

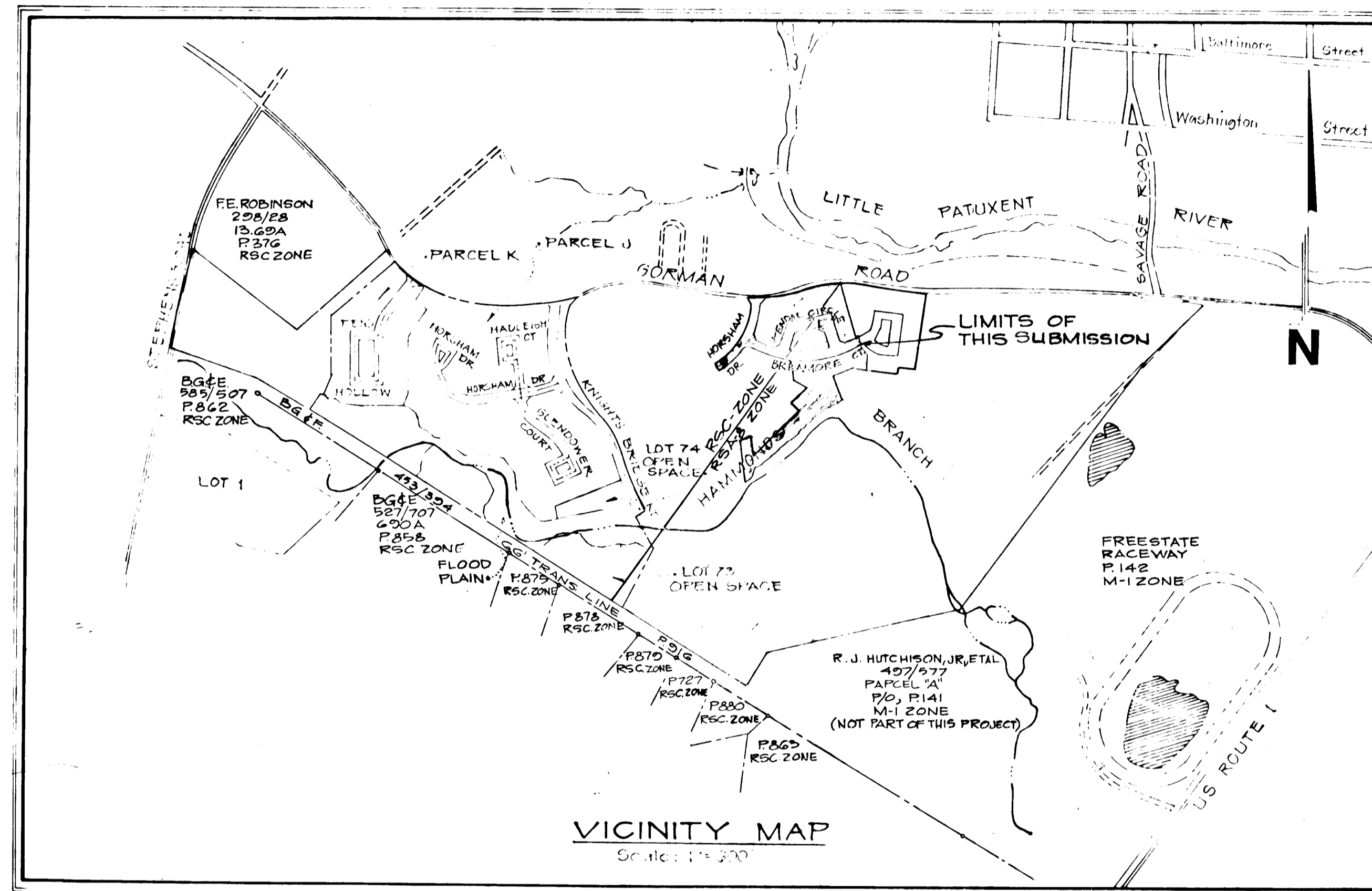
GENERAL NOTES

- THE APPROXIMATE LOCATION OF ALL UTILITIES IS SHOWN BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL LOCATE, PROTECT AND SUPPORT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER/INSPECTOR, AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF PROPOSED UTILITIES AT HIS OWN EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS & ELECTRIC COMPANY - 561-2585 (CONTRACTOR SERVICES)
 - BALTIMORE GAS & ELECTRIC COMPANY - 234-6313 (UNDERGROUND DAMAGE CONTROL)
 - BALTIMORE GAS & ELECTRIC COMPANY - 298-9013 (TROUBLE SHOOTING)
 - "MISS UTILITY" 800-257-7777
 - CHESAPEAKE & POTOMAC (C&P) TELEPHONE COMPANY - 725-9976
 - BUREAU OF UTILITIES/HOWARD COUNTY - 992-2366
- ALL DETAILS NOT SHOWN ON THE DRAWINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS.
- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY SPECIFICATIONS AND HOWARD COUNTY DESIGN MANUAL, VOLUME IV.
- ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST EDITION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- TREES SHALL BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT POSSIBLE. TREES SIX INCH (6") DIAMETER OR GREATER (MEASURED FOUR FEET (4') ABOVE EXISTING GRADE) ADJACENT TO THE LIMITS OF CONSTRUCTION SHALL NOT BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- ALL HORIZONTAL AND VERTICAL CONTROLS ARE BASED ON MARYLAND STATE PLANE COORDINATES SYSTEM PROVIDED BY HOWARD COUNTY.
- TOPOGRAPHY TAKEN FROM MAPS PREPARED BY PHOTOGRAMMETRY BY "AERIAL SURVEYS" IN 1984. TOPOGRAPHY FIELD CHECKED 1986.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12" CLEAR, CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. ANY COST INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT POLES SHALL BE INCLUDED IN UNIT PRICES BID FOR EXCAVATION AND SHALL BE INCLUDED IN UNIT PRICES BID FOR EXCAVATION BACKFILL.
- ALL PIPE BEDDING SHALL BE CLASS C.
- ROAD RIGHT OF WAY INFORMATION IS SHOWN ON THE RECORD PLATS.
- SPOT ELEVATIONS SHOWN ARE TOP OF CURB UNLESS OTHERWISE NOTED.
- SHADED AREAS INDICATE WATER, SEWER, UTILITY, DRAINAGE AND/OR ACCESS EASEMENT(S).

PARCEL E, AREA I

BOWLING BROOK FARMS

LOTS E-1 THRU E-27, E-68 THRU E-92, LOTS 214 THRU 217



STRUCTURE SCHEDULE							
NO.	TYPE	INV. IN	INV. OUT	UPPER END	LOWER END	HO. CO. STD.	LOCATION
I-1	A-5 INLET	222.23	222.73	221.27	221.25	SD 4.01	4+77.17
I-2	A-5 INLET	222.53	222.92	221.47	221.45	SD 4.01	4+77.17
I-3	A-5 INLET	222.53	222.92	221.47	221.45	SD 4.01	5+58.00
I-4	A-5 INLET	222.66	223.16	221.60	221.58	SD 4.01	5+58.00
I-5	A-10 INLET	221.70	222.20	220.64	220.62	SD 4.02	7+12.00
I-6	A-10 INLET	221.70	222.20	220.64	220.62	SD 4.02	7+12.00
I-7	A-10 INLET	221.70	222.20	220.64	220.62	SD 4.02	0+78.00
I-8	A-10 INLET	221.70	222.20	220.64	220.62	SD 4.02	3+24.48
I-9	A-10 W/DEFLEC.	221.70	222.20	220.64	220.62	SD 4.02+4.83	3+30.00
I-10	A-10 INLET	221.70	222.20	220.64	220.62	SD 4.02	0+78.00
M-1	MANHOLE	231.45	230.95	230.00	230.00	G. 5.12	
M-2	MANHOLE	231.45	230.95	230.00	230.00	G. 5.12	1+75.00
E-1	FLARE END SECT.					SD 5.51	
I-11	A-5 INLET					SD 4.01	3+80
I-5a	TYPE 'S' INLET					SD 4.22	

LEGEND	
STORM DRAIN	
PROPOSED &	
PROPOSED R.W.	
LIMITS OF SUBMISSION	
EASEMENT	
HANDICAP PKG SPACE	HC
NO. OF PARKING SPACES IN PARKING BAY	
HANDICAP RAMP	HCR
175 WATT MERCURY VAPOR LAMP POST TOP FIXTURE ON 14 FOOT GRAY FIBERGLASS POLE	

PAVING AND STORM DRAIN CONSTRUCTION PLAN

HOWARD COUNTY, MARYLAND

PIPE SCHEDULE			
DIA.	MATERIAL	CLASS	LENGTH (FT)
15"	RCP	V	289
18"	RCP	V	169
21"	RCP	V	471
24"	RCP	III	4
27"	RCP	V	52

- LANDSCAPING NOTES:
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO PLANTING (SEE NOTE #3 ON SHEET #1).
 - ALL PLANT MATERIAL AND PLANTING SHALL BE IN ACCORDANCE WITH "AMERICAN STANDARD FOR NURSERY STOCK" BY THE A.A.N.
 - SUBSTITUTIONS MAY BE PERMITTED WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT, (762-2220).
 - PLACE "GREEN VASE ZELKOVA" AND "SUMMER SHADE MAPLE" AT RADIIUS "BOUNDS" ON THE "PARKING ISLANDS" AND 5' BEHIND THE SIDEWALK ALONG THE ROADWAYS.
 - PLACE "REGENT SCHOLAR TREE", "GREENSPIRE LINDEN", AND "HEDGE MAPLE" 3' BEHIND SIDEWALK.

PLANT SCHEDULE				
KEY	PLANT NAME	SIZE	QUANTITY	REMARKS
Z	ZELKOVA SERRATA "GREEN VASE"	2 1/2"-3" CAL.	5	B & B
	GREEN VASE ZELKOVA	12-14' HT.		
P	ACER PLATANOIDES "SUMMER SHADE"		24	
	SUMMER SHADE MAPLE			
S	SOPHORA JAPONICA "REGENT"		10	
	REGENT SCHOLAR TREE			
T	TILIA CORDATA "GREENSPIRE"		13	
	GREENSPIRE LINDEN			
C	ACER CAMPESTRE		6	
	HEDGE MAPLE			

INDEX TO DRAWINGS	
SHEET #	DESCRIPTION
1	TITLE SHEET
2	PAVING & STORM DRAINAGE - HORSHAM DRIVE
3	PAVING & STORM DRAINAGE - BREWSTER COURT
4	PAVING & STORM DRAINAGE - KENDAL CIRCLE
5	PAVING & STORM DRAINAGE SECTIONS, DETAILS & PROFILES
6	DRAINAGE AREA MAP
7	EROSION & SEDIMENT CONTROL - DETAIL SHEET
8	EROSION & SEDIMENT CONTROL PLAN

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

James M. Nelson 3-29-88
SIGNATURE DATE

U.S. SOIL CONSERVATION SERVICE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William W. Weiland 4/8/88
Chief, Land Development Division Date

William W. Weiland 4/8/88
Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

William W. Weiland 4-8-88
Chief, Bureau of Engineering Date

William W. Weiland 4/13/88
Chief, Division of Community Planning & Land Development Date

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

APPROVED: *Stephen L. Miller* 3/28/88
HOWARD S.C.D. DATE

NO.	DESCRIPTION	DATE	APPROVED	DATE
1	AS-BUILT REVISIONS	5-6-91		
2	ADD STORM DRAIN I-20	1-25-92		
7	REVISED PER HO. CO. FC	1/27/98		

REVISION APPROVED BY

William W. Weiland
PROFESSIONAL SEAL

TITLE SHEET

Patton Harris Rust and Associates
A Professional Corporation
Engineers, Surveyors, Planners and Landscape Architects
7609 Standish Place Rockville, Maryland 20855 (301)762-2220

BOWLING BROOK FARMS
PARCEL E AREA I
LOTS E-1 THRU E-27, E-68 THRU E-92 LOTS 214 THRU 217
A RESUBDIVISION OF BOWLING BROOK, LOT 2
TAX MAP 47 PARCEL 141
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SURVEY _____ DATE 9-11-87
DESIGN _____
DRAWN C.N.II SHEET 1 of 8
CHECKED K.O.R.
SCALE C.I. AS SHOWN FILE NO. 2184-1-4

