

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 600 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.

Inspection - Inspect all seeded areas and make needed repairs, replacements and reseedsings.

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 25 bushels 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.

TYPE OF TREATMENT	AMOUNT	DIKE A	DIKE B
1	6 Riprap	Seed & Straw Mulch	Seed or Straw Mulch
2	1.5 - 3.0%	Seed & Straw Mulch	Seed or Straw Mulch
3	3.1 - 5.0%	Seed & Straw Mulch	Seed or Straw Mulch
4	5.1 - 10.0%	Seed or Straw Mulch	Seed or Straw Mulch
5	10.1 - 20.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone
6	20.1 - 30.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone
7	30.1 - 40.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone
8	40.1 - 50.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone
9	50.1 - 60.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone
10	60.1 - 70.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone
11	70.1 - 80.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone
12	80.1 - 90.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone
13	90.1 - 100.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone

7) Site Analysis: Total Area of Site 0.325 Acres, Area Disturbed 0.276 Acres, Area to be vegetatively stabilized 0.193 Acres, Total Cut 616 Cu. yds, Total Fill 140 Cu. yds, Offsite waste/borrow area Location N/A

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 control must be provided, if deemed necessary by the Howard County DEW 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.

11) If houses are to be constructed on an "As-Built" basis, at random, Single Lot Sediment Control as shown below shall be implemented.

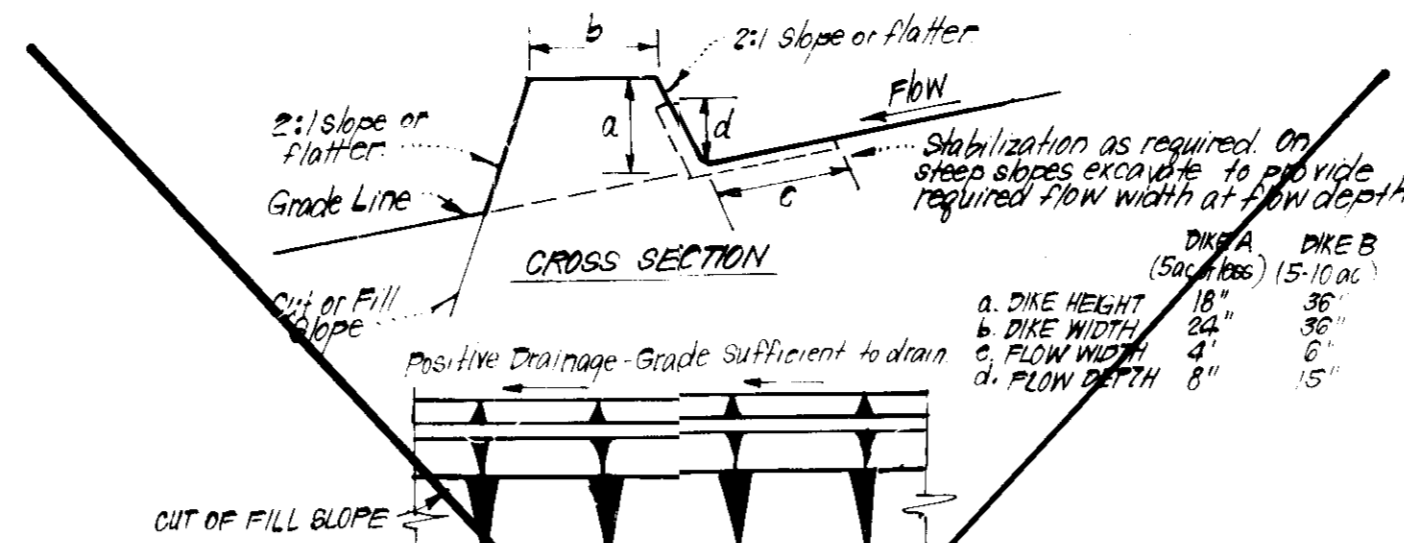
12) All pipes to be blocked at the end of each day (see detail below). N/A

13) The total amount of straw bale dikes/silt fence equals 100 L.F.

