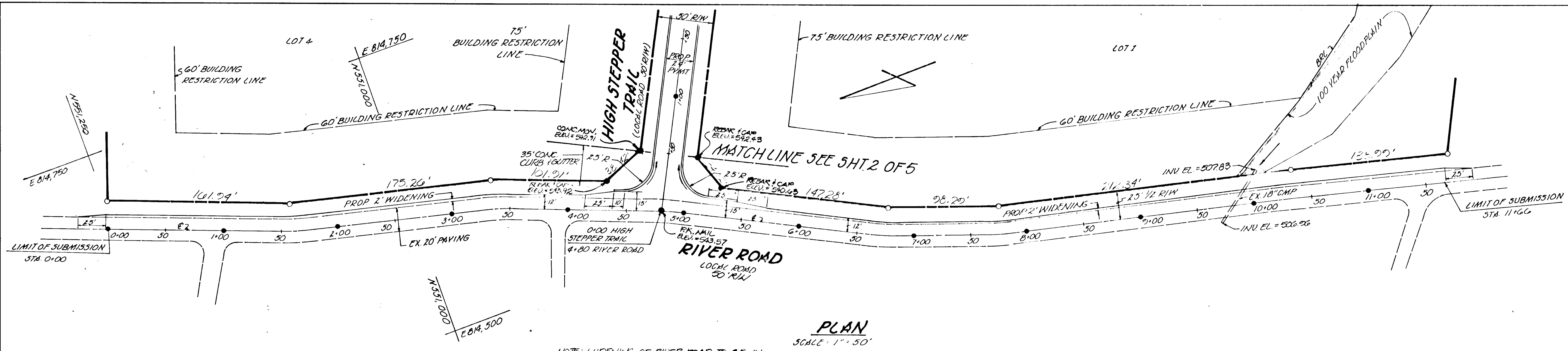
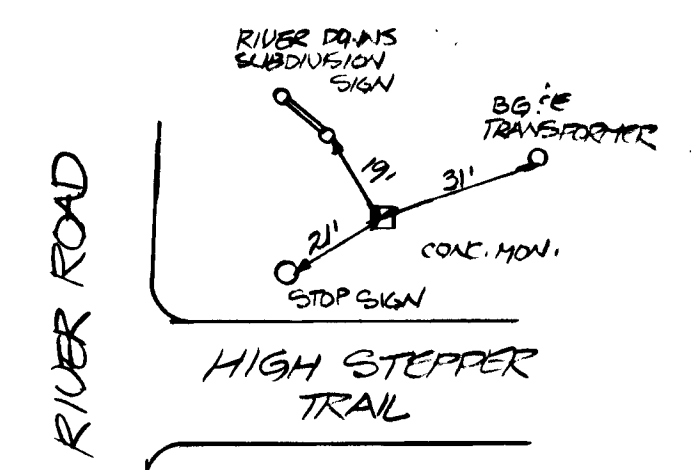


PLAN  
 SURVEYED BY: [blank]  
 DATE: [blank]  
 NOTE BOOK: [blank]  
 NO. OF WAY CHECKED: [blank]



PLAN  
 SCALE 1" = 50'

NOTE: WIDENING OF RIVER ROAD TO CE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS, R-1.02 & R-10.01.

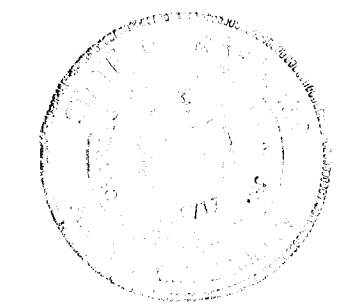


RECOVERY SKETCH  
 N.T.S.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 [Signature] 2/9/90  
 Chief, Land Development Division  
 [Signature] 1/30/90  
 Chief, Bureau of Highways  
 [Signature] 2-12-90  
 Chief, Bureau of Engineering

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 2/2/90  
 Chief, Division of Community Planning  
 And Land Development

NO.	REVISION	DATE
1	ADDITION OF 10' WIDENING @ STA 10+00	2-12-90
2	ADJUSTMENT OF 10' WIDENING @ STA 10+00	2-12-90
3	REVISION	2-12-90



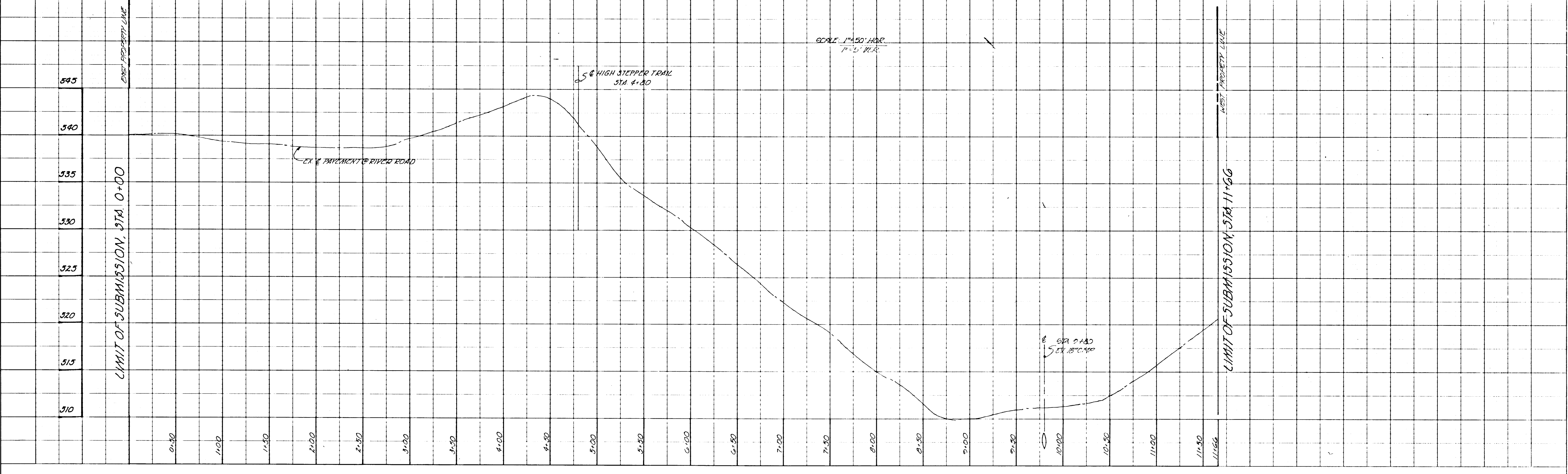
C. Robert Rhoads 1-16-90

OWNER/DEVELOPER:  
 RIVER DOWNS JOINT VENTURE  
 P.O. BOX 1422  
 ELLICOTT CITY, MD 21043

TITLE: FINAL ROAD CONSTRUCTION PLAN		PROJECT: RIVER DOWNS (SEC. 1 LOTS 1-6)		boender associates inc.	
LOCATION: 350 ELECTION DISTRICT HOWARD CO. MD		SCALE: AS SHOWN		consulting engineers	
DESIGNED BY: D. HELSH	DRAWN BY: [blank]	CHECKED BY: [blank]	DATE: 2-23-89	land surveyors	
PAGE NO.: [blank]	JOB NO.: 8016	DRAWING NO.: 1 OF 5		land planners	
				COURTHOUSE SQUARE 3565 ELLICOTT MILLS DRIVE ELLICOTT CITY, MD 21043 (301) 465-7777	

- GENERAL NOTES
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. 1, I.C., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
  - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONSTRUCTION'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
  - THE CONTRACTOR SHALL TEST PIT FOR EXISTING UTILITIES AT LEAST FIVE (5) DAYS PRIOR TO STARTING WORK SHOWN ON THESE DRAWINGS.
  - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS PRIOR TO BEGINNING WORK SHOWN ON THESE DRAWINGS:
    - NICE UTILITY.....550-0100
    - BELL TELEPHONE SYSTEM.....393-3649
    - LONG DISTANCE CABLE DIVISION.....393-5553/3554
    - MARYLAND GAS & ELECTRIC COMPANY.....559-8000
    - HOWARD COUNTY BUREAU OF UTILITIES.....952-2366
    - HOWARD COUNTY CONSTRUCTION INSPECTION SERVICE.....792-2272
  - ALL TRINITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD.
  - ALL STREET CURB RETURNS SHALL HAVE 25' RADII UNLESS OTHERWISE NOTED.
  - STORM DRAIN TRINITS WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOL. 1, I.C., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
  - INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1988 REVISED EDITION.
  - PIPS SHALL NOT BE INSTALLED BY CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
  - DESIGN TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS.
  - ALL FILL AREAS WITHIN ROADWAYS AND/OR UNDER STRUCTURES TO BE CONSTRUCTED TO A MINIMUM 95% COMPACTION.
  - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
  - PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
  - SUBJECT PROPERTY ZONED R PER GO-02-05 COMPREHENSIVE ZONING PLAN.
  - TUPO SHOW HEREON WAS FILED WITH HOWARD ASSOCIATES ON [blank].
  - NO PIPE SHALL BE LAID IN PLACE UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO WITHIN SIX (6) INCHES OF FINISHED GRADE ELEVATIONS.
  - ALL STORM DRAIN PIPE BUILDING SHALL BE CLASS "C" AS SHOWN IN FIG. 11-2 OF THE HOWARD COUNTY DESIGN MANUAL, VOL. 1, UNLESS OTHERWISE NOTED.

