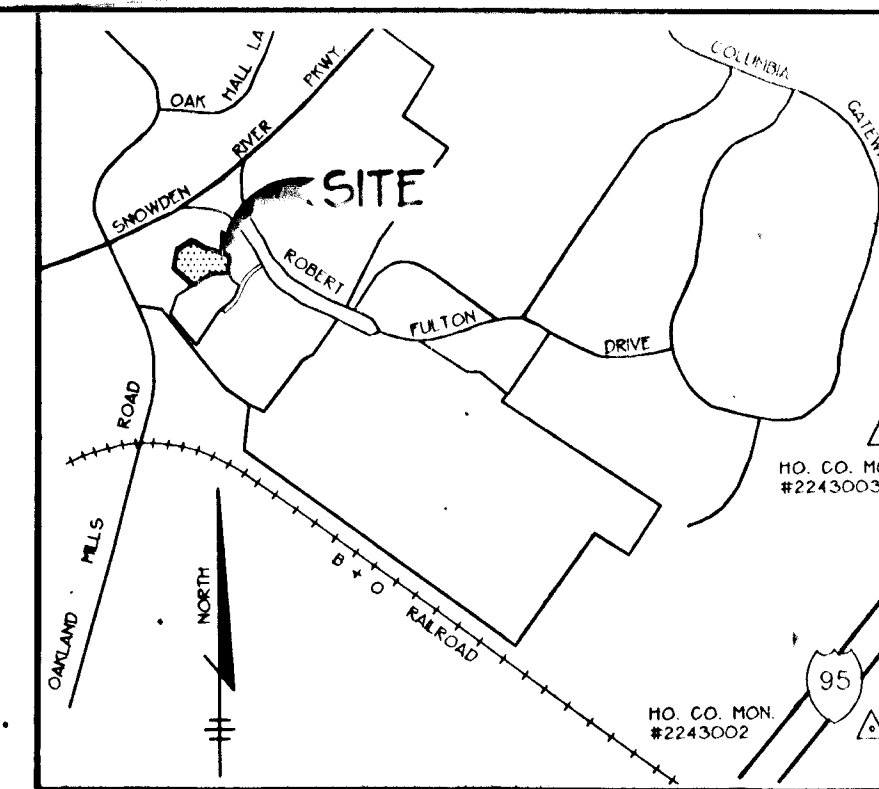


# ROADWAYS AND STORM DRAINS SNOWDEN RIDGE SECTION 1 AREA 2 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	STORM DRAIN PROFILE AND PLAN AND PROFILE OF NATURE'S ROAD
3	GRADING AND SEDIMENT CONTROL PLAN, DRAINAGE AREA MAP AND STRUCTURE SCHEDULE
4	DETAIL SHEET

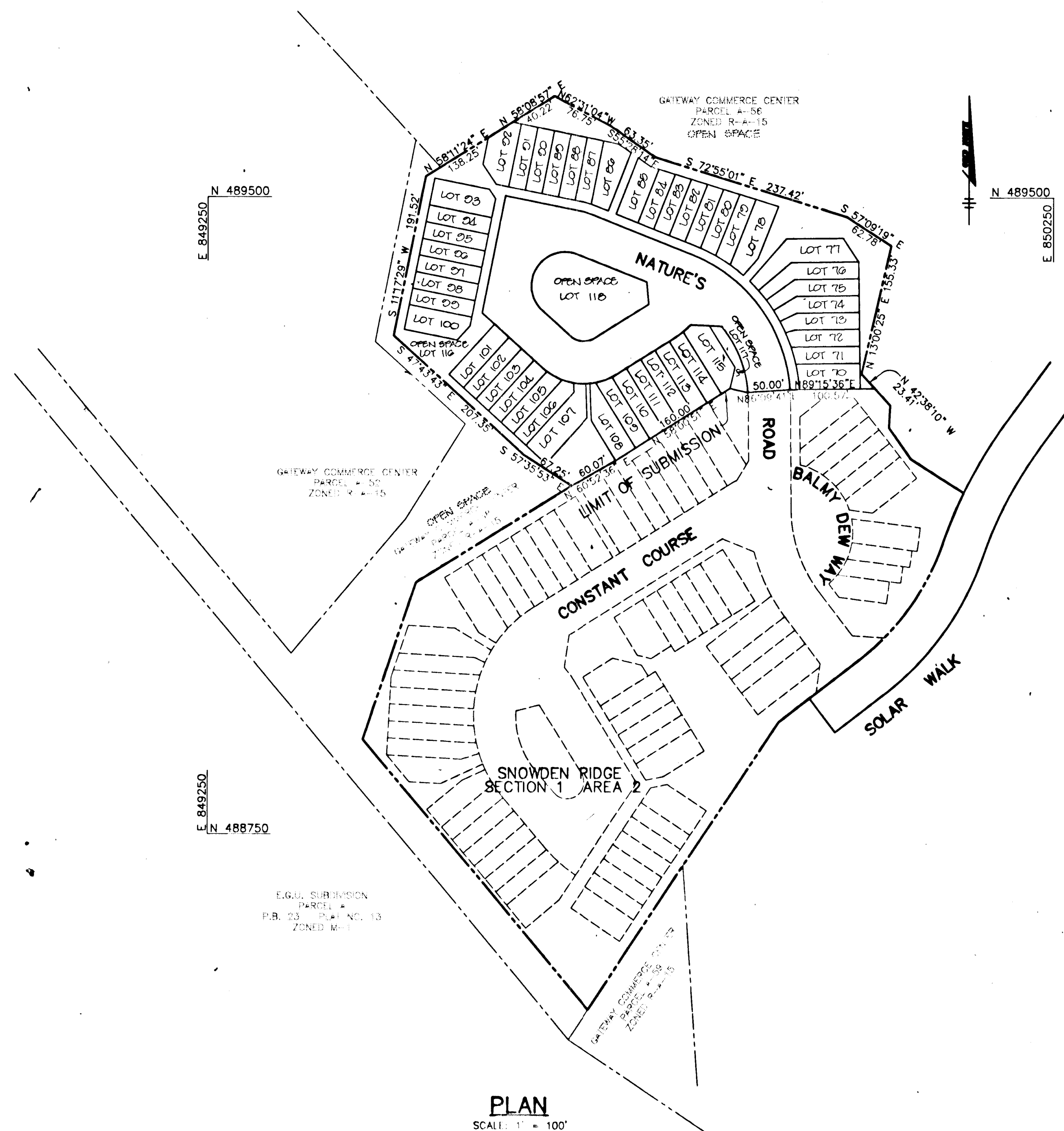


VICINITY MAP  
SCALE: 1" = 2000'

