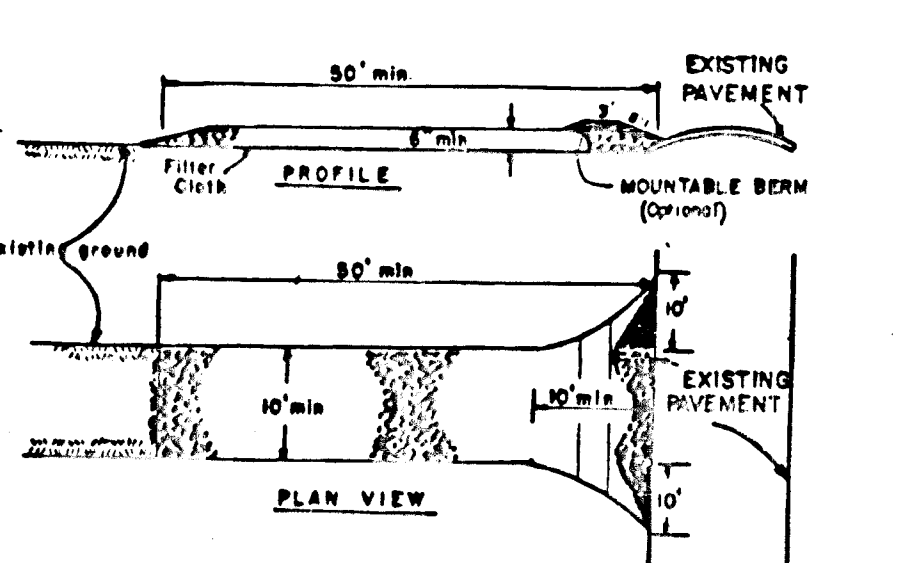


SEDIMENT CONTROL NOTES

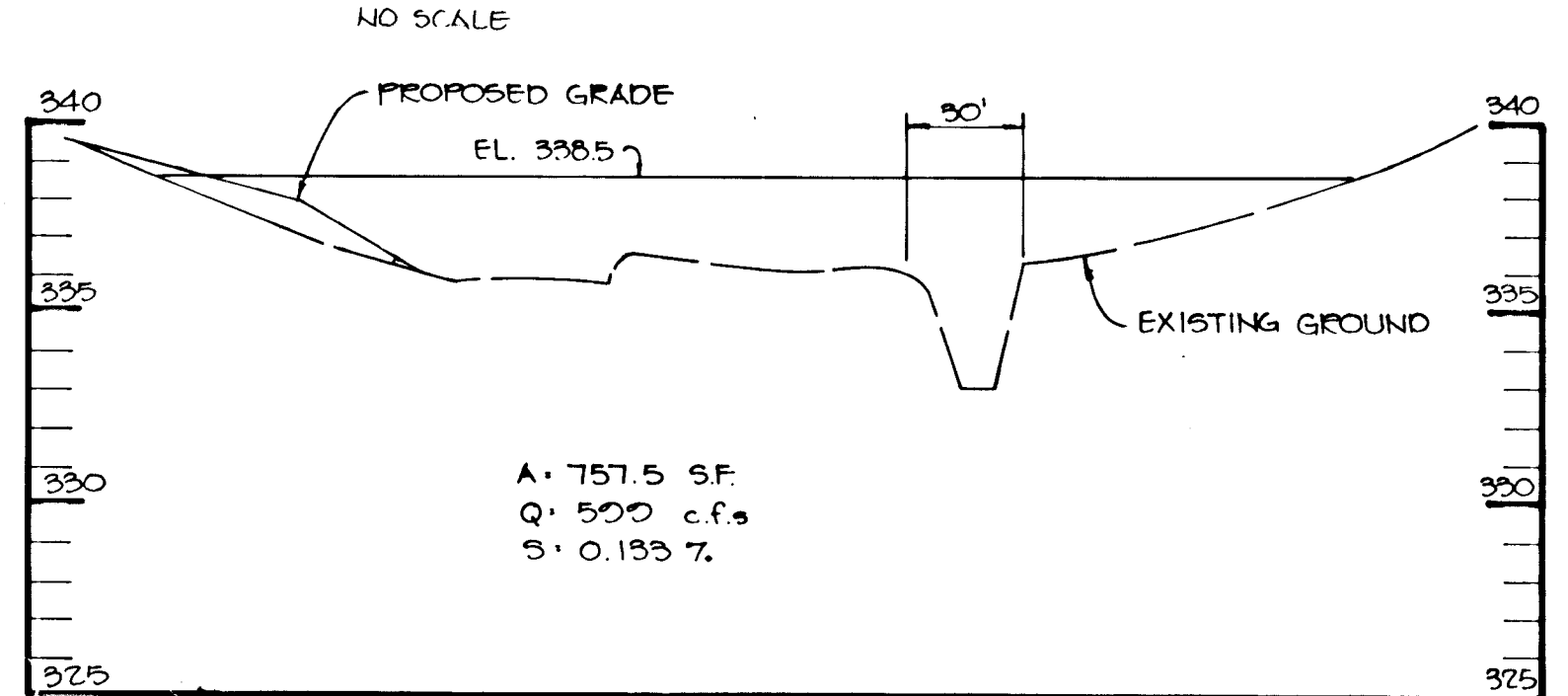
1. A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (902-2437).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. Following initial soil disturbance or redistribution, 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	2.05 acres
Area Disturbed	1.30 acres
Area to be roofed or paved	0.05 acres
Area to be vegetatively stabilized	0.70 acres
Total Cut	10,000 Cu. yds.
Total Fill	10,000 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 DPW 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 the clean out elevation shown on the plans.