NOTE: VICINITY MAP LOCATED ON SHEET 2 OF 5



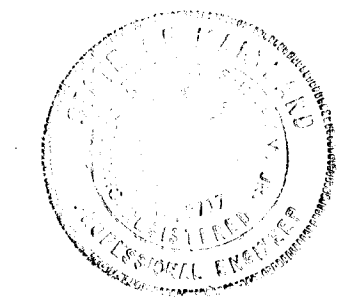
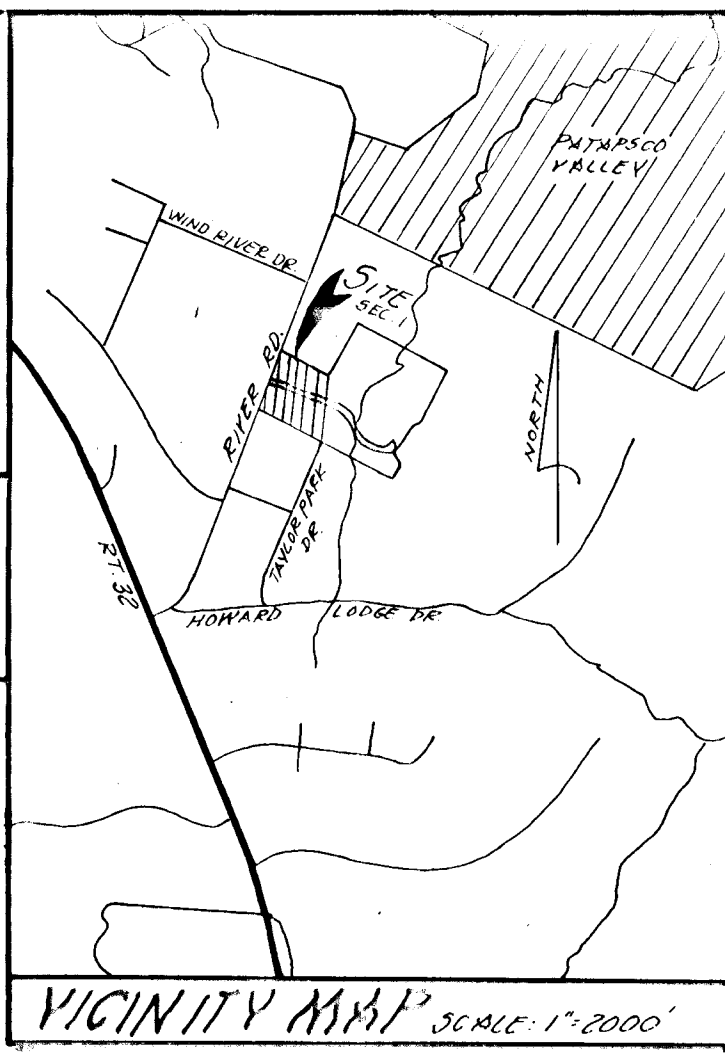
SCALE 1" = 50' HOR.  
 1" = 5' V. (R.L.)

PROFILE  
 SURVEYED BY: [blank]  
 DATE: [blank]  
 NOTE BOOK: [blank]  
 NO. OF WAY CHECKED: [blank]

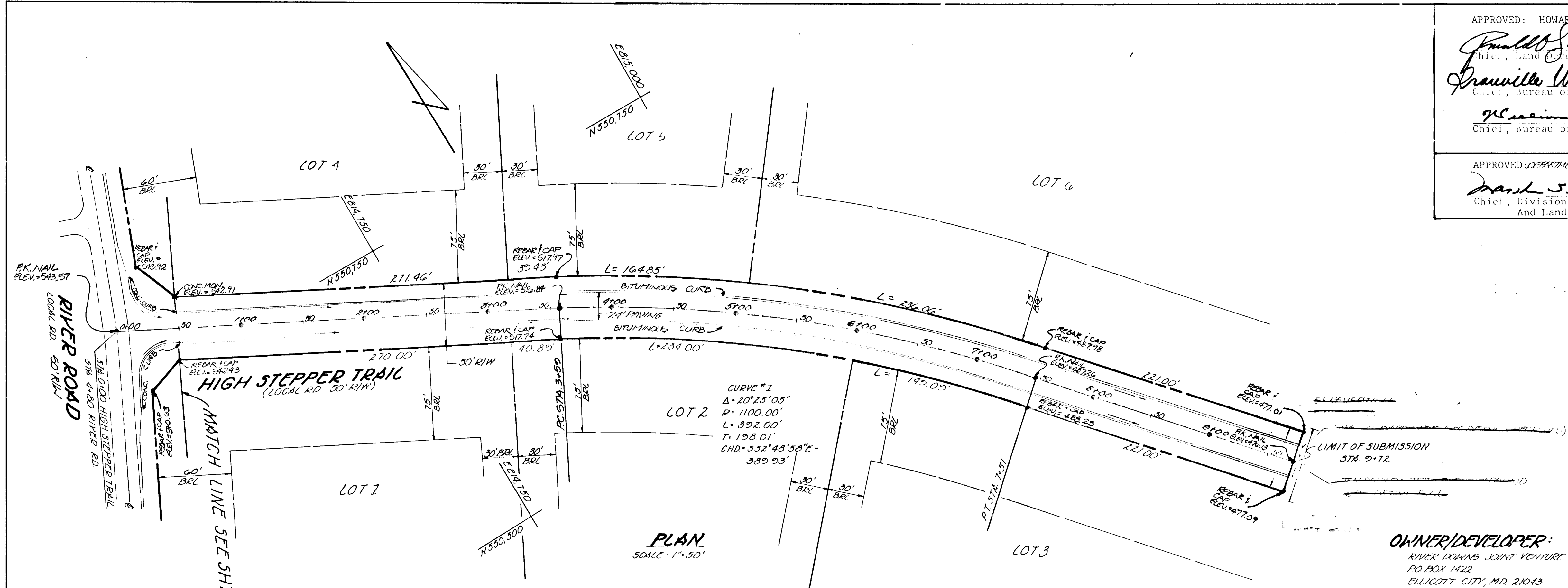
1537

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Donald J. Sisson* Chief, Land Development Division 2/9/90  
*Franklin W. Wetland* Chief, Bureau of Highways 1/30/90  
*William C. Reed* Chief, Bureau of Engineering 2-12-90

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Mark S. McCright* Chief, Division of Community Planning and Land Development 2/22/90



C. Robert Sisson 1-16-90



PLAN  
SCALE 1"=50'

OWNER/DEVELOPER:  
RIVER DOWNS JOINT VENTURE  
PO BOX 1422  
ELLICOTT CITY, MD 21043

HIGH STEPPER TRAIL

TITLE: FINAL ROAD CONSTRUCTION PLAN				
PROJECT: RIVER DOWNS (SEC 1 LOTS 1-6)				
LOCATION: 3 RD ELECTION DISTRICT HOWARD CO. MD				
SCALE: AS SHOWN	DESIGNED BY: M.L.S.	DRAWN BY: D.WELSH	CHECKED BY: T.L.	DATE: 5-13-88
FIELD BOOK: PAGE NO.	JOB NO.: 8818	DRAWING NO.: 2 OF 5		

**boender associates inc.**  
 consulting engineers  
 land surveyors  
 land planners  
 COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD 21043  
 (301) 465-7777

