

**BENCHMARKS**

WB & A #2352	BM - IRON PIPE 240' FEEL POINT OF CENTERLINE STA. 15+00.0 COLUMBIA GATEWAY DRIVE ELEV. 338.29
WB & A #714	BM - IRON PIPE 230' FEEL POINT OF CENTERLINE STA. 34+30.0 COLUMBIA GATEWAY DRIVE ELEV. 315.29

**REVIEWED:** HOWARD COUNTY HEALTH DEPARTMENT

*James M. Helm* 9-18-90  
COUNTY HEALTH OFFICER **NOT FOR DEVELOPMENT OR CONSTRUCTION** DATE

**APPROVED:** HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*John P. Blanton* 10-25-90  
PLANNING DIRECTOR DATE

**APPROVED:** HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*James M. Helm* 9-22-90  
DIRECTOR DATE

*James M. Helm* 9-22-90  
CHIEF BUREAU OF ENGINEERING DATE

Date	No.	Revision Description

**COLUMBIA GATEWAY**  
PARCEL S-4  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**OWNER/DEVELOPER**  
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY  
10275 LITTLE PATRIOT PARKWAY  
COLUMBIA, MARYLAND 21043

**DAFT McCUNE WALKER, INC.**  
LAND PLANNING CONSULTANTS  
LANDSCAPE ARCHITECTS  
ENGINEERS SURVEYORS

10011A - 10 - PARKWAY AND AVENUE  
TOWSON, MD 21284  
TEL: PHONES: 278-3315

**TITLE**  
SITE DEVELOPMENT PLAN  
MASS GRADING PLAN

SUBDIVISION NAME	COLUMBIA GATEWAY	SECT./AREA	LOT/PARCEL	S-4
PLAT/ OR LTR	BLOCK	ZONE	TAX/ZONE MAP	ELEC. DIST.
		M-1	43	6
WATER CODE				CENSUS TR.
				10065.02

**ADDRESS CHART**

LOT NUMBER	STREET ADDRESS

Des By	JMG	Scale	1" = 50'	Proj. No.	89126
Drn By	JMG	Date	1/24/90		
Chk By		Approved			1 OF 3

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

*James M. Helm* 9/27/90  
S.S. SOIL CONSERVATION SERVICE DATE

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

*John P. Blanton* 9/27/90  
HOWARD S.C.D. DATE

**CERTIFICATION 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.

*John P. Blanton* 1/29/90  
DATE

**CERTIFICATION 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John H. N. J.* 1/30/90  
DATE

**SITE CONDITION:** SITE IS A HARDWOOD FOREST COMPOSED OF A MIXTURE OF DECIDUOUS TREES 15'-30' IN DIAMETER

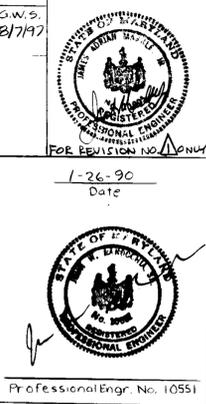
**SITE ANALYSIS:** AREA OF PARCEL 16.27 AC / 701,592 FT<sup>2</sup> PRESENT ZONING: M-1

