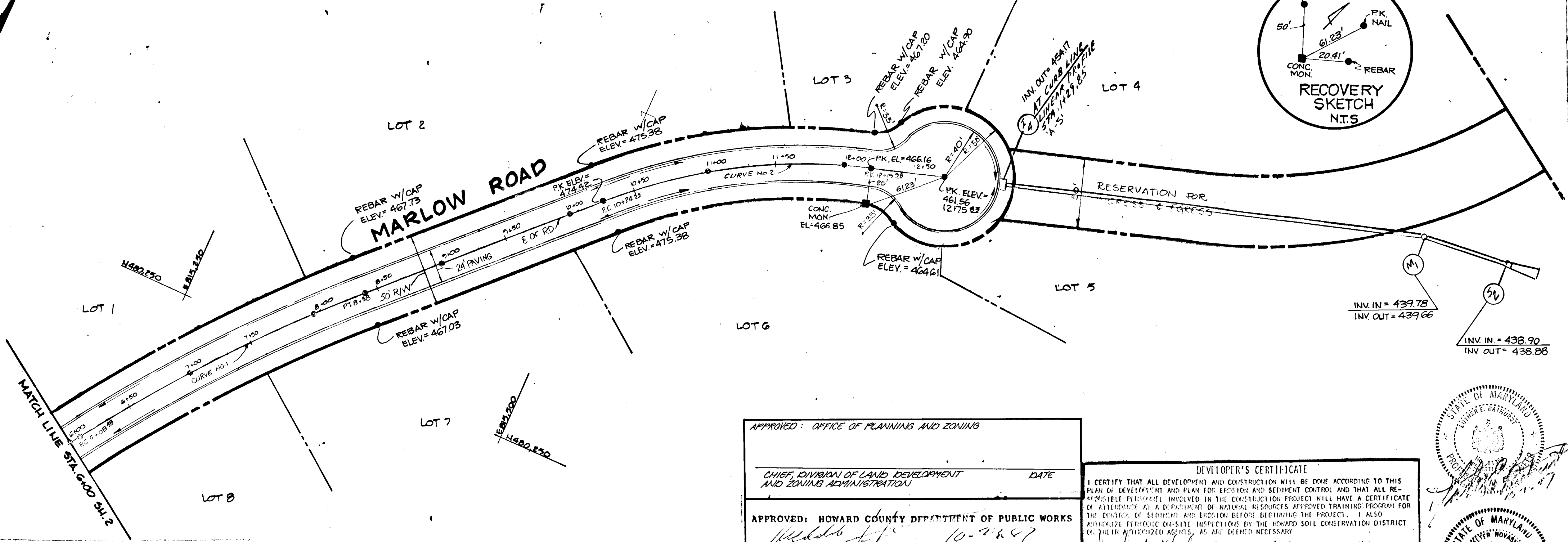
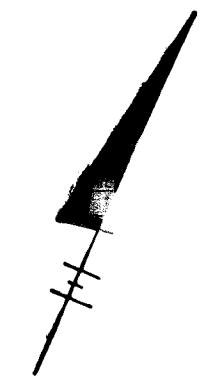
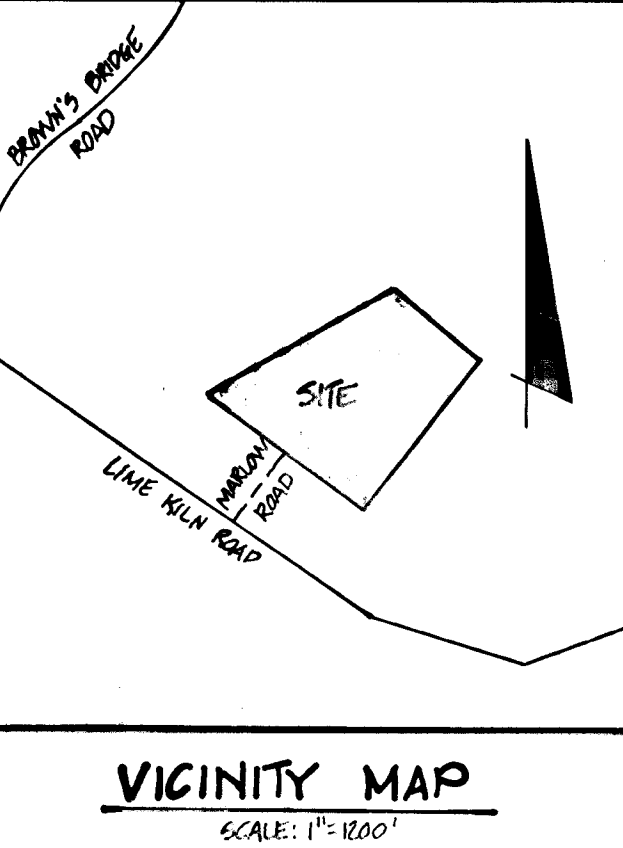


NO	RADIUS	LENGTH	TANGENT	CHD. BEARING	DIST.	DELTA
1.	100.00	230.98	114.55	N89°31'50"E	230.00	11°20'00"
2.	400.00	195.38	99.68	N57°21'05"E	195.45	27°59'11"



- GENERAL NOTES
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
 - APPROPRIATE 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 CONTRACTOR'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) DAY PRIOR TO RECEIVING WORK SHOWN ON THESE DRAWINGS.
 - WES UTILITY.....559-0100
 - BELL TELEPHONE SYSTEM.....383-3649
 - LONG DISTANCE CABLE DIVISION.....393-3532/3554
 - BALTIMORE GAS & ELECTRIC COMPANY.....531-0000
 - HOWARD COUNTY BUREAU OF UTILITIES.....592-2366
 - HOWARD COUNTY CONSTRUCTION INSPECTOR SURVEY DIVISION (24 HOURS NOTICE PRIOR OF CONSTRUCTION).....792-7272
 - ALL UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
 - ALL STREET CURE BEDDING SHALL HAVE 30" ROAD UNLESS OTHERWISE NOTED.
 - STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., 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, 1978 EDITION (REVISED).
 - PIPE SHALL NOT BE INSTALLED BY CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
 - DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS STANDARDS.
 - MARLOW ROAD 1'50" R/W 1' CUL-DE-SAC
 - LINE R/W ROAD 60' R/W 1' MIXED COLLECTOR
 - ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
 - ALL FILL AREAS WITHIN ROADWAYS AND/OR UNDER STRUCTURES TO BE COMPACTED 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 "RP" PER 00-02-85 COMPREHENSIVE ZONING PLAN.
 - TOP SHOWN HEREON WAS FIELD RUN BY BOENDER ASSOCIATES ON OCT., 1986
 - 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 BEDDING SHALL BE CLASS "C" AS SHOWN IN FIG. 11.4 OF THE HOWARD COUNTY DESIGN MANUAL, VOL. I, UNLESS OTHERWISE NOTED.
 - FOR CONSTRUCTION SEQUENCE SEE DRAWING 5-9-6.