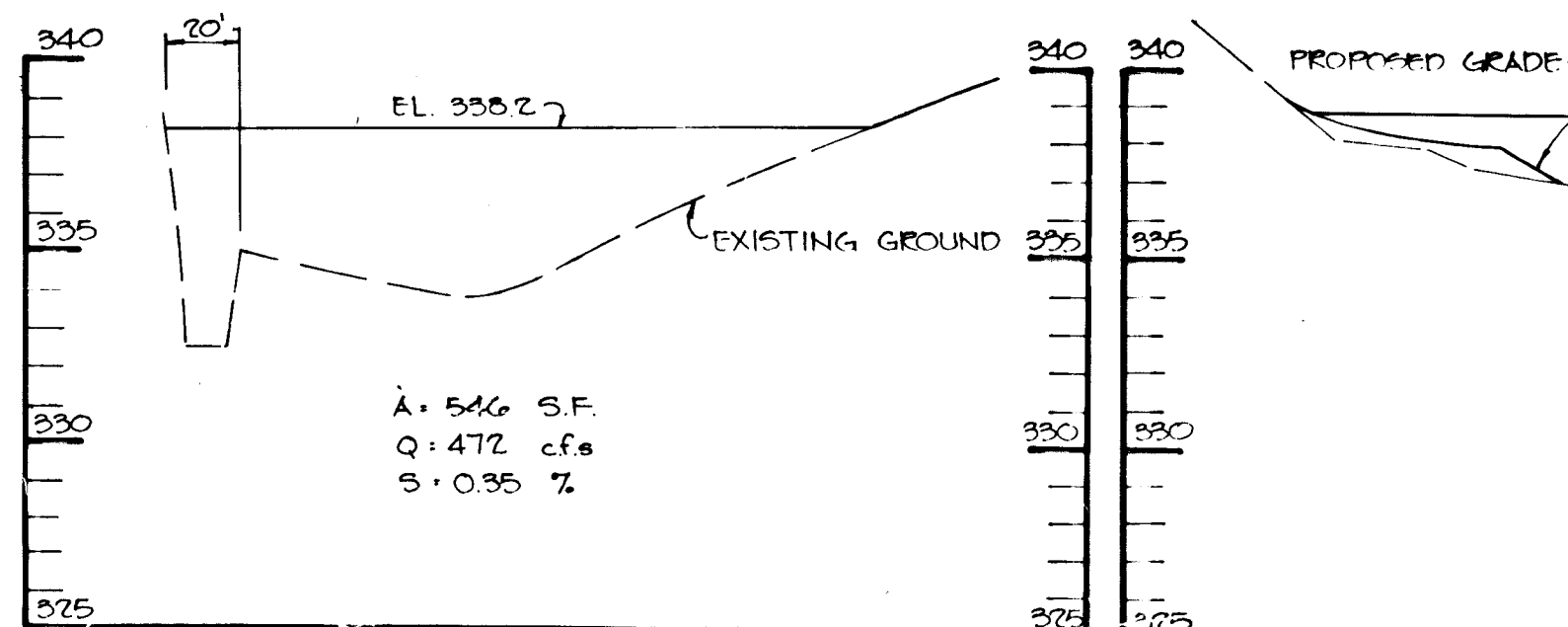


- CONSTRUCTION SPECIFICATIONS**
1. Stone Size - Use 3" stone, or recycled or recycled concrete equivalent.
 2. Length - As required, but not less than 30 feet (except on a single residential lot where a 20 foot minimum length will apply).
 3. Thickness - Not less than six (6) inches.
 4. Width - One (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 residential lot.