GORMAN ROAD LTD. PARTNERSHIP PARCEL

PART OF LOT 2 BOLLING BROOKE ZONED RSC/RSA-2

GORMAN ROAD LTD. PARTNERSHIP PARCEL

PART OF LOT 2 BOLLING BROOKE ZONED RSC

TEMPORARY TURN-AROUND PER H.O.C.O. STD R5.05

5' REVERTIBLE EASEMENT DEAD END BARRICADE SEE H.O.C.O. DETAIL 7.01

DRIVE

BREMORE COURT

HORSHAM

LIMIT OF SUBMISSION

LIMIT OF ASPHALT PAVEMENT

FUTURE PUBLIC ROAD

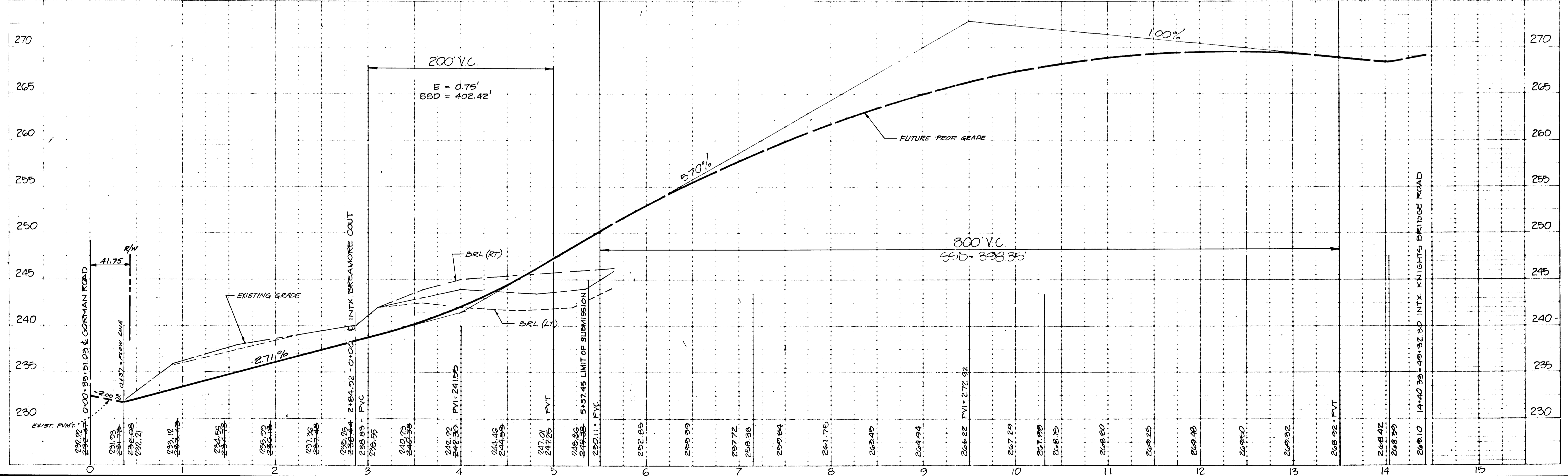
CURVE NO.	PC TO PT	RADIUS	Δ	ARC LENGTH	TAN	CHORD	BEARING
1	0+35.91 to 5+37.45	450.00	63°51'28"	501.54	280.41	476.96	S26°32'20"W

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Land Development Division Date 4/9/88
 Branville W. McCreary
 Chief, Bureau of Highways Date 4-8-88
 McCreary B. Ray
 Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 Chief, Division of Community Planning & Land Development Date 4/15/88
 J.P.

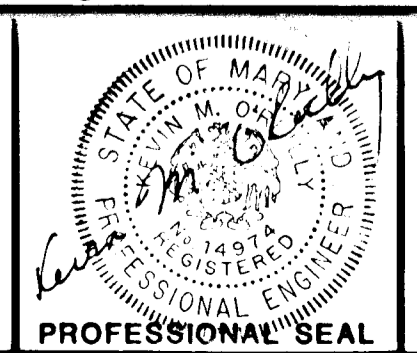
PROFILE LEGEND:
 PROFILE GRADE LINE
 EXISTING G
 B.R.L. (RT.)
 B.R.L. (LT.)
 PROFILE SCALE: HOR. 1"=50'
 VER. 1"=5'

SCALE: 1"=50'



NO.	REVISIONS	DATE	REFERENCE:
1	REVISED PER H.O.C.O.	1/27/88	
2	REVISED TO ELEV@INTX	2/14/88	
3	AS-BUILT REVISIONS	5/6/91	

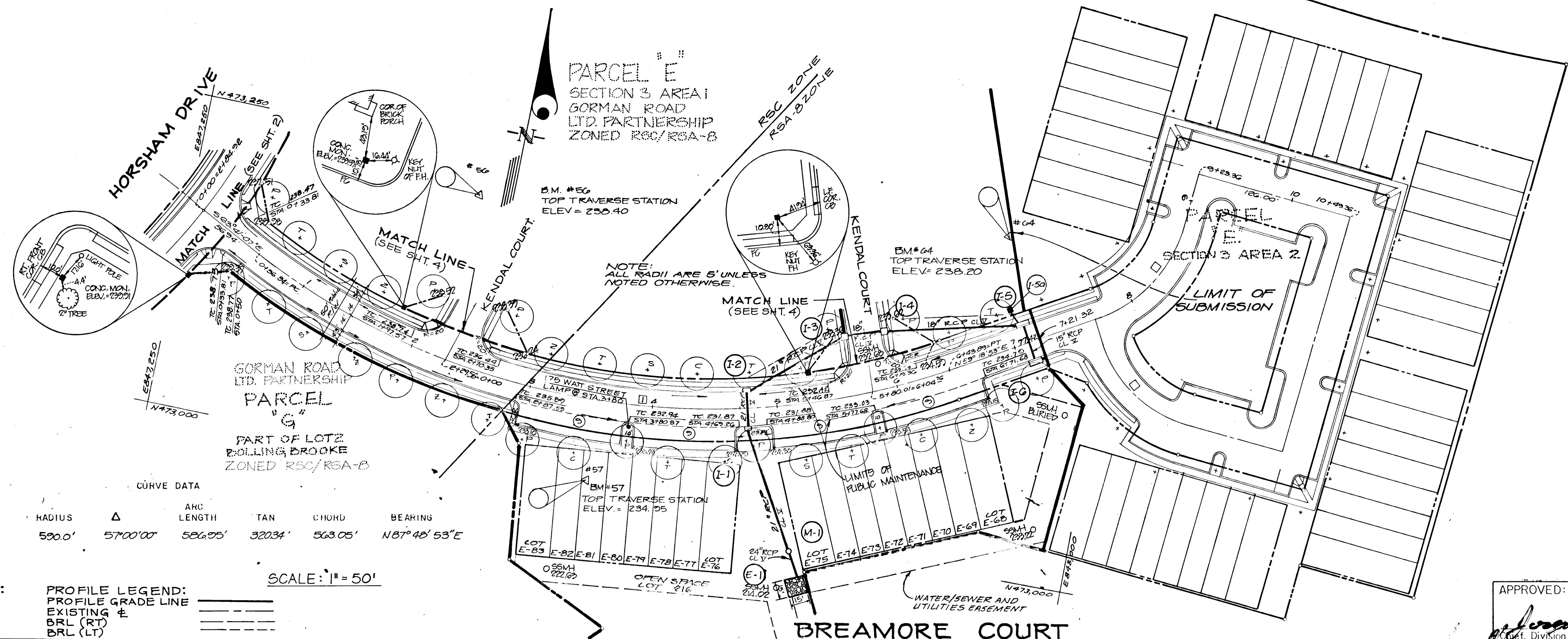
PAVING & STORM DRAINAGE CONSTRUCTION PLANS
HORSHAM DRIVE
 BOWLING BROOK FARMS



Patton Harris Rust and Associates
 A Professional Corporation
 Engineers, Surveyors, Planners and Landscape Architects
 7609 STANDISH PL. ROCKVILLE, MD 20855 (301) 762-2220

BOWLING BROOK FARMS
 PARCEL E AREA 1
 LOTS E-1 THRU E-27, E-68 THRU E-92 LOTS 214 THRU 217
 A RESUBDIVISION OF BOLLING BROOKE, LOT 2
 TAX MAP 47 PARCEL 141
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SURVEY OTHERS	DATE
DESIGN MJK	9-11-87
DRAWN EIC	SHEET 2 OF 8
CHECKED KOR	FILE NO. 2184-14
SCALE 1"=50' HORZ 1"=5' VERT.	



CURVE DATA

CURVE NO.	PC TO PT	RADIUS	Δ	ARC LENGTH	TAN	CHORD	BEARING
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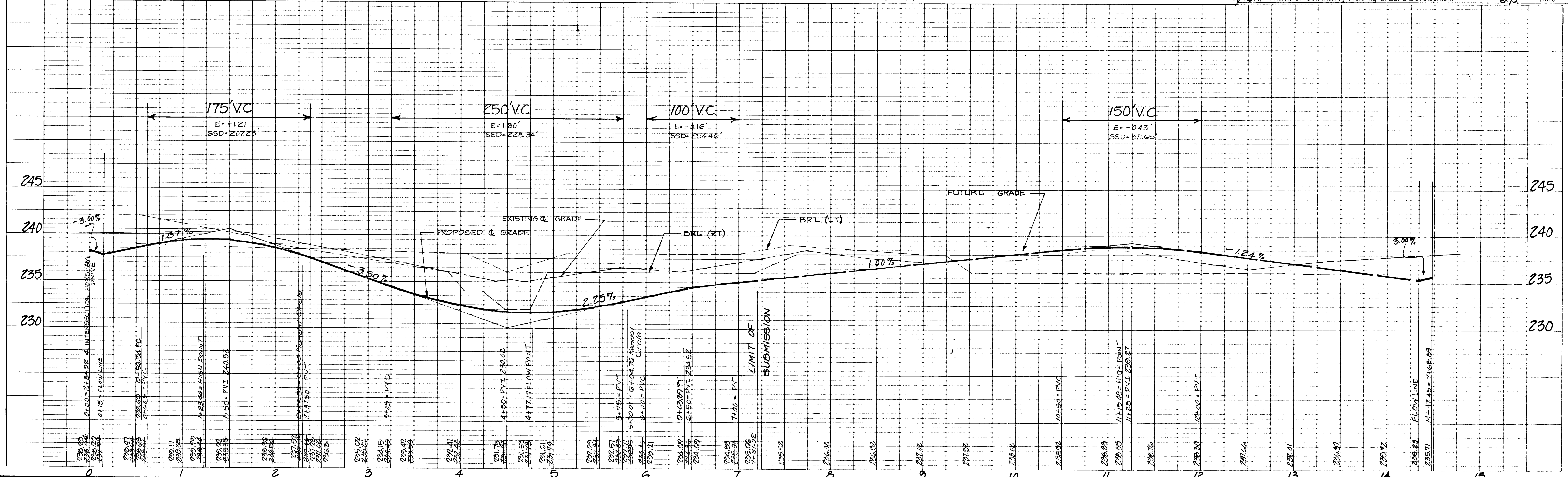
PROFILE SCALE:
HORIZ.: 1"=50'
VERT.: 1"=5'

PROFILE LEGEND:
PROFILE GRADE LINE
EXISTING G
BRL (RT)
BRL (LT)

SCALE: 1"=50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Land Development Division
Date: 4/18/88
Brawley W. Welsand
Chief, Bureau of Highways
Date: 4-2-88
K. R. R. R.
Chief, Bureau of Engineering
Date: 4/13/88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Chief, Division of Community Planning & Land Development
Date: 4/13/88



NO.	DESCRIPTION	DATE	APPROVED	DATE
5	AS-BUILT REVISIONS	5/6/01		
4	ADD STORM DRAIN I-20	1/25/90		
3	REVISED RIPRAP OUTFALL	7/1/89		
2	REVISE TO ELEV @ INTX.	2/4/88		
1	REVISED PER. HOCC.	1/27/88		



PAVING & STORM DRAINAGE
CONSTRUCTION PLANS
BREAMORE COURT
BOWLING BROOK FARMS

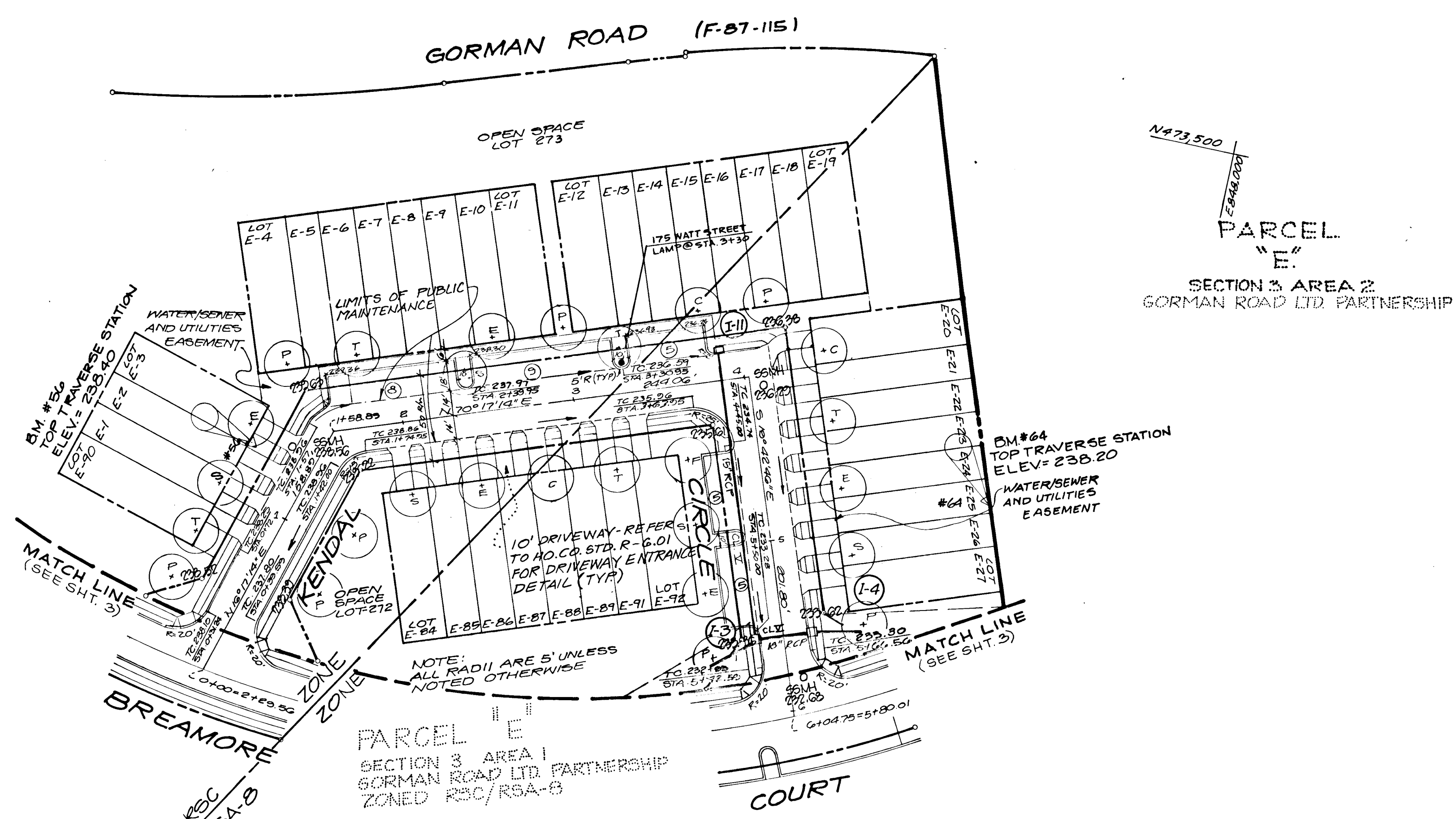
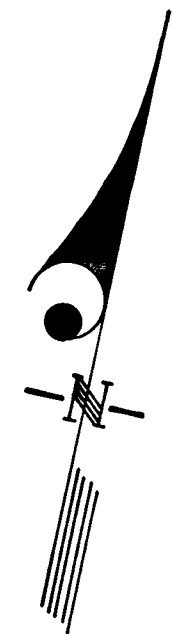
Patton Harris Rust and Associates
A Professional Corporation
Engineers, Surveyors, Planners and Landscape Architects
7609 Standish Place, Rockville, MD 20855 (301)762-2220

