

STRUCTURE SCHEDULE				
NO.	TYPE	INV. IN	INV. OUT	REMARKS
S-7	METAL END SECT.	-	554.55	S.O.S.G.
S-8	"	556.23	-	"

DATE	BY	SURVEYED	ALIGNED	CHECKED	RT. OF WAY CHECKED
NOTE BOOK NO.					

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, LAND DEVELOPMENT DIVISION
 DATE: 11-10-87

Francis W. Wilstead 12/3/87
 CHIEF, BUREAU OF HIGHWAYS
 DATE

William S. Reed 12-8-87
 CHIEF, BUREAU OF ENGINEERING
 DATE

APPROVED OFFICE OF PLANNING AND ZONING
William M. ... 11-16-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 DATE

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION.
2. ANY DAMAGES INCURRED WITHIN THE PUBLIC RIGHT OF WAY SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
3. ALUMINUM PIPE MAY BE USED IN LIEU OF BITUMINOUS COATED STEEL.
4. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION.

PLAN CONCRETE MONUMENT
 SCALE: 1"=50'

NOTE: HORIZONTAL AND VERTICAL CONTROL IS BASED ON THE FOLLOWING HOWARD COUNTY TRANSVERSE STATIONS:
 5534003 N52B480 429 E 799511.417
 8534004 N537417.748 E 798929.356