CONSTRUCTION SEQUENCE:

- Obtain Grading Permit and Install Sediment and Erosion Control Devices and Stabilize.
- Excavate for Foundations and Rough Grade & temporarily stabilize.
- Construct Structures, Sidewalks and Driveways.
- Final Grade and stabilize in accordance with Stds. & Specs.
- Upon approval of the sediment control inspector, remove sediment and erosion controls and stabilize.

No of Days
14 Days
7 Days
7 Days
7 Days
2 Days



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 discharges into 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 chart below.

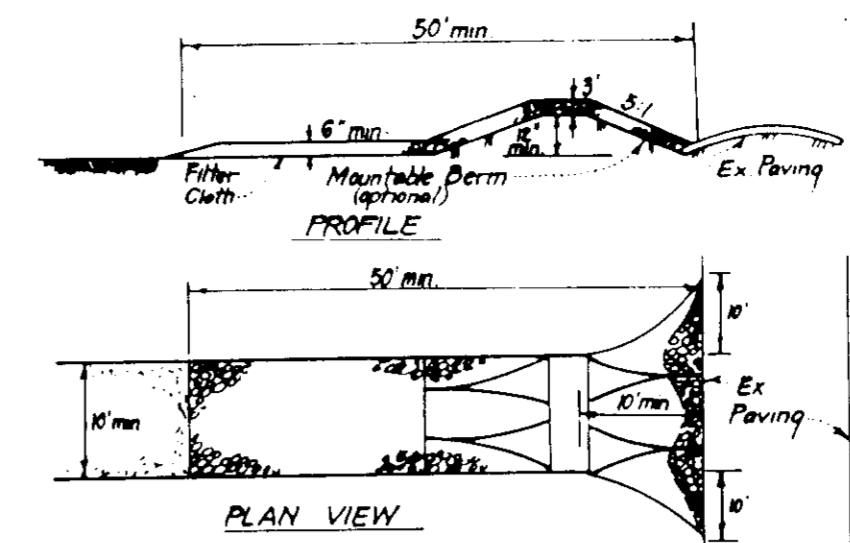
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	AMOUNT	DIKE A	DIKE B
1	6 Riprap	Seed & Straw Mulch	Seed or Straw Mulch
2	1.5 - 3.0%	Seed & Straw Mulch	Seed or Straw Mulch
3	3.1 - 5.0%	Seed & Straw Mulch	Seed or Straw Mulch
4	5.1 - 10.0%	Seed or Straw Mulch	Seed or Straw Mulch
5	10.1 - 20.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone
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12	80.1 - 90.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone
13	90.1 - 100.0%	Lined Riprap 4-8" Stone	Lined Riprap 4-8" Stone

A Stone to be 2" stone, or recycled concrete equivalent, in a layer at least 3" thick and be pressed into soil with construction equipment.
 B Riprap to be 4-8" in a layer at least 8" thick, pressed into 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.

EARTH DIKE DETAIL (E.D.)

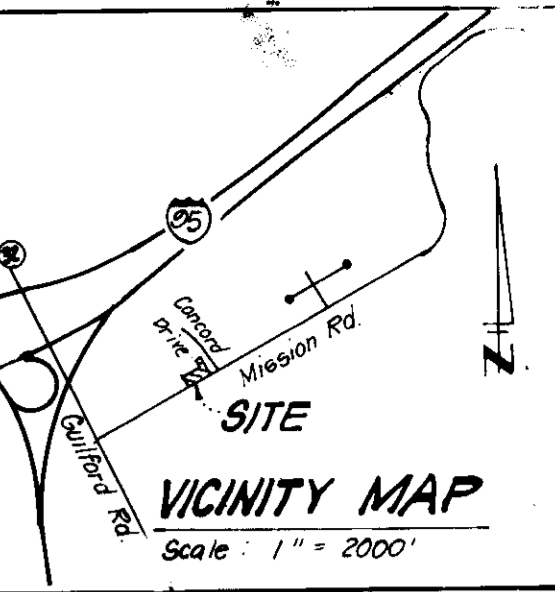
NO SCALE



CONSTRUCTION SPECIFICATIONS:
 1. Stone size - Use 2" stone, or reclaimed or recycled concrete equivalent.
 2. Length - As required, but not less than 50 feet (exception a simple 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 simple 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 mound of earth with a 5:1 slope 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 cleaning with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment applied, 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.