DATE	
BY	
REVISION	
NO.	

NO.	DATE	DESCRIPTION	BY
1		REVISION	
2		REVISION	

APPROVED: OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division

Chief, Bureau of Highways

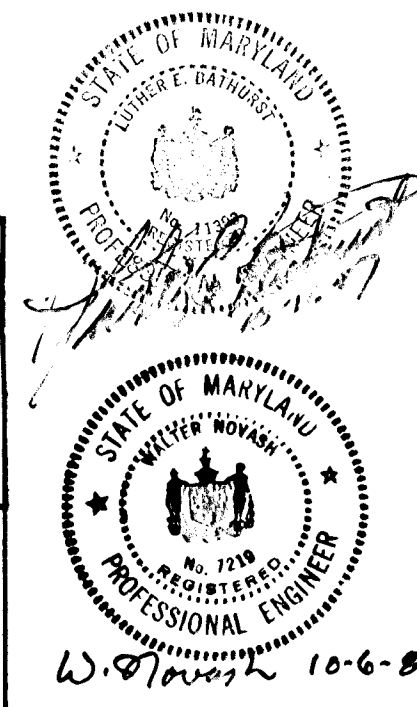
Chief, Bureau of Engineering

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 NECESSARY PRECAUTIONS PROVIDED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ADEQUACY AS A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO ACKNOWLEDGE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OF THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND FEASIBLE 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.



TITLE: ROAD CONSTRUCTION PLANS

PROJECT: HICKORY HILL FARM

LOCATION: TAX MAP 40, PARCEL 134, 07&2 PLE NOS 5-06-76, P.87-82

SCALE: AS NOTED

DESIGNED BY: JLN

DRAWN BY: JLN

CHECKED BY: WIN

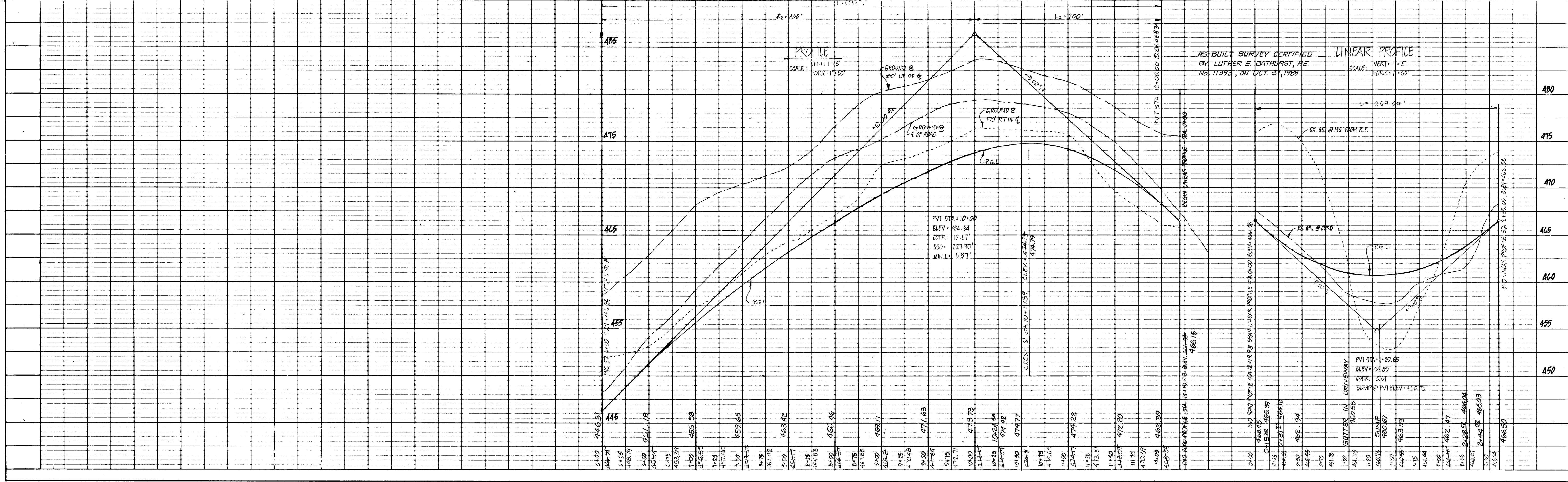
DATE: FEB. 1987

boender associates inc.

consulting engineers land surveyors land planners

COURTHOUSE SQUARE 3865 ELLICOTT MILLS DRIVE ELLICOTT CITY, MD 21043 (301) 465-7777

DATE	
BY	
REVISION	
NO.	



1335

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.
 DEVELOPER: *W. J. ...* DATE: **6-18-87**