 6. Surface Water - All surface water flowing or directed toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 3:1 slope will be provided.
 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 - Areas 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

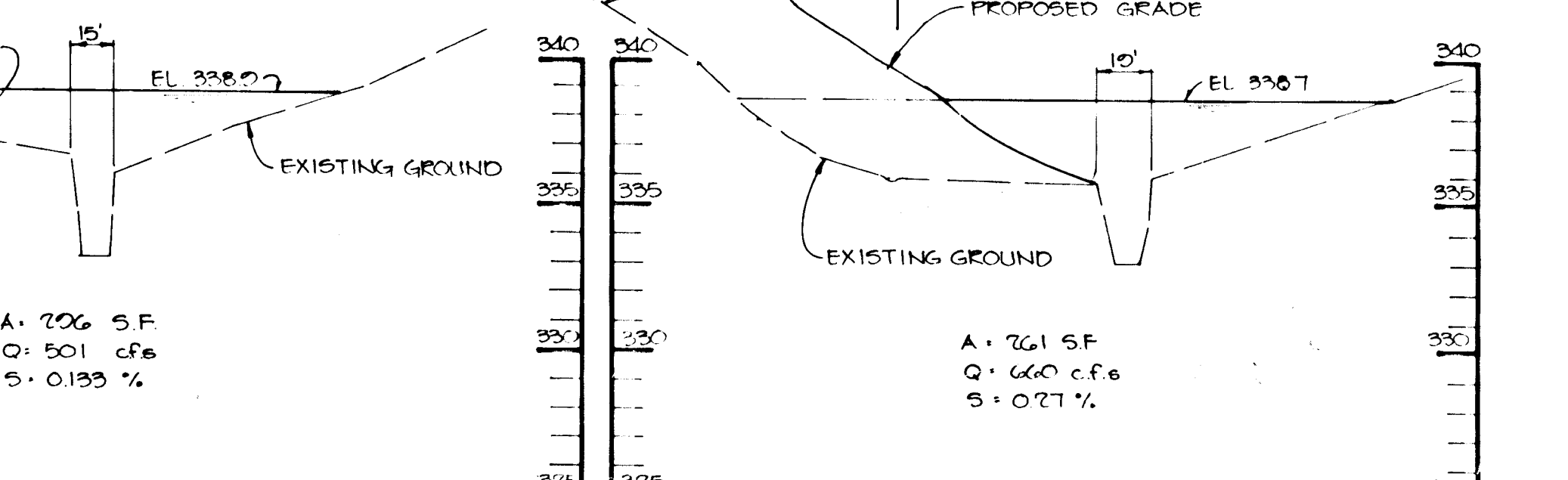


SECTION B



SECTION A

SECTION C



SECTION D (FOR PROPOSED GRADE)