STABILIZED CONSTRUCTION ENTRANCE (SCE)

NO SCALE

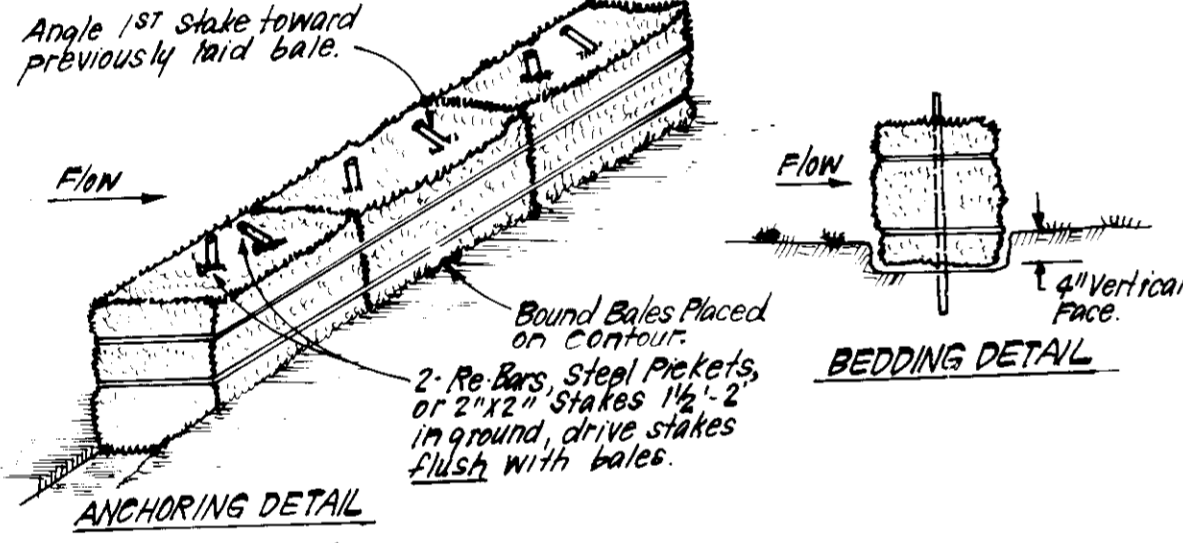


GENERAL NOTES:

1. The land included is zoned R.S.C. as per 8-2-85 Comprehensive Zoning Plan.
2. Coordinates are based upon Howard County Geodetic Control Points 2243001-R & 2142003-R.
3. All roads are public and existing.
4. Any damage to county owned rights-of-way to be corrected at the Developer's expense.
5. Total Area included: 0.325 Acres
6. Total Number of Lots: 2

LEGEND

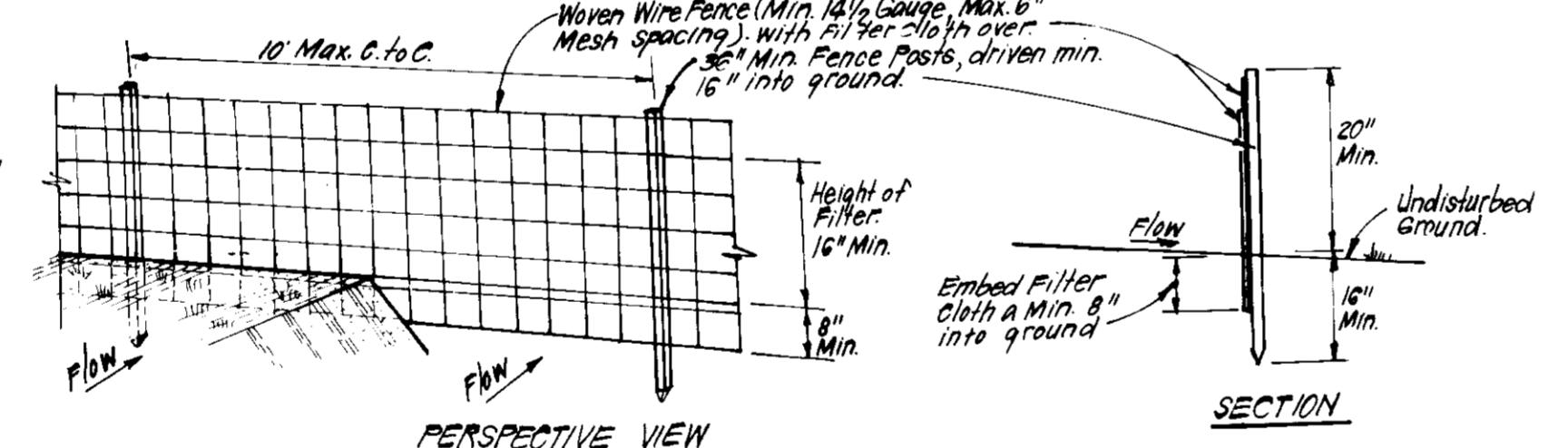
1. Contour Interval 2 Ft
2. Existing Contour
3. Proposed Contour
4. Spot Elevation + 10.5
5. Direction of Drainage
6. Existing Trees to be Saved
7. Straw Bale Dike or Silt Fence
8. Stabilized Construction Entrance