BOWLING BROOK FARMS
PARCEL E AREA 1
LOTS E-1 THRU E-27, E-68 THRU E-92 LOTS 214 THRU 217
A RESUBDIVISION OF BOLLING BROOKE, LOT 2
TAX MAP 47 PARCEL 141
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SURVEY OTHERS
DESIGN MJK
DRAWN MJK
CHECKED K.O.R.
SCALE 1"=50' H
1"=5' V

DATE: 9-11-87
SHEET: 3 OF 3
FILE NO.: 2184-1-4

AP 87210



N473.500
E847.250
PARCEL
"F"
SECTION 3 AREA 2
GORMAN ROAD LTD PARTNERSHIP

PARCEL "E"
SECTION 3 AREA 1
GORMAN ROAD LTD PARTNERSHIP
ZONED R3C/R5A-S

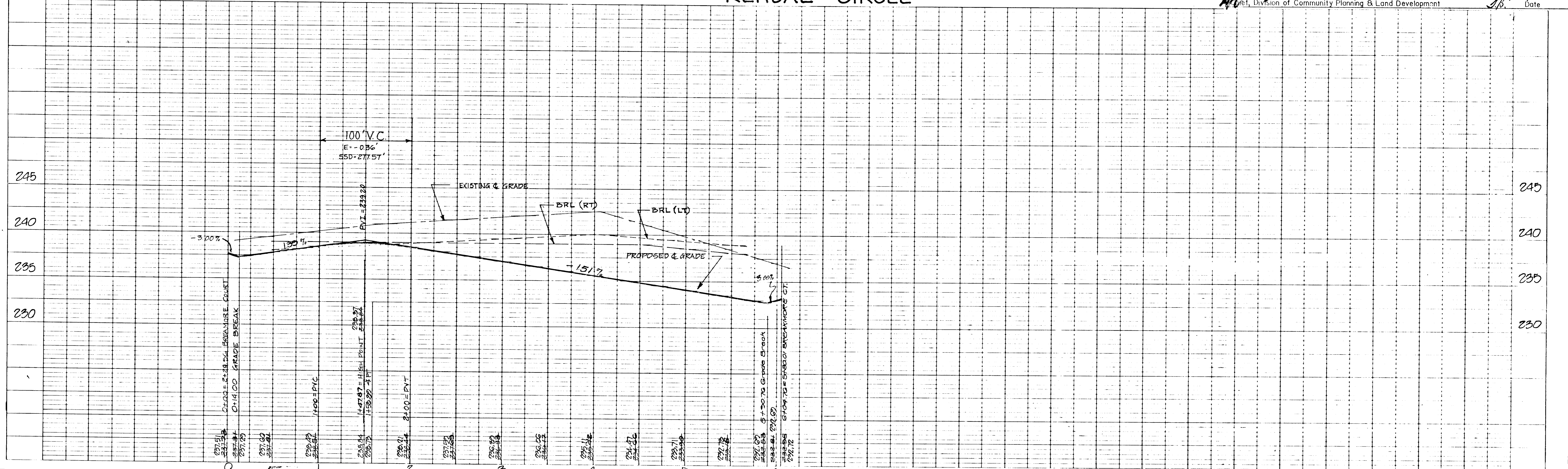
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HORIZ. 1"=50'
VERT. 1"=5'

PROFILE LEGEND:
Profile Grade Line _____
Existing & _____
B.R.L. (RT) _____
B.R.L. (LT) _____

SCALE: 1"=50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Land Development Division
William W. Weiland 4/18/88
Chief, Bureau of Highways
William E. Ray 4-8-88
Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Andrews Rust 4/13/88
Chief, Division of Community Planning & Land Development



NO.	DESCRIPTION	DATE	APPROVED	DATE
3	AS-BUILT REVISIONS	5/6/91		
2	REVISE TO ELEV. INTX.	2/14/88		
1	REVISED PER HO. CO.	1/27/88		



REVISION

**PAVING & STORM DRAINAGE
CONSTRUCTION PLANS
KENDAL CIRCLE
BOWLING BROOK FARMS**

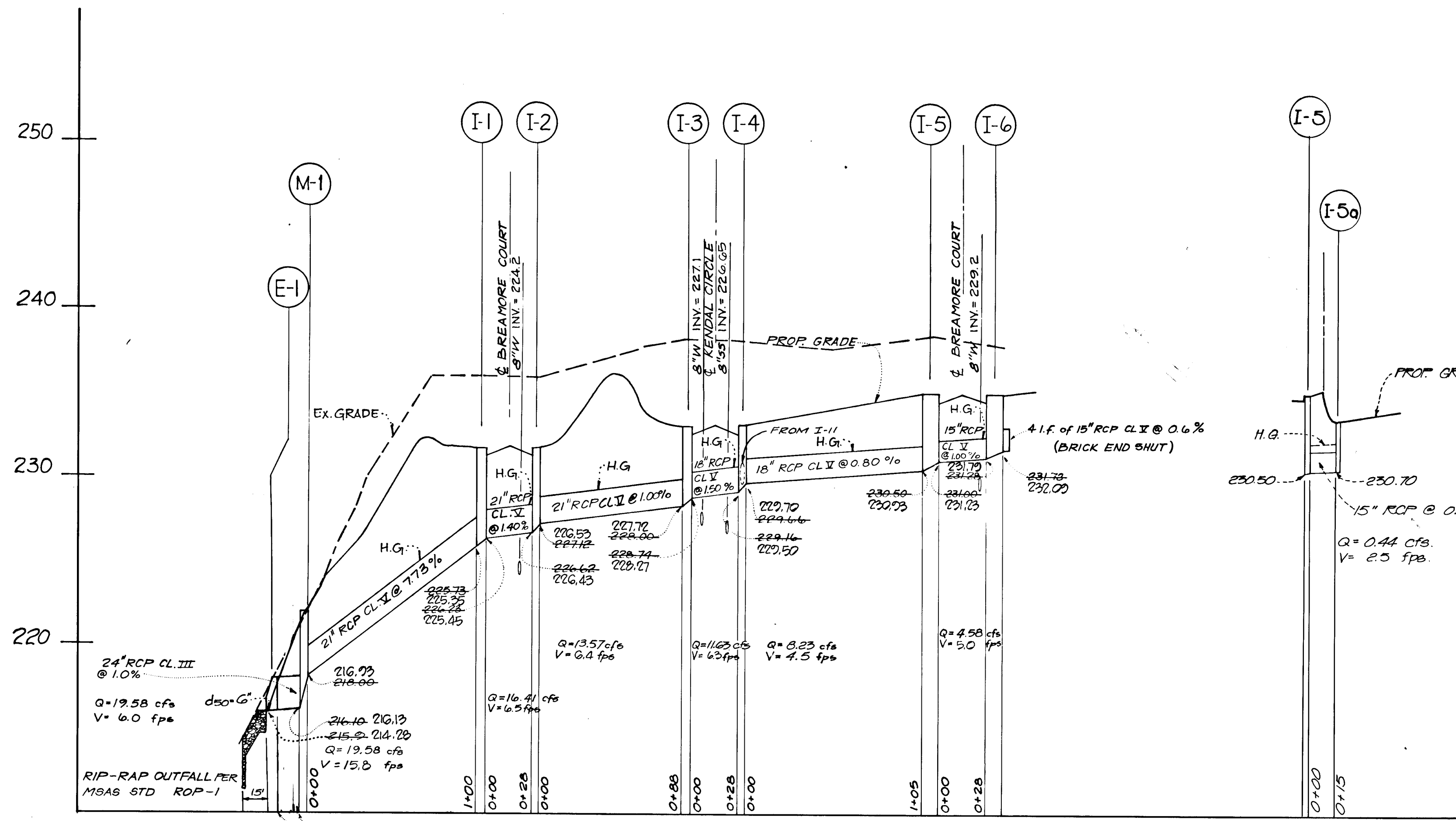
Patton Harris Rust and Associates
A Professional Corporation
Engineers, Surveyors, Planners and Landscape Architects
7609 STANDISH PL. ROCKVILLE, MD 20855 (301) 762-2220

BOWLING BROOK FARMS
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A RESUBDIVISION OF BOLLING BROOKE, LOT 2
TAX MAP 47 PARCEL 141
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SURVEY OTHERS	DATE
DESIGN MJK	9-11-87
DRAWN MJK	SHEET
CHECKED K.O.R.	4 OF 8
SCALE 1"=50' HORIZ. 1"=5' VERT.	FILE NO. 2184-1-C