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

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- APPROXIMATE 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 ALL 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.  
 SMALL ATLANTIC TELEPHONE NETWORK 393-3649  
 LONG DISTANCE CABLE DIVISION 293-3553 OR 3054  
 BALTIMORE GAS AND ELECTRIC CO. 359-8000  
 HOWARD COUNTY BUREAU OF UTILITIES 313-4900  
 CO. OPER. PERSONNEL 795-1300
- 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' RADI 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, L.A. 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 90% 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 10-18-93 COMPREHENSIVE ZONING PLAN.
- NO PIPE SHALL BE LAD 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 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE NOS. SP-95-01, SP-95-09, SP-95-09, 1-95-136.
- LIGHT POLES, ARMS AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME III 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 BOKED WITH THE SITE DEVELOPMENT PLANS.
- TOPOGRAPHY SHOWN HEREON IS FROM MASS GRADING PLANS SDP-95-88 BY GUTSCHK 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: MIDDLE 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 WARNER HAS BEEN APPROVED DATED JULY 31, 1995 TO REDUCE MINIMUM ROAD RADI AND CUR-DE-SAC DESIGN (STANDARD) ESTABLISHED IN TABLE 2.01.
- HOME OWNERS ASSOCIATION WILL BE RESPONSIBLE FOR MAINTENANCE OF OFF-STREET PARKING SPACES.
- 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.  
*Andrew M. Decker* 12-22-95  
 CHIEF, BUREAU OF HIGHWAYS DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
*Gina J. Williams* 1/3/96  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE  
*Charles J. Summers* 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

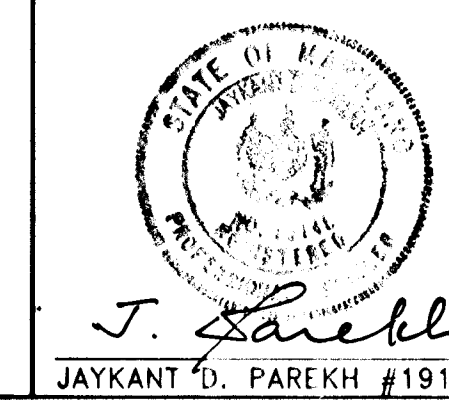
DEVELOPER  
  
 WESTBROOK DEVELOPMENT, INC.  
 Court Towers, Suite 300  
 210 West Pennsylvania Avenue  
 Towson, Maryland 21204  
 (410) 823-4700 • Fax (410) 823-5009  
 Attn: Brian Flick

PROJECT  
 SNOWDEN RIDGE SECTION 1 AREA 2  
 LOTS 70 - 118  
 AREA GATEWAY COMMERCE CENTER - PARCEL "A-53"  
 TAX MAP NO. 42 ZONED R-A-15  
 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