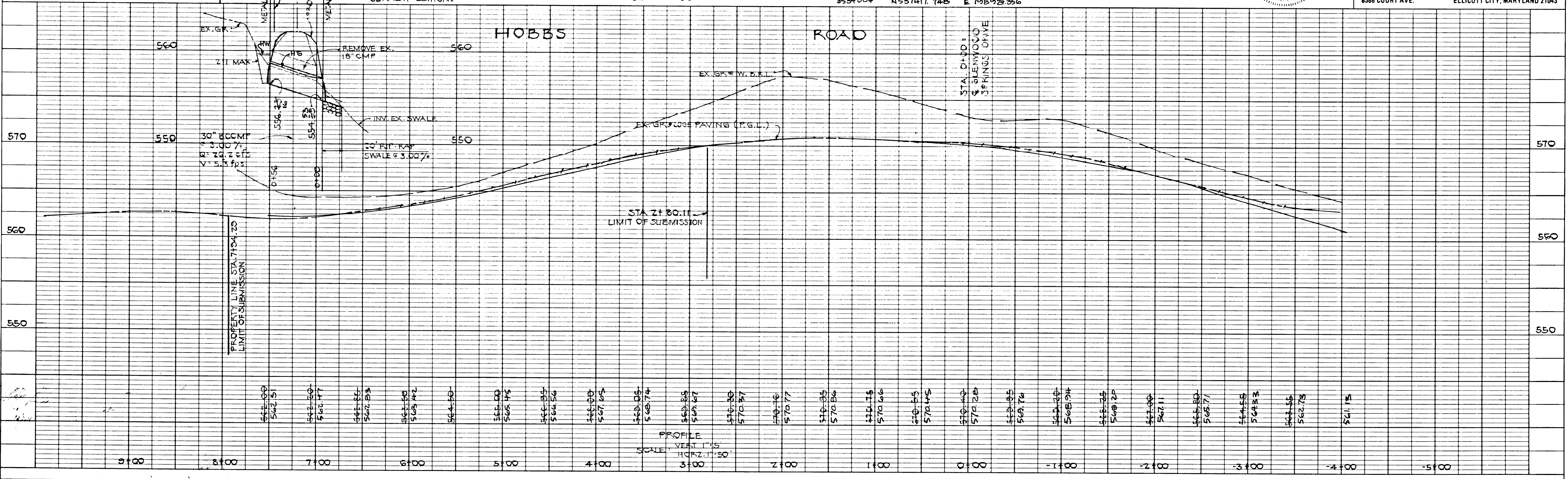
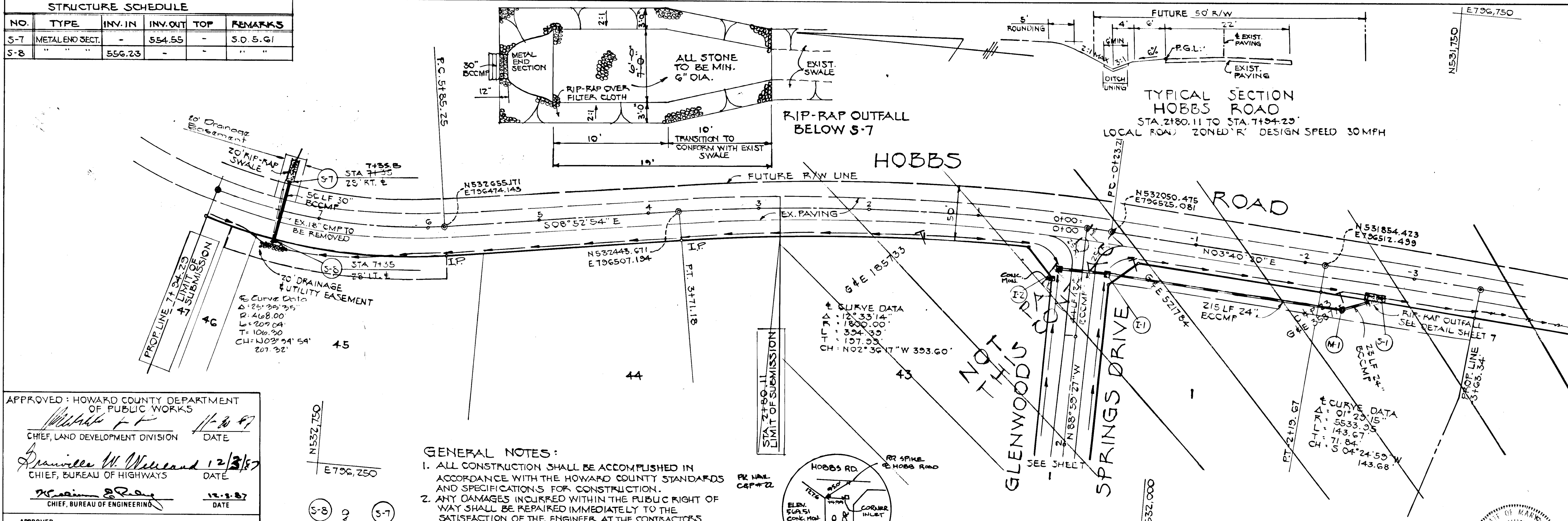
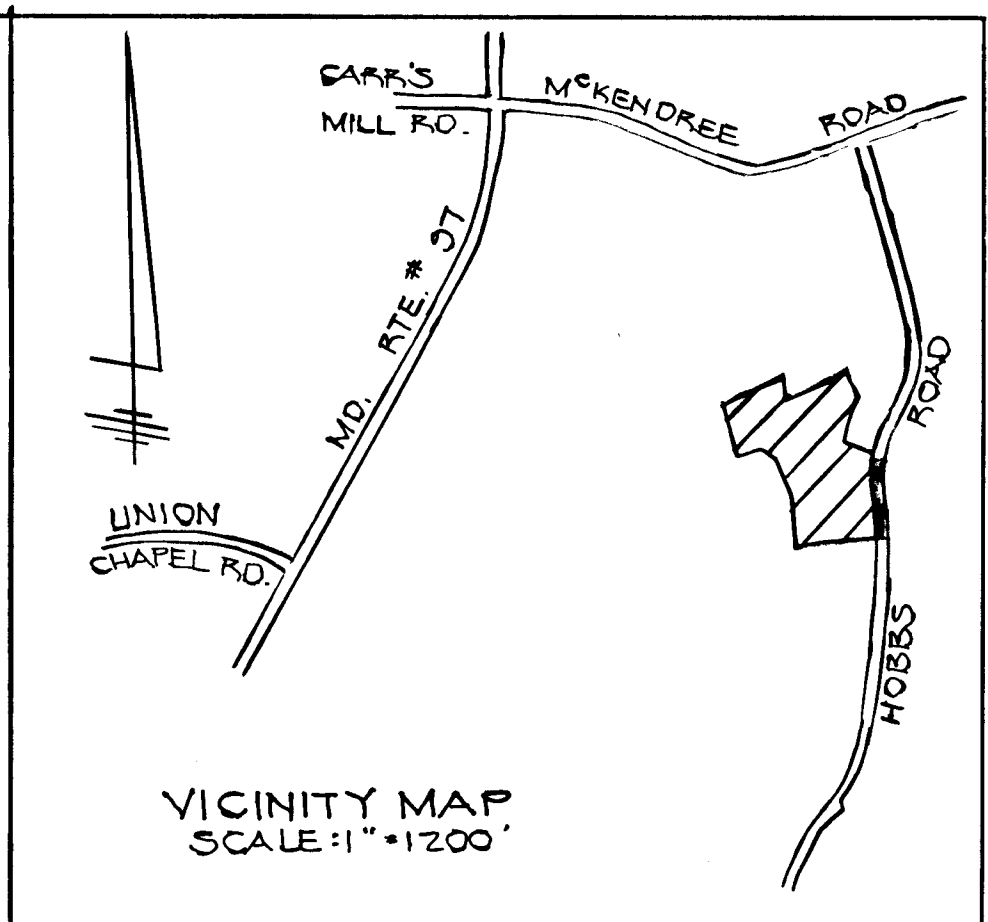
BENCH MARK 3333 002 ELEV. 550.89
 CONC. MON. ON SOUTHEAST SIDE OF RTE. 97
 500' ± S. OF UNION CHAPEL ROAD.