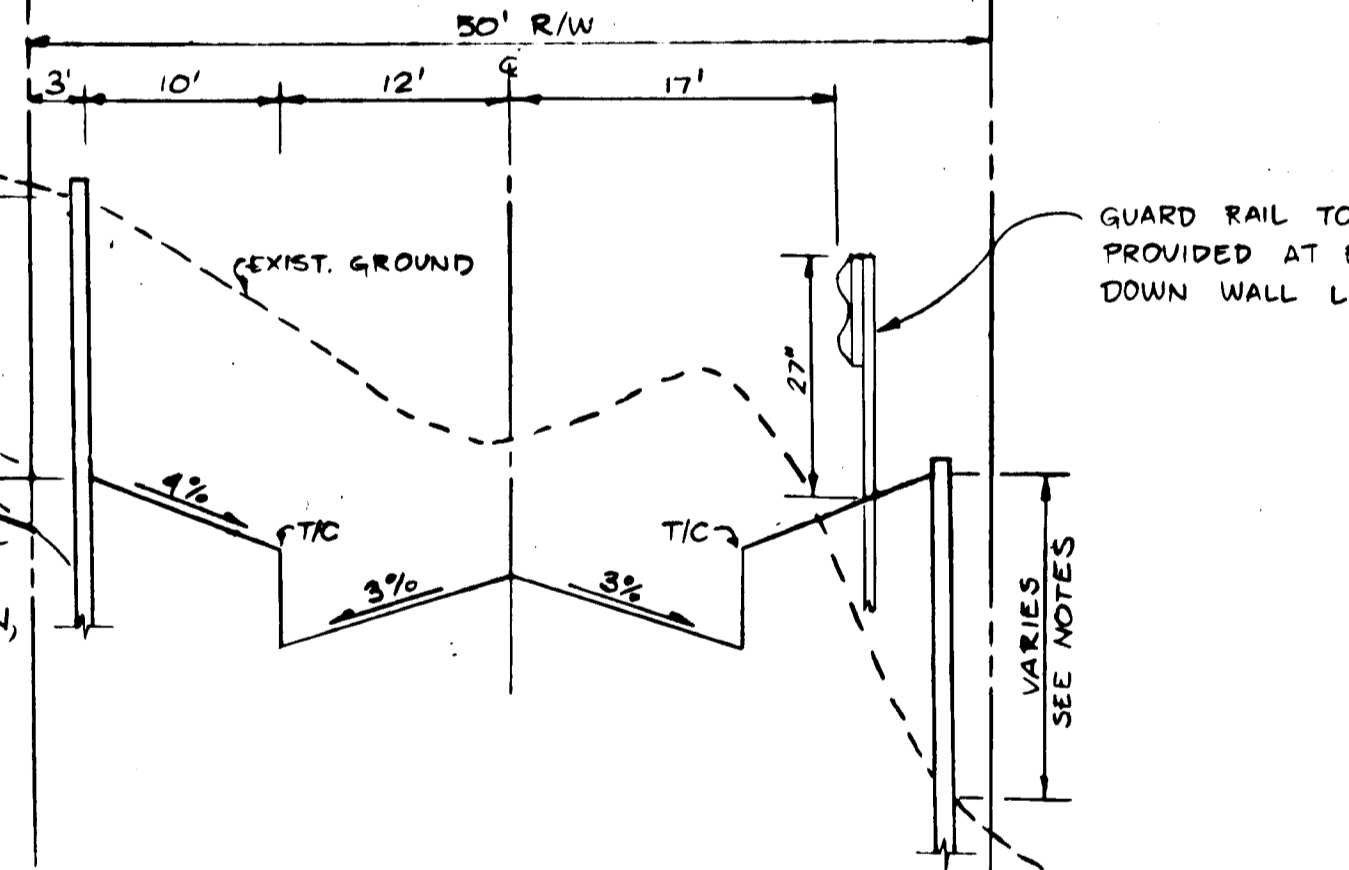
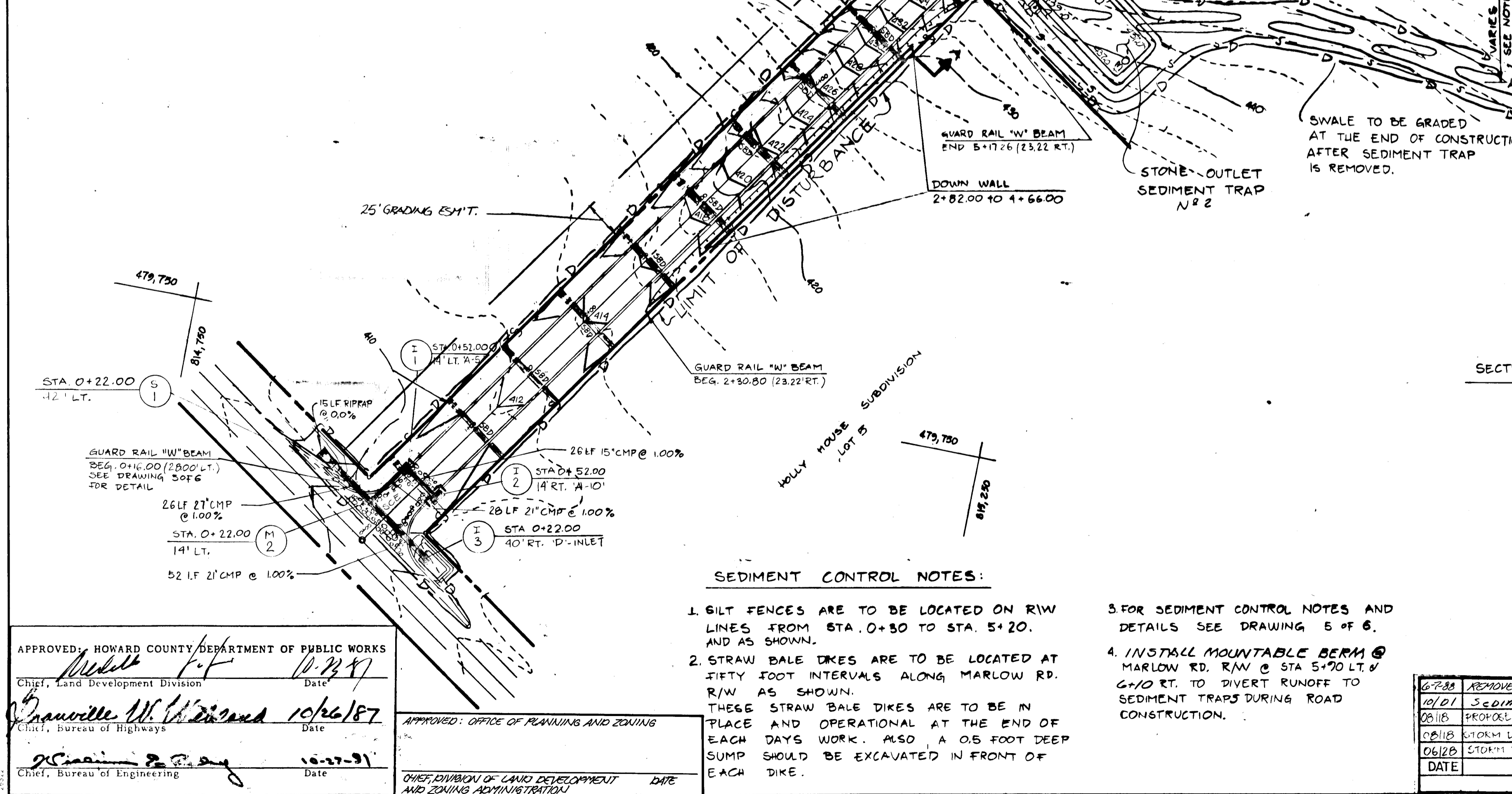
ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 ENGINEER: *...* DATE: **10-12-87**

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 REVIEWER: *...* DATE: **10-19-87**
 U.S. CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 REVIEWER: *...* DATE: **10/26/87**
 HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT TRAP SCHEDULE

TRAP NO.	TYPE OF TRAP	DRAINAGE AREA [AC]	STORAGE REQ'D [CU FT.]	STORAGE PROVIDED [CU FT.]	STORAGE DEPTH [FT.]	WEIR LENGTH & ELEV.	BOTTOM DIM. & ELEV.
1	STONE OUTLET ST-V	0.81	1,438	1,500	1.0	3.3' 443.0	30' x 50' 443.0
2	STONE OUTLET ST-V	1.37	2,466	2,638	1.0	5.5' 439.0	30' x 80' 437.0
3	STONE OUTLET	1.80	3,240	3,600	1.5	7.2' 453.0	40' x 60' 450.50



TYPICAL SECTION A-A

SCALE: 1" = 10' HORIZ.
 1" = 1' VERT.