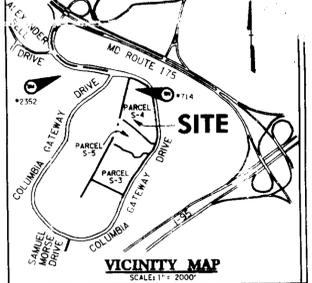
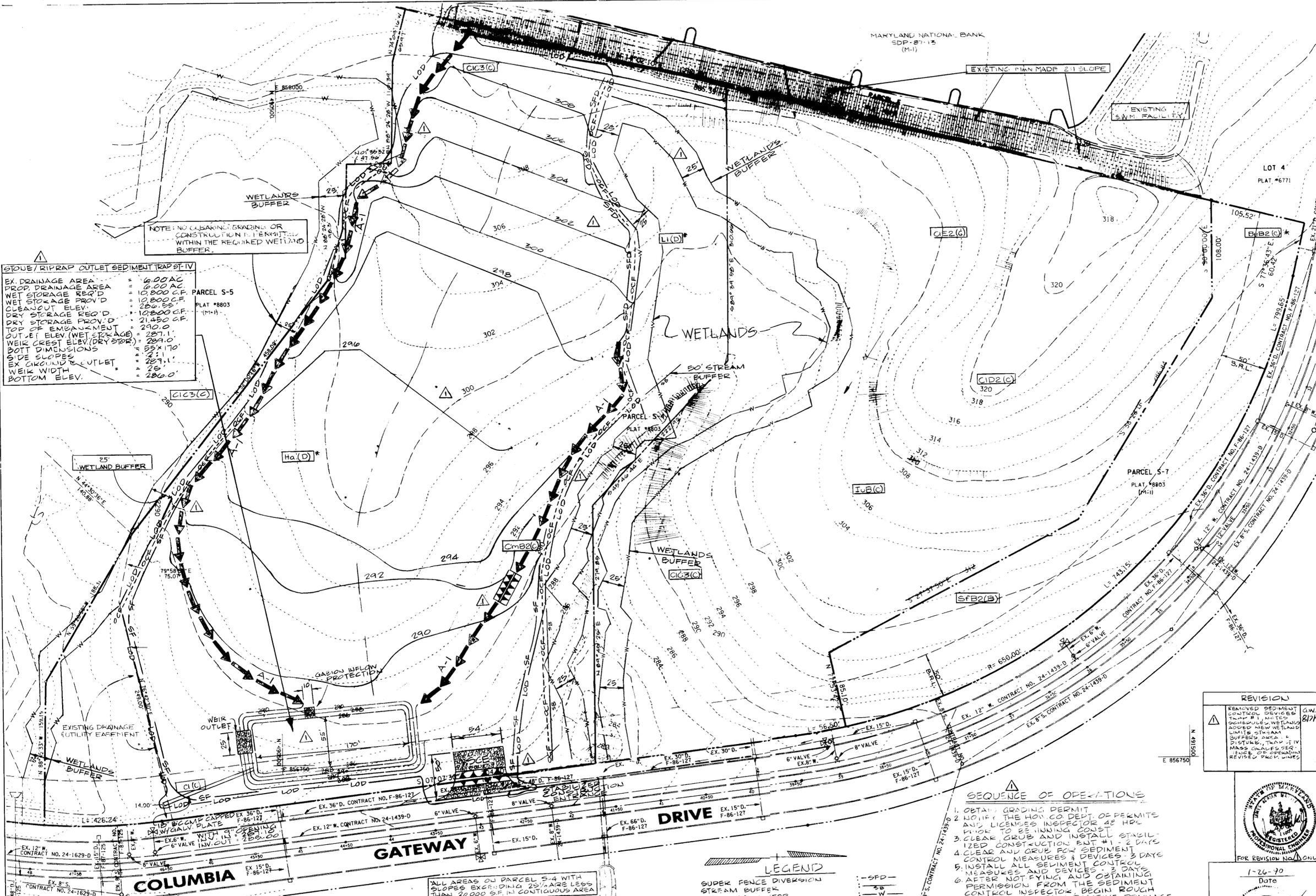
**LEGEND**

EXISTING CONTOURS	---
PROPOSED CONTOURS	---
SLOPES: 15-25%	---
SLOPES: EXCEEDING 25%	---
DRAINAGE AREA LIMIT	---
WETLANDS BUFFER	---

**NOTE:** ANY DAMAGE TO COUNTY OWNED RIGHTS-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.

ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME III - STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1989 AMENDMENTS.