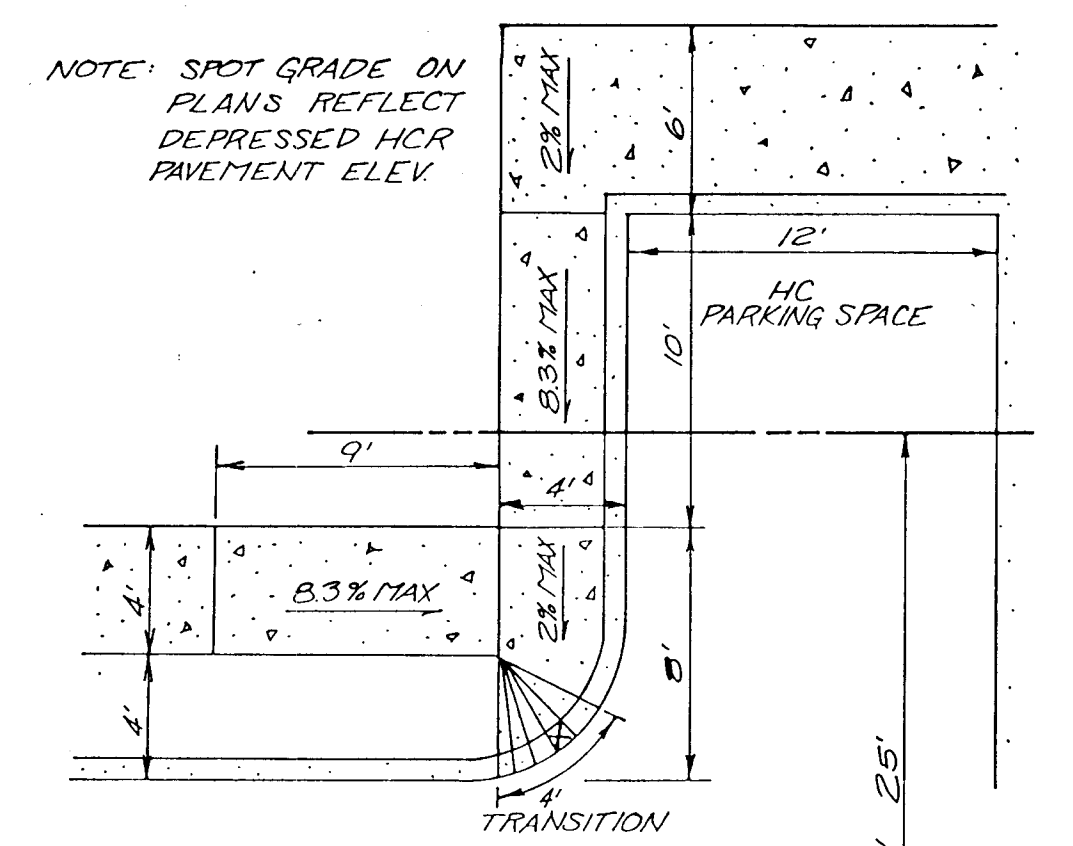
AS-BUILT

F-88-113

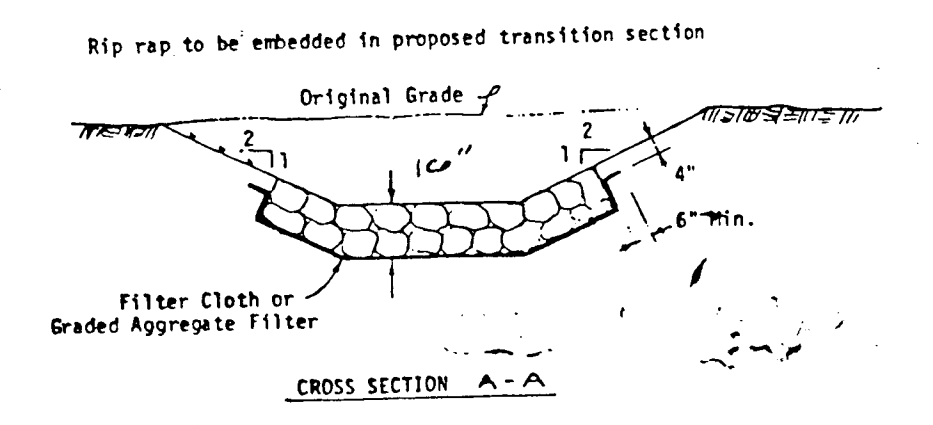
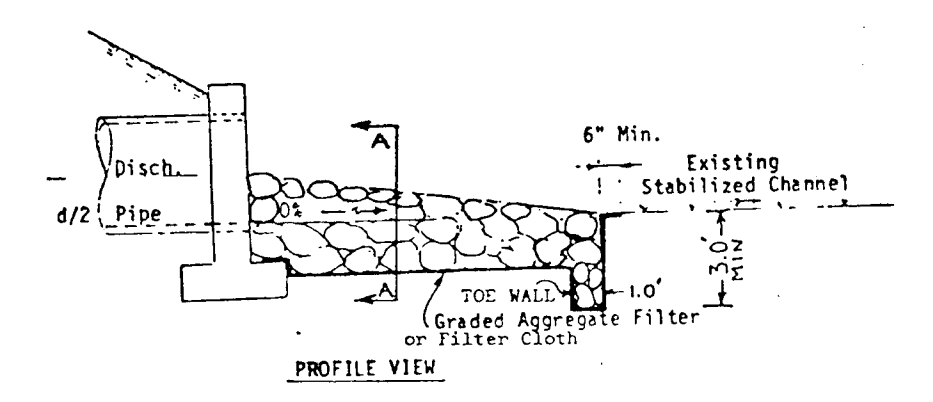
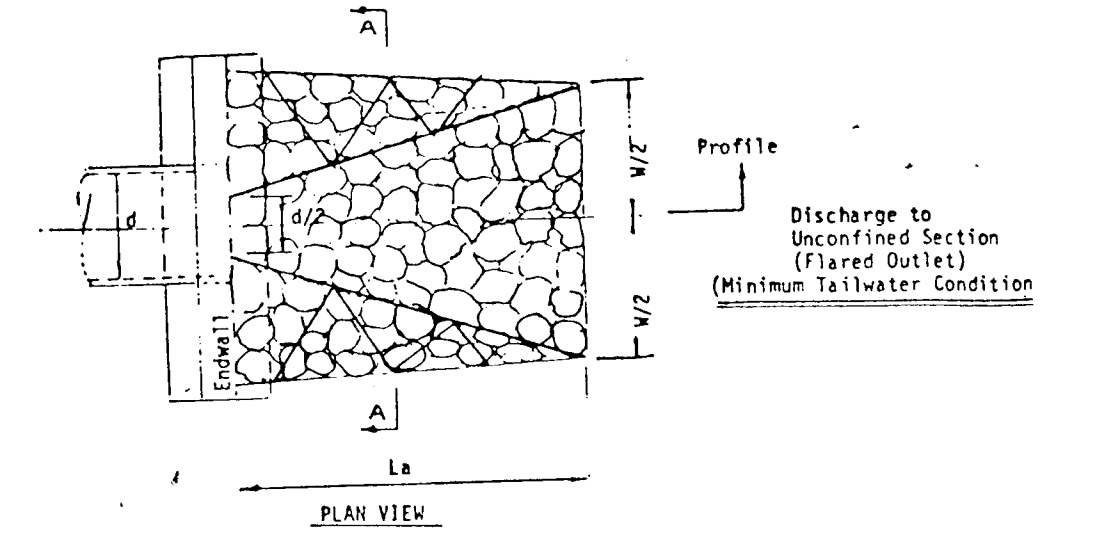


PROFILE SCALE:
 HORIZ: 1"=50'
 VERT: 1"=5'

NOTE: PIPE BEDDING FOR ALL STORM DRAIN TO BE CLASS "C"



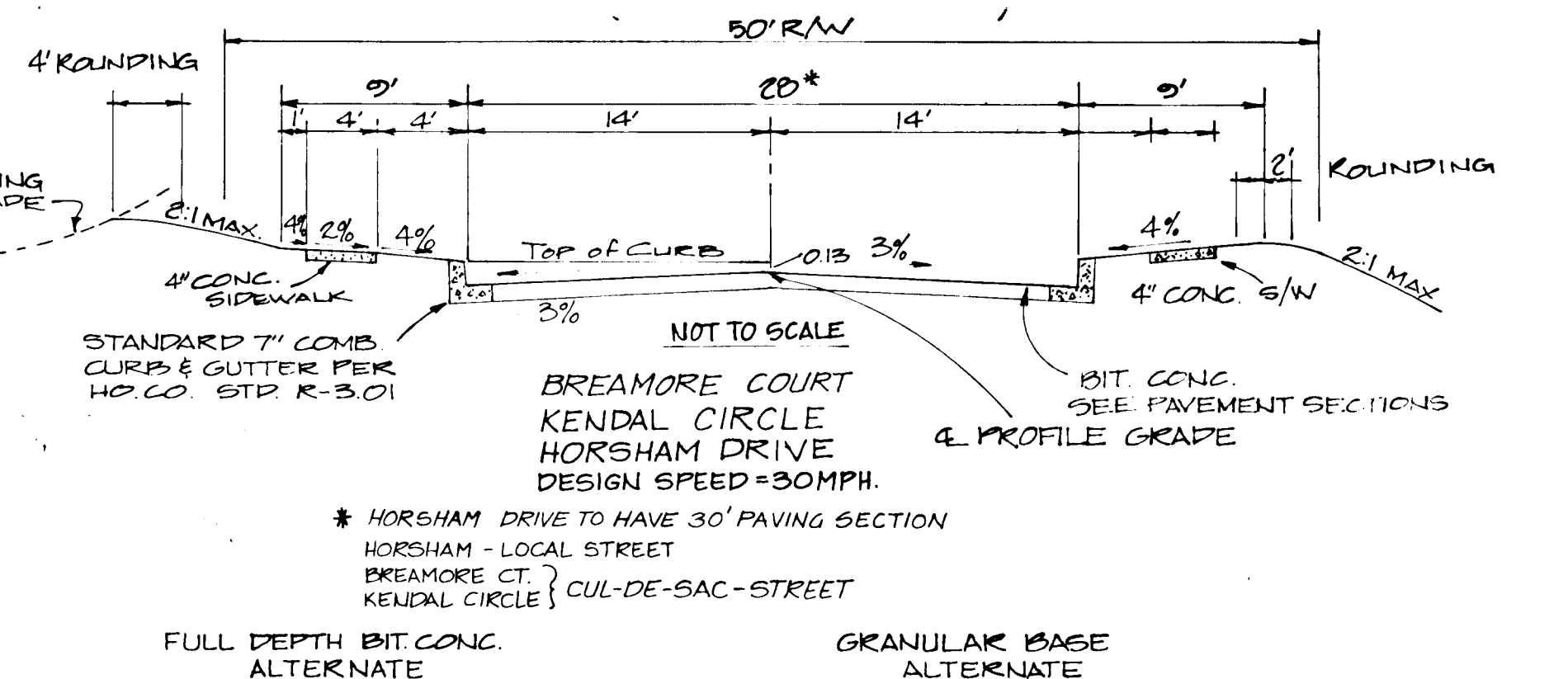
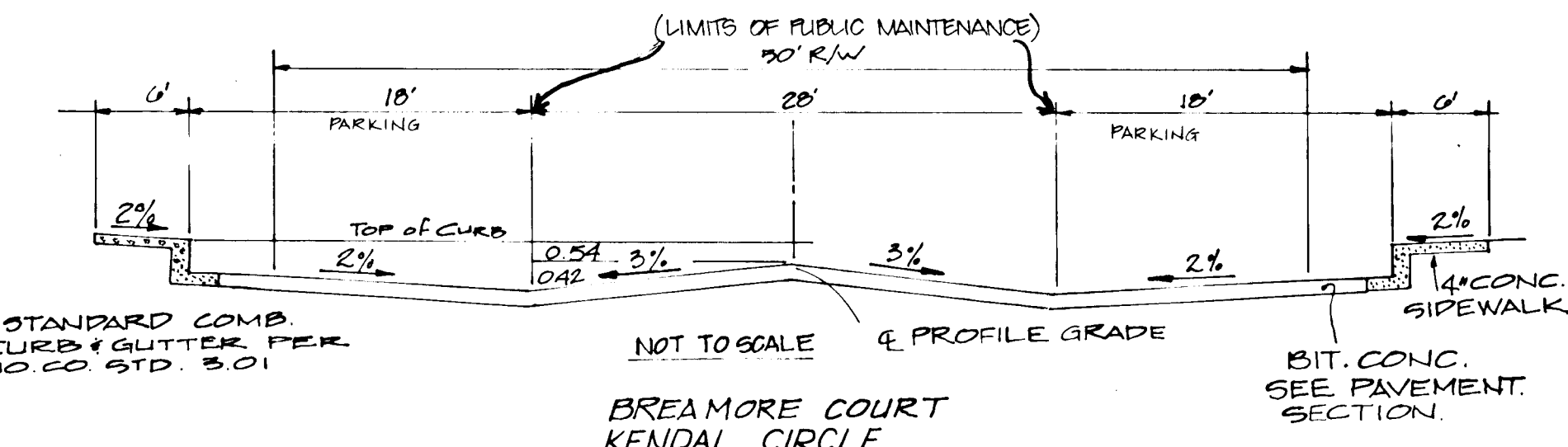
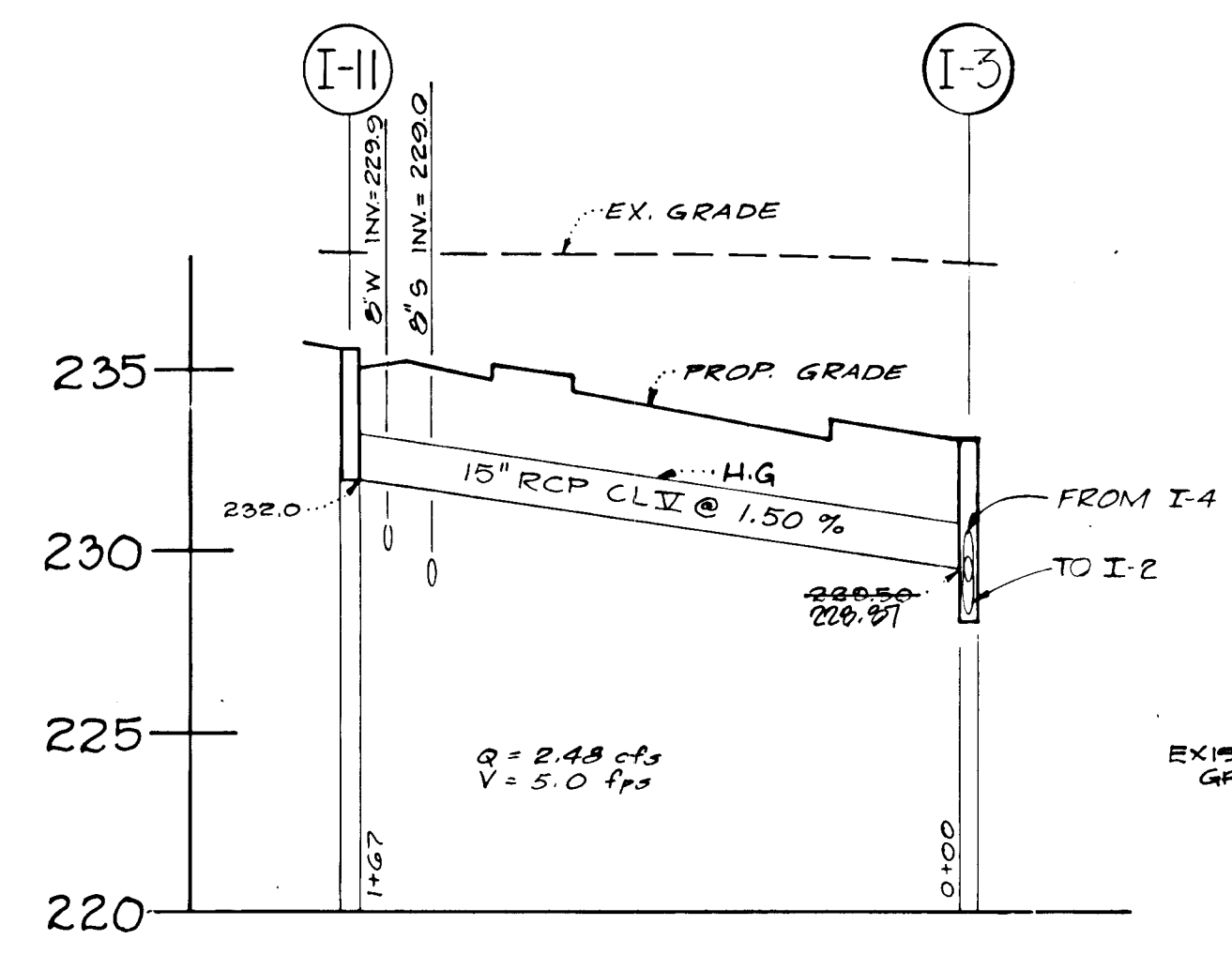
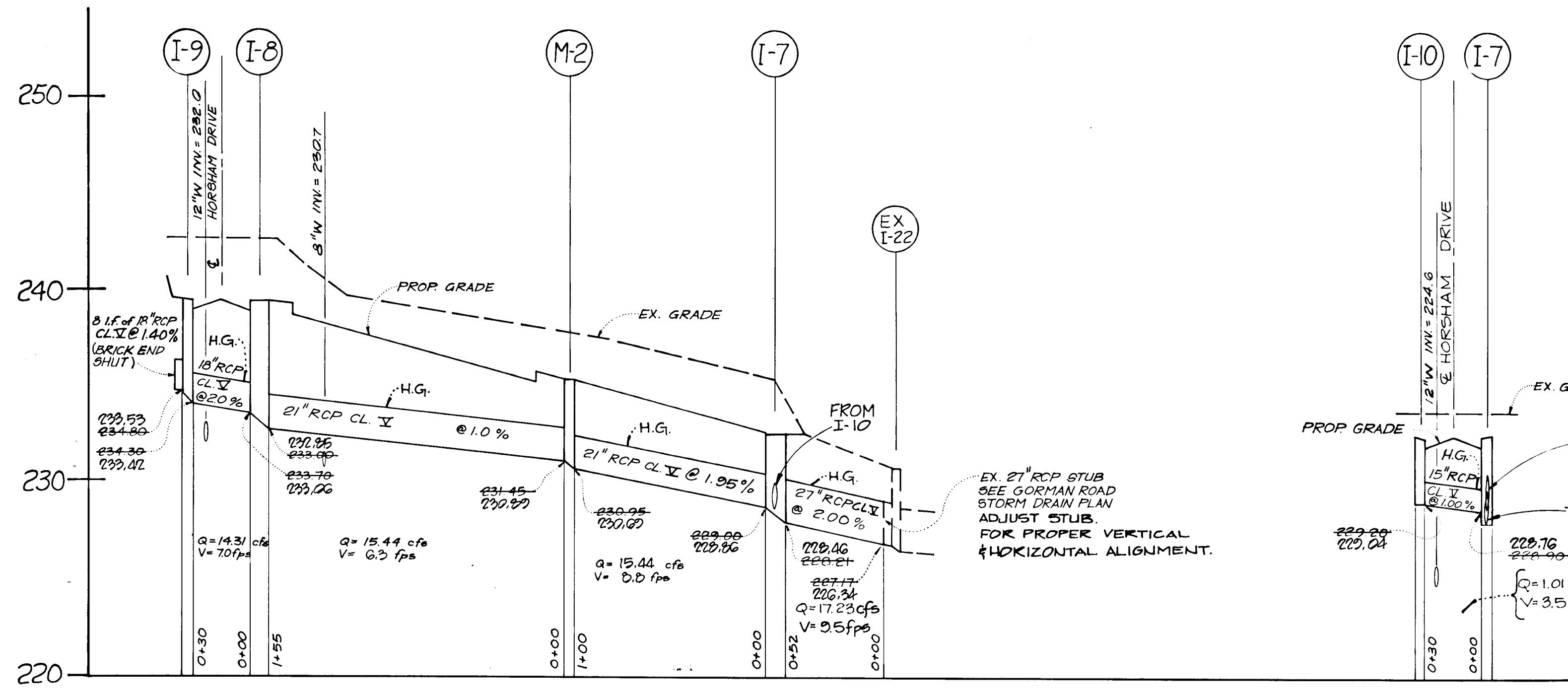
HANDICAP RAMP DETAIL
 NOT TO SCALE