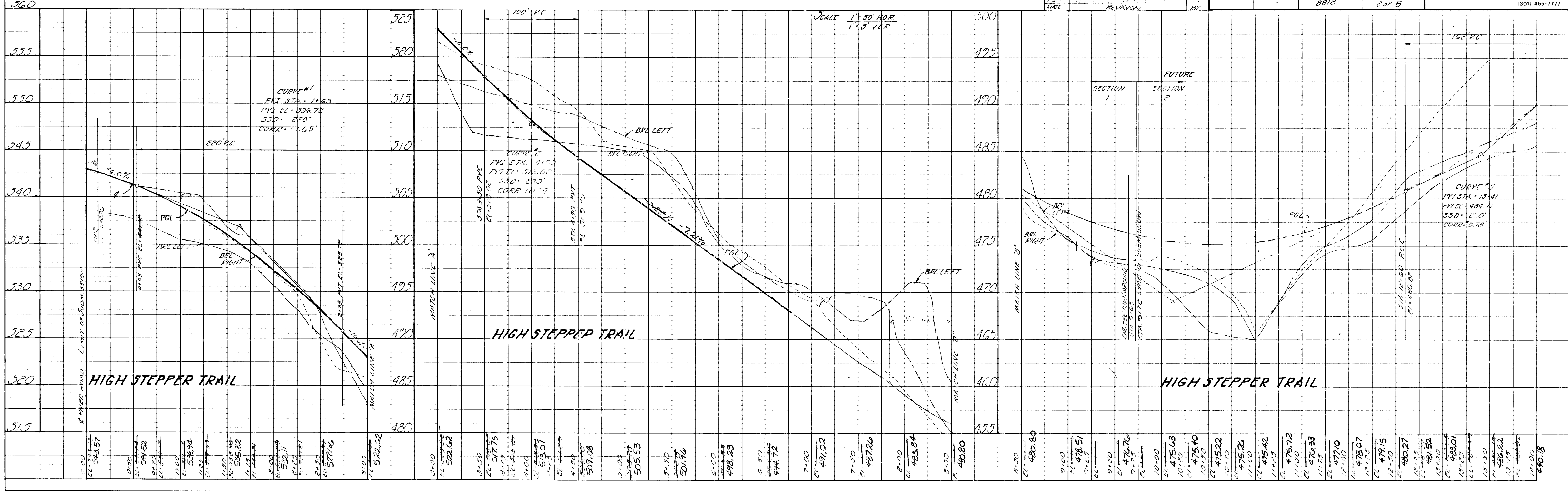
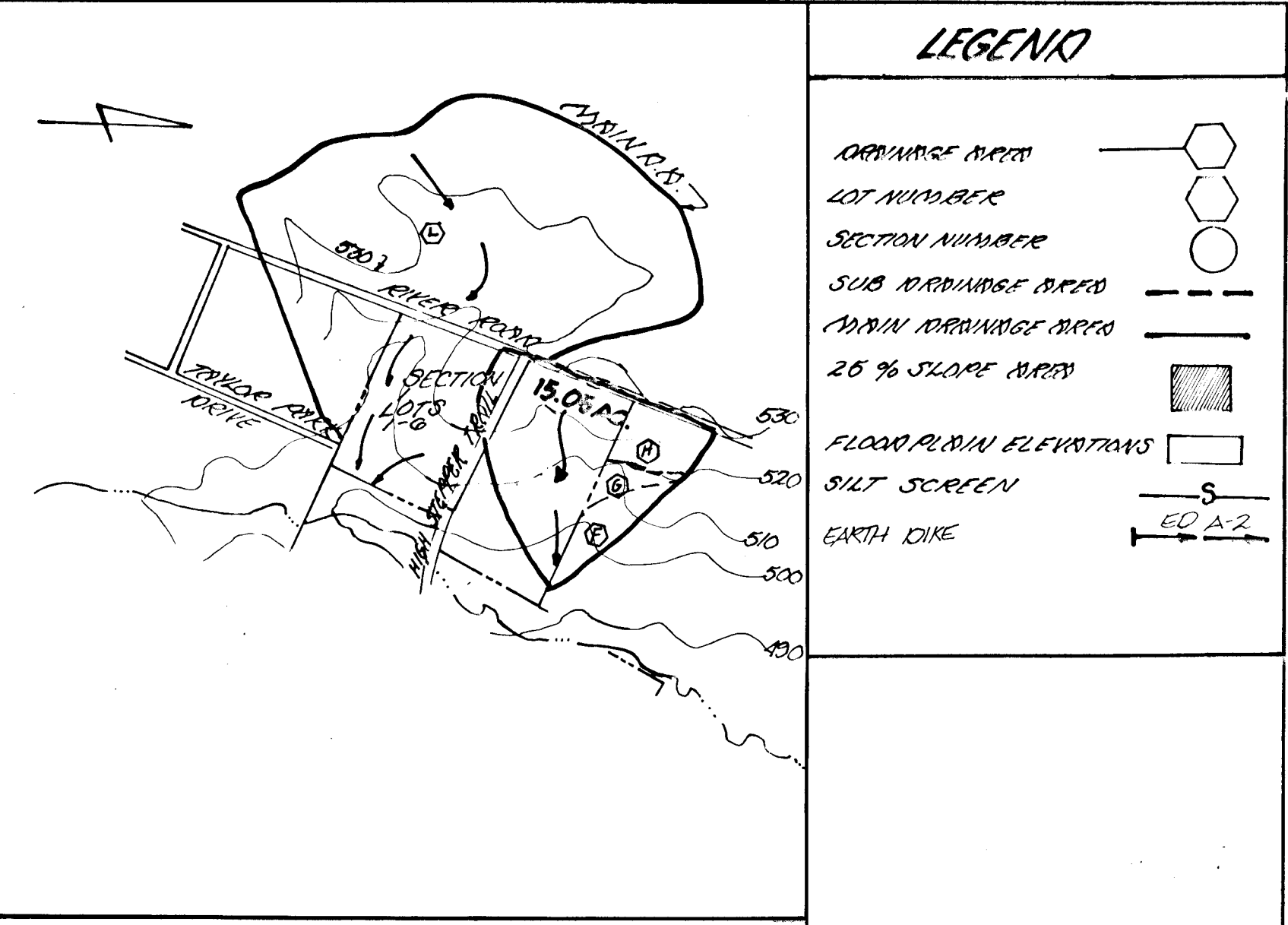
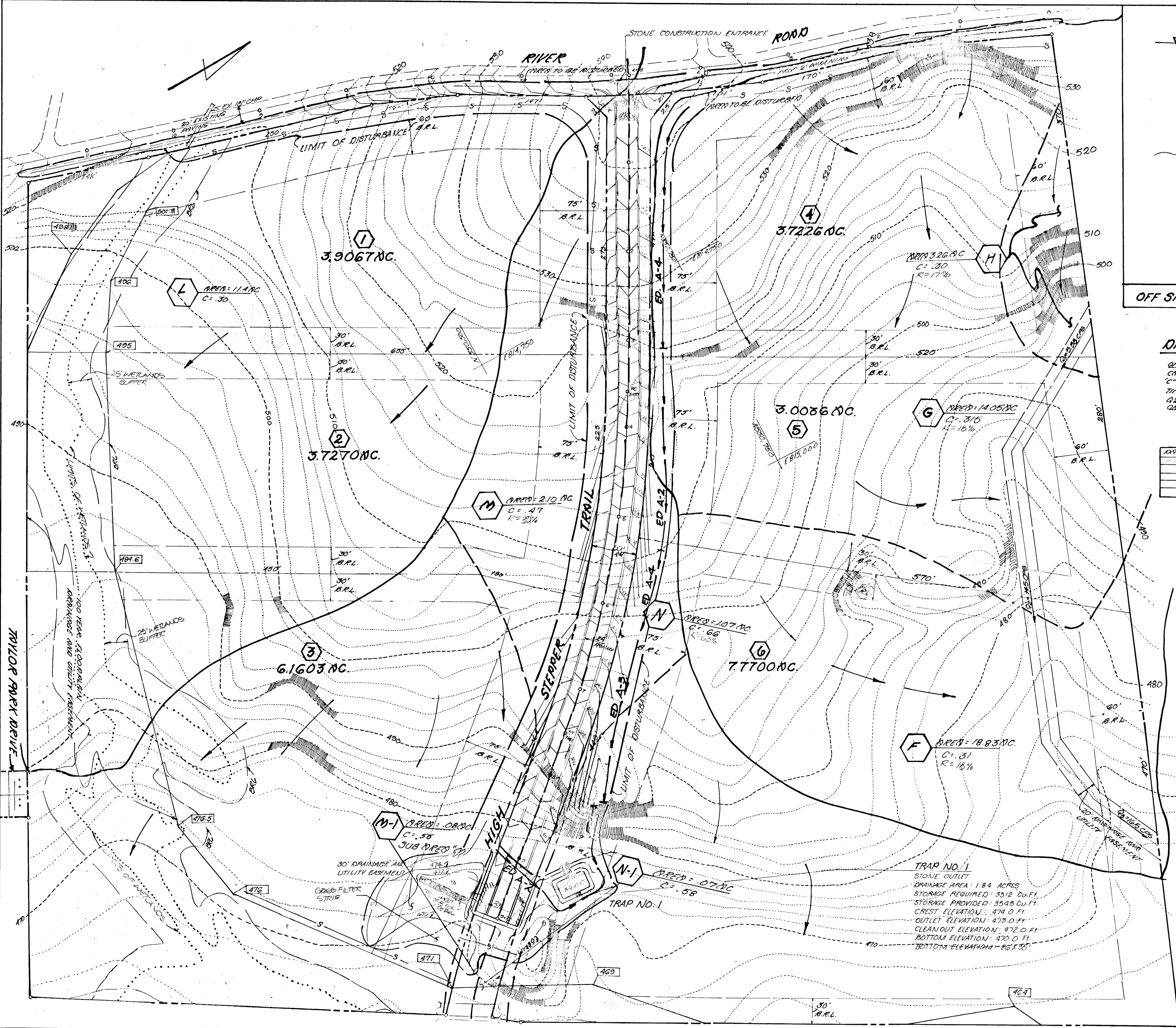


PLATE 1. PLAN PROFILE  
 KEUFEL & ESSER CO.  
 48 7924 MADE IN U.S.A.

F-89-200  
 AS-BUILT  
 12-20-91

1537



OFF SITE DRAINAGE AREAS SCALE: 1"=700'

**LEGEND**

- DRAINAGE AREA
- LOT NUMBER
- SECTION NUMBER
- SUB DRAINAGE AREA
- MAIN DRAINAGE AREA
- 2% SLOPE AREA
- FLOOD PLAIN ELEVATIONS
- SILT SCREEN
- EARTH DIKE

**DRAINAGE DETAILS**

OFF SITE DRAINAGE:  
 CATCHMENT AREA: 50.5 AC.  
 C: COEFFICIENT: 0.30  
 TIME OF CONCENTRATION: 20 MIN.  
 Q2: 43.40 cfs Q10: 71.22 cfs  
 Q50: 115.68 cfs Q100: 175.53 cfs

DATE	REVISION	BY	REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS
1-25-90		JCO	<i>John C. O'Brien</i> 1-25-90 SOIL CONSERVATION SERVICE DATE
1/29/90			<i>John K. Robertson</i> 1/29/90 SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

<i>Paul J. Sporn</i>	2/9/90
Chief, Land Development Division	Date
<i>Francis W. Walsand</i>	1/30/90
Chief, Bureau of Highways	Date
<i>William E. Ryan</i>	2-12-90
Chief, Bureau of Engineering	Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Frank S. L. Taylor</i>	2/20/90
Chief, Division of Community Planning and Land Development	Date

**DEVELOPER'S CERTIFICATE**

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

By: *Harold Paris, Jr.*, President 4/6/89  
DEVELOPER DATE

**ENGINEER'S CERTIFICATE**

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Michael F. F.* 1-16-90  
ENGINEER DATE

**OWNER/DEVELOPER:**

RIVER DOMAINS JOINT VENTURE  
 P.O. BOX 1422  
 ELLICOTT CITY, MARYLAND 21043

TITLE: GRADING, DRAINAGE AND SEDIMENT CONTROL PLAN
PROJECT: RIVER DOMAINS (SECTION 1, LOTS 1-6)
LOCATION: O.R.E. FILE NO.: S-86-21
3rd. ELECTION DISTRICT: HOWARD CO. MD.
SCALE: 1"=50'
DESIGNED BY: RSO
DRAWN BY: BJK
CHECKED BY: HL
DATE: FEB 27, 1990
FIELD BOOK: 112
PAGE NO.: 1-29
JOB NO.: 8818
DRAWING NO.: 3015