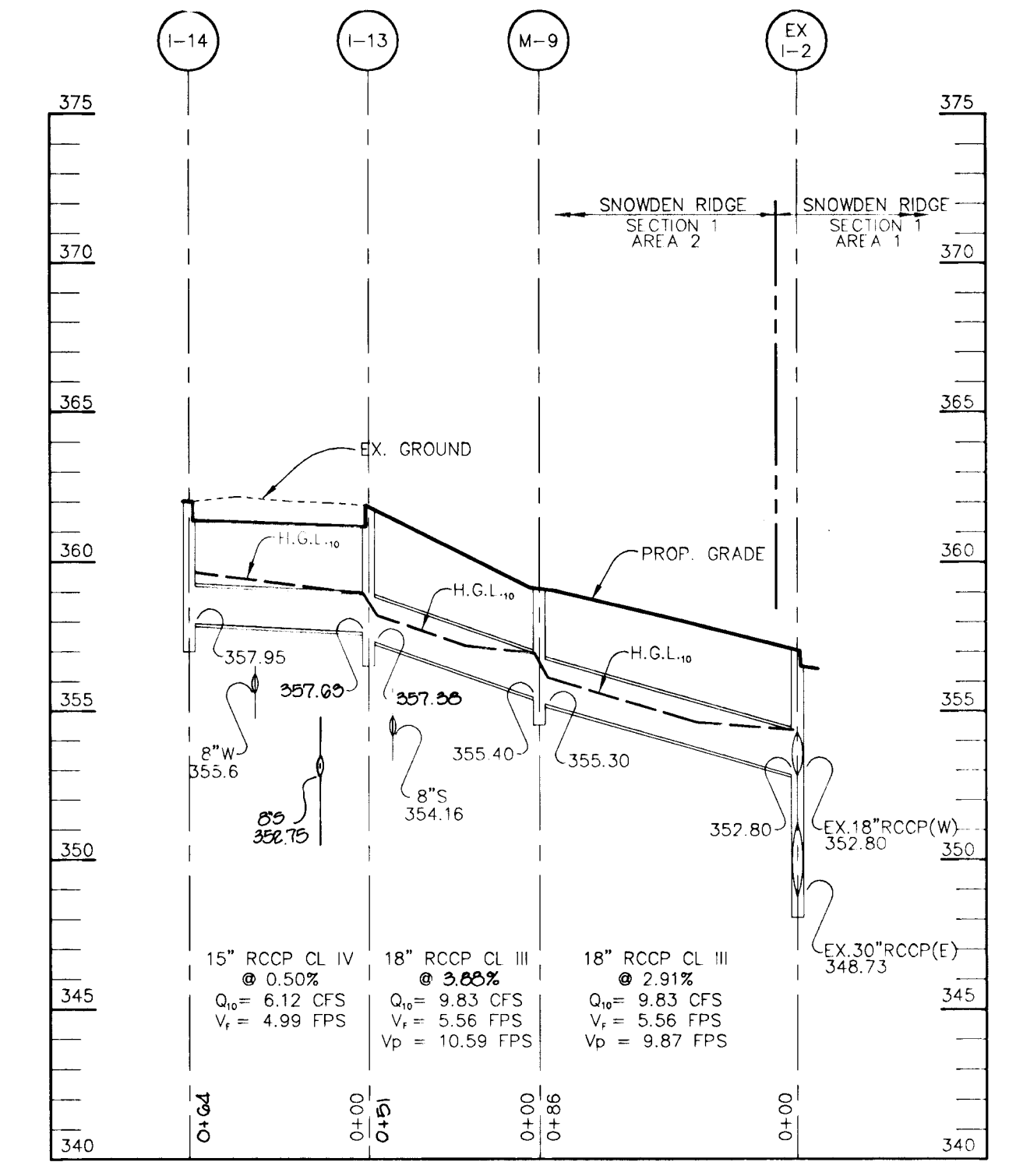
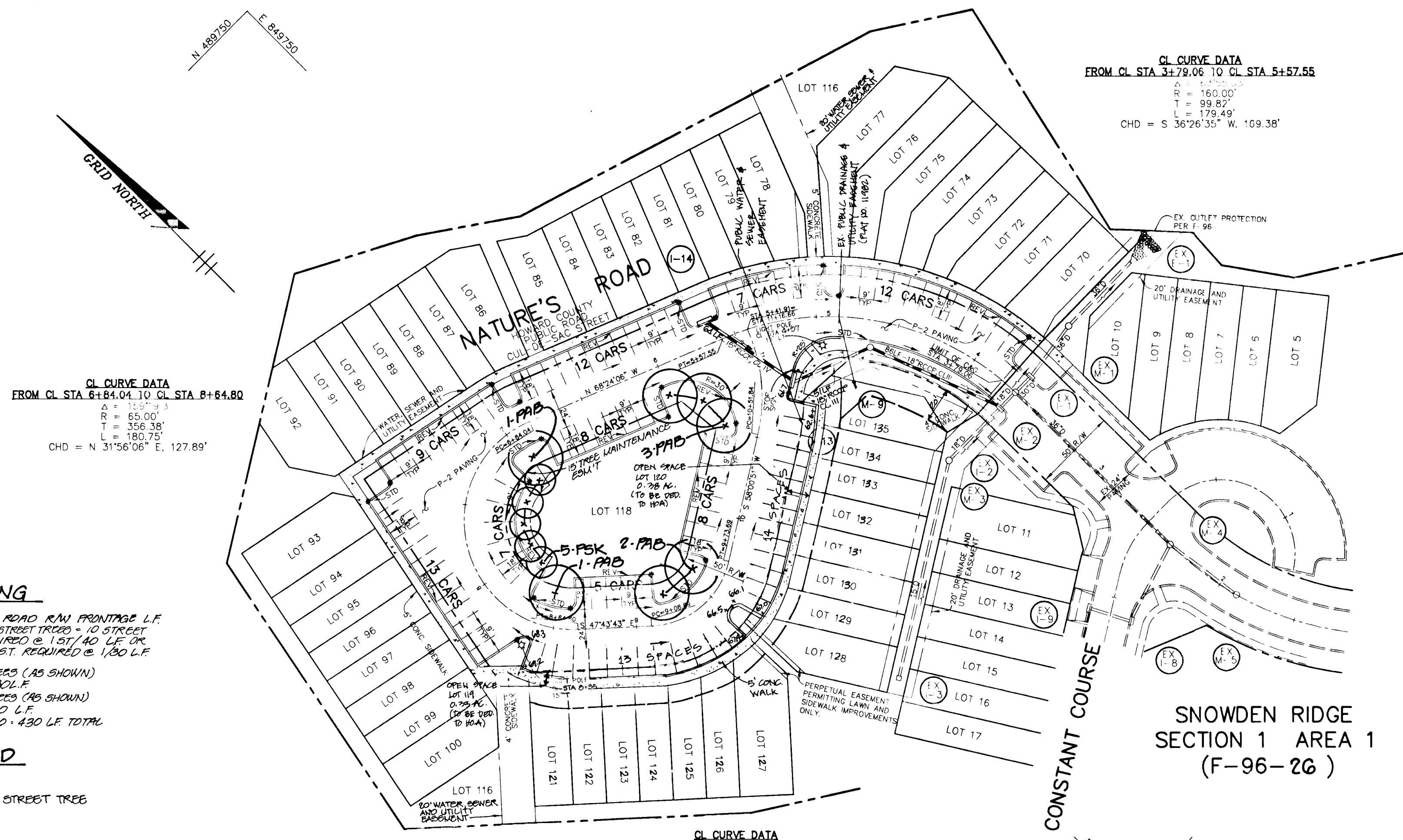
TITLE  
**TITLE SHEET**

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

11.30.95  
 DATE  
 DESIGNED BY : C.J.R.  
 DRAWN BY : DAM  
 PROJECT NO : HOCO\95\10600 PH2RD1.DWG  
 DATE : NOVEMBER 20, 1995  
 SCALE : AS SHOWN  
 DRAWING NO. 1 OF 4



9221



**LANDSCAPING**

REQUIRED: 400' PUBLIC ROAD R/W FRONTAGE L.F. REQUIRING STREET TREES @ 40 STREET TREES REQUIRED @ 1.01/40 L.F. OR 13.3 MINOR ST. TREES REQUIRED @ 1.00 L.F.

PROVIDED: 7 MAJOR TREES (AS SHOWN) 7'x40' DBOL.F.  
5 MINOR TREES (AS SHOWN) 5'x30'x1.50 L.F.  
200'x150'x430 L.F. TOTAL

**LEGEND**

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

**NOTES**

- CURB RADII 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.
- NO. OF SHADE TREES REQUIRED: 3 PER DWELLING UNIT (3x40) = 150
- REQUIRED LANDSCAPING SHALL BE PROVIDED ON THE SITE DEVELOPMENT PLAN FOR LOTS 70-115.
- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE SITE PLAN GRADING PERMIT IN THE AMOUNT OF \$60,000 FOR 10 TREES.