GLENWOOD SPRINGS
 4TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SECT. ONE AREA TWO
HOBBS ROAD
 PLAN AND PROFILE

OWNER AND DEVELOPER
 GLENWOOD SPRING PARTNERSHIP
 P.O. BOX 122
 ELLICOTT CITY, MARYLAND 21043

SCALE AS SHOWN DATE JUNE 27, 1987 DWG. NO. 1 OF 3
 DES. RBC DRN. DWB CHK. RBC

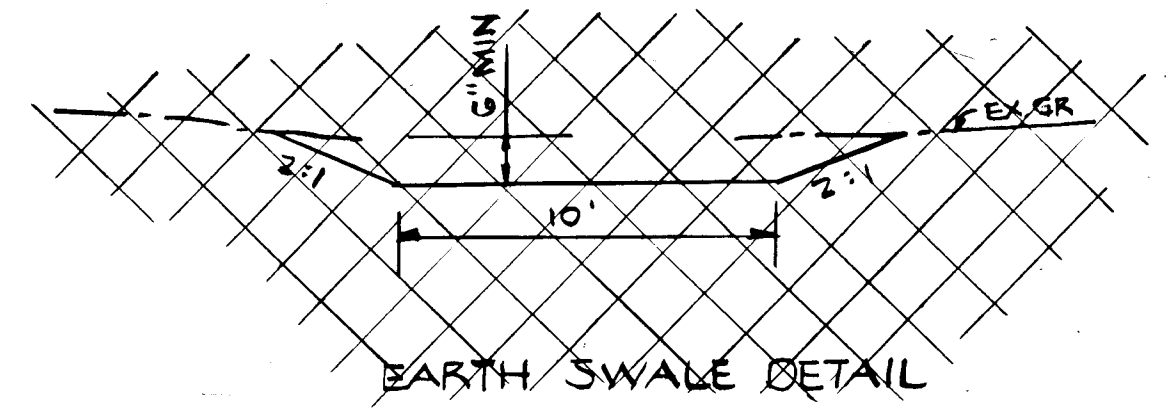
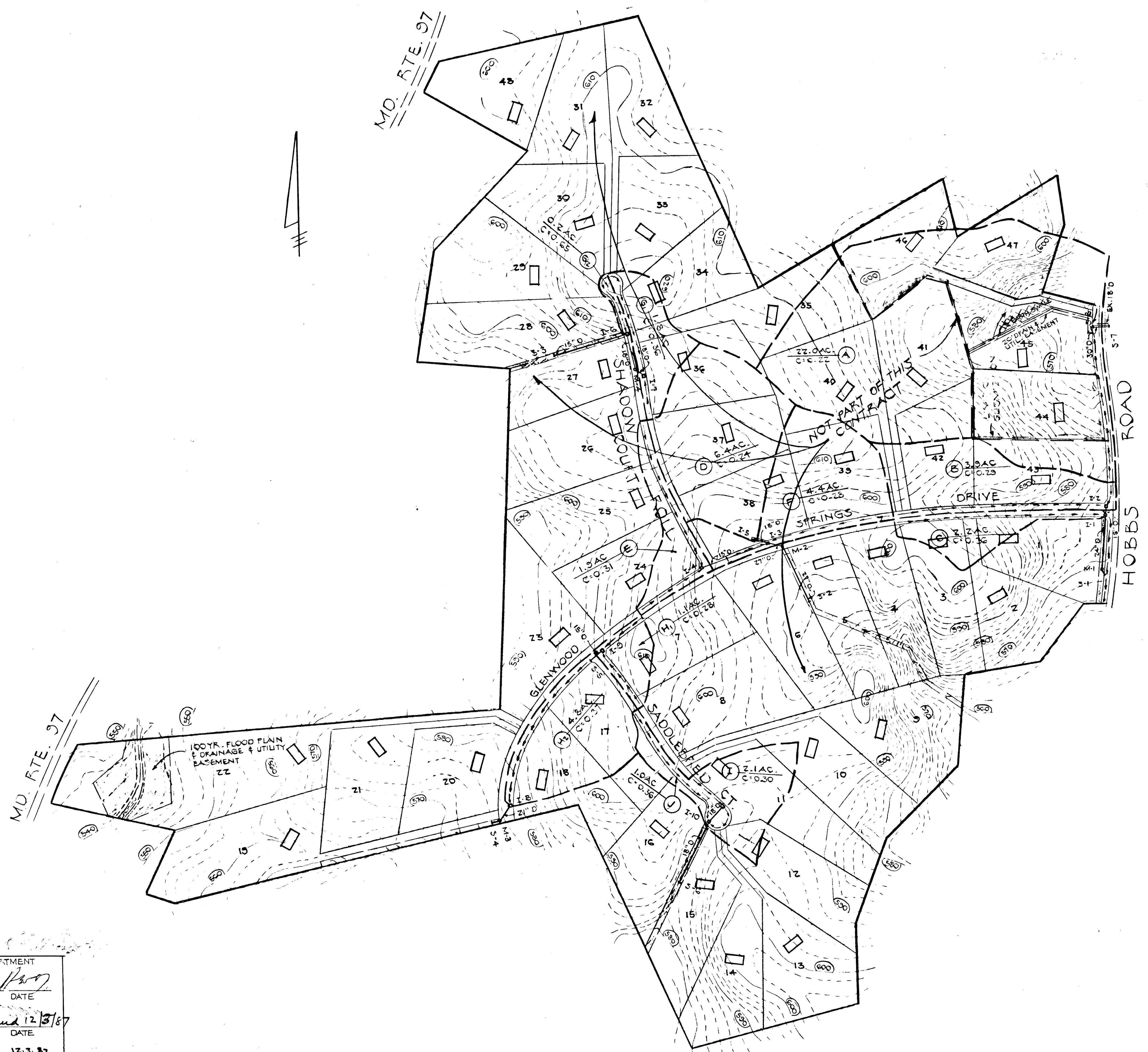
FISHER, COLLINS AND CARTER, INC.
 CIVIL ENGINEERS AND LAND SURVEYORS
 8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043



1339

DATE	BY	SURVEYED	GRADES CHECKED	NOTED	NOTATION CHFD
NOTE BOOK NO.					

