









APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER DATE  
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 PLANNING DIRECTOR DATE 8-10-87  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 8-7-87  
 APPROVED FOR PUBLIC WATER, PUBLIC SEWER AND STORM DRAINAGE SYSTEMS AND ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 DIRECTOR DATE 8/5/87  
 CHIEF, BUREAU OF ENGINEERING DATE 8-5-87

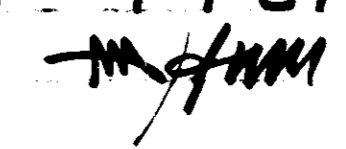
ADDRESS CHART	
STREET ADDRESS	LOT
9340 SPRING WATER PATH	57
9336	58
9332	59
9328	60

ELEVATIONS SEWER H.C.	
LOT NO.	INVERT
57	313.97
58	314.48
59	314.45
60	314.73

BUILDING COVERAGE			
LOT NO.	LOT AREA - S.F.	HOUSE AREA - S.F.	% LOT COVERAGE
57	14,000	1,707	12.2
58	29,895	1,854	7.8
59	17,502	1,707	9.8
60	14,469	1,854	12.8

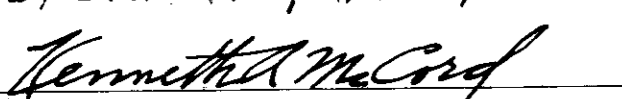
SUBDIVISION NAME	SECT./AREA	LOT #
VILLAGE OF KINGS CONTRIVANCE	5 2	THRU 51 THRU 60
PLAT BLOCK ZONE TAX/ZONE MAP ELEC/DIST. CENSUS TR.	R-20 47	0 6024
WATER CODE	E18	SEWER CODE
		G150000

NO.	DATE	DESCRIPTION OF REVISION
1	7/9/87	As per Planning, DPW & SCS Comments

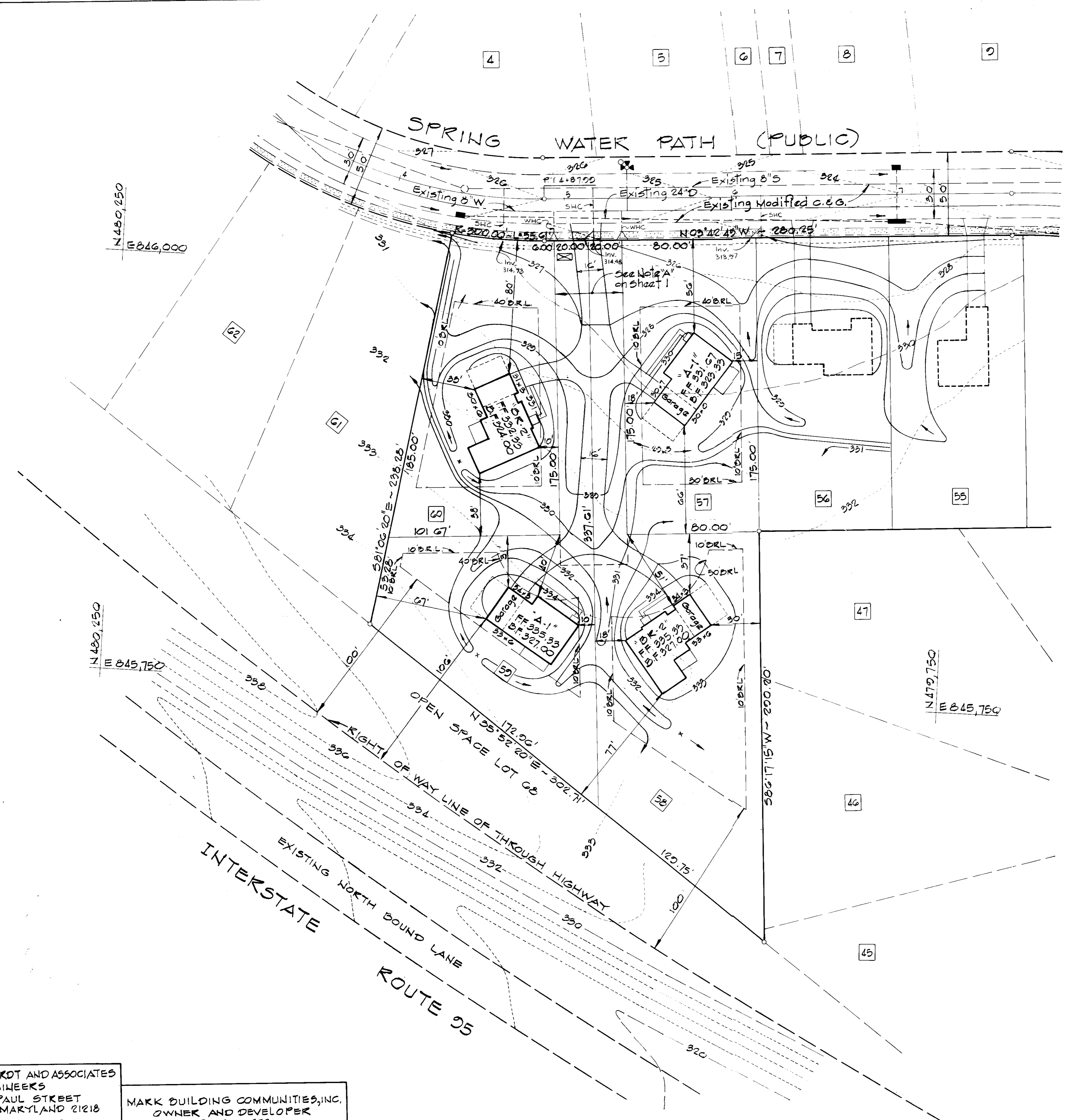
APPROVED  
 DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION  
 HOWARD COUNTY MARYLAND  
 DATE 7-7-87  