**boender associates**  
 inc.  
 consulting engineers  
 land surveyors  
 land planners

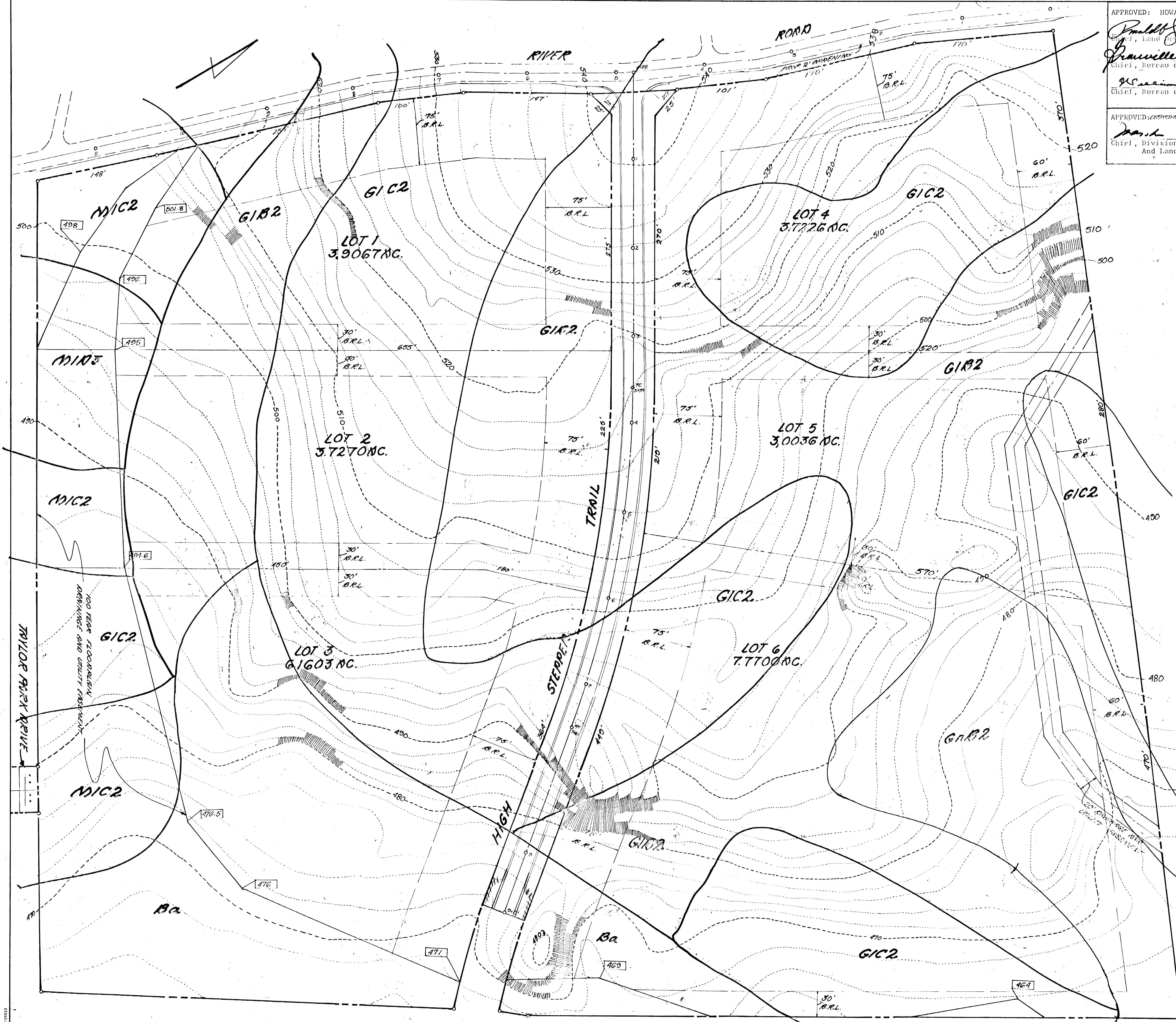
COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD. 21043  
 (301) 465-7777

1537

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Donald E. Sporn* 2/9/90  
 Chief, Land Development Division Date  
*Granville W. Wehland* 1/30/90  
 Chief, Bureau of Highways Date  
*William B. Reay* 2-12-90  
 Chief, Bureau of Engineering Date

