1/3/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

... 12/28/95
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE	NO.	REVISION

OWNER: THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DEVELOPER: WESTBROOK DEVELOPMENT, INC.
Court Towers, Suite 300
210 West Pennsylvania Avenue
Towson, Maryland 21204
(410) 823-4700 • Fax (410) 82

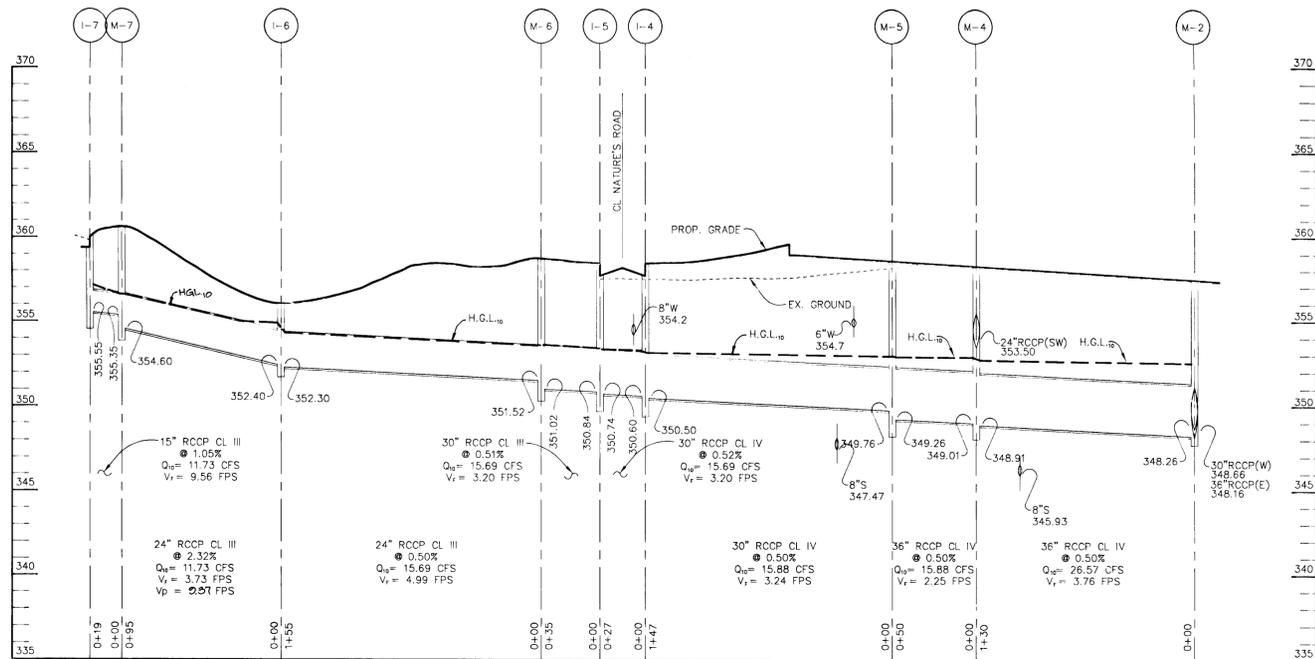


PROFILE

HOR. - 1"=50'
VERT. - 1"=5'

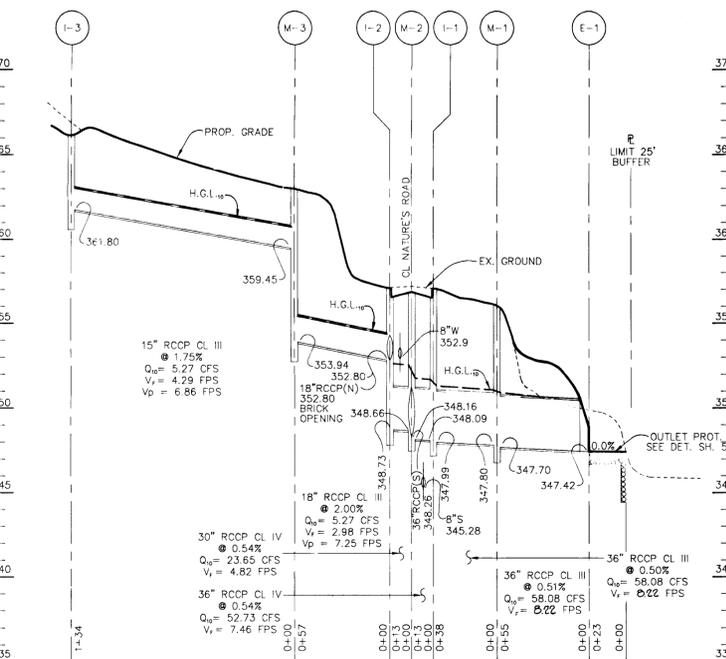
PROFILE

HOR. - 1"=50'
VERT. - 1"=5'



PROFILE

HOR. - 1"=50'
VERT. - 1"=5'



PROFILE

HOR. - 1"=50'
VERT. - 1"=5'

AS BUILT CERTIFICATE	
DATE	
APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
<i>Andrew M. Daulton</i> CHIEF, BUREAU OF HIGHWAYS	12-22-95 DATE
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Gina Stummans</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	11/31/96 DATE
<i>Chris Dammann</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	12/09/95 DATE
DATE NO.	REVISION
OWNER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044	
DEVELOPER WESTBROOK DEVELOPMENT, INC. Court Towers, Suite 300 210 West Pennsylvania Avenue Towson, Maryland 21204 (410) 823-4700 • Fax (410) 823-5009 Attn: Brian Flick	
PROJECT SNOWDEN RIDGE SECTION 1 AREA 1 LOTS 1 - 69	
AREA GATEWAY COMMERCE CENTER - PARCEL 'A'-53 TAX MAP NO. 42 ZONED R-A-15 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE PROFILE SHEET	
RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-9900 FAX : 410-997-9282	
11.30.95 DATE	SP-95-88 1:95-138 SP-95-98 SP-95-09
DESIGNED BY : C.J.R.	
DRAWN BY : DAM	
PROJECT NO : HOCO\95H10600 PHTRD6.DWG	
DATE : NOVEMBER 30, 1995	
SCALE : AS SHOWN	
DRAWING NO. 6 OF 6	
 J. Parekh JAYKANT D. PAREKH #19148	

JULI