**STREET LIGHT SUMMARY TABLE**

LOCATION	TYPE
17' LT. OF S. STA. 4+57 NATURE'S ROAD	100 WATT HPS VAPOR TRADITIONAIRE MOUNTED ON A 14 FOOT BLACK FIBERGLASS POLE
15' RT. OF S. STA. 8+55 NATURE'S ROAD	100 WATT HPS VAPOR TRADITIONAIRE MOUNTED ON A 14 FOOT BLACK FIBERGLASS POLE

AS BUILT CERTIFICATE

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

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

*John Damm* 12/25/95  
CHIEF, DEVELOPMENT M.K. ENGINEERING DIVISION

DATE: 11/30/95

OWNER: THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
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 2  
LOTS 70 - 100, 121-155, 116-120

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

TITLE: STORM DRAIN PROFILE AND 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

DESIGNED BY: C.J.R.

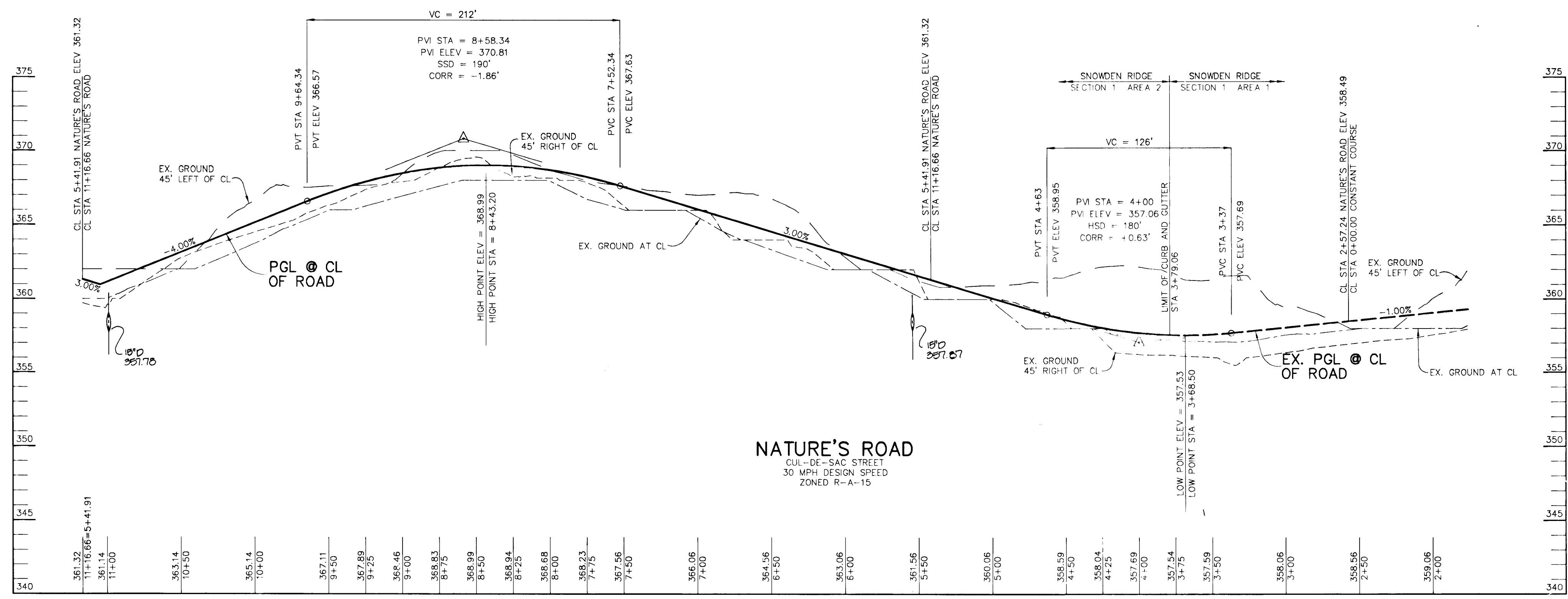
DRAWN BY: DAM

PROJECT NO: HOCO95H10600 PH2RD2.DWG

DATE: NOVEMBER 30, 1995

SCALE: AS SHOWN

DRAWING NO. 2 OF 4



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

1776



**STRUCTURE SCHEDULE**

NO.	TYPE	LOCATION	INV. IN	INV. OUT	TOP ELEV.	REMARKS
I-13	A-10	12.00' RT OF CL STA 10+80.44 NATURE'S ROAD	357.05	357.05	362.17	HO. CO. STD. DETAIL SD-441 & SD-402
I-14	A-10	12.00' RT OF CL STA 5+63.30 NATURE'S ROAD	-	357.95	362.4	HO. CO. STD. DETAIL SD-4.41 & SD-4.02
M-9	4'-0" DIA MANHOLE	16.27' LT OF CL STA 4+64.65 NATURE'S ROAD	355.40	355.30	359.41	HO. CO. STD. DETAIL G-5.11

**DRAINAGE AREA TABLE**

INLET NO.	AREA (ACRES)	'C' FACTOR	% IMP.
I-13	0.64	0.70	73
I-14	1.05	0.69	71



**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'

**SEQUENCE OF CONSTRUCTION**

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

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.

*Lewis, Inc.* 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 SILL CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*J. Larell* 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* 12/18/95  
NATURAL RESOURCE CONSERVATION SERVICE DATE

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

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

AS BUILT CERTIFICATE  
DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

*Andrew M. Duerke* 12-22-95  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

*Jim Spurr* 1/3/96  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING DATE

*Clark Damm* 12/29/95  
CHIEF, DEVELOPMENT 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 21286  
(410) 823-4700 • FAX (410) 823-5000  
Attn: Brian Flick

PROJECT  
SNOWDEN RIDGE SECTION 1 AREA 2  
LOTS 70 - 118

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

TITLE  
GRADING PLAN AND DRAINAGE AREA MAP AND STRUCTURE SCHEDULE

**RIEMER MUEGGE & ASSOCIATES, INC.**  
Planners • Engineers • Surveyors  
8818 Centre Park Drive • Suite 200 • Columbia, Md 21045  
410-897-8000 FAX : 410-897-8202

11.30.95 DATE  
DESIGNED BY : C.J.R.  
DRAWN BY : DAM  
PROJECT NO : HOCO 95-10600  
DATE : NOVEMBER 30, 1995  
SCALE : 1" = 50'  
DRAWING NO. : 3 OF 4  
JAYKARD, PAREKH #19146

1776



**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be redistributed 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 unfrotted 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.