**COLUMBIA**  
 SITE PLANS FOR  
 VILLAGE OF KINGS CONTRIVANCE  
 SECTION 5 AREA 2  
 LOTS 1 THRU 18 AND 51 THRU 60  
 (SINGLE FAMILY DETACHED DWELLINGS)  
 GRADING PLAN  
 SHEET 3 OF 5  
 ELECTION DISTRICT NO. 6  
 HOWARD COUNTY MARYLAND  
 TAX MAP 47  
 DATE: JUNE 8, 1987  
 SCALE: 1"=30'



WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS  
 2315 ST. PAUL STREET  
 BALTIMORE, MARYLAND 21218  
  
 KENNETH A. MCCORK, P.E. NO. 1974

MARK BUILDING COMMUNITIES, INC.  
 OWNER AND DEVELOPER  
 P.O. BOX 1272  
 COLUMBIA, MARYLAND 21044



**SEDIMENT TRAP DESIGN DATA**

**TRAP #1 - STONE OUTLET**

DRAINAGE AREA: 2.5 ACRES  
 DISTURBED AREA: 1.2 ACRES  
 VOLUME REQ'D: 6742.5:168 CT.  
 VOLUME AVAILABLE: 100 CT.  
 TOP BERM: 328.0  
 WEIR CREST: 327.0  
 LENGTH OF WEIR: 10'  
 STORAGE: 326.0  
 BOTTOM: 322.5

**TRAP #2 - STONE OUTLET**

DRAINAGE AREA: 3.1 ACRES  
 DISTURBED AREA: 3.1 ACRES  
 VOLUME REQ'D: 6742.5:208 CT.  
 VOLUME AVAILABLE: 213 CT.  
 TOP BERM: 309.0  
 WEIR CREST: 308.0  
 LENGTH OF WEIR: 12'  
 STORAGE: 307.0  
 BOTTOM: 300.0