APPROVED: COMMISSION OF PLANNING AND ZONING  
*David S. Prange* 2/2/90  
 Chief, Division of Community Planning, And Land Development Date

DATE	REVISION	BY



□ HYDRIC SOILS

NOTE: SOILS SHOWN HEREON FROM HOWARD COUNTY SOIL SURVEY, PARS. NO. 4.

▨ SLOPES 25% OR GREATER

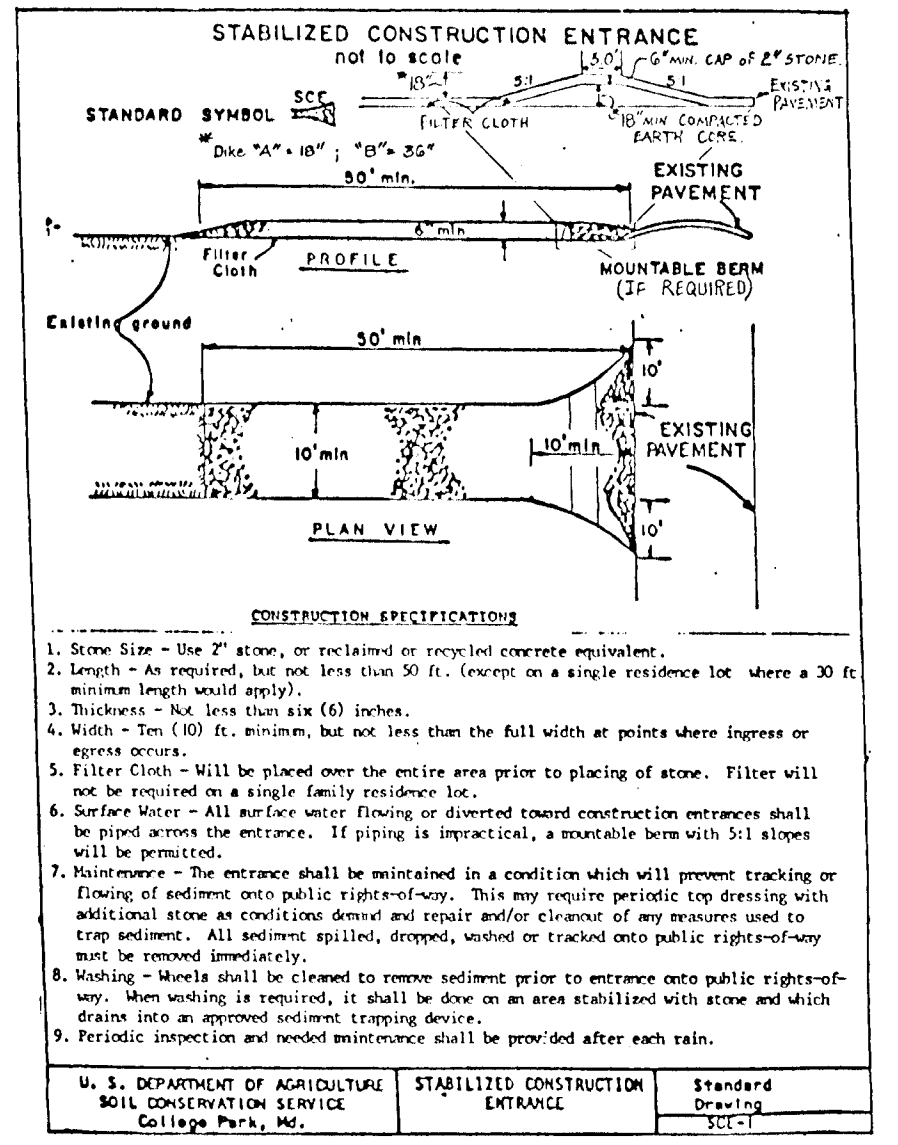
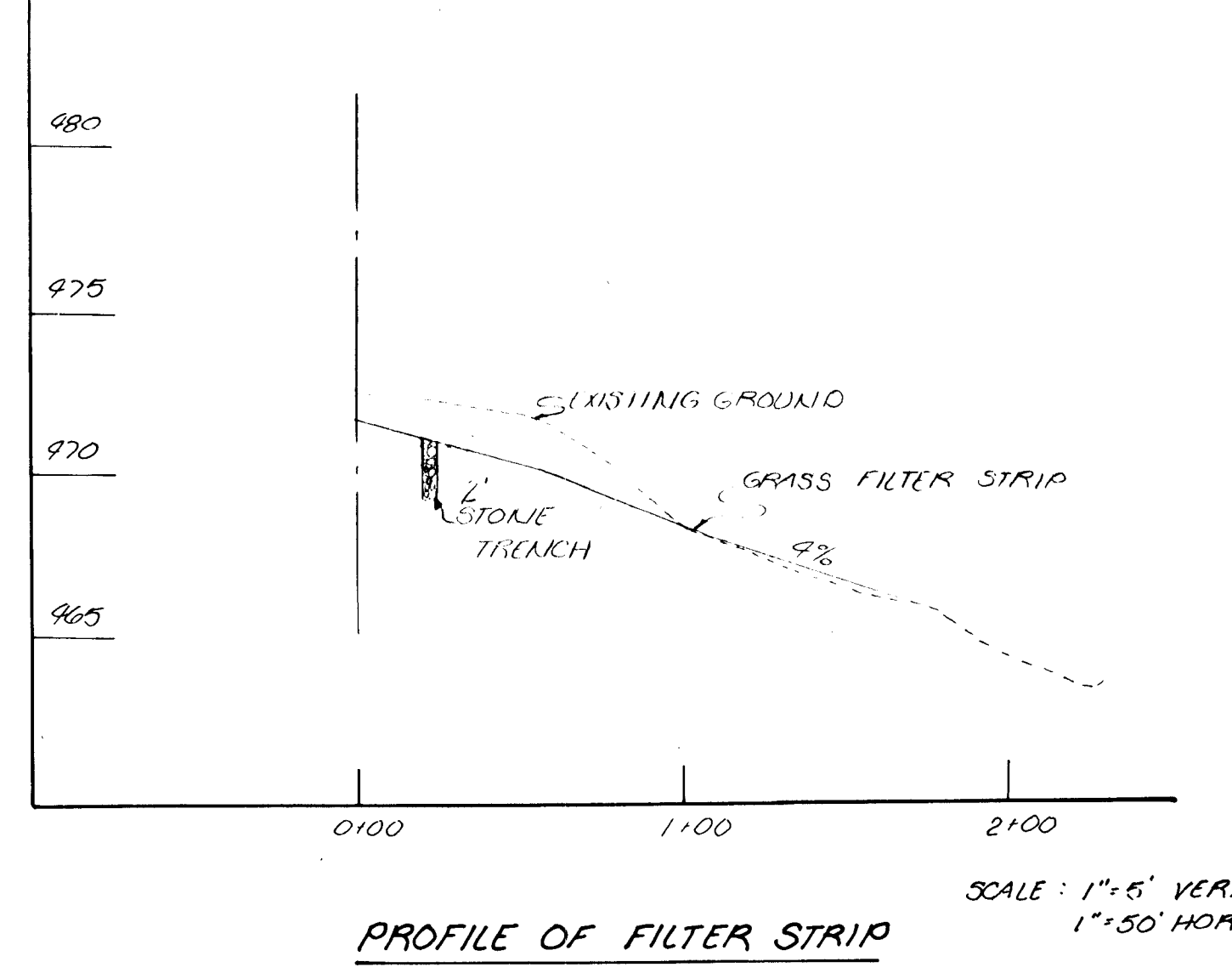
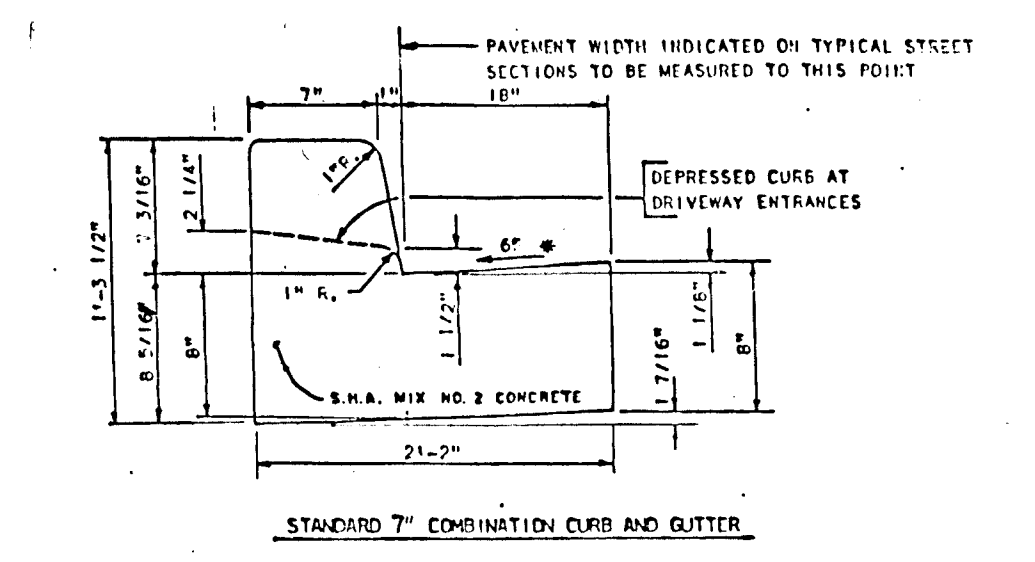
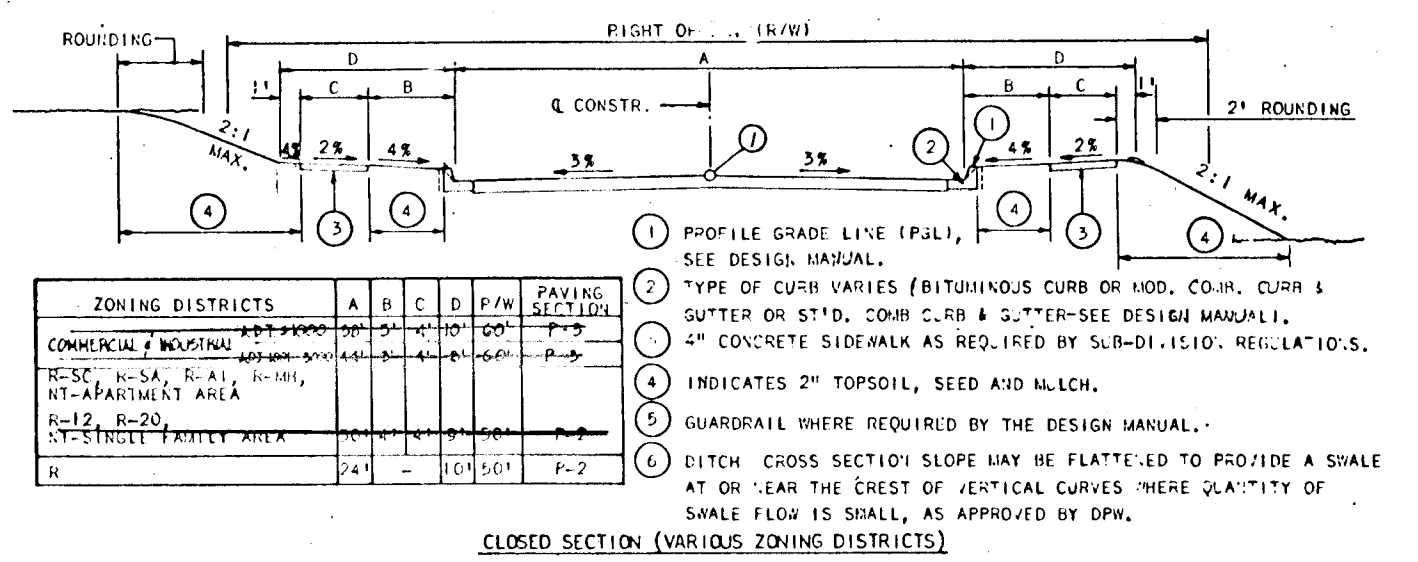
*Medell H.*