SECTION 'A-A' NOTES

- 1. "UP WALL" STA. 4+53.00 TO 5+56.00 (LEFT SIDE) VARIES FROM 1.50' TO 2.22' @ STA. 5+15.00
- 2. "DOWN WALL" STA. 0+22.00 TO 1+00.00 (LEFT SIDE) VARIES FROM 1.50' TO 1.65' @ STA. 0+50
- 3. STA. 0+28.00 TO 3+66.00 (LEFT SIDE) VARIES FROM 1.50' TO 2.22' @ STA. 2+50.00
- 4. STA. 2+82.00 TO 3+66.00 (RIGHT SIDE) VARIES FROM 1.50' TO 2.22' @ STA. 3+50.00

5. FOR STRUCTURAL DETAILS AND TOP OF WALL ELEVATIONS SEE DRAWING 6 OF 6.

- NOTE:**
1. SEE DRAWING 5 OF 6 FOR CONSTRUCTION SEQUENCE.
 2. SEE DRAWING 5 OF 6 FOR STORM DRAIN STRUCTURE SCHEDULE.
 3. SWALES ON LOT 2 & 8 ARE NOT TO BE CONSTRUCTED UNTILL THE STREET IS PAVED.
 4. SWALE TO DIRECT RUNOFF INTO ROADWAY.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Land Development Division
W. J. ... DATE: **10-23-87**

W. J. ... DATE: **10/26/87**
 Chief, Bureau of Highways

W. J. ... DATE: **10-27-87**
 Chief, Bureau of Engineering

APPROVED: OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 DATE: _____

- SEDIMENT CONTROL NOTES:**
1. SILT FENCES ARE TO BE LOCATED ON R/W LINES FROM STA. 0+30 TO STA. 5+20, AND AS SHOWN.
 2. STRAW BALE DIKES ARE TO BE LOCATED AT FIFTY FOOT INTERVALS ALONG MARLOW RD. R/W AS SHOWN. THESE STRAW BALE DIKES ARE TO BE IN PLACE AND OPERATIONAL AT THE END OF EACH DAYS WORK. ALSO, A 0.5 FOOT DEEP SUMP SHOULD BE EXCAVATED IN FRONT OF EACH DIKE.
 3. FOR SEDIMENT CONTROL NOTES AND DETAILS SEE DRAWING 5 OF 6.
 4. INSTALL MOUNTABLE BERM @ MARLOW RD. R/W @ STA. 5+70 LT. & 6+70 RT. TO DIVERT RUNOFF TO SEDIMENT TRAPS DURING ROAD CONSTRUCTION.

DATE	DESCRIPTION	BY
10-23-87	APPROVE CT RETAINING WALL & GUARDRAIL, ADD 25' GRADING ELEVATION	JOD
10/21	Sediment Traps Added	EVA
08/18	PROPOSED CULVERTS, LIMIT OF DISTURBANCE & SED TRAP SHOWN	EVA
08/18	STORM DRAIN LAYOUT & CHANNELS, EX. DRIVEWAYS SHOWN	EVA
06/28	STORM DRAIN LAYOUT AND DRAINAGE EASEMENT LOCATION CHANNELS	EVA



TITLE: GRADING & SEDIMENT CONTROL PLAN

PROJECT: **HICKORY HILL FARM**

LOCATION: TAX MAP 40 PARCEL 134
 FIFTH ELECTION DISTRICT HOWARD CO., MD.

SCALE: 1" = 30'
 DESIGNED BY: JOE NASON
 DRAWN BY: J.C. OGLE
 CHECKED BY: J.T. NASON
 DATE: JAN, 1987

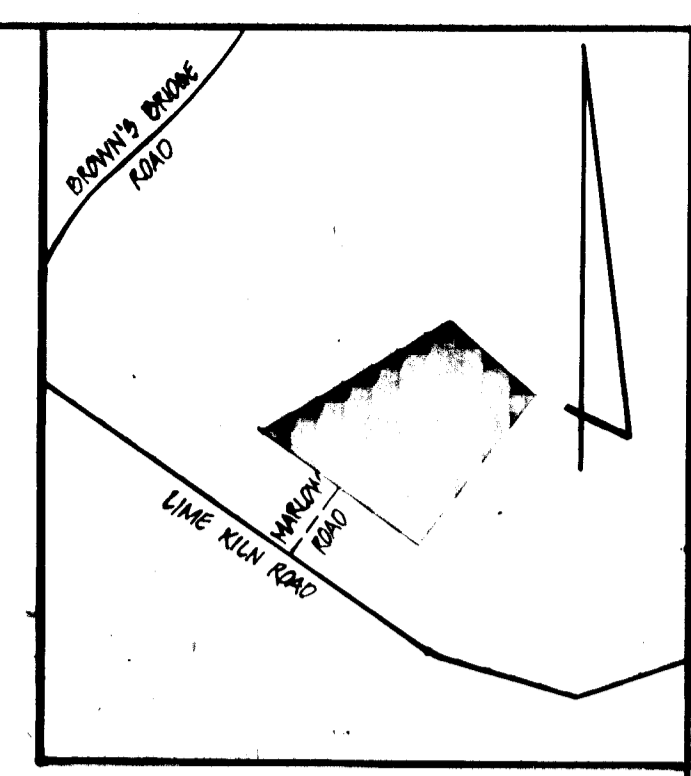
FIELD BOOK: _____ JOB NO.: 06139 DRAWING NO.: 3 OF 6

OWNER & DEVELOPER
 WINKLER JOINT VENTURE
 5715 SHADY LANE
 GLENWOOD, MARYLAND 21757

boender associates inc.
 consulting engineers
 land surveyors
 land planners

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

CURVE NO. 1	CURVE NO. 2	CURVE NO. 3
R = 1000.00'	R = 400.00'	R = 400.00'
L = 299.00'	L = 191.55'	L = 217.00'
T = 190.01'	T = 64.97'	T = 111.24'



VICINITY MAP
SCALE: 1"=100'