**TRAP #3 - STONE OUTLET**

DRAINAGE AREA: 2.2 ACRES  
 DISTURBED AREA: 2.2 ACRES  
 VOLUME REQ'D: 6742.5:147 CT.  
 VOLUME AVAILABLE: 147 CT.  
 TOP BERM: 309.0  
 WEIR CREST: 308.0  
 LENGTH OF WEIR: 9'  
 STORAGE: 307.0  
 BOTTOM: 305.0

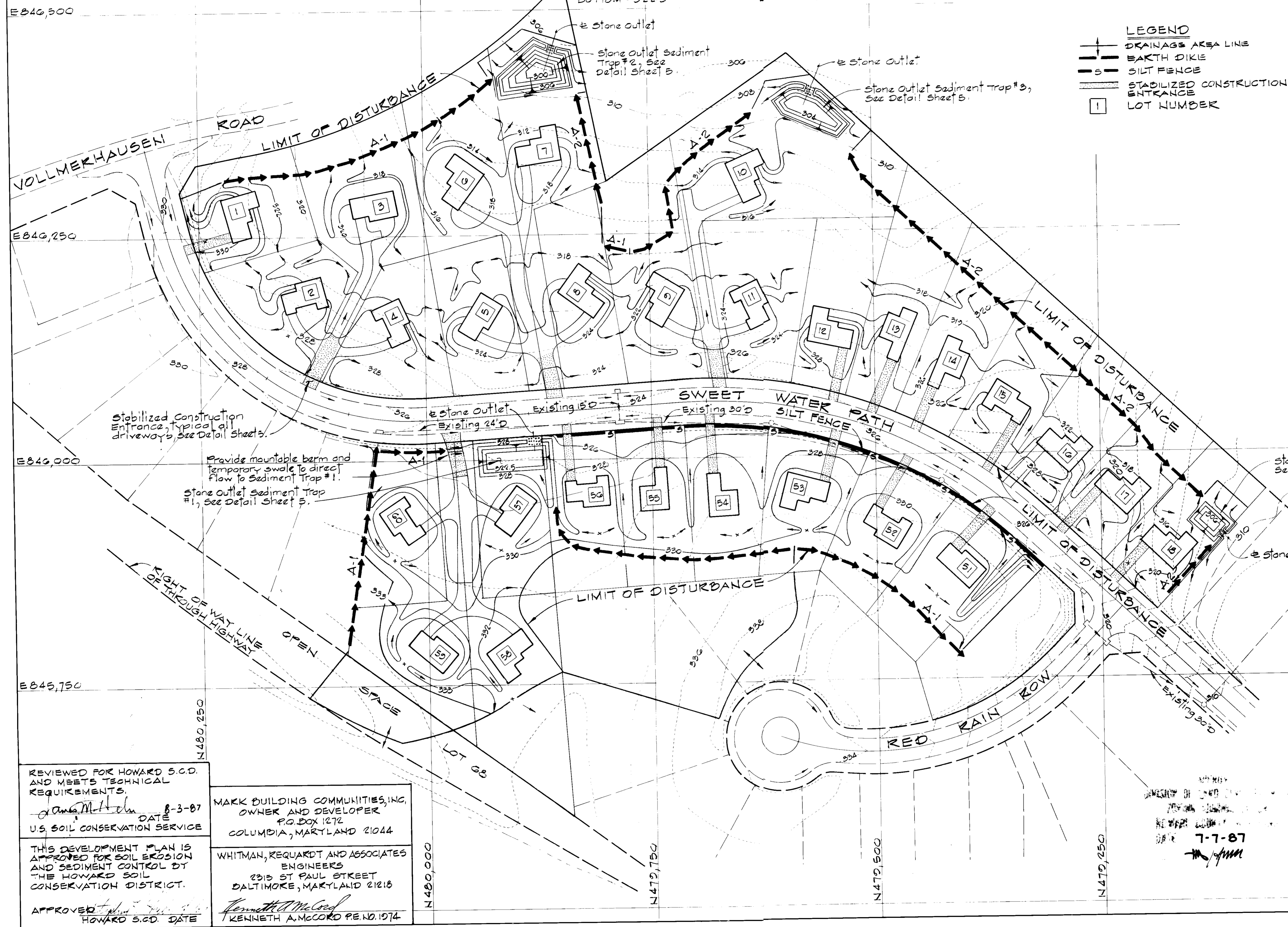
**TRAP #4 - STONE OUTLET**

DRAINAGE AREA: 0.8 ACRES  
 DISTURBED AREA: 0.8 ACRES  
 VOLUME REQ'D: 6742.5:54 CT.  
 VOLUME AVAILABLE: 54 CT.  
 TOP BERM: 312.0  
 WEIR CREST: 311.0  
 LENGTH OF WEIR: 5'  
 STORAGE: 310.0  
 BOTTOM: 306.0

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 PLANNING DIRECTOR \_\_\_\_\_ DATE 8-10-87  
 CHIEF DIVISION OF LAND DEVELOPMENT \_\_\_\_\_ DATE 8-7-87  
 APPROVED FOR PUBLIC WATER, PUBLIC SEWER AND STORM DRAINAGE SYSTEMS AND ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 DIRECTOR \_\_\_\_\_ DATE 8-6-87  
 CHIEF, BUREAU OF ENGINEERING \_\_\_\_\_ DATE 8-5-87

**LEGEND**

- DRAINAGE AREA LINE
- EARTH DIKE
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- LOT NUMBER



**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.  
 Kenneth A. McCord 5-27-87  
 KENNETH A. MCCORD 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.  
 Lawrence I. Rosenberg 5-27-87  
 LAWRENCE I. ROSENBERG DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.  
 DATE 8-3-87  
 U.S. SOIL CONSERVATION SERVICE

MARK BUILDING COMMUNITIES, INC.  
 OWNER AND DEVELOPER  
 P.O. BOX 1272  
 COLUMBIA, MARYLAND 21044

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
 HOWARD S.C.D.

WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 2315 ST PAUL STREET  
 BALTIMORE, MARYLAND 21218  
 Kenneth A. McCord P.E. NO. 1074

NO.	DATE	DESCRIPTION OF REVISION
1	7/14/87	As per S.C.S. Comments

**COLUMBIA SITE PLANS**  
 FOR  
 VILLAGE OF KINGS CONTRIVANCE  
 SECTION 5 AREA 2  
 LOTS 1 THRU 18 AND 51 THRU 60  
 (SINGLE FAMILY DETACHED DWELLINGS)  
**SEDIMENT CONTROL PLAN**  
 SHEET 4 OF 5  
 ELECTION DISTRICT NO. 6  
 HOWARD COUNTY MARYLAND  
 TAX MAP 47  
 DATE: JUNE 8, 1987 SCALE: 1" = 50'



**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.

**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/1000 square ft) and 500 lbs per acre 10-10-10 fertilizer (14 lbs/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/1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

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

**Mulching -** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

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

**TEMPORARY SEEDING NOTES**

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

**Seedbed Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

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

**Seeding -** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/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.