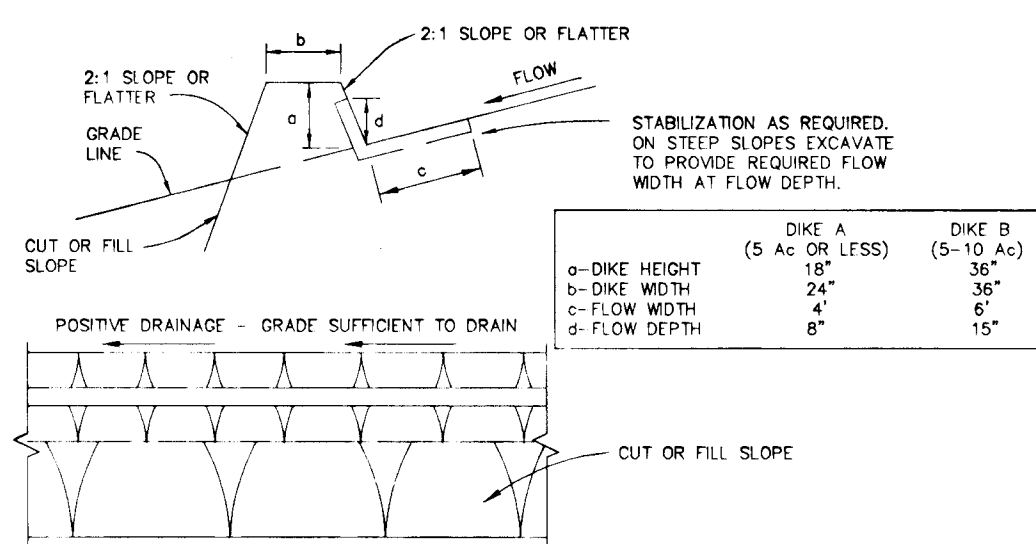
**Mulching:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unfrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 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 72 HOURS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, BY 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), SOIL (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	3.82 ACRES
AREA DISTURBED	1.71 ACRES
AREA TO BE ROOFED OR PAVED	0.76 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.95 ACRES
TOTAL CUT	500 CU.YDS.
TOTAL FILL	500 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 BIG 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.

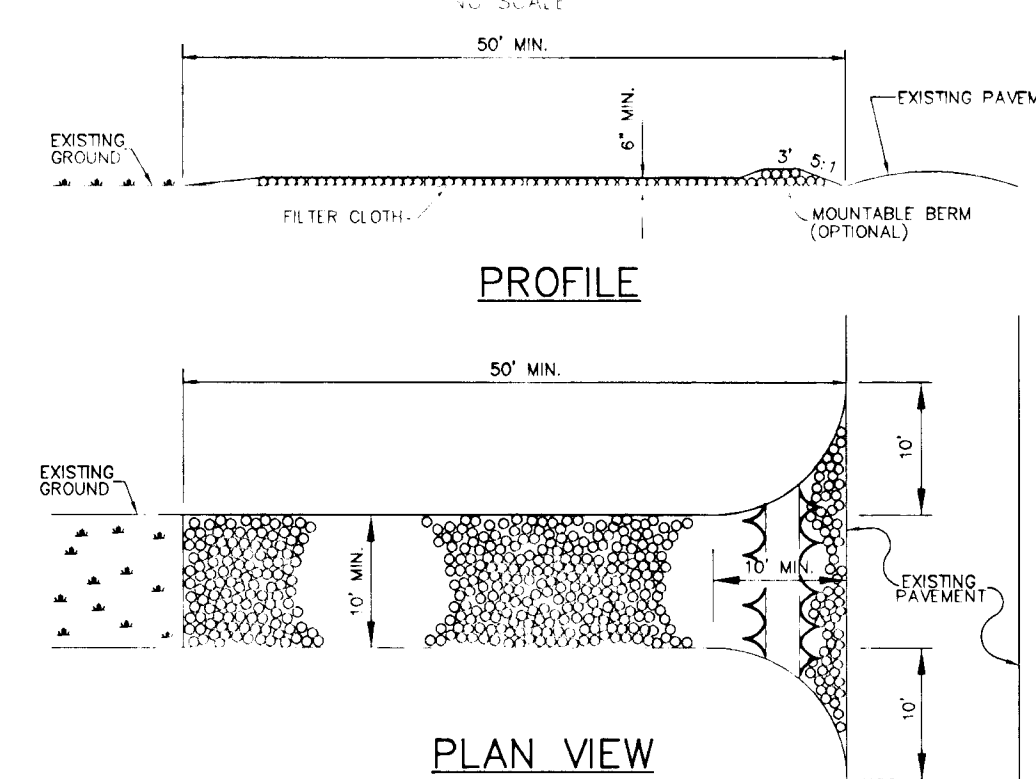


**CONSTRUCTION SPECIFICATIONS**

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 SLOPE 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.

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 JUTE, OR EXCELSDOR, 500' 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR 500' 2" STONE	LINED RIPRAP 4"-6"
4	8.1-20%	LINED RIPRAP 4"-6"	ENGINEERED DESIGN