U.S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 COLLEGE PARK, MARYLAND

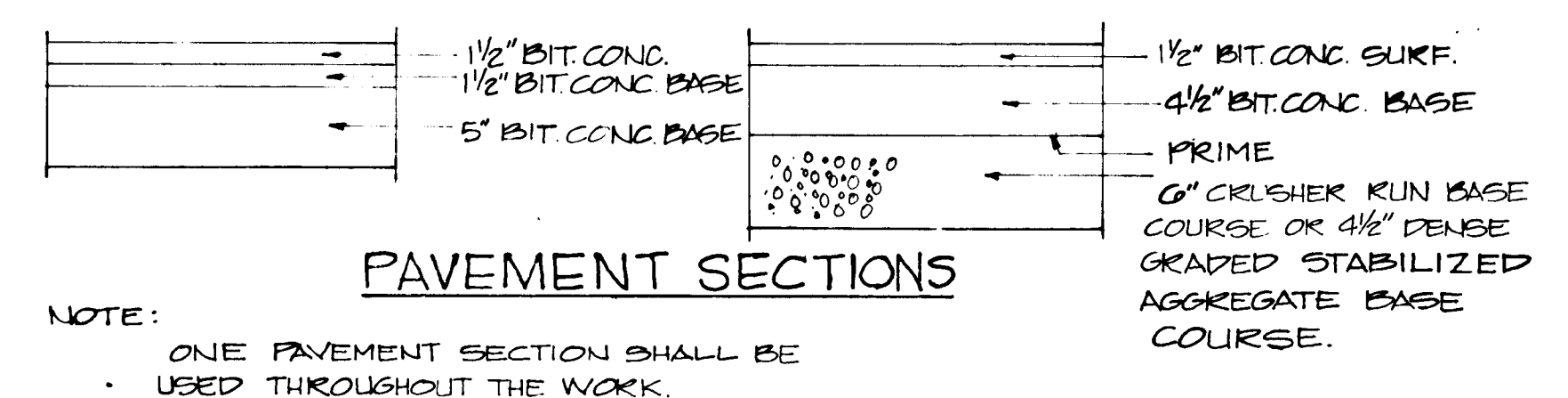
RIPRAP OUTLET
 PROTECTION-I

STANDARD DRAWING
 ROP-1



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Land Development Division
Frankie M. Weiland 4/8/88
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 Chief, Bureau of Engineering
James R. ... 4/8/88
 Chief, Division of Community Planning & Land Development



NO.	DESCRIPTION	DATE	APPROVED	DATE
4	AS-BUILT REVISIONS	5-9-91		
3	ADD STORM DRAIN I-5a	1-25-90		
2	REVISED PER HO.CO.	7/17/89		
1	REVISED PER HO.CO.	1/27/88		

REVISION APPROVED BY

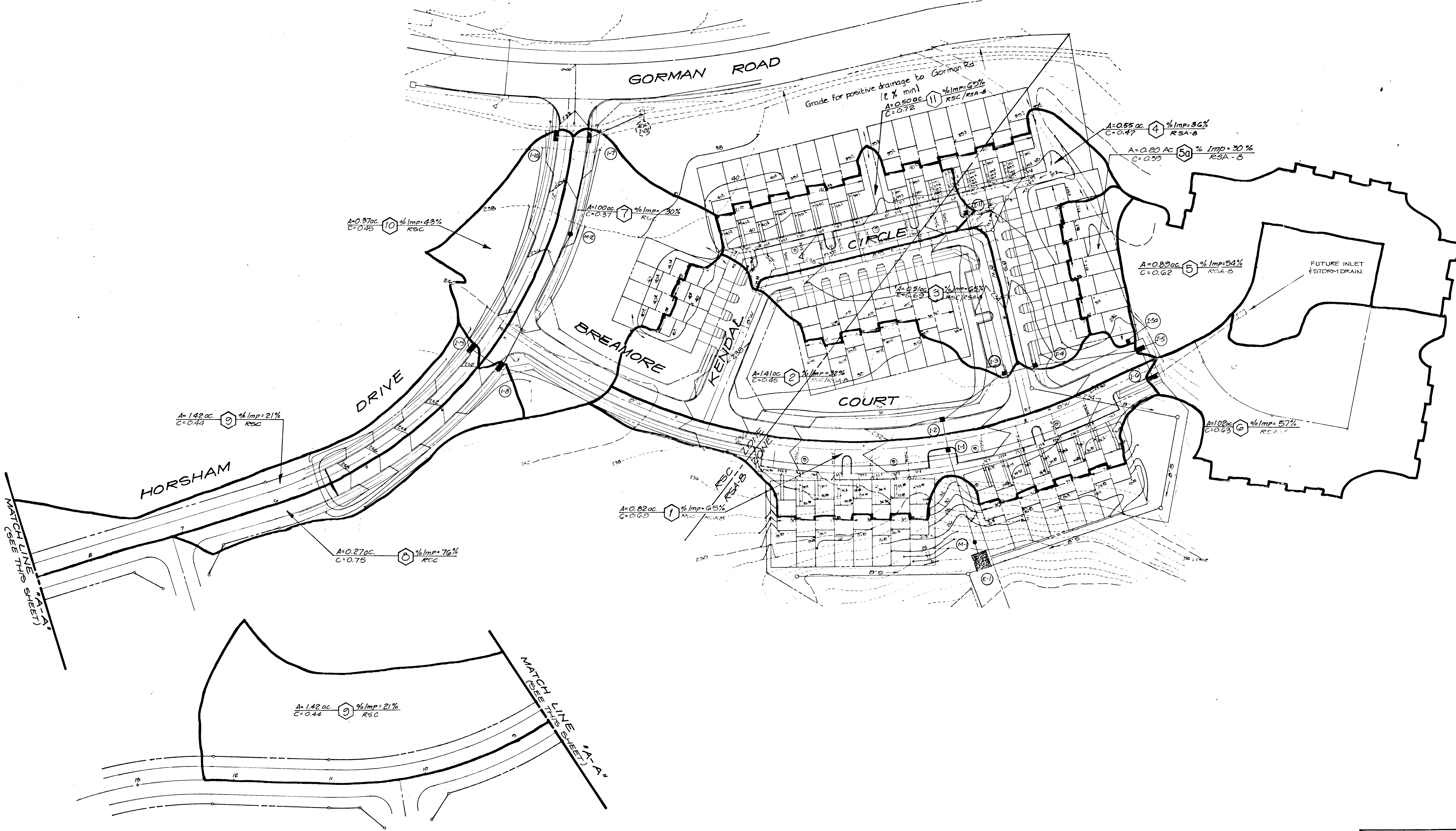
PROFESSIONAL SEAL

PAVING & STORM DRAINAGE SECTIONS, DETAILS & PROFILES

Patton Harris Rust and Associates pc
 Engineers, Surveyors, Planners, Landscape Architects
 7609 Standish Place Rockville, Maryland 20855 (301)762-2220

BOWLING BROOK FARMS
 PARCEL E AREA I
 LOTS E-1 THRU E-27, E-68 THRU E-92 LOTS 214 THRU 217
 A RESUBDIVISION OF BOLLING BROOKE, LOT 2
 TAX MAP 47 PARCEL 141
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

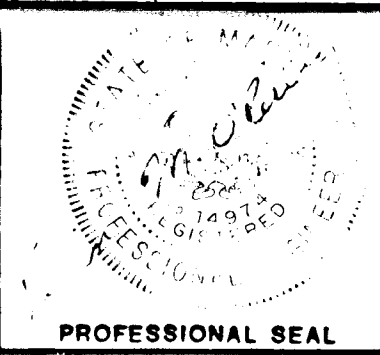
SURVEY	DATE
K.O.R.	9-11-87
DESIGN	
DRAWN	
CHECKED	
SCALE AS SHOWN	
FILE NO.	2184-I-4



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Land Development Division
 Chief, Bureau of Highways
 Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 Chief, Division of Community Planning & Land Development