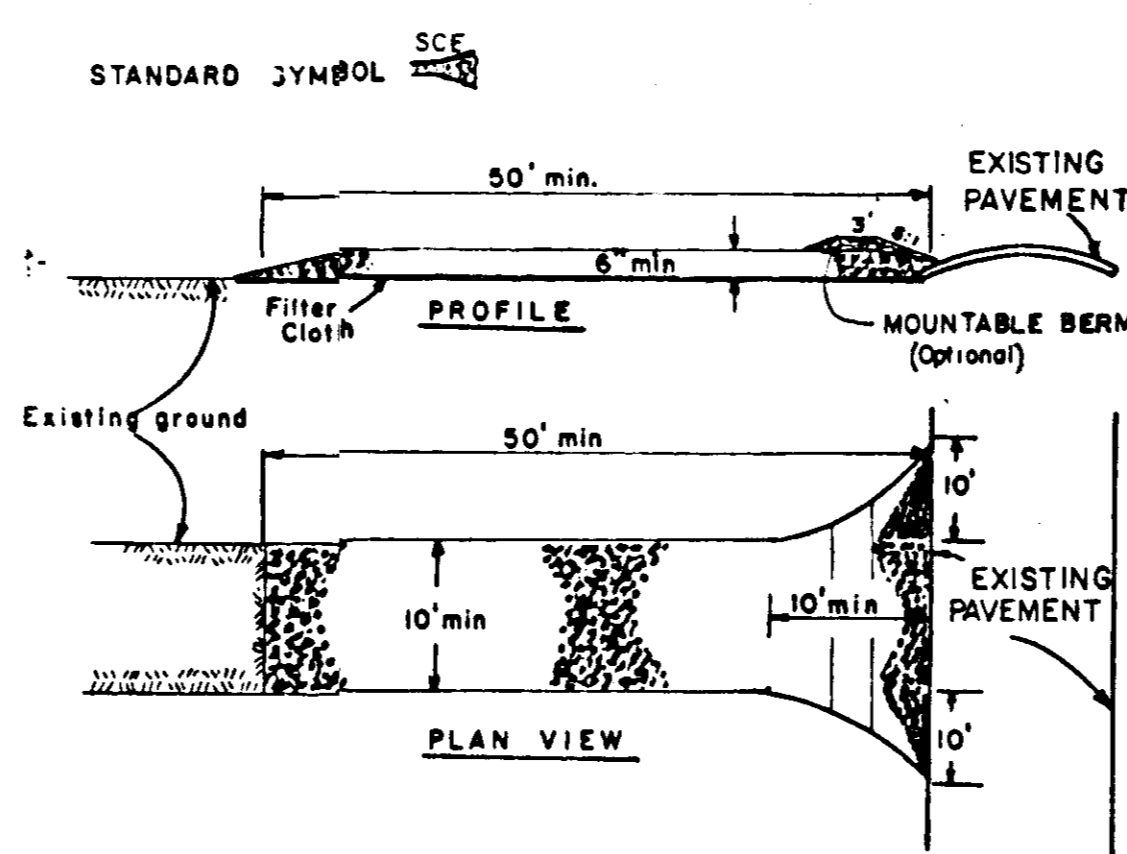
**Mulching:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/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.

**SEDIMENT CONTROL NOTES**

- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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 all other disturbed or graded areas on the project site.
- 4) 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.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52.) Temporary stabilization with mulch alone 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: 11.5 Acres  
Area Disturbed: 9.2 Acres  
Area to be roofed or paved: 1.7 Acres  
Area to be vegetatively stabilized: 7.5 Acres  
Total Cut: 18,000 Cu. yds  
Total Fill: 18,000 Cu. yds  
Offsite waste/borrow area location
- 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 DPW sediment control inspector.
- 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