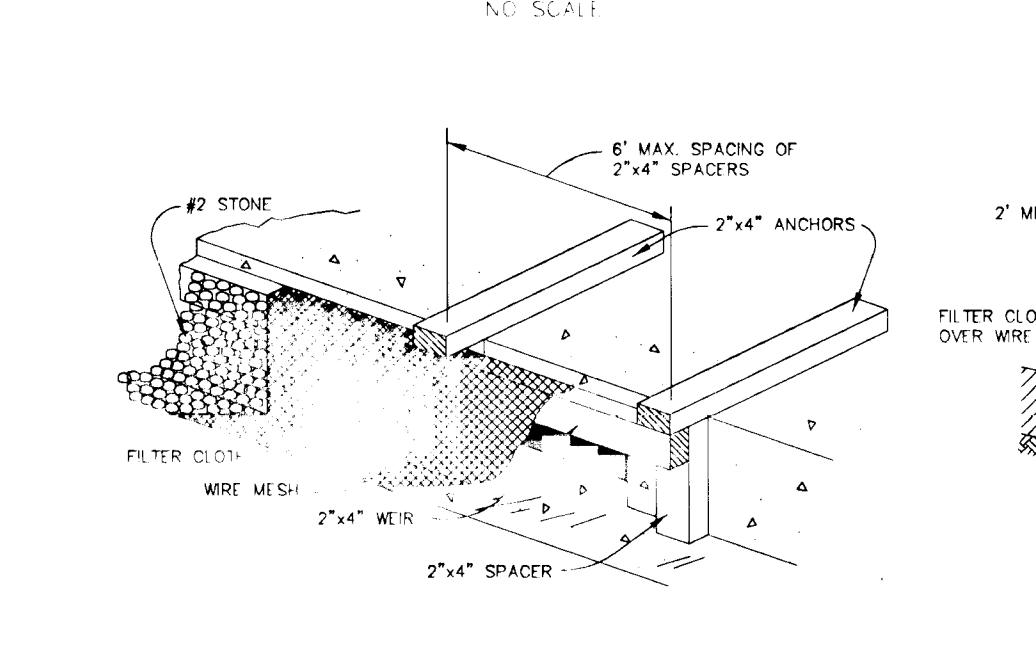
**EARTH DIKE**



**CONSTRUCTION SPECIFICATIONS**

1. STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 35 FOOT MINIMUM WOULD APPLY).
3. THICKNESS - NOT LESS THAN 5" (8" INCHES).
4. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT ALL POINTS WHERE INGRESS AND EGRESS OCCURS.
5. 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.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM 5' HIGH SHALL BE MAINTAINED WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT, ALL SEDIMENT SPILLED, DISPOSED, 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.

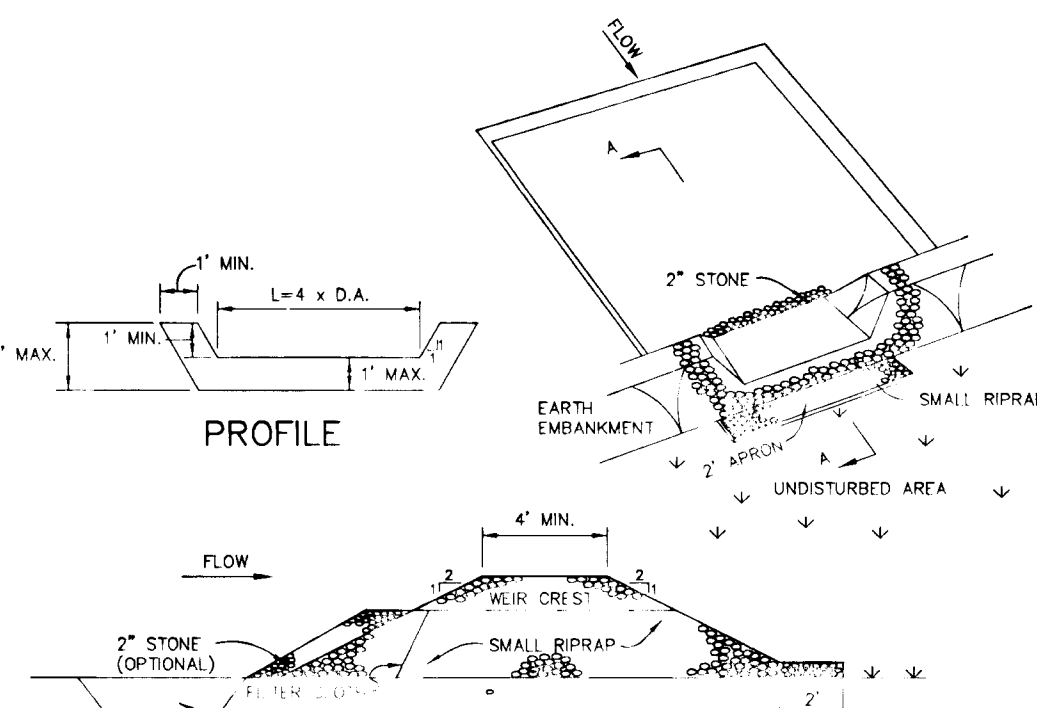
**STABILIZED CONSTRUCTION ENTRANCE**



**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 IMPOUNDED AGAINST IT.
- C. FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE, RESISTANT TO PULLING WITH A SAFE SIZE, EG: 40-BS, 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.
- E. ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MIN. WIDTH BY THROAT LENGTH PLUS 4") TO THE 2"x4" WEIR (MEASURING THROAT LENGTH PLUS 2") AS SHOWN ON THE STANDARD DRAWING.
- F. PLACE A PIECE OF APPROVED FILTER CLOTH (40-BS SIZE) OF THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH TO THE 2"x4" WEIR.

**CURB INLET PROTECTION**



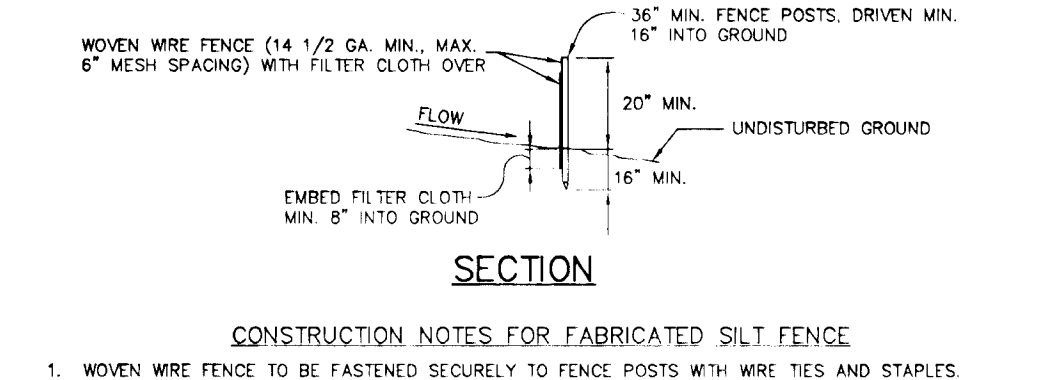
**STONE OUTLET SEDIMENT TRAP**

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 RIPRAP 4"-8" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SLOPE ON 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.