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.
- Soil Amendments:** Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.). Where soil is highly acidic, apply dolomitic limestone at the rate of 1 ton per acre.
- Seeding:** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 140 lbs. per acre of annual ryegrass (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 15 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 untreated 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 340 gal. per acre (6 gal./1000 sq.ft.) for anchoring.

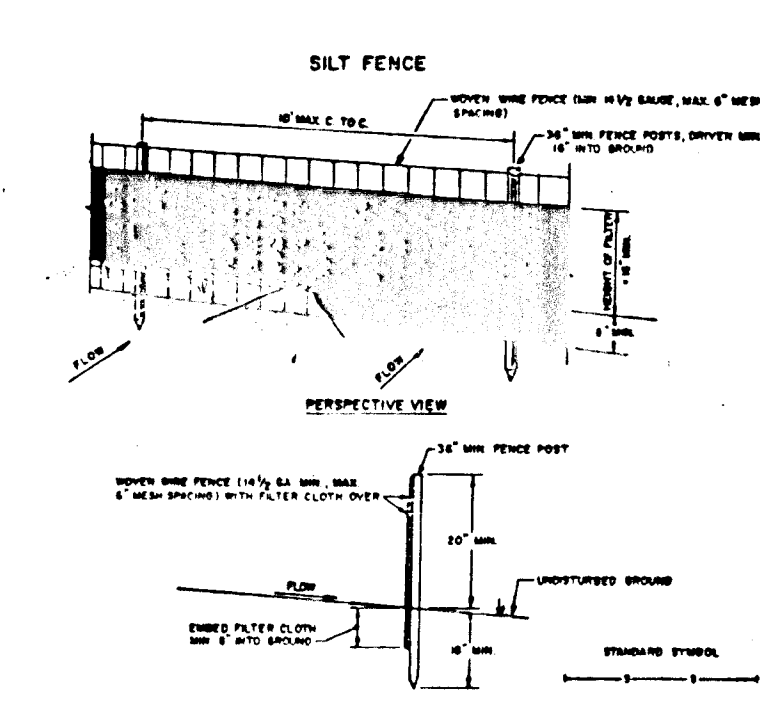
Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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:** Apply 0-20-20 fertilizer at the rate of 600 lbs. per acre. Narrow or disc line and 0-20-20 fertilizer into the soil to a minimum depth of 3". Lawns or high maintenance areas will be dragged and leveled with a York rake. At the time of seeding, apply 400 lbs. of 30-0-0 ureaform fertilizer and 500 lbs. of 10-20-20 or equivalent fertilizer per acre.
- Seeding:** For the periods March 1 thru April 30, and August 1 thru November 15, seed with 40 lbs. per acre (1 lb./1000 sq.ft.) of a mixture of certified 'Merion' Kentucky bluegrass, common Kentucky bluegrass @ 40 lbs. per acre (1 lb./1000 sq.ft.) and Red Fescue, Pennlawn or Jamestown @ 20 lbs. per acre (0.5 lb./1000 sq.ft.) for the period May 1 thru July 31, seed with 40-40-20 mix as specified above and 2 lbs. per acre (0.05 lb./1000 sq.ft.) of weeping lovegrass. During the period of October 15 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 40-40-20 mix specified above 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 untreated 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 340 gallons per acre (6 gal./1000 sq.ft.) for anchoring.
- Maintenance:** Inspect all seeded areas and make needed repairs, replacements and seedings.