NO.	DESCRIPTION	DATE	APPROVED	DATE
2	ADD STORM DRAIN I-52	1/25/90	ERC	
1	REVISED PER HO.CO.	1/27/88	FC	



REVISION

DRAINAGE AREA MAP

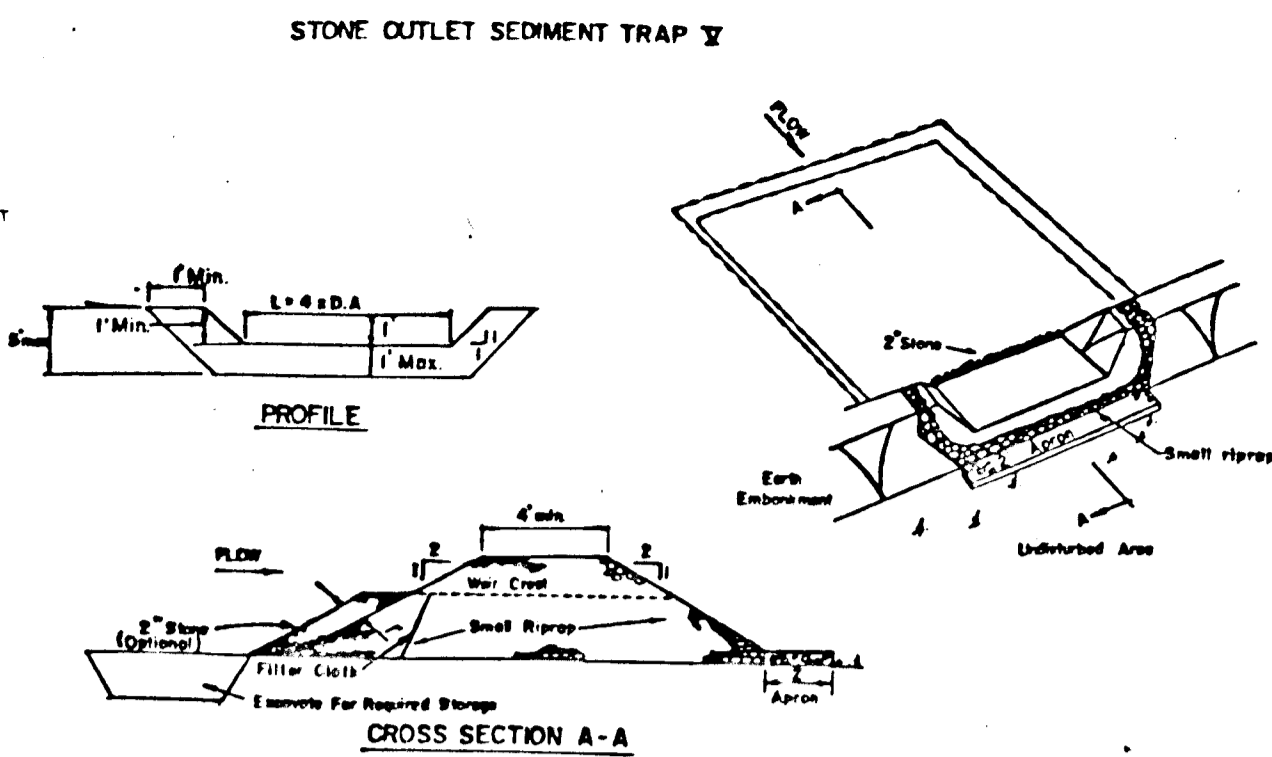
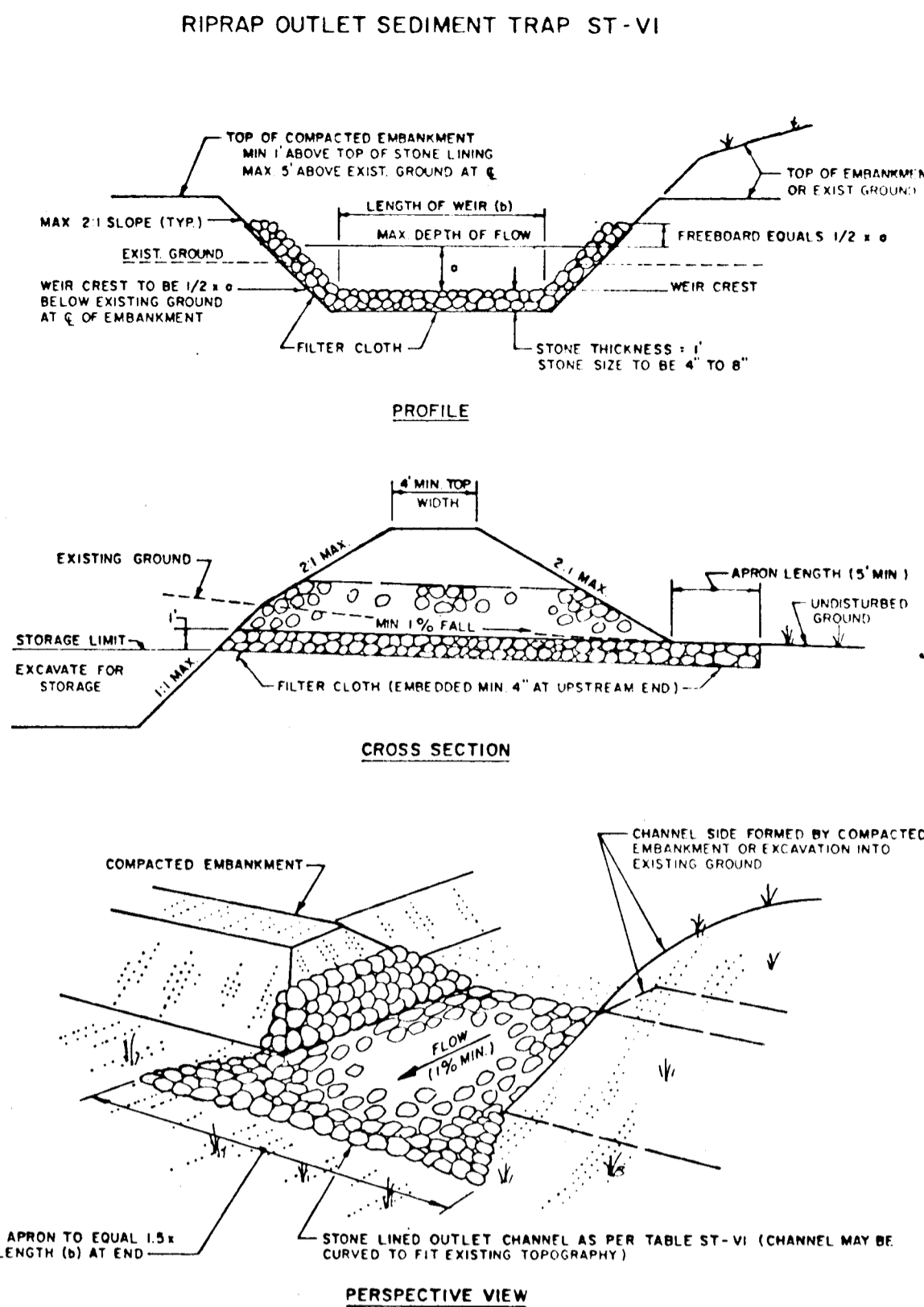
Patton Harris Rust and Associates
 A Professional Corporation
 Engineers, Surveyors, Planners and Landscape Architects
 Fairfax, Va./Bridgewater, Va./Leesburg, Va./Rockville, Md./Tidewater, Va.

BOWLING BROOK FARMS
 PARCEL E AREA 1
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 A RESUBDIVISION OF BOLLING BROOKE, LOT 2
 TAX MAP 47 PARCEL 141
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SURVEY DATE: 9-11-87
 DESIGN: K.O.P.
 DRAWN: [Signature]
 CHECKED: K.O.R.
 SCALE: 1"=40'
 SHEET: 6 OF 8
 FILE NO.: 184-1-4

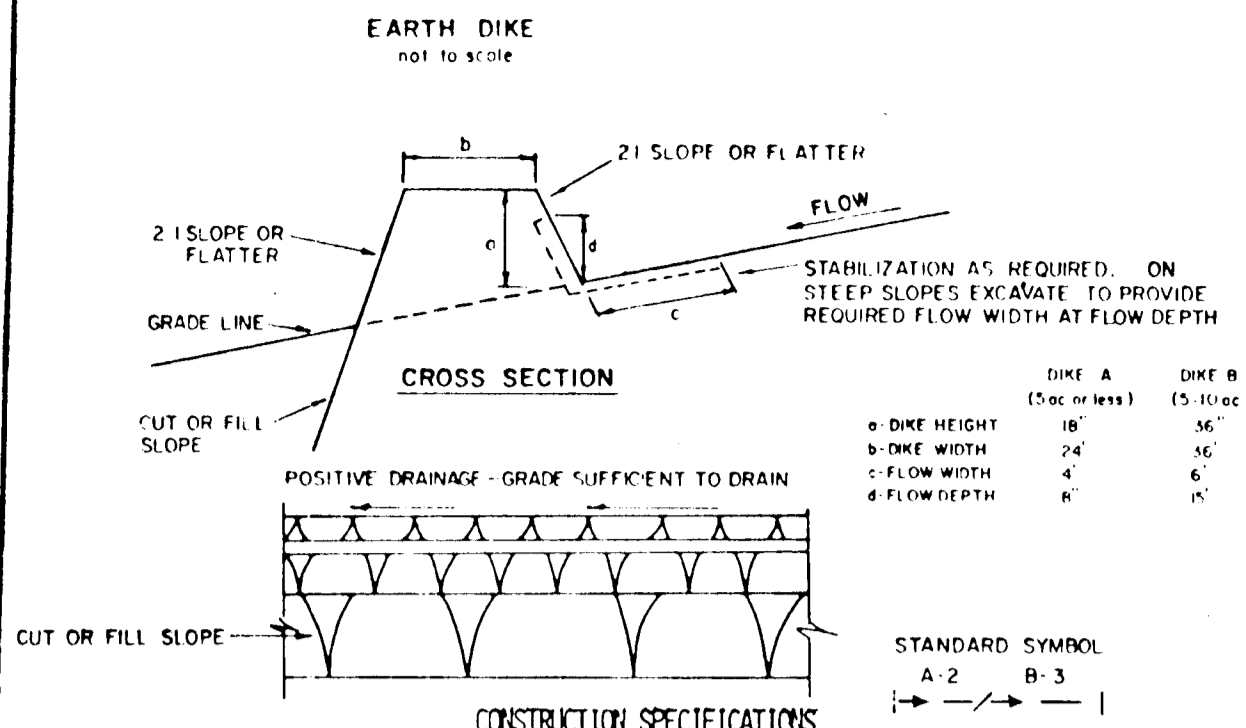
CONSTRUCTION SPECIFICATIONS FOR ST-VI

- 1. The 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 or other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
3. All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
4. Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
5. Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.
6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
7. Stone used in the outlet channel shall be four (4) to eight (8) inches (rip-rap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet/stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
8. 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. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
9. The structure shall be inspected after each rain and repaired as needed.
10. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
12. Drainage area for this practice is limited to 15 acres or less.



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-VI
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 oversized 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.

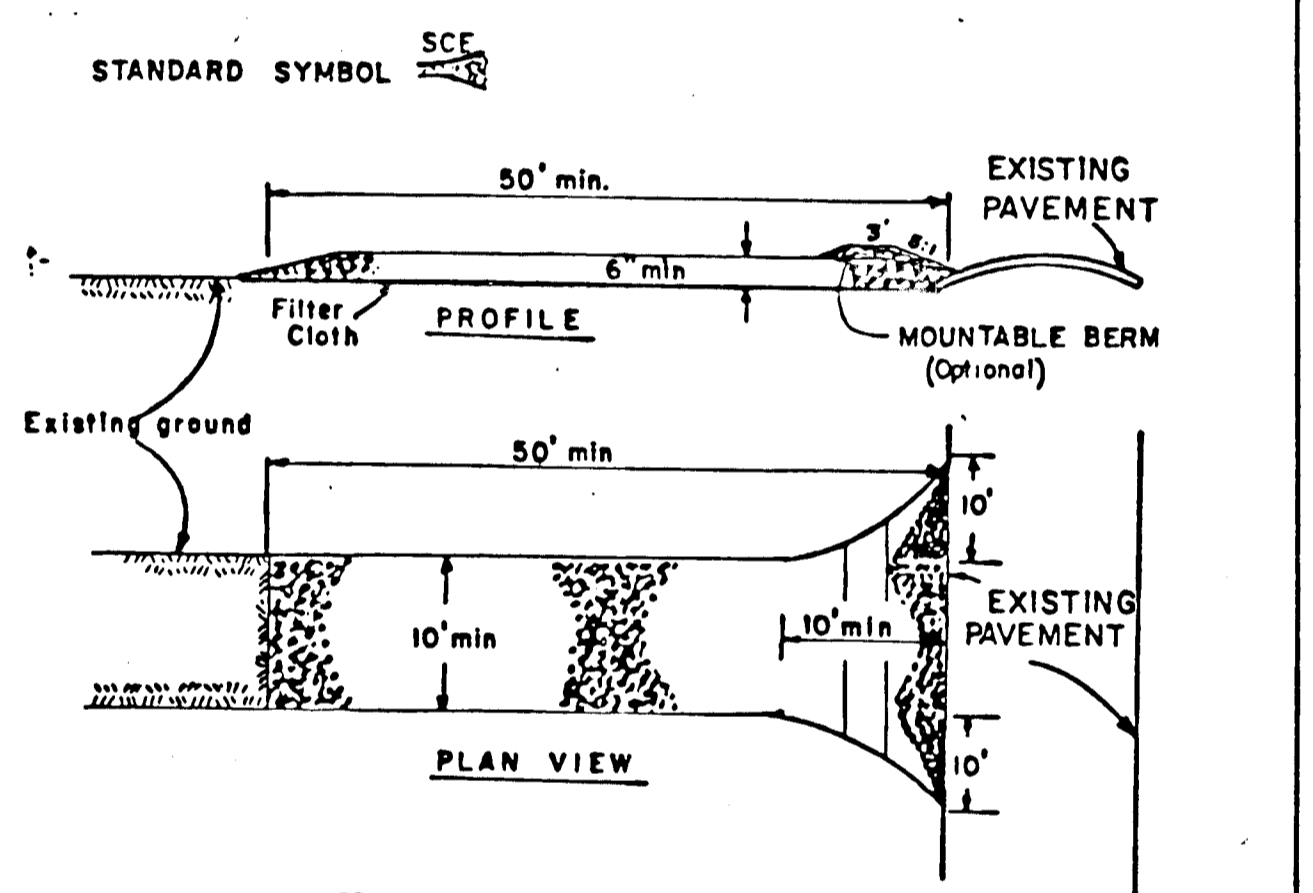


- 1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED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

Table with columns: TYPE OF TREATMENT, CHANNEL CHANNEL, DIKE A, DIKE B. Rows 1-4 detailing stabilization methods like seed and straw mulch, lined rip-rap, etc.