**BENCHMARKS**

WR& A #2352	BM - IRON PIPE 240 FEET RIGHT OF CENTERLINE STA. 15+00, COLUMBIA GATEWAY DRIVE ELEV. 338.29'
WR& A #714	BM - IRON PIPE 230 FEET RIGHT OF CENTERLINE STA. 34+30, COLUMBIA GATEWAY DRIVE ELEV. 315.29'

**STONE/RIPRAP OUTLET SEDIMENT TRAP # IV**

EX. DRAINAGE AREA	= 6.00 AC
PROP. DRAINAGE AREA	= 6.00 AC
WET STORAGE REQ'D	= 10,800 CF
WET STORAGE PROV'D	= 10,800 CF
CLEANOUT ELEV.	= 286.98'
DRY STORAGE REQ'D	= 10,800 CF
DRY STORAGE PROV'D	= 21,450 CF
TOP OF EMBANKMENT	= 290.0'
OUTLET ELEV. (WET STORAGE)	= 287.1'
WEIR CREST ELEV. (DRY STORAGE)	= 294.0'
BOTT. DIMENSIONS	= 55' x 170'
SIDE SLOPES	= 2:1
EX. CIRCUMF. @ OUTLET	= 287.1'
WEIR WIDTH	= 55'
BOTTOM ELEV.	= 286.0'

REVIEWED: HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DATE: 9-18-91

DATE: 10-25-90

DATE: 9/2/91

DATE: 9/1/90

DATE: 7/1/91

**COLUMBIA GATEWAY**

PARCEL S-4  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**OWNER/DEVELOPER**

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LAND PLANNING CONSULTANTS  
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200 EAST PENNSYLVANIA AVENUE  
TOWSON, MD 21284  
TELEPHONE: 410 296 5335

**TITLE**

SITE DEVELOPMENT PLAN  
SEDIMENT & EROSION CONTROL PLAN

SUBDIVISION NAME	COLUMBIA GATEWAY	SECT./AREA	N/A	LOT/PARCEL	S-4
PLAT# OR L/P	08025	BLOCK#	M-1	TAX/ZONE MAP	43
WATER CODE		SEWER CODE		ELEC. DIST.	6
				CENSUS TR.	6065.02
ADDRESS CHART					
LOT NUMBER					
STREET ADDRESS					

Des By	JMG	Scale	1" = 50'	Proj. No.	89126
Drn By	JCW	Date	1/24/90		2 OF 3
Chk By	Approved				

**SEQUENCE OF OPERATIONS**

1. OBTAIN GRADING PERMIT
2. NOTIFY THE HOW. CO. DEPT. OF PERMITS AND LICENSES INSPECTOR 48 HRS PRIOR TO BEGINNING CONSTRUCTION
3. CLEAR GRUB AND INSTALL STABILIZED CONSTRUCTION ENTRANCE
4. CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES AND DEVICES - 3 DAYS
5. INSTALL ALL SEDIMENT CONTROL MEASURES AND DEVICES - 2 DAYS
6. AFTER NOTIFYING AND OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR BEGIN ROUGH GRADING, MAINTAIN POSITIVE DRAINAGE TO SEDIMENT CONTROL MEASURES AND DEVICES - 2 DAYS
7. FINE GRADE THE ENTIRE SITE, MAINTAIN POSITIVE DRAINAGE TO SEDIMENT CONTROL MEASURES AND DEVICES STABILIZE ALL REMAINING AREA - 15 DAYS
8. AFTER NOTIFYING AND OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROL MEASURES AND DEVICES - 3 DAYS
9. FINE GRADE AND STABILIZE THESE AREAS - 3 DAYS

**LEGEND**

- SUPER FENCE DIVERSION
- STREAM BUFFER
- WETLANDS BUFFER
- ORANGE CONSTRUCTION FENCE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- INTERIM CONTOURS (SEDIMENT TRAPS)
- EXISTING DRAINAGE AREA LIMIT
- PROPOSED DRAINAGE AREA LIMIT
- LIMIT OF TEMPORARY STOCKPILE
- SILT FENCE
- EARTH DIKE
- STABILIZED CONSTRUCTION ENTRANCE
- MOUNTABLE BERM
- LIMIT OF DISTURBANCE
- SOIL LIMIT / TYPE / HYDRIC
- SLOPE: 15:25
- SLOPE: EXCEEDING 25:1

△ LIMIT OF DISTURBANCE  
311,060 SF OK 7.1+ AC ±

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

James M. Selman 8/17/90  
U.S. SOIL CONSERVATION SERVICE

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

John H. N. G. 8/17/90  
HOWARD S.C.D.