SEQUENCE OF CONSTRUCTION

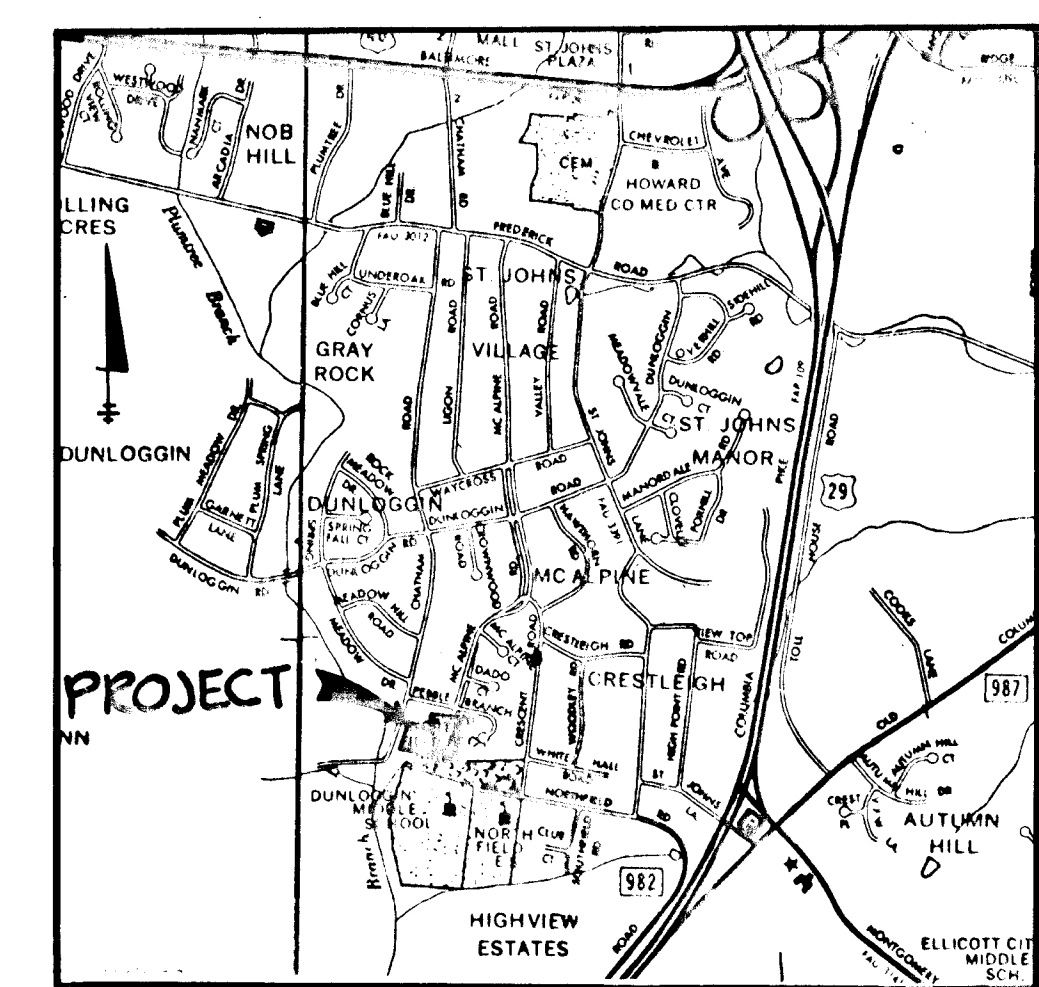
1. OBTAIN GRADING PERMIT.
2. INSTALL SILT FENCE.
3. GRADE THE SITE WITHOUT DISTURBING SEDIMENT CONTROL MEASURES.
4. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
5. UPON APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES AND STABILIZE ALL REMAINING DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.



- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
1. MONITOR FENCE TO BE MAINTAINED SECURELY TO FACE WITH WIRE TIES OR STAPLES.
 2. FILTER CLOTH TO BE MAINTAINED SECURELY TO FACE WITH WIRE TIES OR STAPLES EVERY 2' AT TOP AND 10' SECTION.
 3. WHEN TWO SECTIONS OF FILTER CLOTH MEET, EACH END OF SECTIONS SHALL BE OVERLAPPED BY SIX INCHES AND TIED.
 4. MAINTENANCE SHALL BE PROVIDED AS FENCE AND INITIAL SEDIMENT ARE MAINTAINED DEVELOP IN THE SILT FENCE.
- POSTS:** Steel edge 1" or 1 1/2" type of 1" diameter.
- FENCE:** 1/2" x 1/2" gal. 10' x 10' mesh.
- FILTER CLOTH:** Filter cloth shall be approved by the Howard County Department of Public Works.
- PREFABRICATED UNIT:** Geotextile, polypropylene or approved equivalent.

SILT FENCE

SCALE: HORIZ. 1" = 50'
SCALE: VERT. 1" = 5'



VICINITY MAP

SCALE: 1" = 2000'

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."

T.J. Costell DEVELOPER 7/22/86 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."

Stephen E. McGuire ENGINEER 7-21-86 DATE

REVIEWED FOR HOWARD NAME S.C.D.

AND MEETS TECHNICAL REQUIREMENTS

Stephen E. McGuire 7-28-86 DATE

U.S. SOIL CONSERVATION SERVICE

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

Stephen E. McGuire 7-28-86 DATE

HOWARD S.C.D.

DATE	NO.	REVISION

OWNER/DEVELOPER

THOMAS J. COSTELL
4050 MAC ALPINE DRIVE
ELLICOTT CITY, MARYLAND 21045

PROJECT

COSTELL PROPERTY
LOT 1, 2 & 3

AREA

TAX MAP 24 PARCEL 100G
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

FLOODPLAIN IMPROVEMENT PLAN

THE RIEMER GROUP, INC.

A LAND PLANNING, DESIGN & CIVIL ENGINEERING FIRM

3105 HEALTH PARK DRIVE, ELLICOTT CITY, MD. 21043 301.641-2690

7-21-86 DATE

DESIGNED BY: J.D.P.

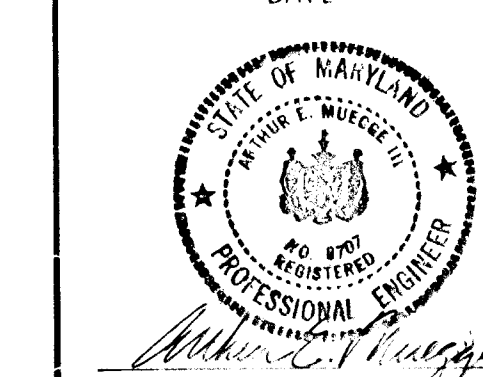
DRAWN BY: B.A.C.

PROJECT NO: 15500

DATE: 6-13-85

SCALE: 1" = 50'

DRAWING NO. OF



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

John W. Huchman 7-28-86 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Stephen E. McGuire 7-28-86 DATE

CHIEF, BUREAU OF ENGINEERING

GRADING SEDIMENT CONTROL SITE TABULATION

TOTAL AREA ZONING	2.93 AC. R-20
PREDOMINANT SOIL TYPE	GLEUELG-MANOP LOAM; 5-8% SLOPE
TOTAL DISTURBED AREA	0.39 AC.
AREA TO BE VEGETATIVELY STABILIZED	0.33 AC.
AREA TO BE MECHANICALLY STABILIZED (PAVEMENT, STONE, ETC.)	0.06 AC.
GRADING:	
TOTAL GRADING	3028 CU.YDS.
TOTAL FILL	3028 CU.YDS.
TOTAL BORROW	3028 CU.YDS.
TOPSOIL (4" ESTIMATED DEPTH)	208 CU.YDS.

1226