CONSTRUCTION SPECIFICATIONS:
 1. Bales shall be placed on the top of a slope or on the contour and in a row with ends tightly abutting the adjacent bales.
 2. Each bale shall be embedded in the soil a min. of 4" and placed so the bindings are horizontal.
 3. Bales shall be securely anchored in place by either 2 stakes or re-bars driven thru the bale. The 1st stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the bales.
 4. Inspection shall be frequent and repair replacement shall be made promptly as needed.
 5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

STRAW BALE DIKE DETAIL (SBD)

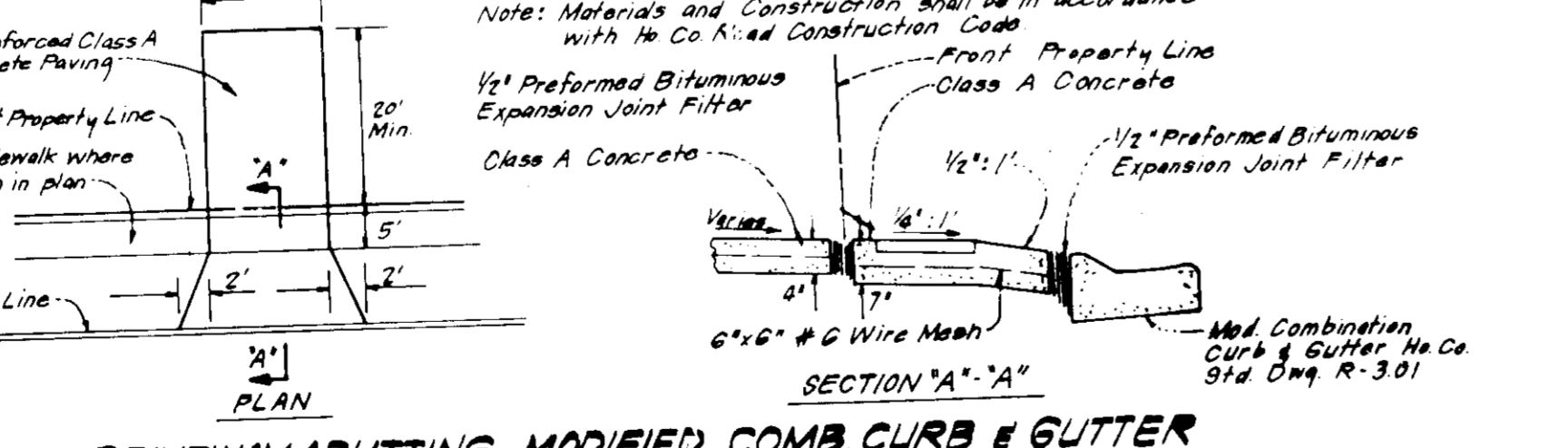
NO SCALE



CONSTRUCTION SPECIFICATIONS:
 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 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and stapled.
 4. Maintenance shall be performed as needed and material removed when "bulges" develop in silt fence.