**OWNER/DEVELOPER:**  
 RIVER WALKS JOINT VENTURE  
 P.O. BOX 1422  
 ELLICOTT CITY, MARYLAND 21043

TITLE: <b>SOILS MAP</b>		boender associates inc.	
PROJECT: <b>RIVER WALKS (SECTION 1) LOTS 1-6</b>		consulting engineers	
LOCATION: <b>3rd ELECTION DISTRICT HOWARD CO. MD.</b>		land surveyors	
SCALE: 1"=50'	DESIGNED BY: <b>ASD</b>	CHECKED BY: <b>RSD</b>	DATE: <b>2/27/90</b>
FIELD BOOK: <b>112</b>	PAGE NO.: <b>1-29</b>	JOB NO.: <b>8918</b>	DRAWING NO.: <b>4 OF 5</b>

AS-BUILT F-89-200

1537



**TEMPORARY SEEDING NOTES**

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

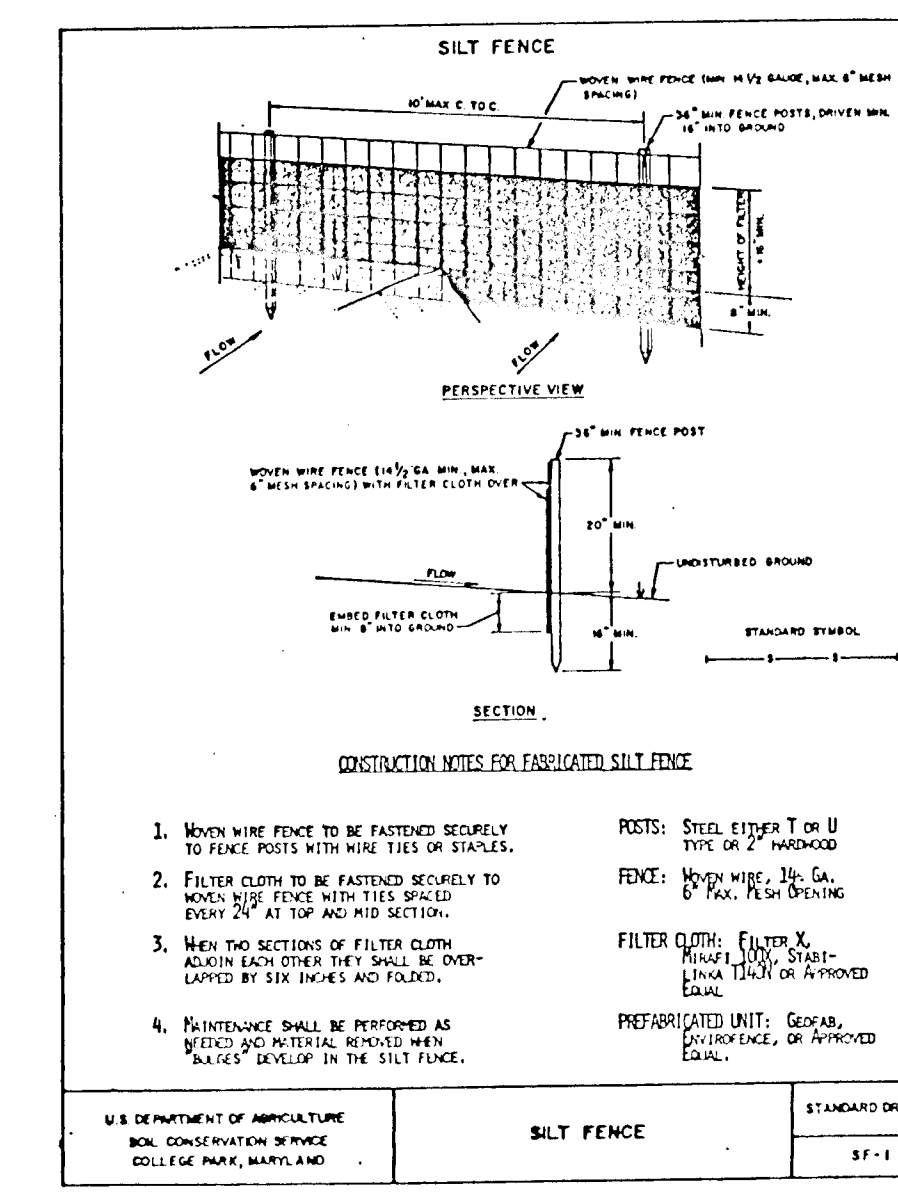
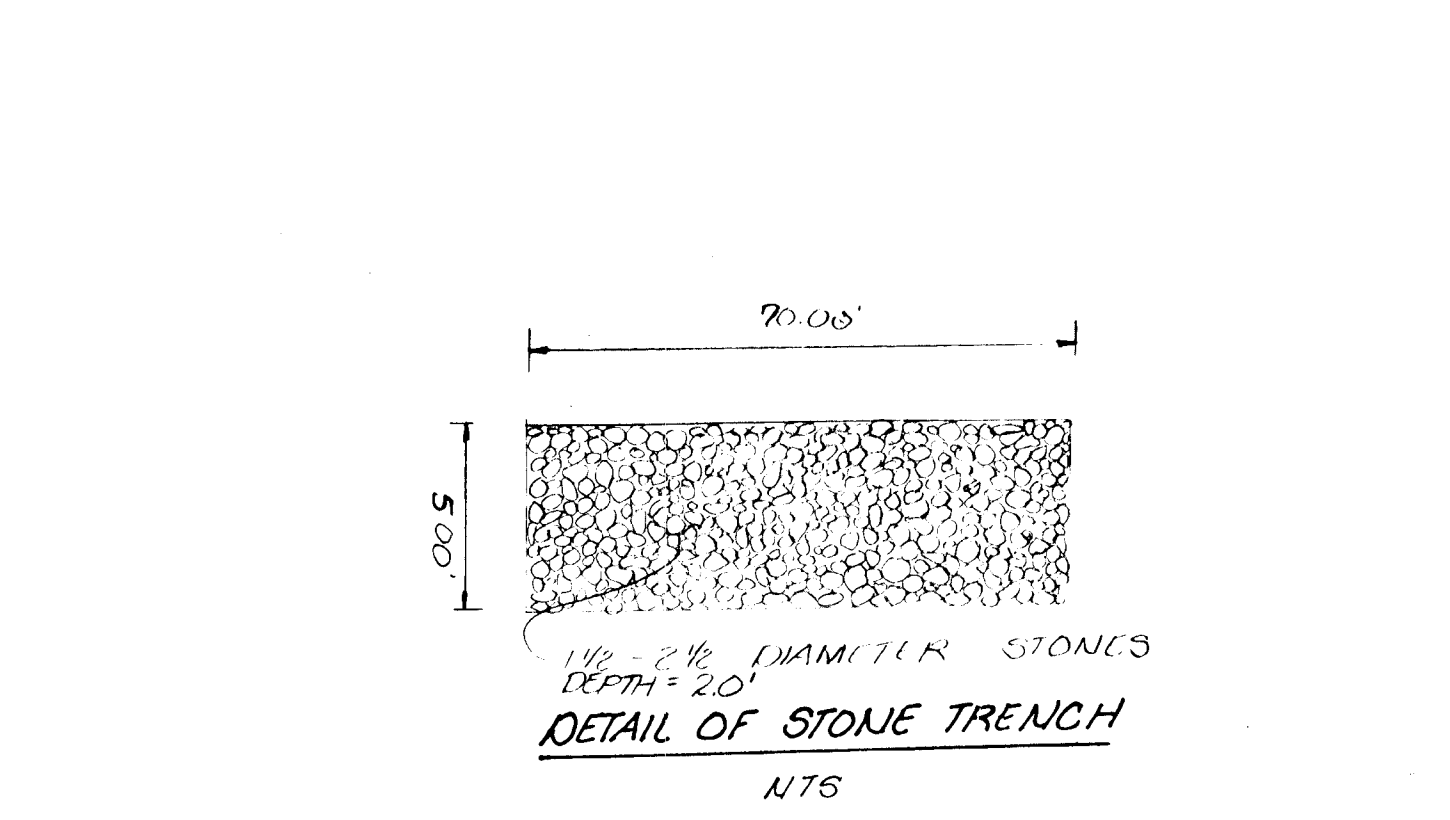
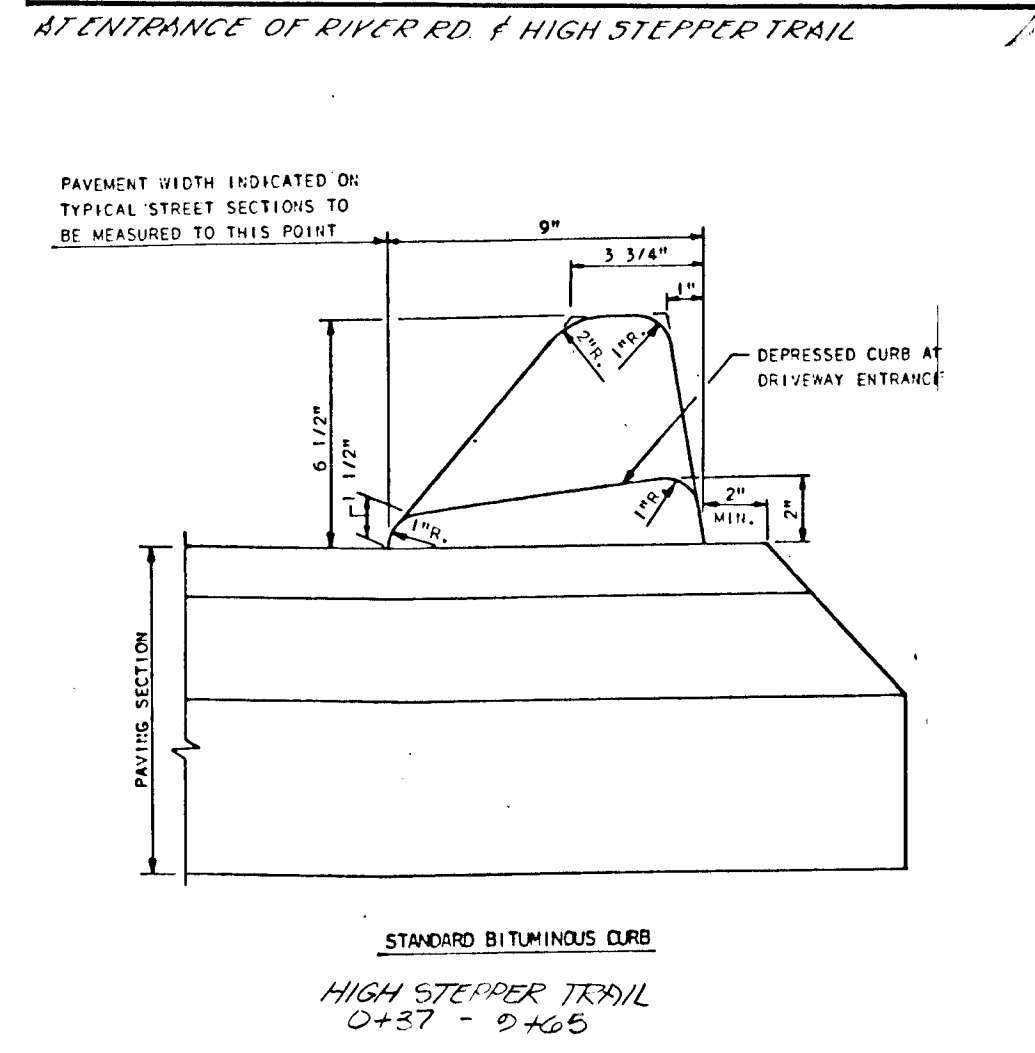
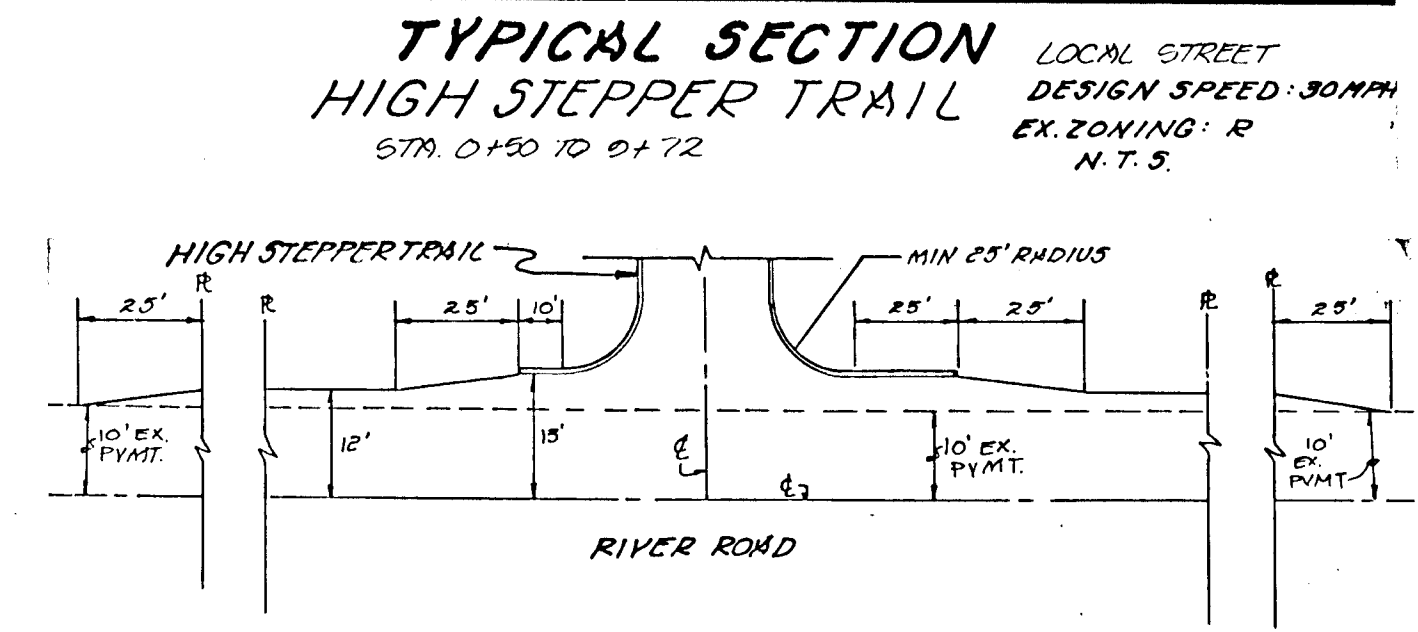
**Seedbed Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

**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 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 (0.7 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 670 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.