**CONSTRUCTION SPECIFICATIONS**

1. WOVEN WIRE FENCE (MIN. 14 1/2 GAUGE, MAX. 6" MESH SPACING)
2. FILTER CLOTH TO BE FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND 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 FILTER FENCE.

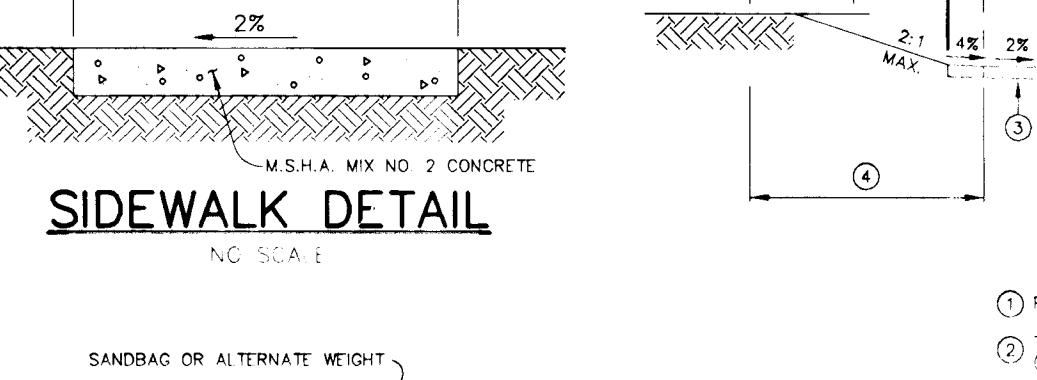
**SILT FENCE DETAIL**



**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 TIES SPACED EVERY 24" AT TOP AND 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.

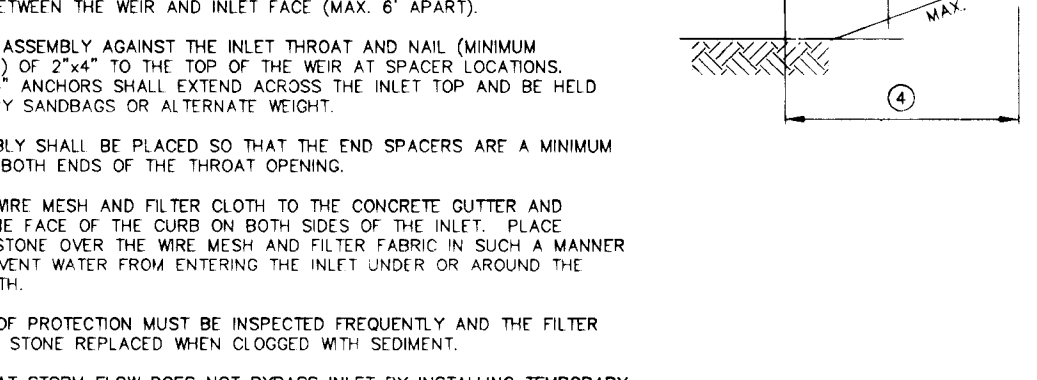
**SIDEWALK DETAIL**



**CONSTRUCTION SPECIFICATIONS**

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (WOODEN, REVERSE COMB AND STANDARD COMB CURB & GUTTER - SEE ROAD PLAN).
3. 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 25 M.P.H.
6. RESIDENTIAL DRIVEWAY ENTRANCE PER HD. CD. STD. DETAIL R-6.01.

**TYPICAL SECTION CUL-DE-SAC STREET w/ DRIVEWAYS**



**CONSTRUCTION SPECIFICATIONS**

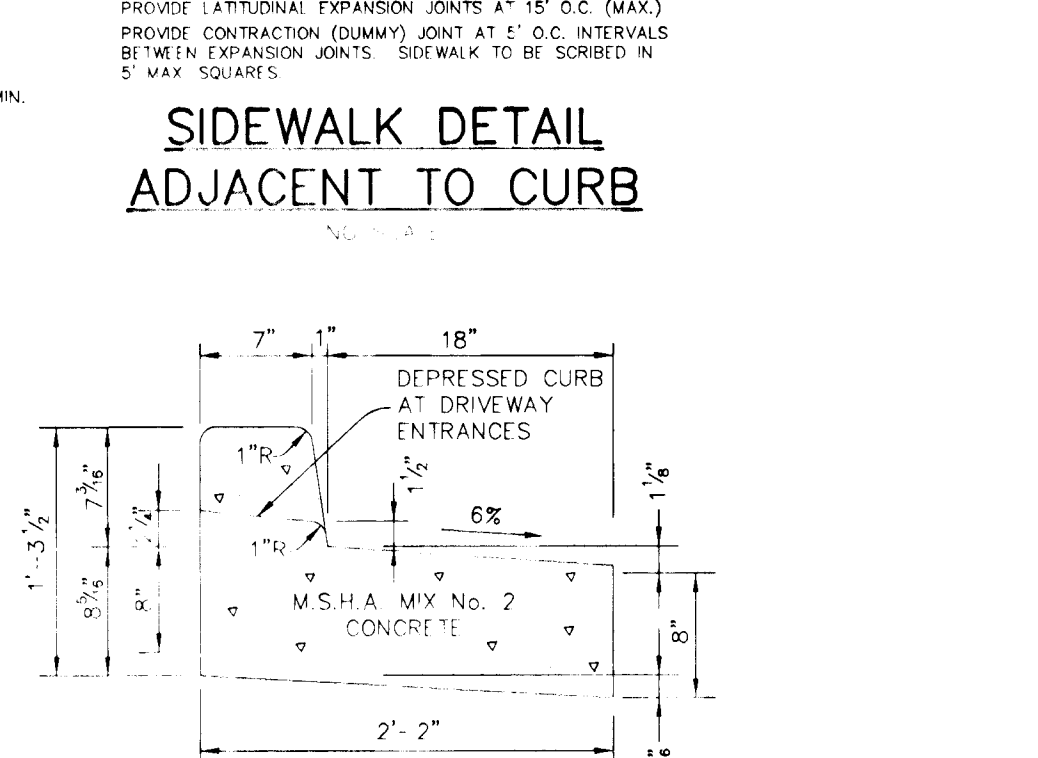
1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (WOODEN, REVERSE COMB CURB & GUTTER - SEE ROAD PLAN).
3. 5" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 25 M.P.H.