1339



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEFLAND DEVELOPMENT DIVISION DATE
 CHIEF, BUREAU OF HIGHWAYS DATE
 CHIEF, BUREAU OF ENGINEERING DATE
 APPROVED OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

GLENWOOD SPRINGS
 4TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SECT. ONE AREA TWO
 DRAINAGE AREA MAP
 OWNER AND DEVELOPER
 GLENWOOD SPRING PARTNERSHIP
 P.O. BOX 122
 ELLICOTT CITY, MARYLAND 21043
 SCALE: AS SHOWN DATE: JUNE 27, 1987 DWS: NO. 2 OF 3
 DES. RBC DPN. OWS GHK. RBC
 FISHER, COLLINS AND CARTER, INC.
 CIVIL ENGINEERS AND LAND SURVEYORS
 8388 COURT AVE. ELLICOTT CITY, MARYLAND, 21043



Rev. 4/2/91-Delete Earth Swale, Lot 45

AS-BUILT JAN. 16, 1992 F-88-02

SEDIMENT CONTROL

() By the Developer:
 "I/We certify that all development and/or construction will be done according to these plans, 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

Ronald B. Carter 11-5-1987
 Signature of Developer Date
 Print name below signature

() 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. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District.

Clifford A. ... 11/5/87
 Signature of Engineer Date
 Print name below signature

() These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for soil erosion and sediment control.

John L. ... 11-12-87
 Signature of Engineer Date
 Print name below signature

() These plans for soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded 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 sq 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 (22 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.

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

Soil Amendments: Apply 60 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 bushel 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 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.

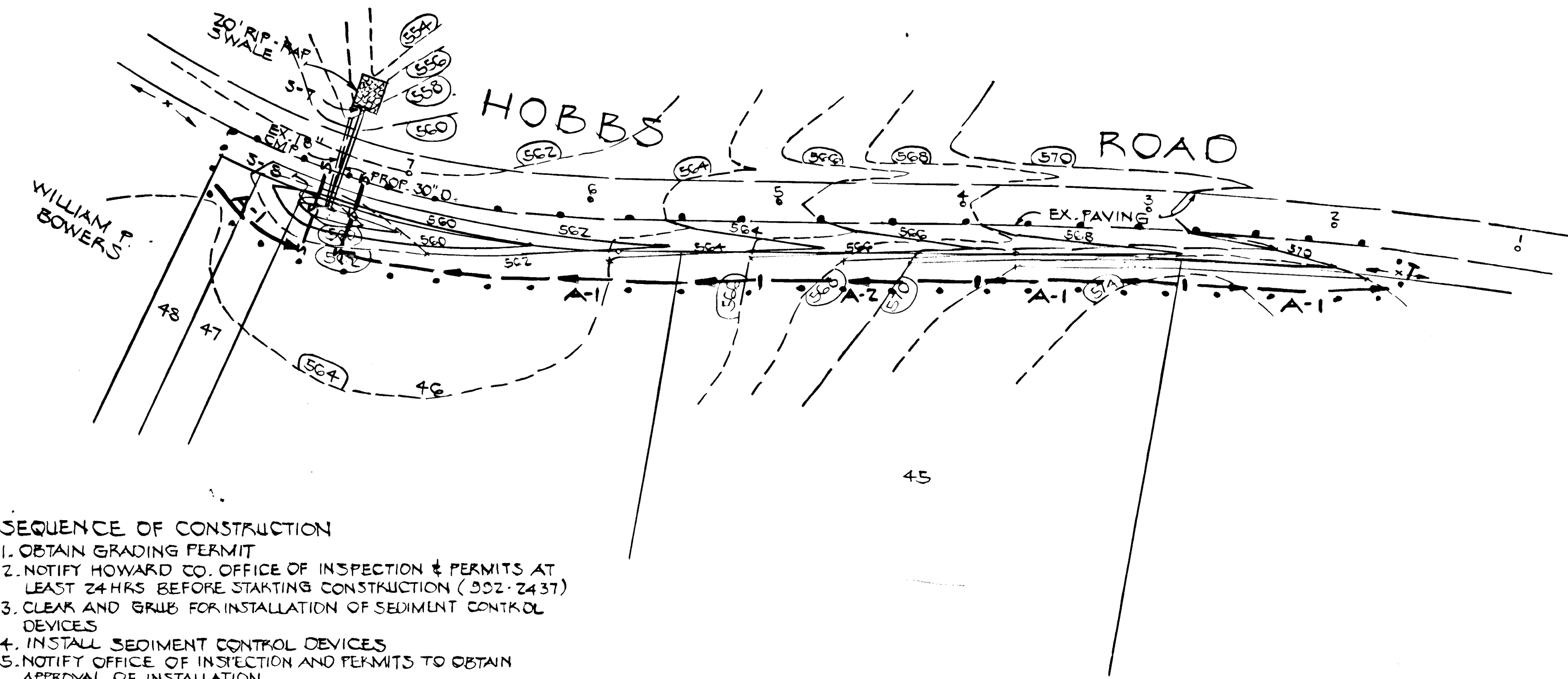
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft or higher, use 348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