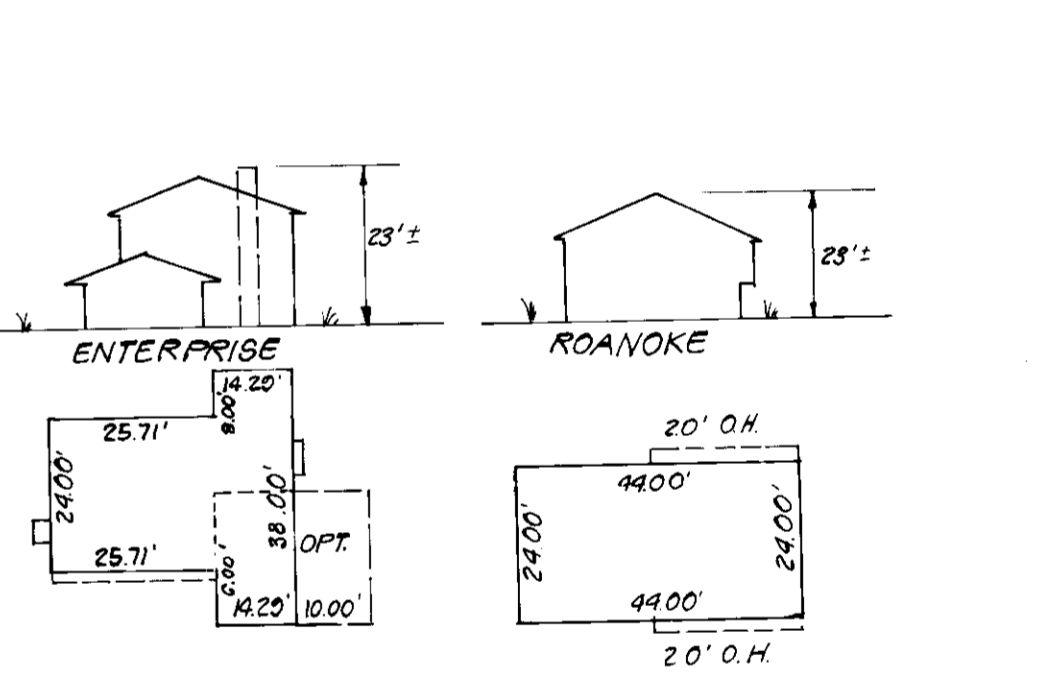
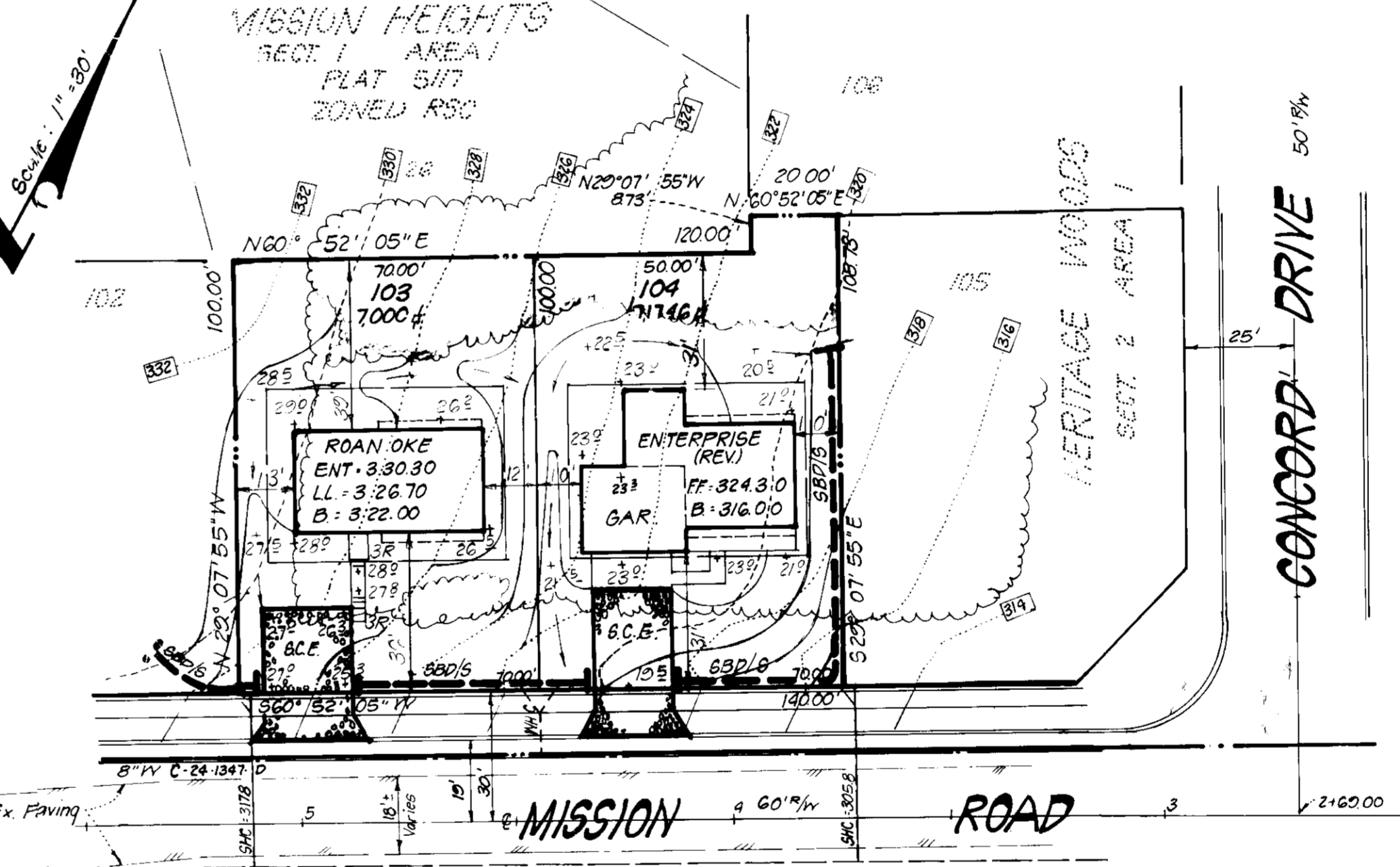
SILT FENCE DETAIL (S)