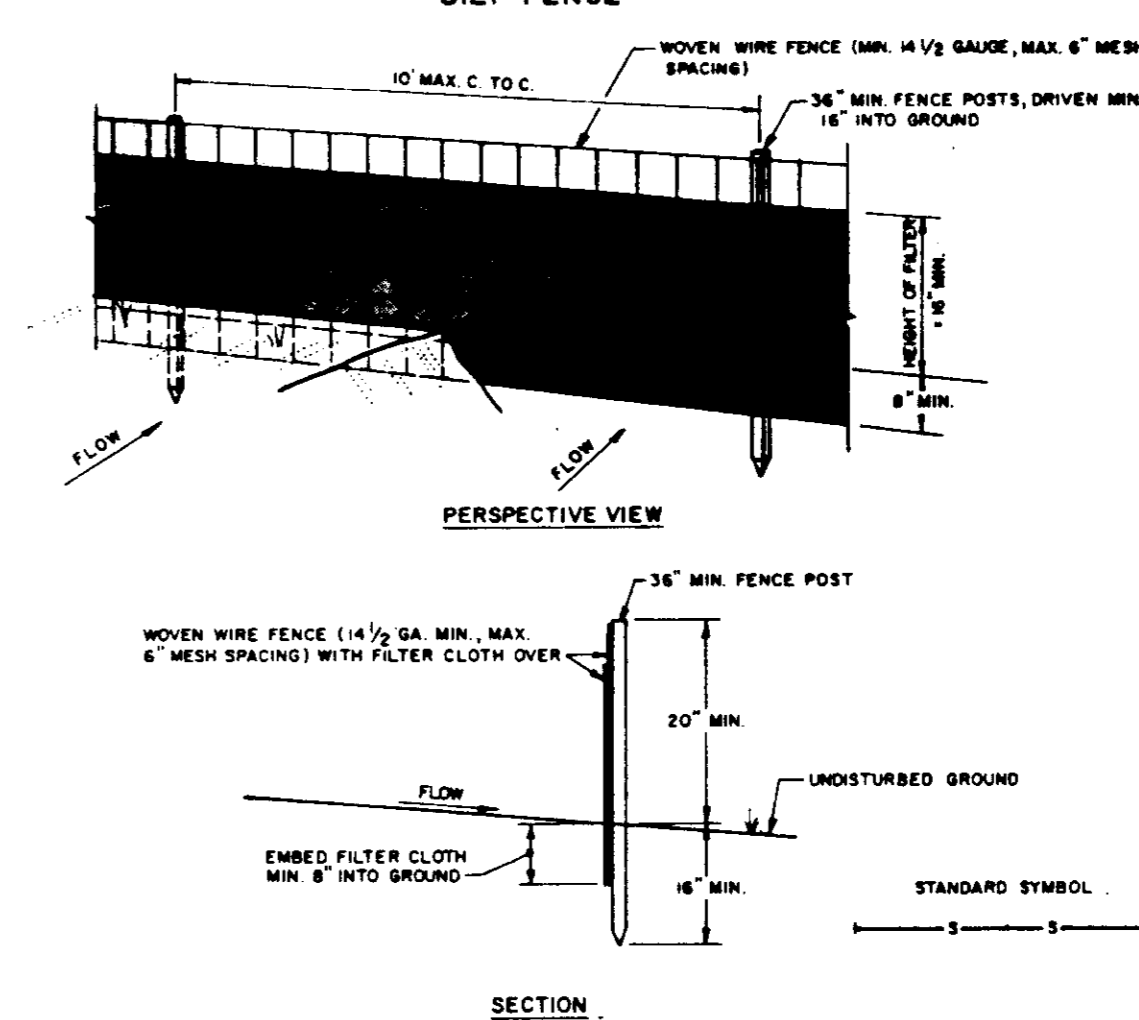
**STABILIZED CONSTRUCTION ENTRANCE**  
not to scale



**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 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. 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.
7. 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 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.
8. 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.
9. Periodic inspection and needed maintenance shall be provided after each rain.