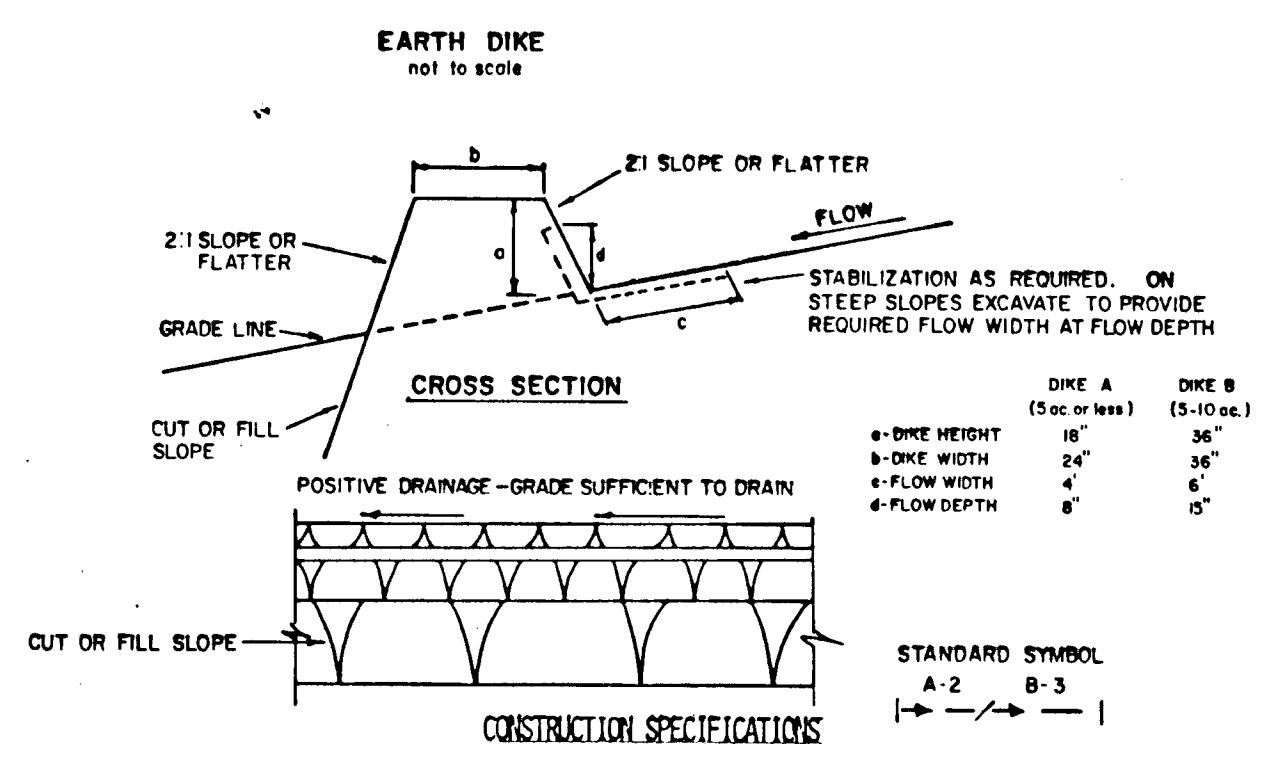
- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 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	18.02 Acres
Area Disturbed	0.10 Acres
Area to be roofed or paved	0 Acres
Area to be vegetatively stabilized	0.11 Acres
Total Cut	Cu. yds
Total Fill	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 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.