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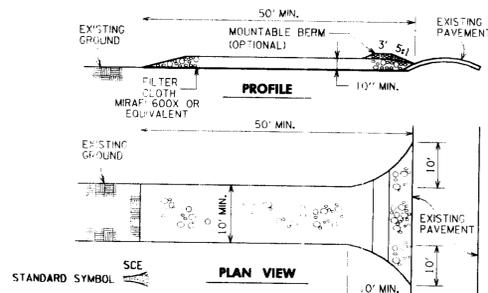
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John H. N. G. 1/29/90  
DATE

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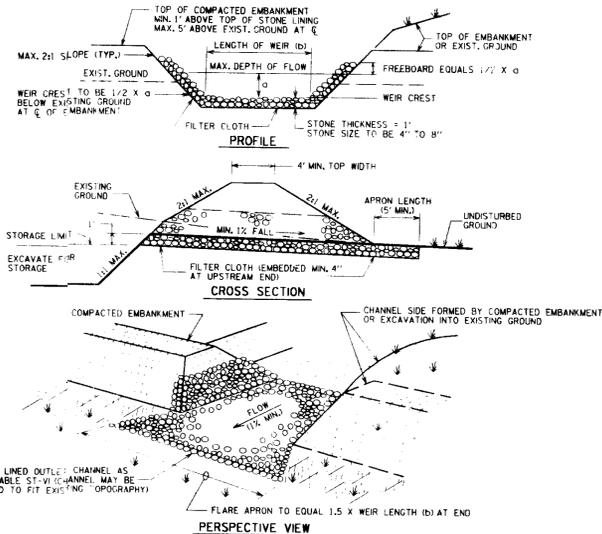
**CONSTRUCTION SPECIFICATIONS:**

- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH IS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN TEN (10) INCHES.
- WIDTH - TEN (10) FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER CLOTH - SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE, IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- 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 MULCH DRAINING INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

U.S. DEPT. OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MD. (SP-1)

**STABILIZED CONSTRUCTION ENTRANCE**

**NOTE:** PRIOR TO DREDGING THE SEDIMENT TRAP, THE WATER SHALL BE PUMPED OUT OF THE TRAP BY SUBMERGING THE SUCTION PERFORATED CYLINDERS OR OTHER METHOD APPROVED BY THE SEDIMENT CONTROL INSPECTOR. THE INTENT IS TO REMOVE THE WATER AND LEAVE THE SEDIMENTS IN THE TRAP.



**RRIPRAP OUTLET SEDIMENT TRAP ST-VI**

**CONSTRUCTION SPECIFICATIONS FOR ST-VI**

- THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
- THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER OBSTRUCTION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONAL MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVELING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF EMBANKMENT SHALL BE FIVE (5) FEET, MEASURED AT CENTERLINE OF EMBANKMENT.
- ALL FILL SLOPES SHALL BE 2:1 OR FLATTER; CUT SLOPES 1:1 OR FLATTER.
- ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED THE HEIGHT OF EMBANKMENT.
- STORAGE AREA PROVIDED SHALL BE FIGURED BY COMPUTING THE VOLUME AVAILABLE BEHIND THE OUTLET CHANNEL UP TO AN ELEVATION OF ONE (1) FOOT BELOW THE LEVEL WEIR CREST.
- FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO PLACEMENT OF STONE. SECTIONS OF FABRIC MUST OVERLAP AT LEAST ONE (1) FOOT WITH SECTION NEAREST THE ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
- STONE USED IN THE OUTLET CHANNEL SHALL BE FOUR (4) TO EIGHT (8) INCHES (BRRAP), TO PROVIDE A FILTERING EFFECT. A LAYER OF FILTER CLOTH SHALL BE EMBEDDED ONE (1) FOOT BACK INTO THE UPSTREAM FACE OF THE OUTLET STONE OR A ONE (1) FOOT THICK LAYER OF TWO (2) INCH OR FINER AGGREGATE SHALL BE PLACED ON THE DOWNSTREAM FACE OF THE OUTLET.
- 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. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED.
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
- THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- DRAINAGE AREA FOR THIS PRACTICE IS LIMITED TO 15 ACRES OR LESS.