**SILT FENCE**



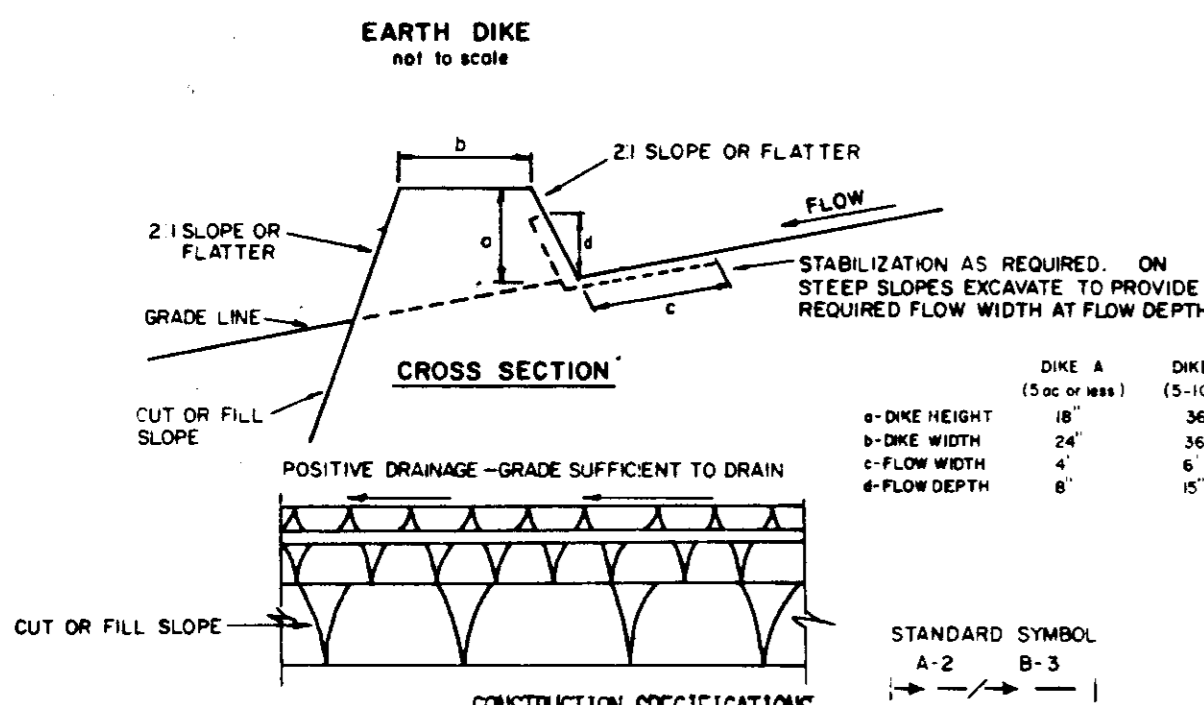
**CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES 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 AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

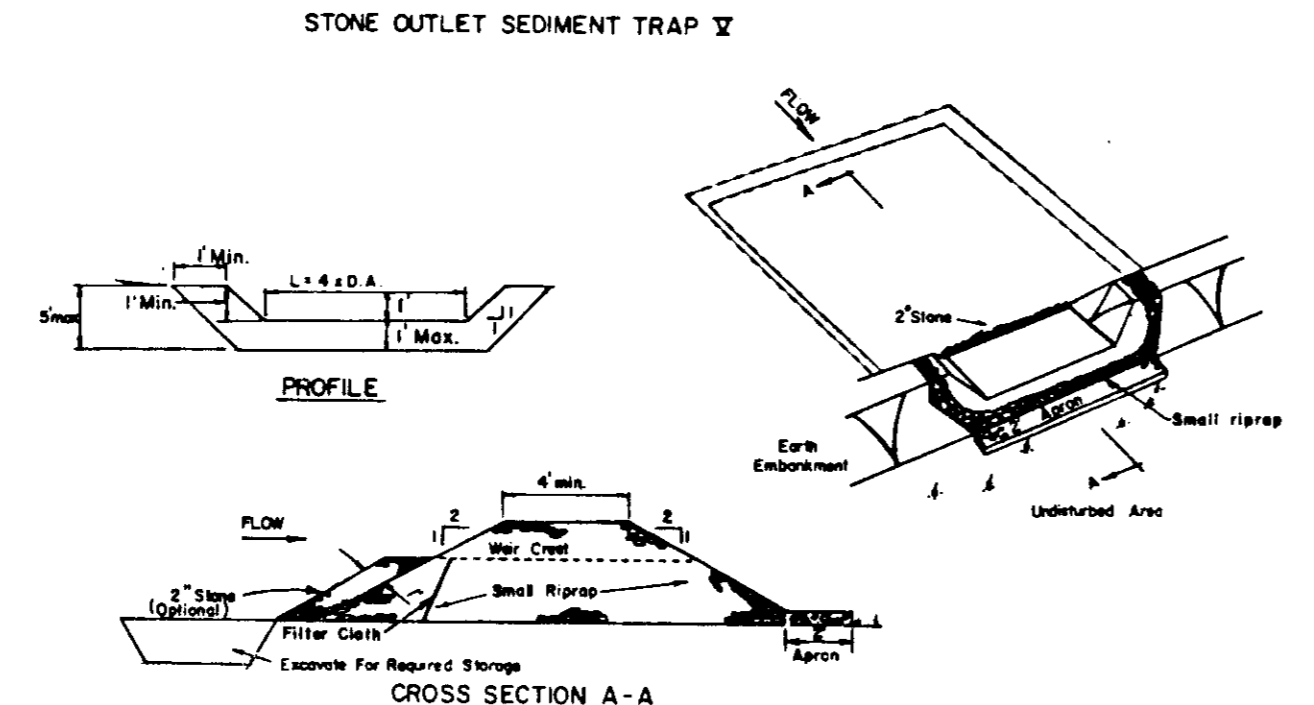
- POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD  
FENCE: WOVEN WIRE, 14" GA. 6" MAX. MESH OPENING  
FILTER CLOTH: FILTER X, TERRAZOLON, STABILINKA 1500 OR APPROVED EQUAL  
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