GENERAL NOTES

1. TR. MAP: AD - PARCEL 194; BLOCK - 94
2. DEED REFERENCE: 9401971
3. EXISTING EASING: R
4. PRIVATE WATER AND PRIVATE SEWERAGE ARE TO BE UTILIZED.
5. MINIMUM LOT SIZE: 3.00 AC
6. TOTAL NO. OF LOTS: 8 (BUILDABLE)
7. TOTAL AREA OF LOTS: 27.59 AC
8. TOTAL AREA OF ROAD DEDICATION: 1.0 AC
9. TOTAL AREA OF OPEN SPACE: NONE
10. TOTAL AREA OF SITE: 28.59 AC
11. BECOMING CONTROL MEASURES SHOWN ON ROAD CONSTRUCTION PLAN - DRAWING NO. 5 OF 6
12. TOPOGRAPHY SHOWN HEREIN IS BASED ON A SURVEY PREPARED BY C.M. SKINNER, JR.
13. BOUNDARY SHOWN HEREIN IS BASED ON A PLAT ENTITLED, "HOLLY HILLS DIVISION", LIBER 7 AT FOLIO 82 AND NOT AN ACTUAL SURVEY.
14. THERE IS AN EXISTING DWELLING ON LOT 2.
15. THIS DRAWING IS ONLY FOR DRAINAGE AREAS, SWALES, AND GRADE ON LOTS 2 & 8, FOR FINAL ROAD GRADINGS SEE DRAWINGS NO. 5 OF 6. FOR BEHAVIOR CALCULATIONS SEE APPROVED PRELIM. PLAN P-87-22.

THE LOTS SHOWN HEREIN COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOTS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE.

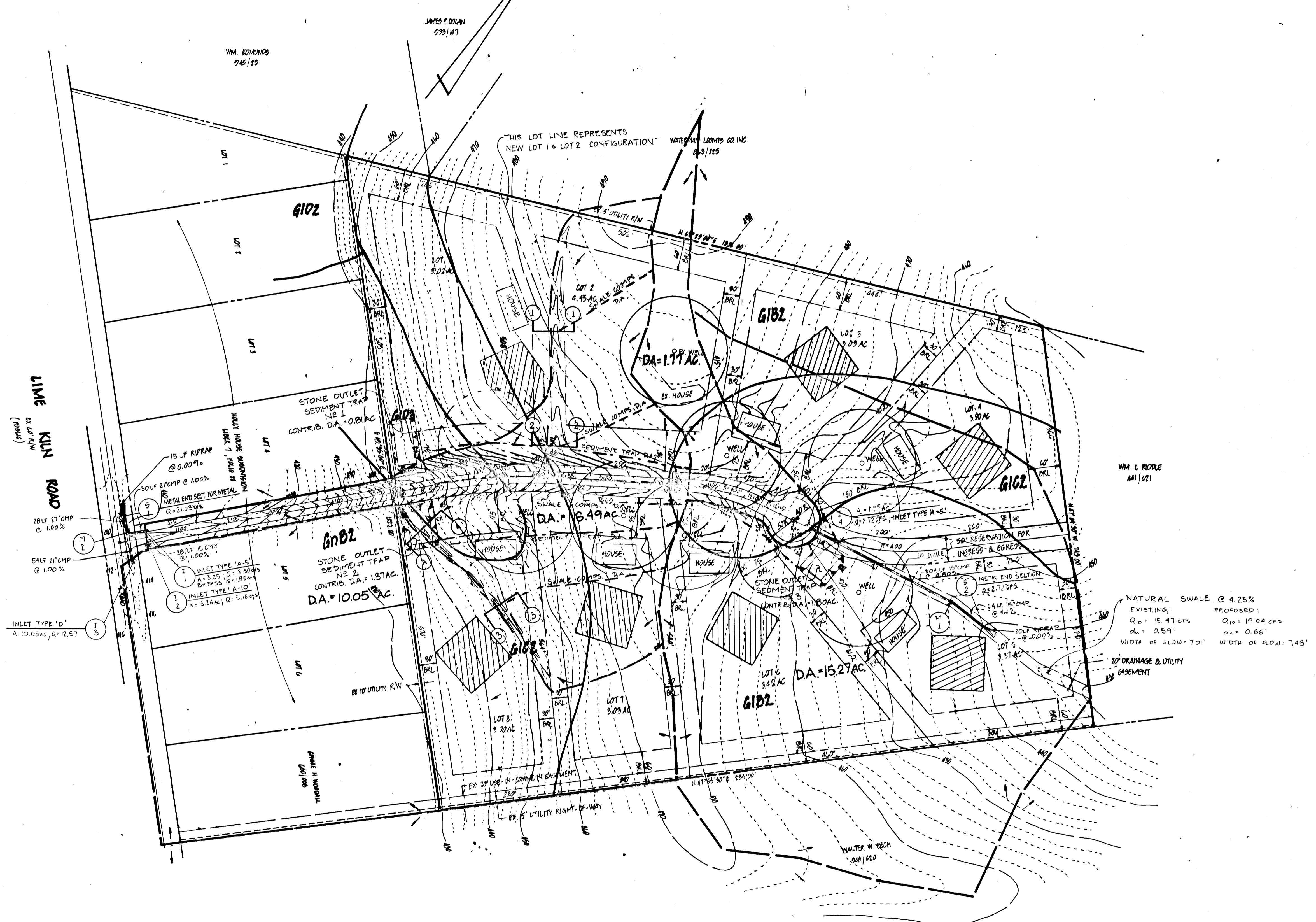
THIS AREA DESIGNATES A PRIVATE SEWERAGE BASINMENT OF APPROXIMATELY 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE AND APPROXIMATE ANY RESIDENTIAL STRUCTURES CONSTRUCTED ON THESE BUILDING SITES. THESE CASSEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWERAGE BASINMENT. RECONSTRUCTION OF A MODIFIED SEWERAGE BASINMENT SHALL NOT BE NECESSARY.

ALL PERCOLATION TEST Holes SHOWN HEREIN HAVE BEEN FIELD LOCATED AND SHOWN HEREIN (+).

LOT NO.	AVERAGE RES. TIME IN MIN. FOR 2.00 INCH	MAX. DEPTH PERMITTED FOR EFFLUENT PIPE TO ENTER SEWERAGE DISPOSAL AREA AT ITS HIGHEST ELEV. WITH REF. TO EX. GRADE AT TIME OF TEST
1		
2		
3		
4		
5		
6		
7		
8		