**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, if not previously loosened.

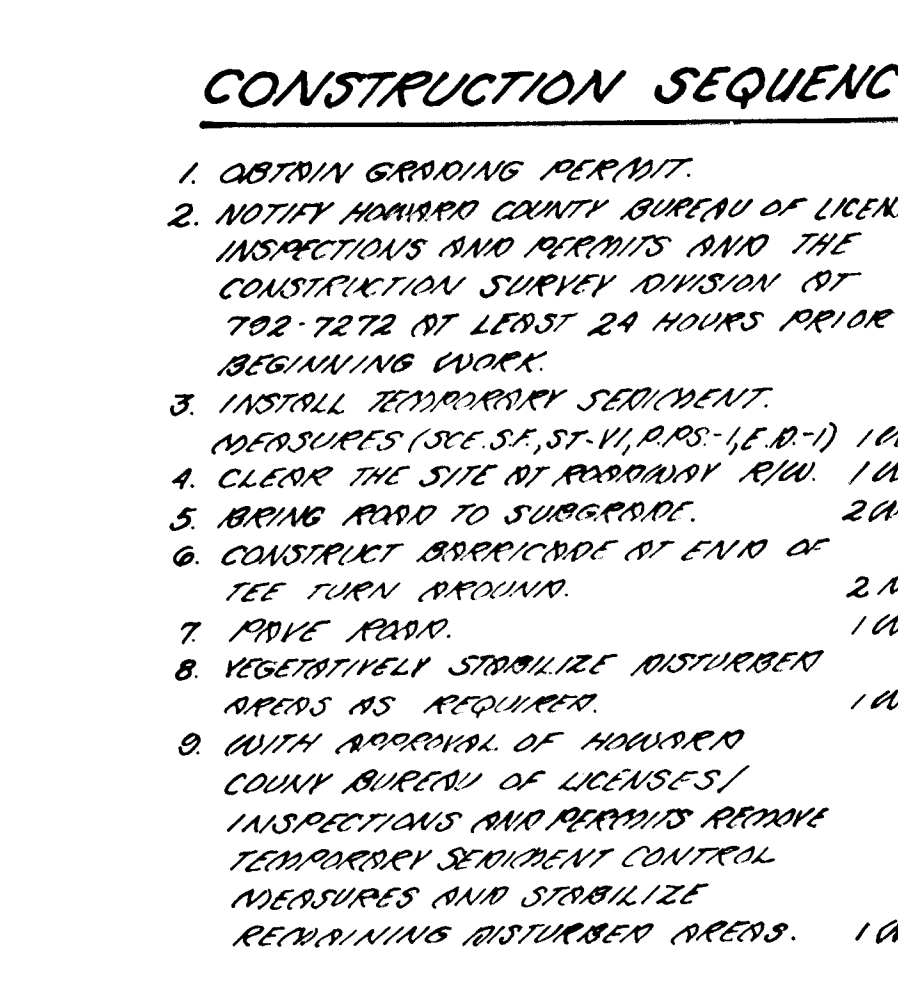
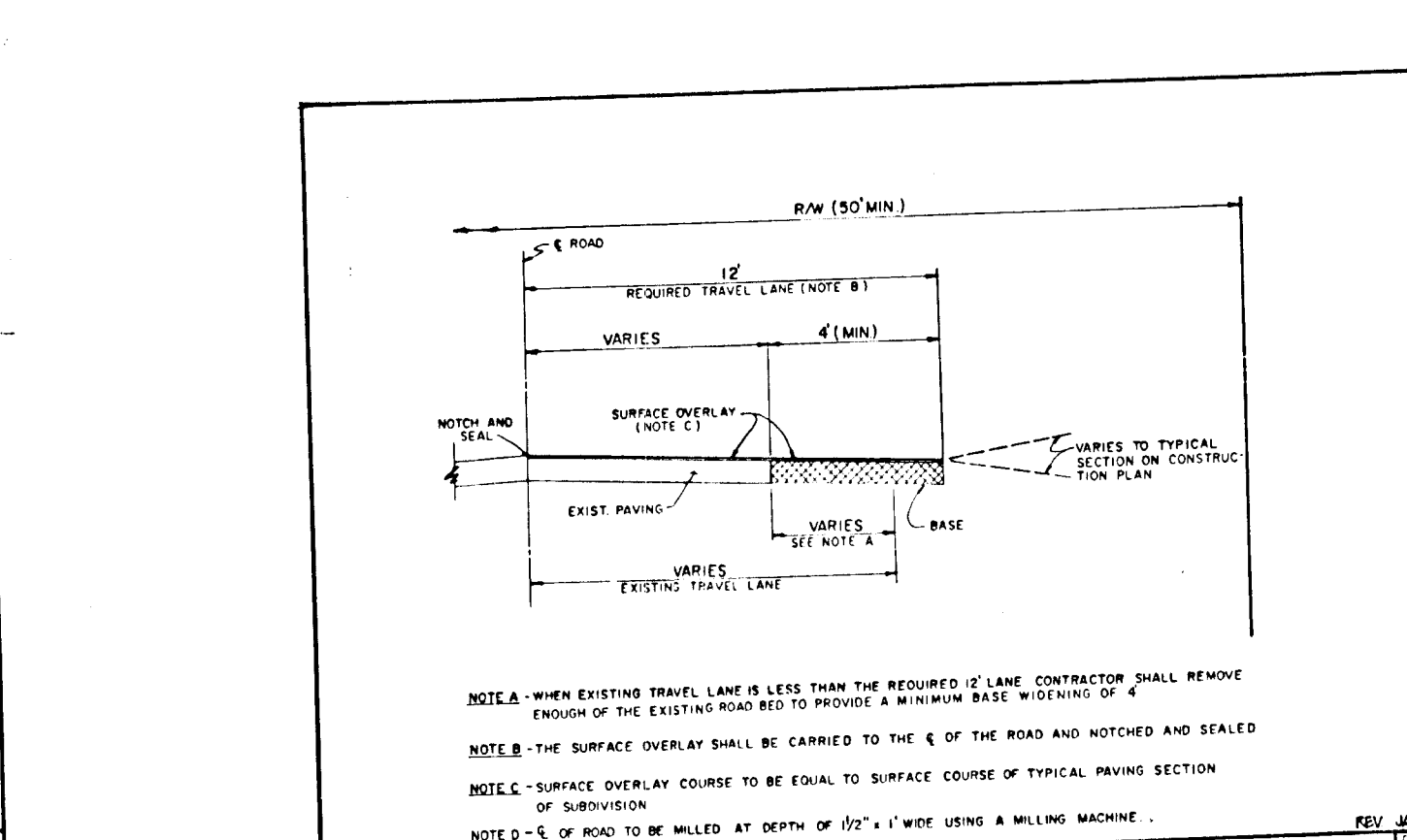
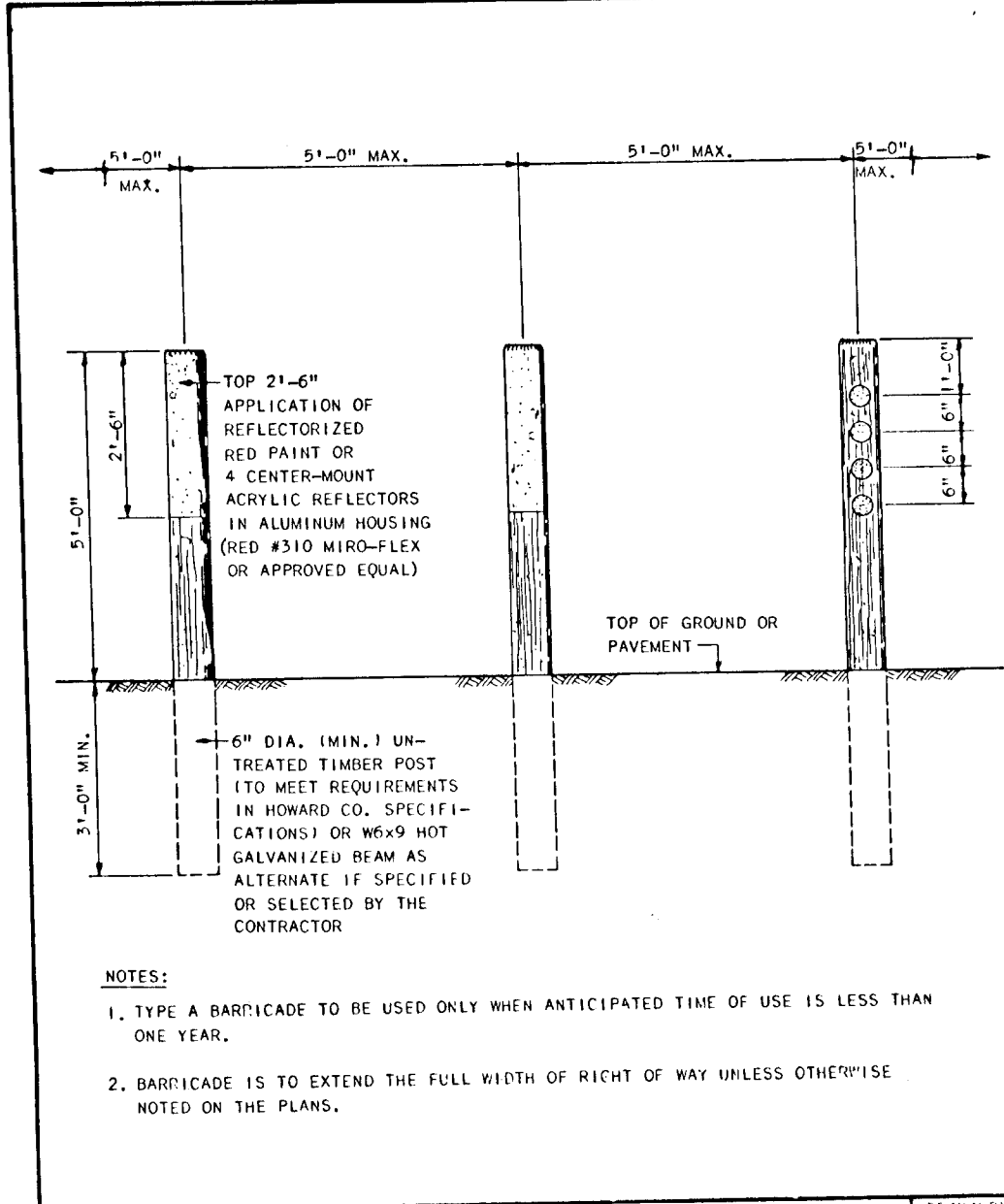
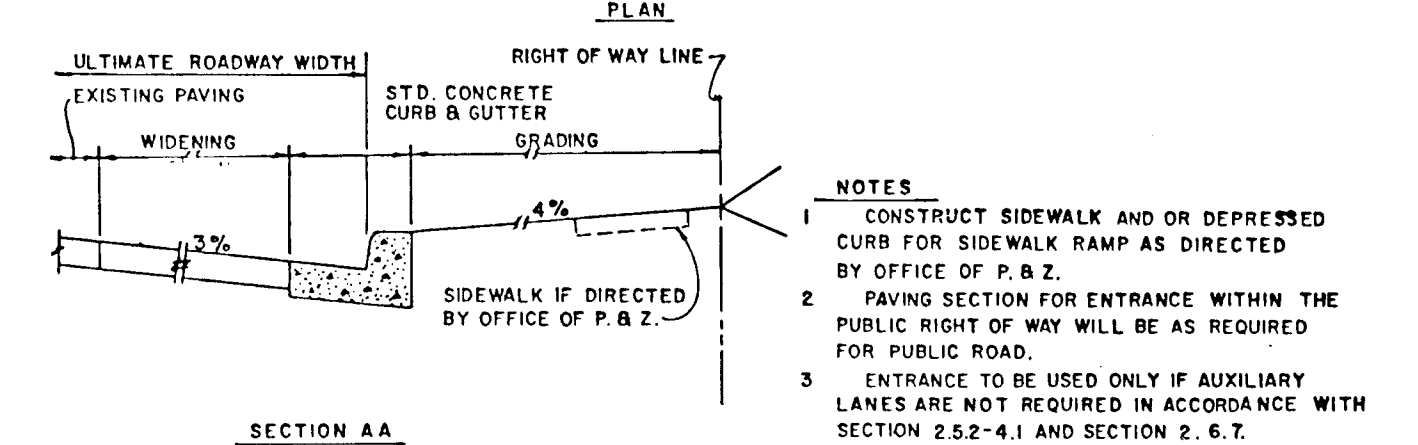
**Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) 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 1 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.