**CONSTRUCTION SPECIFICATIONS FOR ST-VI**

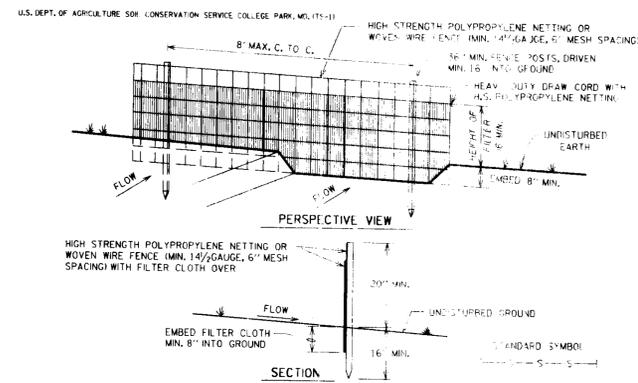
**SEQUENCE OF CONSTRUCTION**

- OBTAIN A GRADING PERMIT.
- NOTIFY THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS (992-2437) A MINIMUM OF 24 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE. (ONE DAY)
- CLEAR AND GRUB FOR SEDIMENT AND EROSION CONTROL MEASURES OR DEVICES, TRAPS 1 AND 2, DIKES, ETC. (ONE DAY)
- INSTALL AND STABILIZE ALL SEDIMENT AND EROSION CONTROL. (TWO DAYS)
- WITH THE PRIOR APPROVAL OF THE SEDIMENT CONTROL INSPECTOR CLEAR AND GRUB THE REMAINDER OF THE SITE. (ONE WEEK)
- MASS GRADING ENTIRE SITE, MAINTAIN MOUNTABLE DIKES AS GRADING OPERATIONS CONTINUE. DIKE MUST BE LEFT IN A WORKABLE, FUNCTIONING CONDITION AT THE END OF EACH WORK DAY. (THREE WEEKS)
- UPON COMPLETION OF MASS GRADING APPLY PERMANENT SEEDING TO THE ENTIRE SITE. (ONE DAY)
- WITH THE PRIOR PERMISSION OF THE SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SEDIMENT CONTROL DIVISION REMOVE ALL SEDIMENT CONTROL. FINE GRADE AND STABILIZE THESE AREAS. (ONE WEEK)

**Sediment Control Notes**

- A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1985 Maryland Standards and Specifications for Soil Erosion and Sediment Control.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within a seven calendar day period for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, 5:1, 4:1 days to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the Howard County Design Manual, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1985 Maryland Standards and Specifications for Soil Erosion and Sediment Control for permanent seedings (Sec. 51) and temporary seedings (Sec. 52) and mulching (Sec. 53). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:
  - Off-site area of site
  - Area Disturbed
  - Area to be Seeded or Paved
  - Area to be Vegetatively Stabilized
  - Total
  - Off-site Waste/Borrow Area Location
- Any sediment control practice which is disturbed by grading activity or placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided if deemed necessary by the Howard County Sediment Control Inspector.