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
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.
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.
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.
Mulching -- Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of rotted small grain straw immediately after seeding.
Maintenance -- Inspect all seeded areas and make needed repairs, replacements and reseedings.

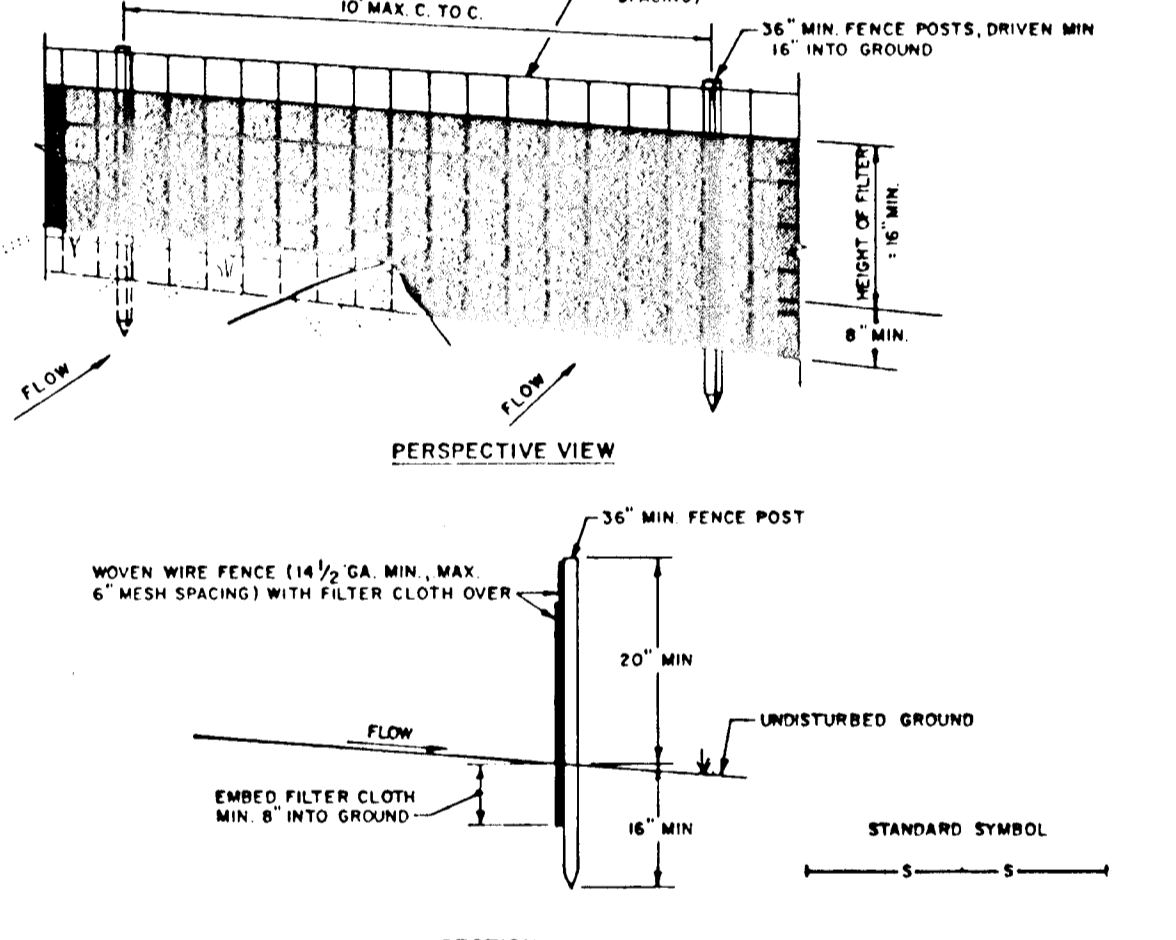
STABILIZED CONSTRUCTION ENTRANCE not to scale



- CONSTRUCTION SPECIFICATIONS
1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 30 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.

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE College Park, Md. STABILIZED CONSTRUCTION ENTRANCE Standard Drawing SCE-1

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 "BAGS" DEVELOP IN THE SILT FENCE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND SILT FENCE STANDARD DRAWING SF-1

SEDIMENT TRAP SCHEDULE

Table with columns: SEDIMENT TRAP #, TYPE OF TRAP - STD & SPEC #, DRAINAGE AREA (ACRES), STORAGE REQUIRED (FT^3), STORAGE PROVIDED (FT^3), BASE DIMENSIONS & ELEV., WEIR LENGTH & ELEV., STORAGE DEPTH, EMBANKMENT HT. & TOP ELEV., MAX. DEPTH OF FLOW OVER WEIR.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

Signature of Developer/Builder: R.P. Beaworth, Date: 1/23/88

ENGINEER'S CERTIFICATE

I hereby 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 Conservator District.

Signature of Engineer: Richard E. Travers, Date: 1/20/88

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.
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 42 calendar days for all perimeter erosion control structures, dikes, perimeter slopes and all slopes greater than 3:1, 14 days for 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 22, 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. 24) and temporary seedings (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: 9.14 Acres, Area to be seeded or paved: 2.82 Acres, Area to be vegetatively stabilized: 3.28 Acres, Total Cost: 28,600, Off-site water/borrow area location: PARCEL E AREA I.

SEQUENCE OF CONSTRUCTION

- 1. MAINTAIN EXISTING SEDIMENT CONTROL MEASURES IN PLACE FROM ROUGH GRADING OPERATIONS AND INSTALL ADDITIONAL DEVICES AS REQUIRED BY THIS PLAN AND THE SEDIMENT CONTROL INSPECTOR.
2. INSTALL ALL SEDIMENT CONTROL DEVICES AND "WPD" DEVICES AS SHOWN ON THIS PLAN FOR THE SANITARY SEWER OUTFALL. CONSTRUCT SANITARY SEWER OUTFALL.
3. CONSTRUCT STORM DRAIN SYSTEM, INCLUDING TEMPORARY DIVERSIONS INTO SEDIMENT TRAPS AS SHOWN ON PLAN.
4. COMPLETE CONSTRUCTION OF REMAINING UNDERGROUND UTILITIES AND CONSTRUCT DWELLING UNITS. PAVE STREETS.
5. AS THEIR CONTRIBUTING DRAINAGE AREAS ARE BROUGHT TO FINAL GRADE AND PERMANENTLY STABILIZED, REMOVE SEDIMENT CONTROL MEASURES AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR. BRING THESE AREAS TO FINAL GRADE AND APPLY PERMANENT STABILIZATION. REMOVE TEMPORARY STORM DIVERSIONS AND COMPLETE CONSTRUCTION OF STORM DRAIN OUTFALLS; APPLY PERMANENT STABILIZATION IMMEDIATELY.

*NOTE: ULTIMATE REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE CONTINGENT ON ALL SITE WORK, INCLUDING DWELLING UNITS, BEING COMPLETED.

THIS PLAN FOR STREET AND UTILITY CONSTRUCTION ONLY.

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS.

Signature: James M. Helm, Date: 3-29-88, U.S. Soil Conservation Service

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

Signature: Stephen L. Fink, Date: 3/27/88, Howard S.C.D.

PLAN NUMBER

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Signature: Anthony Rantz, Date: 4/13/88, Chief, Division of Community Planning & Land Development

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

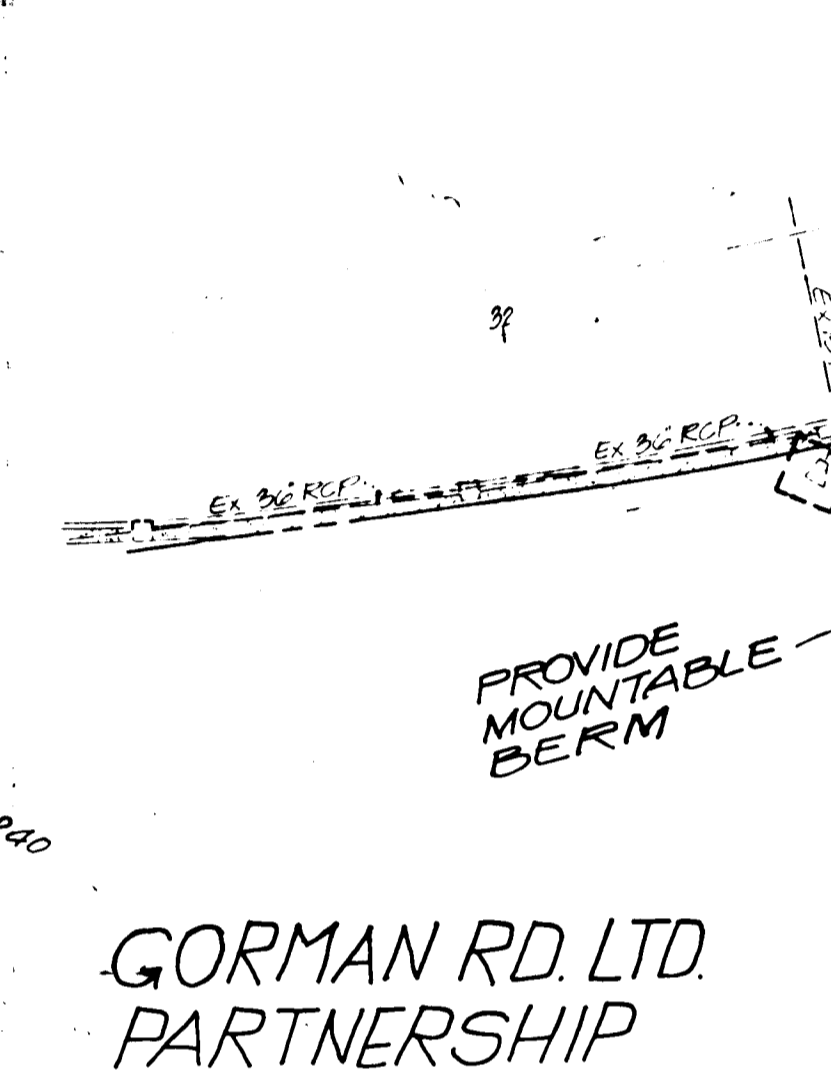
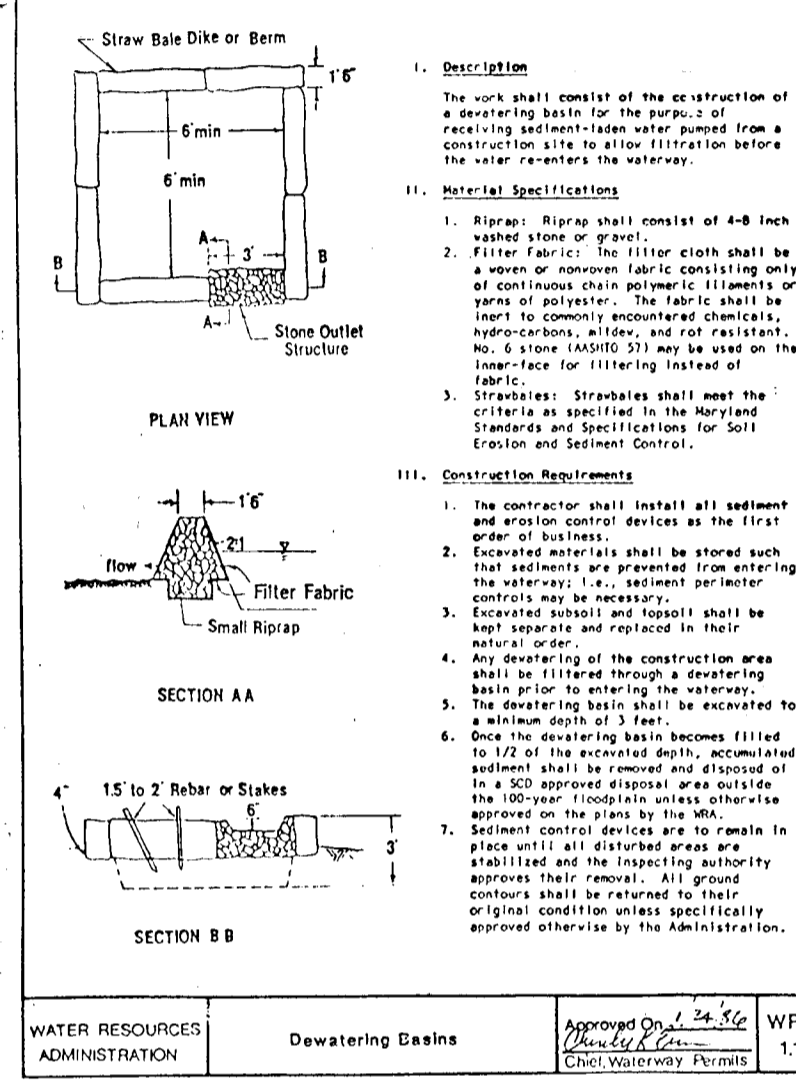
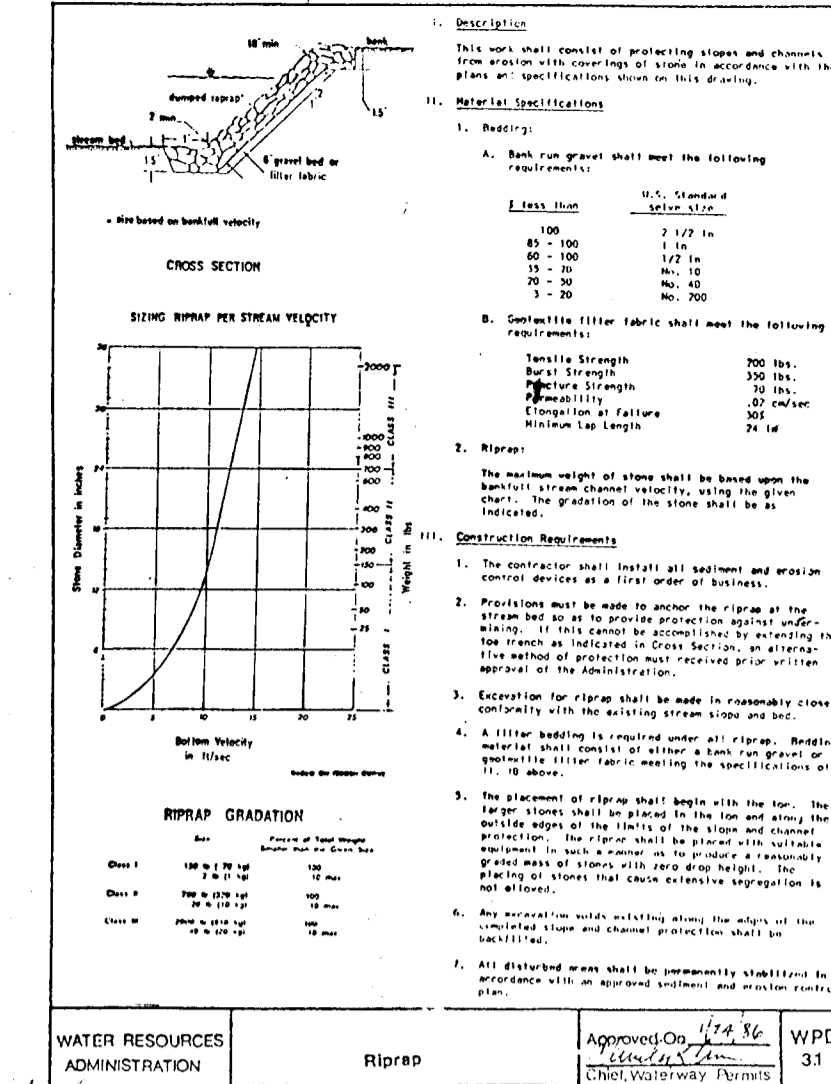
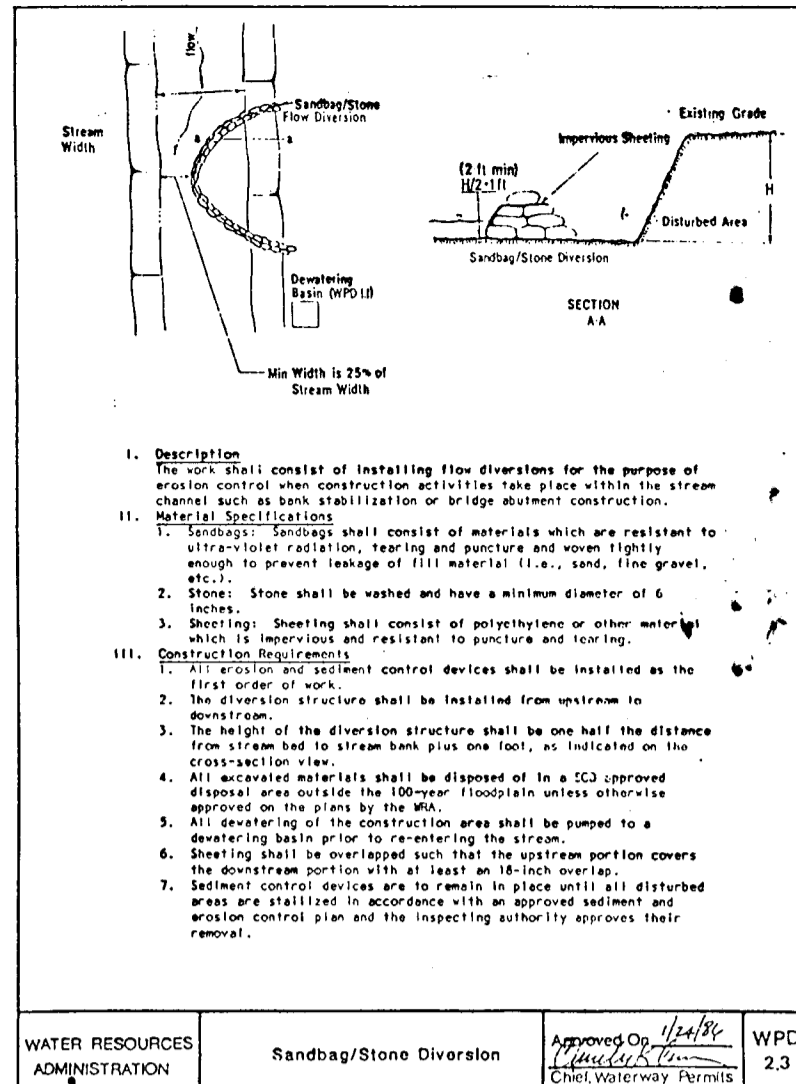
Signature: Brantley W. Weyand, Date: 4/8/88, Chief, Bureau of Highways; Signature: Raymond D. Brown, Date: 4-8-88, Chief, Bureau of Engineering