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

HOWARD COUNTY HEALTH OFFICER _____ DATE _____



APPROVED: OFFICE OF PLANNING AND ZONING

CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE _____

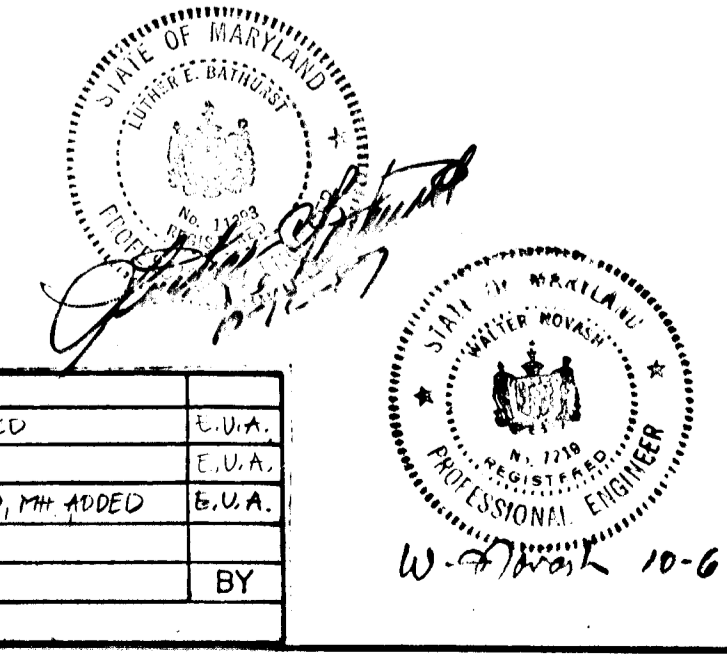
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division DATE 10-13-87

1335 *William M. Williams* 10/26/87
Chief, Bureau of Highways

William & Riley 10-27-87
Chief, Bureau of Engineering

DATE	DESCRIPTION	BY
08/11/87	SWALES ADDED, STORM DRAIN LAYOUT CHANGED, D.A. REVISED	E.U.A.
08/26/87	STORM DRAIN LAYOUT CHANGED, DRAINAGE CASSEMENT CHANGED	E.U.A.
09/14/87	CULVERT HOLE CHANGED TO 2 INLETS, PIPE LENGTH CHANGED, MH ADDED	S.U.A.



OWNER & DEVELOPER

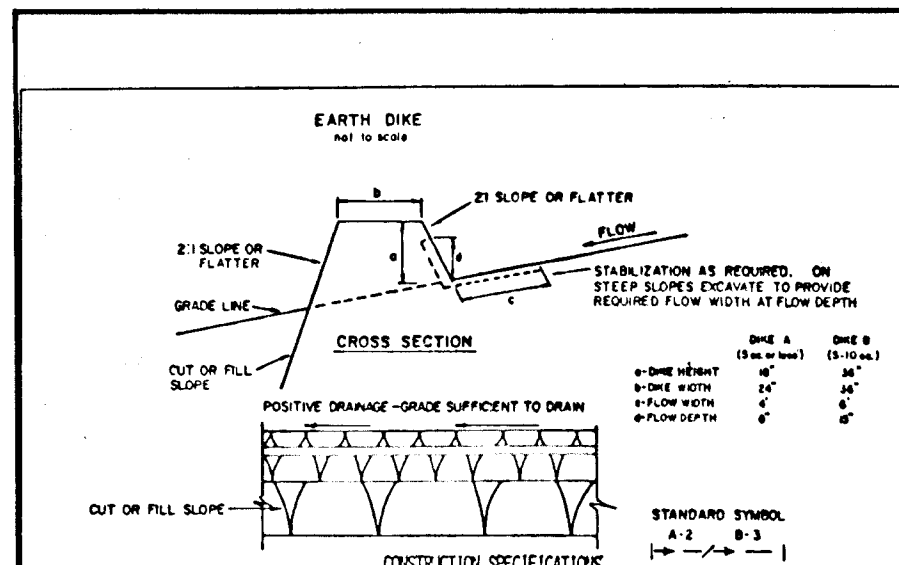
WINLER JOINT VENTURE
979 SHADY LANE
BLENNDOW, MARYLAND 21779

boender associates inc.
consulting engineers
land surveyors
land planners

FOURTHOUSE SQUARE
3585 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD 21043
18011 465-7777

TITLE: DRAINAGE AREA MAP
PROJECT: HICKORY HILL FARM
LOCATION: PARCEL 194, 5TH ELECTION DISTRICT, TR. MAP 80, HOWARD CO., MD.
SCALE: 1"=100'
DESIGNED BY: J.T.N.
DRAWN BY: D.P.
CHECKED BY: W.J.N.
DATE: JUNE, 1986
FIELD BOOK: PAGE NO. 86190 JOB NO. 4 OF 6 DRAWING NO. 10-6-86