- SEQUENCE OF CONSTRUCTION**
1. OBTAIN GRADING PERMIT
 2. NOTIFY HOWARD CO. OFFICE OF INSPECTION & PERMITS AT LEAST 24 HRS BEFORE STARTING CONSTRUCTION (992-2437)
 3. CLEAR AND GRUB FOR INSTALLATION OF SEDIMENT CONTROL DEVICES
 4. INSTALL SEDIMENT CONTROL DEVICES
 5. NOTIFY OFFICE OF INSPECTION AND PERMITS TO OBTAIN APPROVAL OF INSTALLATION
 6. INSTALL 30" DRAIN AND RIP-RAP SWALE
 7. STABILIZE AREA AT ENTRANCE TO 30" DRAIN BETWEEN SILT FENCES WITH SEED, MULCH AND JUTE MATTING
 8. GRADE SHOULDER, SWALE & SLOPES
 9. STABILIZE DISTURBED AREAS
 10. REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE THOSE AREAS

- LEGEND**
- LIMIT OF DISTURBANCE
 - - - EARTH DIKE
 - - - SILT FENCE
 - EX. CONTOURS
 - PROP. CONTOURS

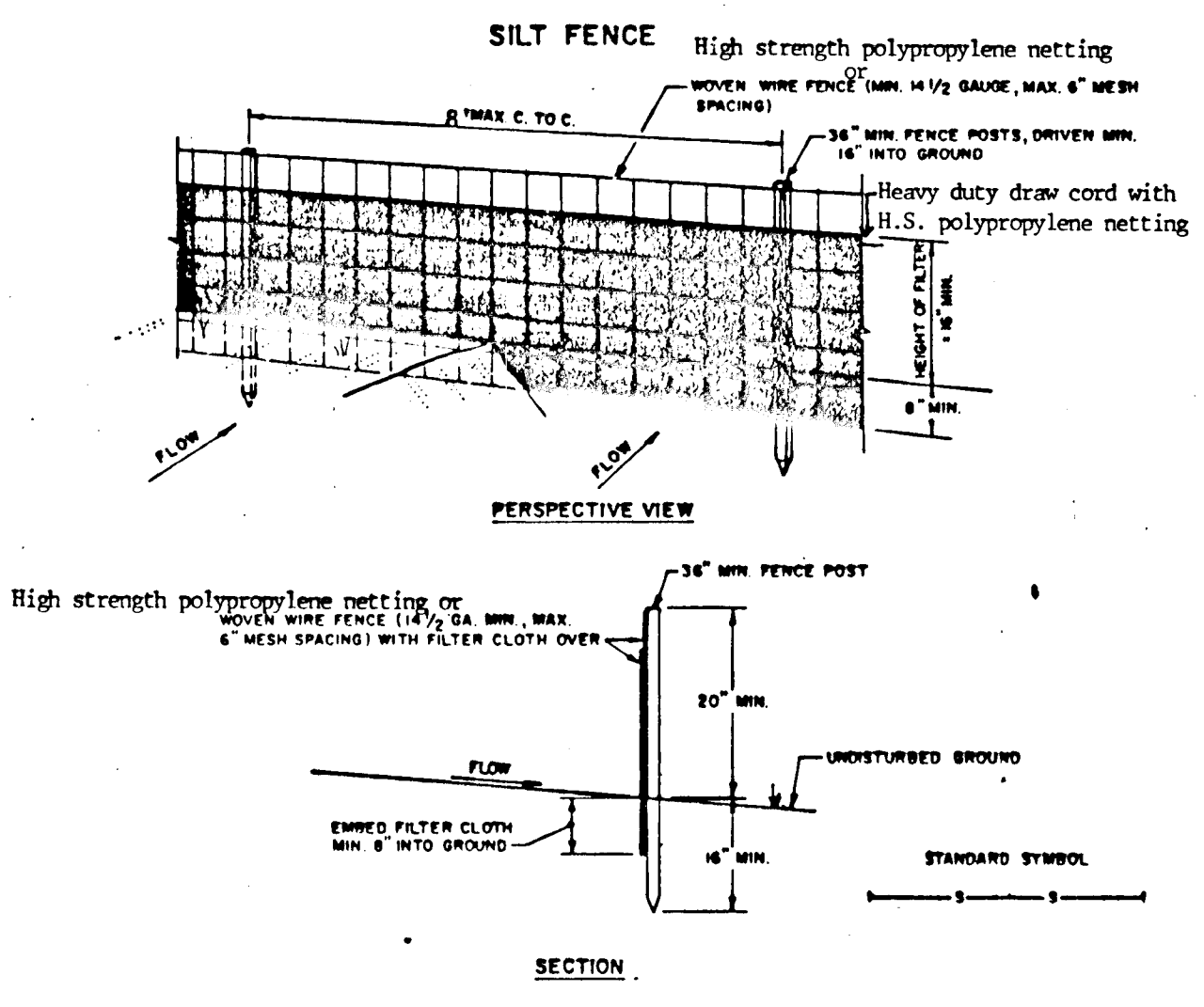


1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED 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.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSTOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

- 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.



- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