NO SCALE



DRIVEWAY ABUTTING MODIFIED COMB. CURB & GUTTER

NO SCALE



TYPICAL HOUSES

NO SCALE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: [Signature] DATE: 4-9-86
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 PLANNING DIRECTOR: [Signature] DATE: 4-10-86
 CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: [Signature] DATE: 4-9-86
 CHIEF BUREAU OF ENGINEERING: [Signature] DATE: 4-9-86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: [Signature] DATE: 4-9-86
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 PLANNING DIRECTOR: [Signature] DATE: 4-10-86
 CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: [Signature] DATE: 4-9-86
 CHIEF BUREAU OF ENGINEERING: [Signature] DATE: 4-9-86

MISSION HEIGHTS SECTION 1 AREA PLAT 517 ZONED R.S.C.
 ROANOKE ENT. 3,30.30 LL. 3,26.70 B. 3,22.00
 ENTERPRISE (REV) 23' x 24' 3" GAR. 23' x 24' 3" B. 3,16.00
 MAURICE M. SIMPKINS, INC. ENGINEER
 2-5-86

OWNER: Security Development, 7180 Minstrel Way Suite 215, Ellicott City, Maryland 21043
 G. Nelson Clark, 2-5-86
 MAURICE M. SIMPKINS, INC. ENGINEER, 2-5-86



Address Chart

Lot #	Street	Address
103	8668	Mission Road
104	8664	Mission Road

SUBDIVISION NAME: HERITAGE WOODS, SECT./AREA: 2/1, LOTS: 103 & 104
 PLAT #: 517, BLOCK #: 18, ZONE: R.S.C., TAX/ZONE MAP: 42, ELEC. DIST: 674, CENSUS TR.: 6064
 WATER CODE: E-14, SEWER CODE: 4400.900

CLARK FINEFROCK & SACKETT ENGINEERS • PLANNERS • SURVEYORS
 11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 583-3400
 DESIGNED BY: J.K., DRAWN BY: V.H.L., CHECKED BY: J.M.E., DATE: 2-5-86
 SCALE: AS SHOWN, DRAWING: 1 OF 1, JOB NO.: 85-140, FILE NO.: 85-140-X
 FOR: THE RYLAND GROUP, INC., 7180 Minstrel Way Suite 215, Columbia, MD 21045
 S.D.P. 86-16C