**SEQUENCE OF CONSTRUCTION**

1. OBTAIN GRADING PERMIT.
2. CLEAR AND GRUB AREAS FOR SEDIMENT CONTROL FACILITIES ONLY. (3 DAYS)
3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES ON ALL DRIVEWAYS, SEDIMENT TRAPS 1, 2, 3, AND 4, EARTH DIKES AND SILT FENCES. (4 DAYS)
4. GRADE LOTS. (2 WEEKS)
5. CONSTRUCT DWELLINGS AND APPURTENANCES AND SEED YARDS. (3 MONTHS)
6. REMOVE ALL SEDIMENT CONTROL FACILITIES AFTER GRASS IS ESTABLISHED ON ALL LOTS.



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.
- | TYPE OF TREATMENT | FLOW CHANNEL STABILIZATION |                                  |
|-------------------|----------------------------|----------------------------------|
|                   | CHANNEL BROAD              | DIKE A                           |
| 1                 | 5-3.0X                     | SEED AND STRAW MULCH             |
| 2                 | 3.1-5.0X                   | SEED AND STRAW MULCH             |
| 3                 | 5.1-8.0X                   | SEED WITH JUTE, OR SOD; 2" STONE |
| 4                 | 8.1-20X                    | LINED RIP-RAP 4-8"               |
- A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.  
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED 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.



- OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.
- CONSTRUCTION SPECIFICATIONS FOR ST-V**
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 side 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.
- Maximum Drainage Area: 5 Acres

APPROVED  
DIVISION OF LAND DEVELOPMENT &  
ZONING ADMINISTRATION  
HOWARD COUNTY, MARYLAND  
DATE 7-7-87

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS  
DATE 8-3-87  
US SOIL CONSERVATION SERVICE

MARK BUILDING COMMUNITIES, INC.  
OWNER AND DEVELOPER  
P.O. BOX 1272  
COLUMBIA, MARYLAND 21044

WHITMAN, REQUARDT AND ASSOCIATES  
ENGINEERS  
2315 ST. PAUL STREET  
BALTIMORE, MARYLAND 21218

KENNETH A. MCCORD  
REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR  
RE NO. 1974



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."  
DATE 5-27-87  
KENNETH A. MCCORD

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."  
DATE 5-27-87  
LAWRENCE I. ROSENBERG

NO.	DATE	DESCRIPTION OF REVISION
		COLUMBIA SITE PLANS FOR VILLAGE OF KINGS CONTRIVANCE SECTION 5 AREA 2 LOTS 1 THRU 18 AND 51 THRU 60 (SINGLE FAMILY DETACHED DWELLINGS) SEDIMENT CONTROL DETAILS SHEET 5 OF 5
		ELECTION DISTRICT NO. 6 HOWARD COUNTY MARYLAND TAX MAP 47 DATE: JUNE 8, 1987