**SEDIMENT CONTROL NOTES**



**CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**

- HIGH STRENGTH POLYPROPYLENE NETTING OR WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

**SILT FENCE**

**UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL PRACTICES**

- EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON UPSTREAM SIDE OF TRENCH.
- IMMEDIATELY FOLLOWING PIPE INSTALLATION, THE TRENCH SHALL BE BACKFILLED, COMPACTED AND IMMEDIATELY STABILIZED (MULCHED, SEED, AND/OR SOODED MECHANICAL STABILIZATION) AT THE END OF EACH WORK DAY.
- SILT FENCE SHALL BE PLACED IMMEDIATELY DOWN STREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED LONGER THAN ONE (1) WORKING DAY. (SILT FENCE AS PER SCS STANDARD DRAWING - SF-1)
- THE CONTRACTOR SHALL DISTURB AND OPEN TRENCH THE MINIMUM PRACTICAL AREA REQUIRED TO ACCOMPLISH THE WORK DESIGNATED FOR EACH DAY.
- ALL SEDIMENT AND EROSION CONTROL PRACTICES AND VEGETATIVE STABILIZATION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS.

**UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL**

REVIEWED BY: HOWARD COUNTY HEALTH DEPARTMENT	DATE: 9-18-90
APPROVED BY: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING	DATE: 9-25-90
APPROVED BY: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	DATE: 9-26-90
APPROVED BY: CHIEF BUREAU OF ENGINEERING	DATE: 10-10-90

Date	No.	Revision Description

**COLUMBIA GATEWAY**

PARCEL S-4  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**OWNER/DEVELOPER**

THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY  
10073 LITTLE PATENT PARKWAY  
COLUMBIA, MARYLAND 21043

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200 EAST PENNSYLVANIA AVENUE  
TOWSON, MD. 21286  
TELEPHONE: 301-286-1333

**TITLE**

SEDIMENT & EROSION CONTROL DETAILS

SUBDIVISION NAME	COLUMBIA GATEWAY	SECT./AREA	LOT/PARCEL #
PLAT OR L/P	2803	ZONE	M-1
BLOCK	43	TAX/ZONE MAP	6
ELEC. DIST.	43	CENSUS TR.	6065.02

**ADDRESS CHART**

LOT NUMBER STREET ADDRESS

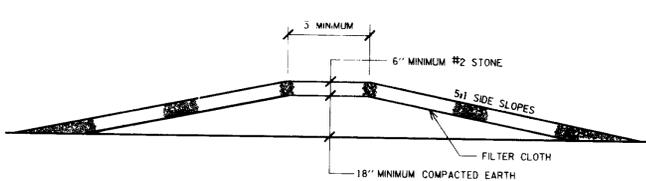
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Drn By JCW-WALI Date JAN. 24, 1990 3 of 3

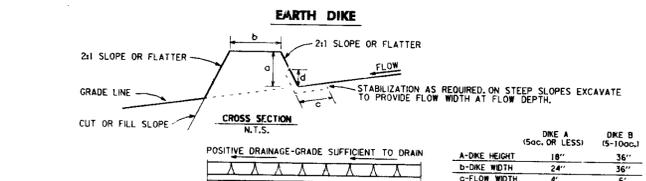
Chk By JHM

Professional Engr. No. 10551

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**MOUNTABLE BERM DETAIL**



**CONSTRUCTION SPECIFICATIONS**

- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
- 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 EITHER DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
- STABILIZATION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (SEE FLOW CHANNEL BELOW).

**FLOW CHANNEL STABILIZATION**

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSDOR 500 2" STONE LINED RIP-RAP 4"-8"
3	5.1-8.0%	SEED WITH JUTE OR SOIL 2" STONE	LINED RIP-RAP 4"-8"
4	8.1-20%	LINED RIP-RAP 4"-8"	ENGINEERING DESIGN

**PERMANENT SEEDING NOTES**

- STONE TO BE 2" STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3" THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
- RIP-RAP TO BE 4"-8" IN A LAYER AT LEAST 8" THICKNESS AND PRESSED INTO THE SOIL.
- APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
- PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

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1/29/90 DATE

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1/30/90 DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

James M. Helms 8/2/90  
U.S. SOIL CONSERVATION SERVICE

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John R. Roberts 8/19/90  
HOWARD S.C.D.

PLAN NUMBER