**SIDEWALK DETAIL ADJACENT TO CURB**

1. PROVIDE LATERAL EXPANSION JOINTS AT 15' O.C. (MAX).
2. PROVIDE CONTRACTION (DOWRY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SORBED IN 5' MAX SQUARES.

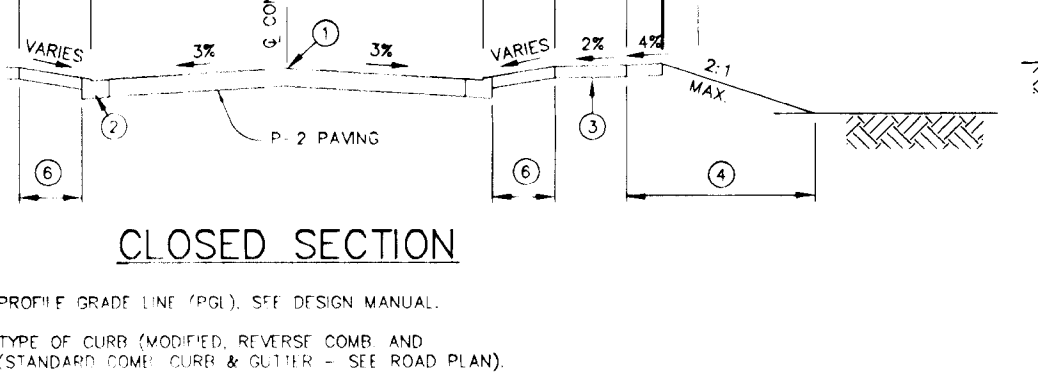
**REVERSE 7" COMBINATION CURB AND GUTTER**



**CONSTRUCTION SPECIFICATIONS**

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (WOODEN, REVERSE COMB AND STANDARD COMB CURB & GUTTER - SEE ROAD PLAN).
3. 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 25 M.P.H.
6. RESIDENTIAL DRIVEWAY ENTRANCE PER HD. CD. STD. DETAIL R-6.01.

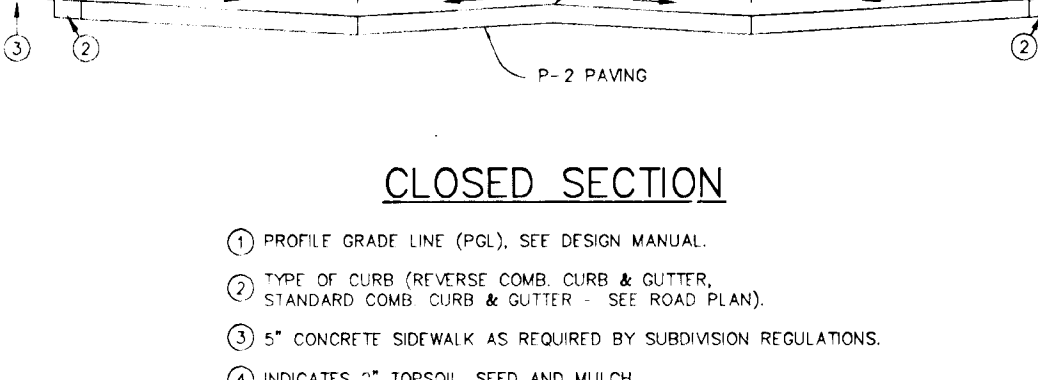
**TYPICAL SECTION CUL-DE-SAC STREET**



**CONSTRUCTION SPECIFICATIONS**

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (WOODEN, REVERSE COMB CURB & GUTTER - SEE ROAD PLAN).
3. 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 25 M.P.H.

**TYPICAL SECTION WITH PARKING STALLS**



**CONSTRUCTION SPECIFICATIONS**

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (WOODEN, REVERSE COMB CURB & GUTTER - SEE ROAD PLAN).
3. 5" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 25 M.P.H.



**TYPICAL SECTION CUL-DE-SAC STREET**

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (WOODEN, REVERSE COMB CURB & GUTTER - SEE ROAD PLAN).
3. 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 25 M.P.H.

**CONSTRUCTION SPECIFICATIONS**

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (WOODEN, REVERSE COMB CURB & GUTTER - SEE ROAD PLAN).
3. 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 25 M.P.H.

**TYPICAL SECTION WITH PARKING STALLS**



**CONSTRUCTION SPECIFICATIONS**

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB (WOODEN, REVERSE COMB CURB & GUTTER - SEE ROAD PLAN).
3. 5" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.
5. DESIGN SPEED = 25 M.P.H.

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.

*James P. Inc.* 11/14/95  
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 Engler/PAE* 12/4/95  
NATURAL RESOURCES EVALUATION SERVICE DATE

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

*John R. Robertson* 10/1/95  
HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE

DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

*Jim Swinman* 1/3/96  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

*Chad Dammann* 12/29/95  
CHIEF, DEVELOPMENT AND 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 2 LOTS 70 - 118

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

TITLE DETAIL SHEET

RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8800 FAX: 410-997-9282

11-30-95 DATE

DESIGNED BY: C.J.R.

DRAWN BY: DAM

PROJECT NO.: H00095H10600 PH2RDS.DWG

DATE: NOVEMBER 29, 1995

SCALE: AS SHOWN

DRAWING NO. 4 OF 4

JAYKANT D. PAREKH #19148

STATE OF MARYLAND PROFESSIONAL ENGINEER

11-30-95 DATE

DESIGNED BY: C.J.R.

DRAWN BY: DAM

PROJECT NO.: H00095H10600 PH2RDS.DWG

DATE: NOVEMBER 29, 1995

SCALE: AS SHOWN

DRAWING NO. 4 OF 4

JAYKANT D. PAREKH #19148

F-36-27

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