Table with columns: NO., DESCRIPTION, DATE, APPROVED, DATE. Includes revision history for the plan.

EROSION AND SEDIMENT CONTROL PLAN. Includes professional seal and title block.

Patton Harris Rust and Associates A Professional Corporation Engineers, Surveyors, Planners and Landscape Architects 7809 Standish Place Rockville, Maryland 20856 (301) 782-2220

BOWLING BROOK FARMS - PARCEL E AREA I. LOTS E-1 THRU E-27, E-68 THRU E-92 LOTS 214 THRU 217 A RESUBDIVISION OF BOWLING BROOKE, LOT 2 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND. SURVEY DATE: 9-11-87. DESIGN SHEET: 7 of 8. DRAWN BY: K.O.R. CHECKED BY: SCALE: 1"=40'. FILE NO.: 2104-1-4.



DEVELOPER'S/BUILDER'S CERTIFICATE

I/We 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

R.P. Basworth 3/29/88
Signature of Developer/Builder Date

ENGINEER'S CERTIFICATE

I hereby 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.

Kevin M. O'Leary 3/29/88
Signature of Engineer Date

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS.

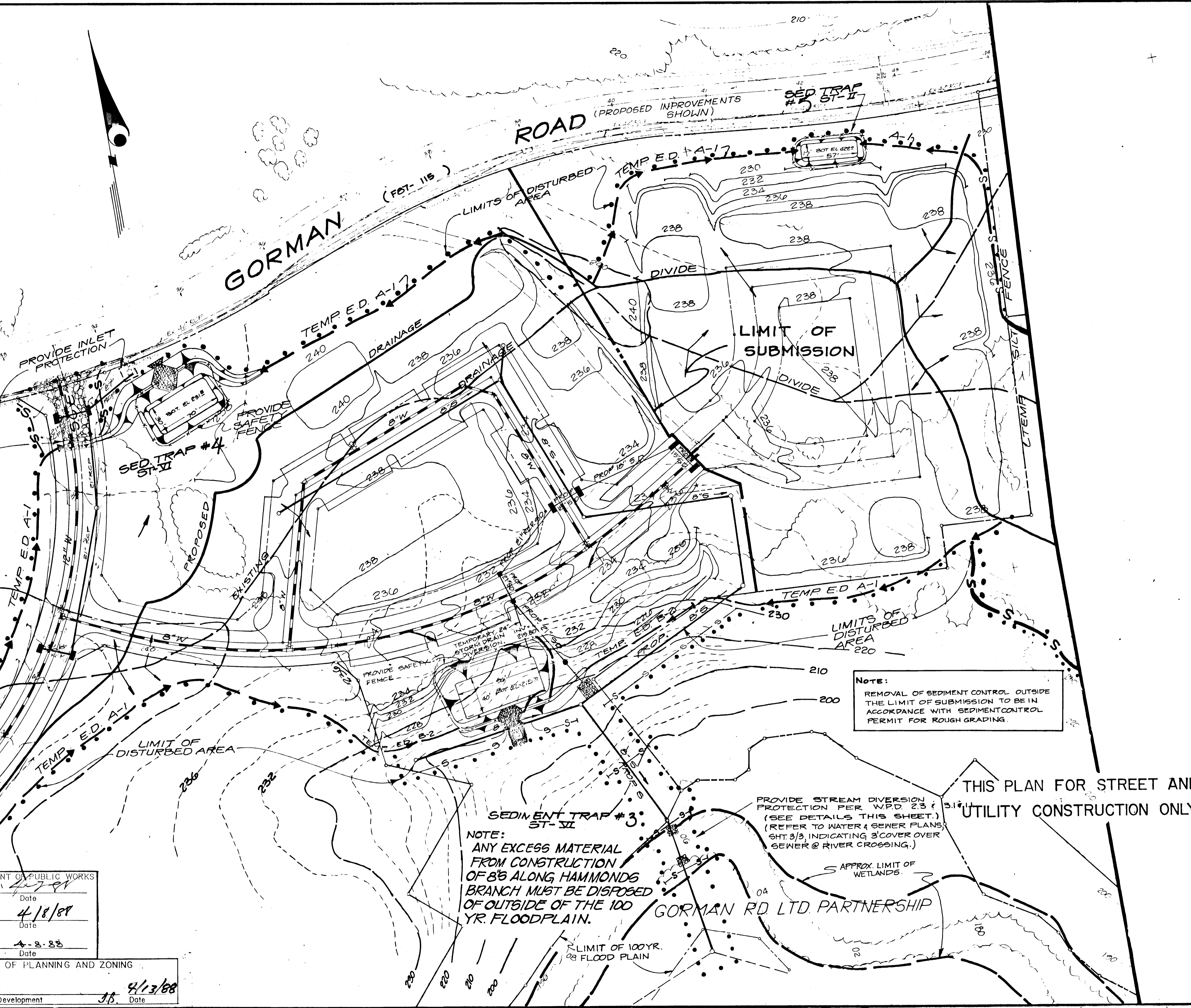
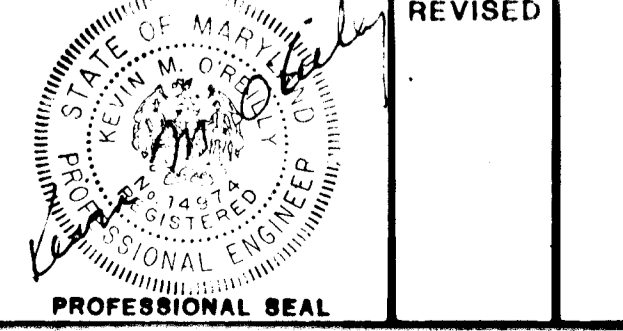
James M. Helm 3/29/88
Soil Conservation Service Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Land Development Division Date
Traville W. Weiland 4/18/89
Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Chief, Bureau of Engineering Date
William D. Ray 4-2-88
Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Chief, Division of Community Planning & Land Development Date
James R. Rutter 4/13/88
Chief, Division of Community Planning & Land Development Date

NO.	DESCRIPTION	DATE	APPROVED	DATE
2	ADDED NOTES FOR STREAM CROSSING PER WRA COMMENT	2-4-88		
1	REVISED PER H.C.O.	1/27/88		



NOTE:
REMOVAL OF SEDIMENT CONTROL OUTSIDE THE LIMIT OF SUBMISSION TO BE IN ACCORDANCE WITH SEDIMENT CONTROL PERMIT FOR ROUGH GRADING.

NOTE:
ANY EXCESS MATERIAL FROM CONSTRUCTION OF 8'S ALONG HAMMONDS BRANCH MUST BE DISPOSED OF OUTSIDE OF THE 100 YR. FLOODPLAIN.

PROVIDE STREAM DIVERSION PROTECTION PER W.P.D. 23 (SEE DETAILS THIS SHEET.) (REFER TO WATER & SEWER PLANS, SHT. 3/3, INDICATING 3' COVER OVER SEWER @ RIVER CROSSING.)

THIS PLAN FOR STREET AND UTILITY CONSTRUCTION ONLY

EROSION AND SEDIMENT CONTROL PLAN

Patton Harris Rust and Associates
A Professional Corporation
Engineers, Surveyors, Planners and Landscape Architects
7609 Standish Place Rockville, Maryland 20855 (301) 762-2220

BOWLING BROOK FARMS
PARCEL E AREA I
LOTS E-1 THRU E-27, E-68 THRU E-92 LOTS 214 THRU 217
A RESUBDIVISION OF BOLLING BROOKE, LOT 2
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SURVEY OTHERS	DATE
DESIGN EIC	2/11/87
DRAWN EIC	
CHECKED K.O.R.	8/0/88
SCALE 1" = 40'	FILE NO. 2104-1-4
C.L. 2	