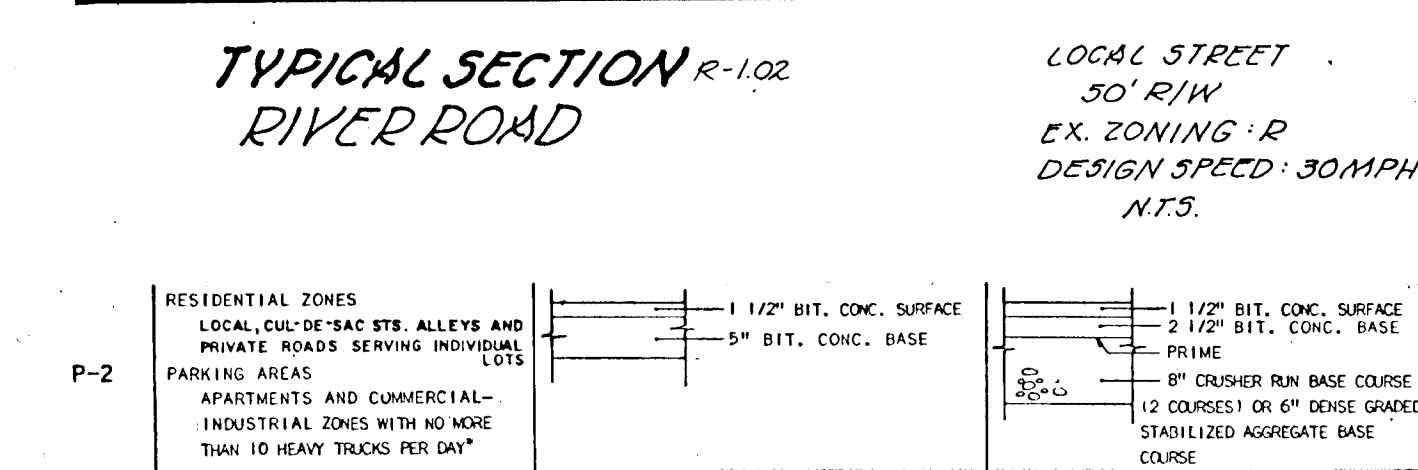
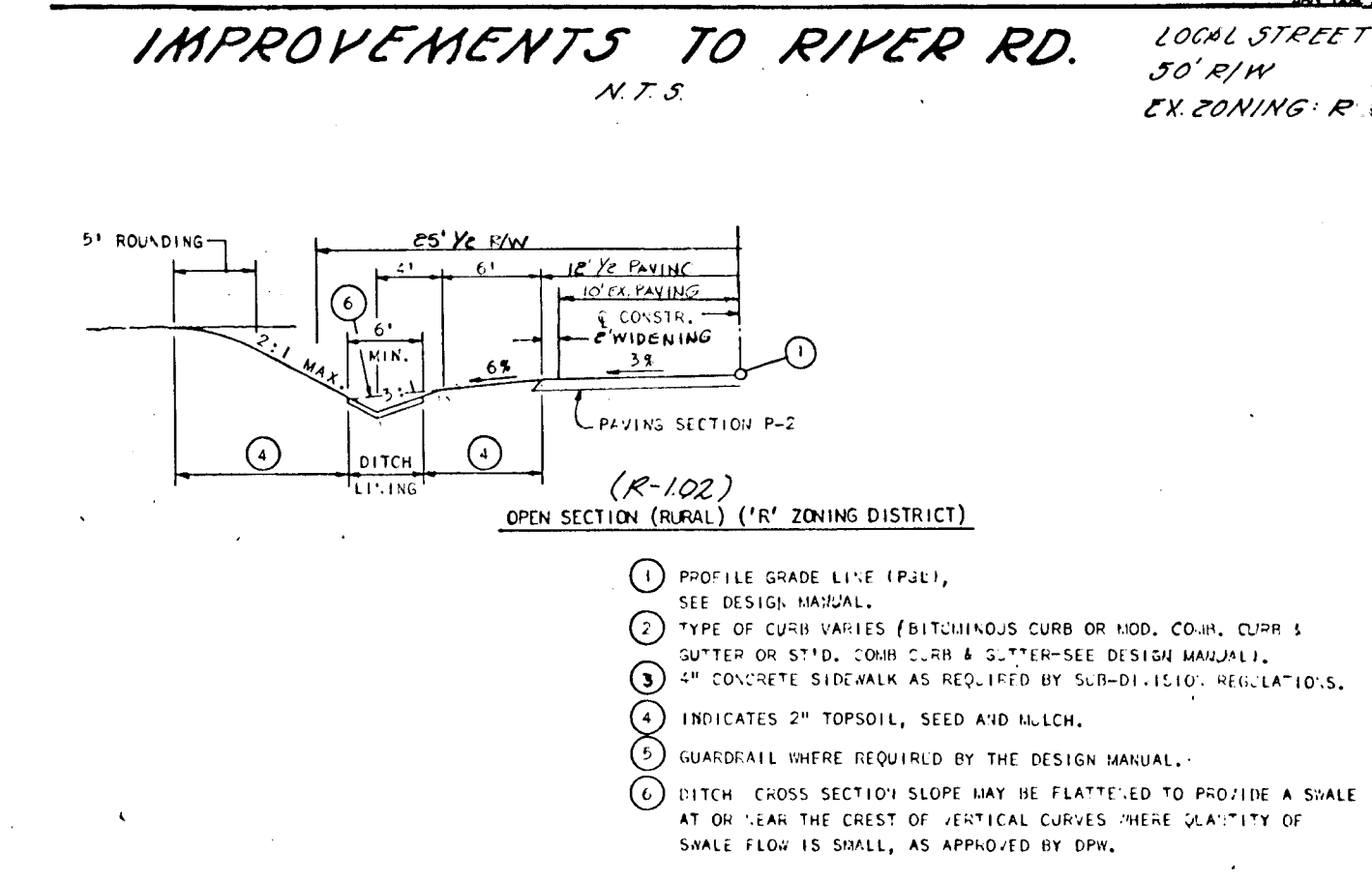
**Maintenance -** Inspect all seeded areas and make needed repairs, replacements and reseedings.



**SEDIMENT CONTROL GENERAL 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. (932-2437).
- 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 must 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: 20.40 Acres  
 Area to be graded or paved: 1.65 Acres  
 Area to be vegetatively stabilized: 18.75 Acres  
 Total Cut: 2.20 Cu. Yds.  
 Total Fill: .61 Cu. Yds.  
 Definite 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 DPM 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.

**SPECIAL NOTE:** PRIOR TO PERFORMING ANY CONSTRUCTION ADJACENT TO EXISTING WATERBODIES, INSTALL SILT FENCE IN ACCORDANCE WITH STANDARD DETAIL, SEE THIS SHEET.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Arnold J. Spon* 2/5/90  
 Chief, Land Development Division

*Janet W. McLeod* 1/30/90  
 Chief, Bureau of Highways

*William E. Reed* 2-12-90  
 Chief, Bureau of Engineering

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*David V. Saylor* 2/22/90  
 Chief, Division of Community Planning  
 And Land Development

**DEVELOPER'S CERTIFICATE**

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

*Barthelme Paris, Jr.* 4/6/89  
 DEVELOPER

**ENGINEER'S CERTIFICATE**

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Michael F. T.* 1-16-90  
 ENGINEER

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

*John R. Robertson* 1-25-90  
 SOIL CONSERVATION SERVICE

*John R. Robertson* 1/25/90  
 SOIL CONSERVATION DISTRICT

TITLE: **DETAIL SHEET**

PROJECT: **RIVER DOWNS (SEC 1 LOTS 1-6)**

LOCATION: **380 ELECTION DISTRICT HOWARD CO. MD.**

SCALE: **AS NOTED** DESIGNED BY: **D.WELSH** DRAWN BY: **D.WELSH** CHECKED BY: **M.L.** DATE: **2/23/89**

FIELD BOOK: **30F.5** PAGE NO.: **281B** JOB NO.: **281B** DRAWING NO.: **30F.5**

**boender associates inc.**  
 consulting engineers  
 land surveyors  
 land planners

COURTHOUSE SQUARE  
 3565 ELLICOTT MILLS DRIVE  
 ELLICOTT CITY, MD 21043  
 (301) 465-7777

1537