1. High strength polypropylene netting or 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 4"ES 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 1 1/2" x 1 1/2" Min. (Actual) BARWOOD
 FENCE: WOVEN WIRE, 14# GA. 6" MAX. PESH OPENING or high strength polypropylene netting
 FILTER CLOTH: FILTER X, MIRAFIL, STABI-LINKA TITAN OR APPROVED EQUAL
 PREFABRICATED UNIT: GEOPAB, ENVIRONMENT, OR APPROVED EQUAL.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John L. ... 11-20-87
 CHIEF, LAND DEVELOPMENT DIVISION DATE

Francis W. Weverna 12/31/87
 CHIEF, BUREAU OF HIGHWAYS DATE

... 12/1/87
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: OFFICE OF PLANNING & ZONING
... 11-16-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE



GLENWOOD SPRINGS
 4TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SECTION ONE AREA TWO

SEDIMENT CONTROL PLAN

OWNER AND DEVELOPER
 GLENWOOD SPRING PARTNERSHIP
 P.O. BOX 172
 ELLICOTT CITY, MARYLAND 21043

SCALE: 1" = 50' DATE: OCT. 3, 1987 DRAWING NO. 3 OF 3
 DES. RBC ORN. DWS CHK. RBC
 FISHER, COLLINS AND CARTER, INC.
 CIVIL ENGINEERS AND LAND SURVEYORS
 8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043