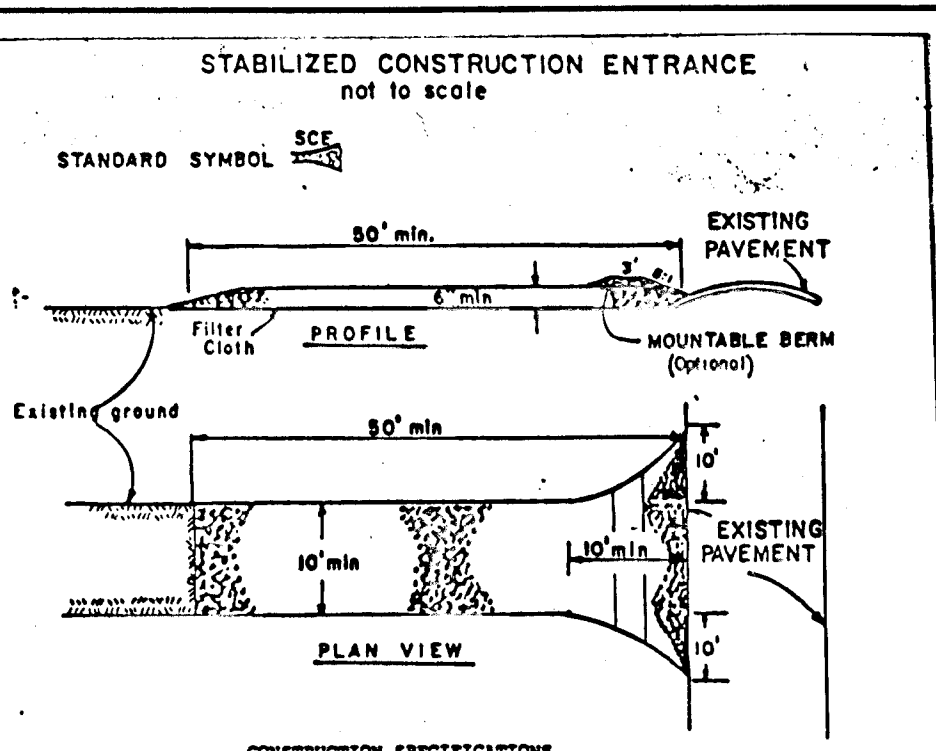
AS-BUILT 10-31-88 F-87-224



CONSTRUCTION SPECIFICATIONS

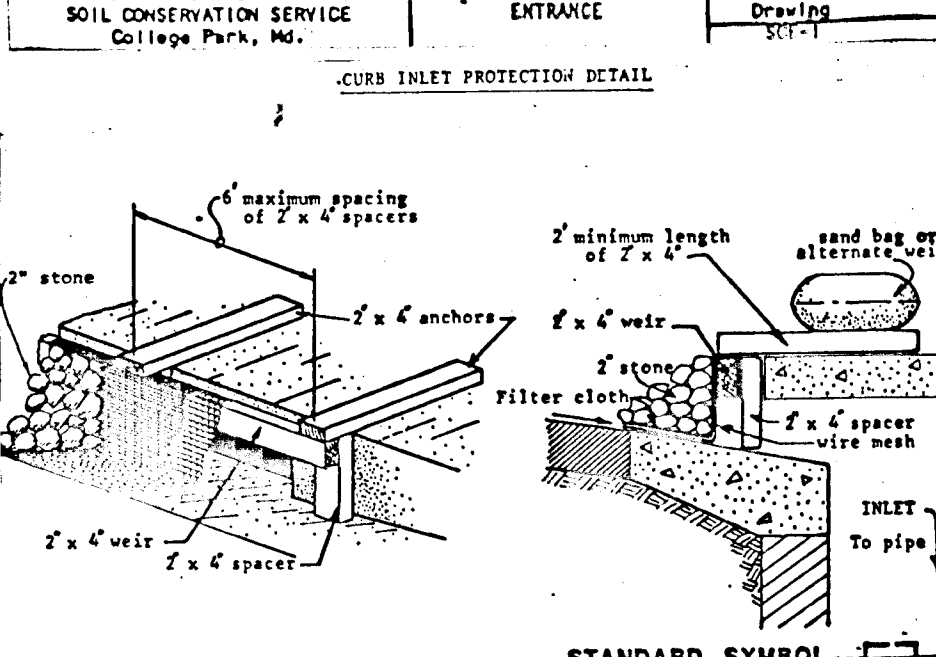
- All dikes shall be constructed by hydraulic equipment.
- All dikes shall have positive drainage to an outlet.
- The filter cloth shall be installed in a location to facilitate removal by construction traffic.
- Earth dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be directed 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 immediately stabilized.
- Stabilization shall be 100% in accordance with standard specifications for seed and straw mulch (see Section 21.03) in the second season. If flow channels are present the dike shall be.

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



CONSTRUCTION SPECIFICATIONS

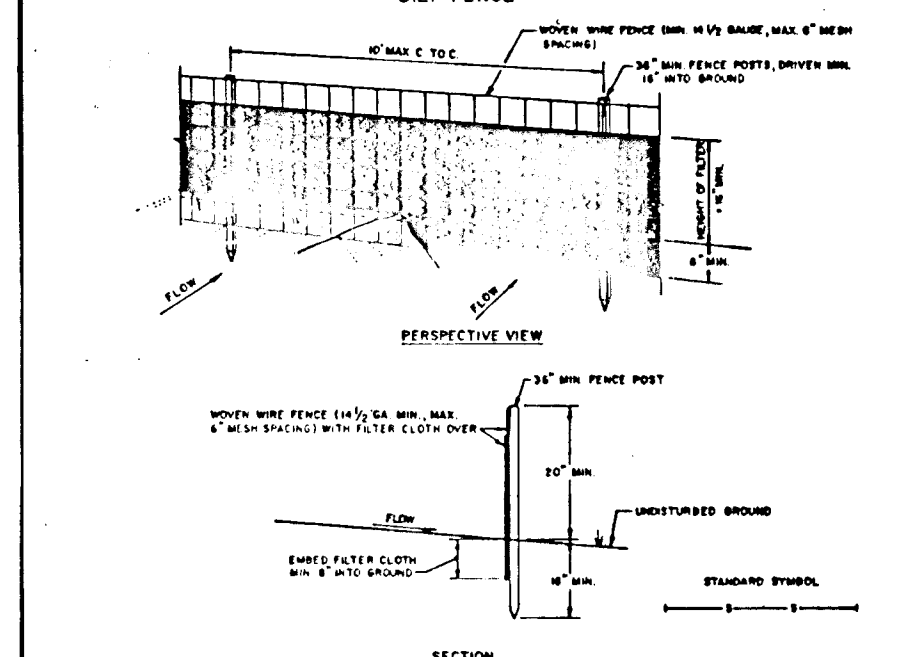
- Stone Size - Use 2" stone, or recycled or recycled concrete equivalent.
- Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
- Thickness - Not less than six (6) inches.
- Width - Ten (10) foot minimum, but not less than the full width at points where access or egress occurs.
- Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single residence lot.
- 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 6" spacing will be provided.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All conditions required, dropped, washed or tracked onto public right-of-way must be removed immediately.
- Warning - Signs shall be placed to remove sediment prior to entrance onto public right-of-way. When warning is required, it shall be on an area stabilized with stone and which drains into an approved sediment trapping device.
- Periodic inspection and needed maintenance shall be provided after each rain.



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- When wire fence is to be fastened securely to fence posts with wire ties or staples.
- Filter cloth to be fastened securely to wire ties with the staples.
- When the sections of filter cloth are joined, the sections shall be overlapped by six (6) inches and fastened with staples.
- Maintenance shall be performed as required.

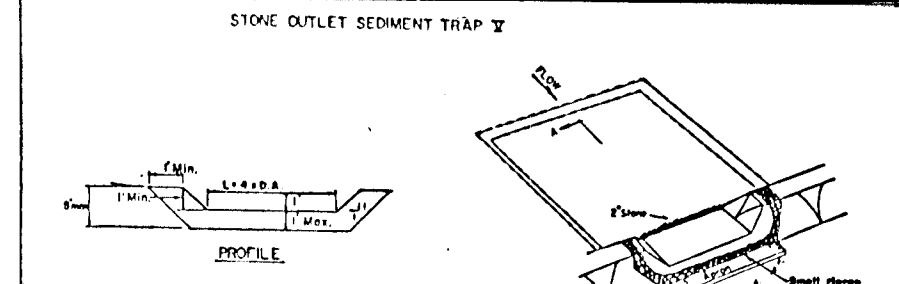
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND



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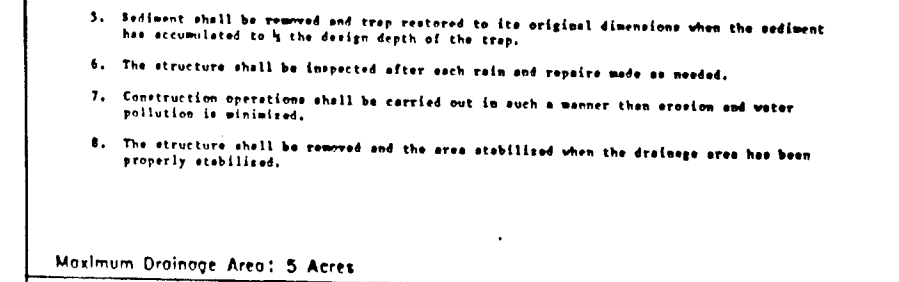
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND



CONSTRUCTION SPECIFICATIONS FOR ST-2

- Area under sediment trap shall be cleared, graded and covered with vegetation and rock mulch. The soil area shall be stabilized.
- The filter material shall be placed in a location to facilitate removal by construction traffic.
- All on and off site areas shall be 100% stabilized.
- The stone used in the trap shall be small stones 1/2" to 1" in diameter with a 1/2" thickness of aggregate placed on the upper side of the trap to facilitate filter cloth to be placed.
- Trap shall be removed and trap replaced by the original dimensions when the sediment has accumulated to the design depth of the trap.
- The structure shall be inspected after each rain and repairs made as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution is avoided.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

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

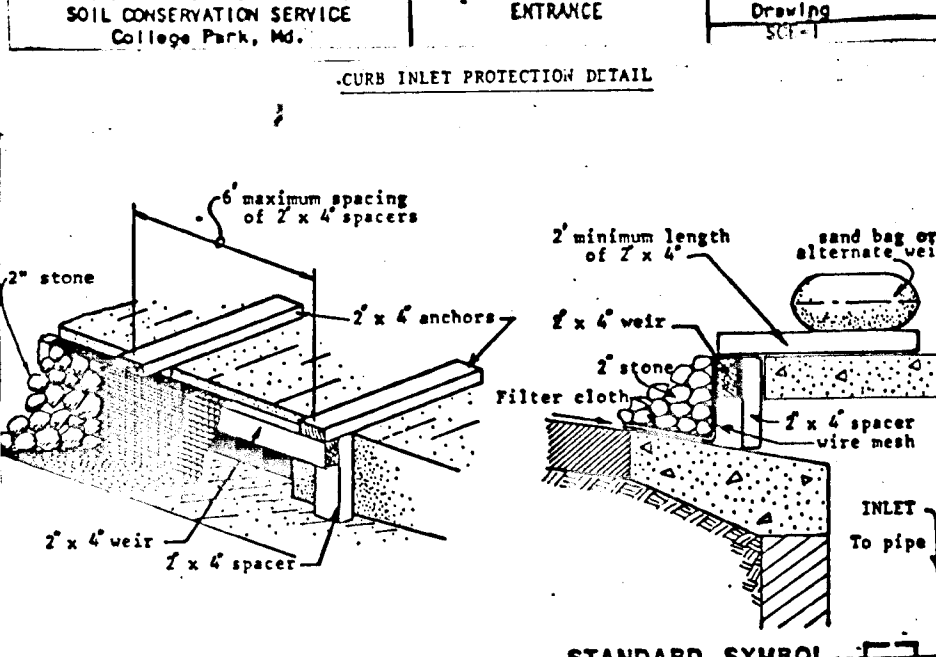


U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Date: 10-26-87
Chief, Land Development Division
Date: 10-27-87
Chief, Bureau of Engineering

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
Date: 10-19-87
James M. Nelson
SOIL CONSERVATION SERVICE

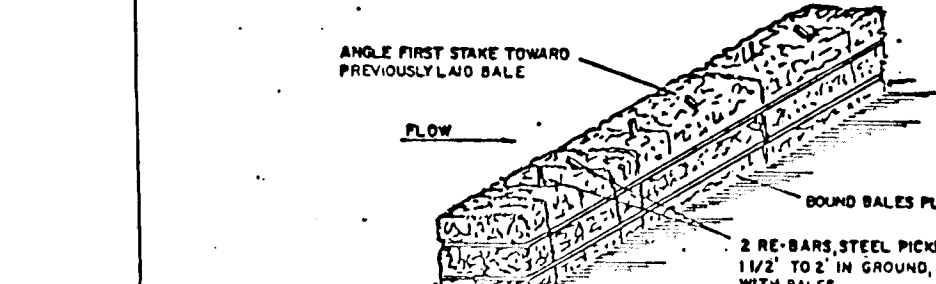
THIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Date: 10-22-87
Site: 10-22-87



CONSTRUCTION SPECIFICATIONS

- Bales shall be placed in the top of a slope or on the contour and in a row with ends tightly abutting the adjacent bales.
- Each bale shall be perforated in the soil a minimum of (4) inches, and placed so the perforations are horizontal.
- Bales shall be securely anchored in place by either two stakes or re-bars driven through the soil. The first stake in each bale shall be driven through the perforation laid ball at an angle to force the bales together. Stakes shall be driven flush with the bales.
- Inspection shall be provided and repair replacement shall be made promptly as needed.
- Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

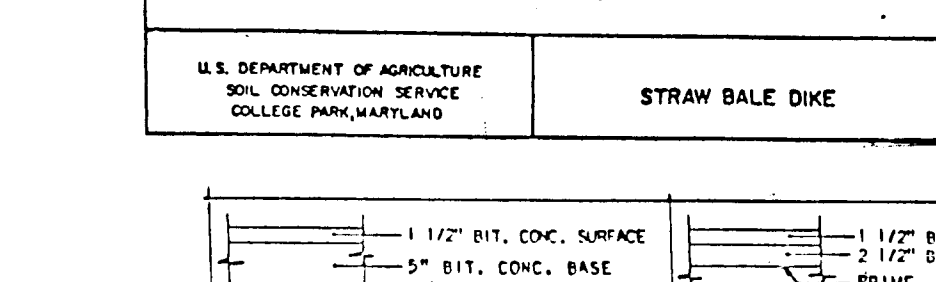
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND



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



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

APPROVED: OFFICE OF PLANNING AND ZONING
Date: 10-27-87
Chief, Division of Land Development and Zoning Administration

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.
Date: 10-22-87
Site: 10-22-87

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.
Date: 10-22-87
Site: 10-22-87

PERMANENT SEEDING NOTES

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

Seeding 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:

- Preferred - Apply 2 tons per acre dolomitic limestone (80 lbs/1000 sq ft) and 400 lbs per acre 10-10-10 fertilizer (18 lbs/1000 sq ft) before seeding. Narrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 uniform fertilizer (9 lbs/1000 sq ft).
- Acceptable - Apply 2 tons per acre dolomitic limestone (80 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Narrow 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 50 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 50 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (0.05 lbs/1000 sq ft) of seeding clovergrass. 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 seed with 40 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons of 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 200 gallons per acre (8 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 500 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 restructured where a short-term vegetative cover is needed.

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

Soil Amendments: Apply 400 lbs per acre 10-10-10 fertilizer (11 lbs/1000 sq ft)

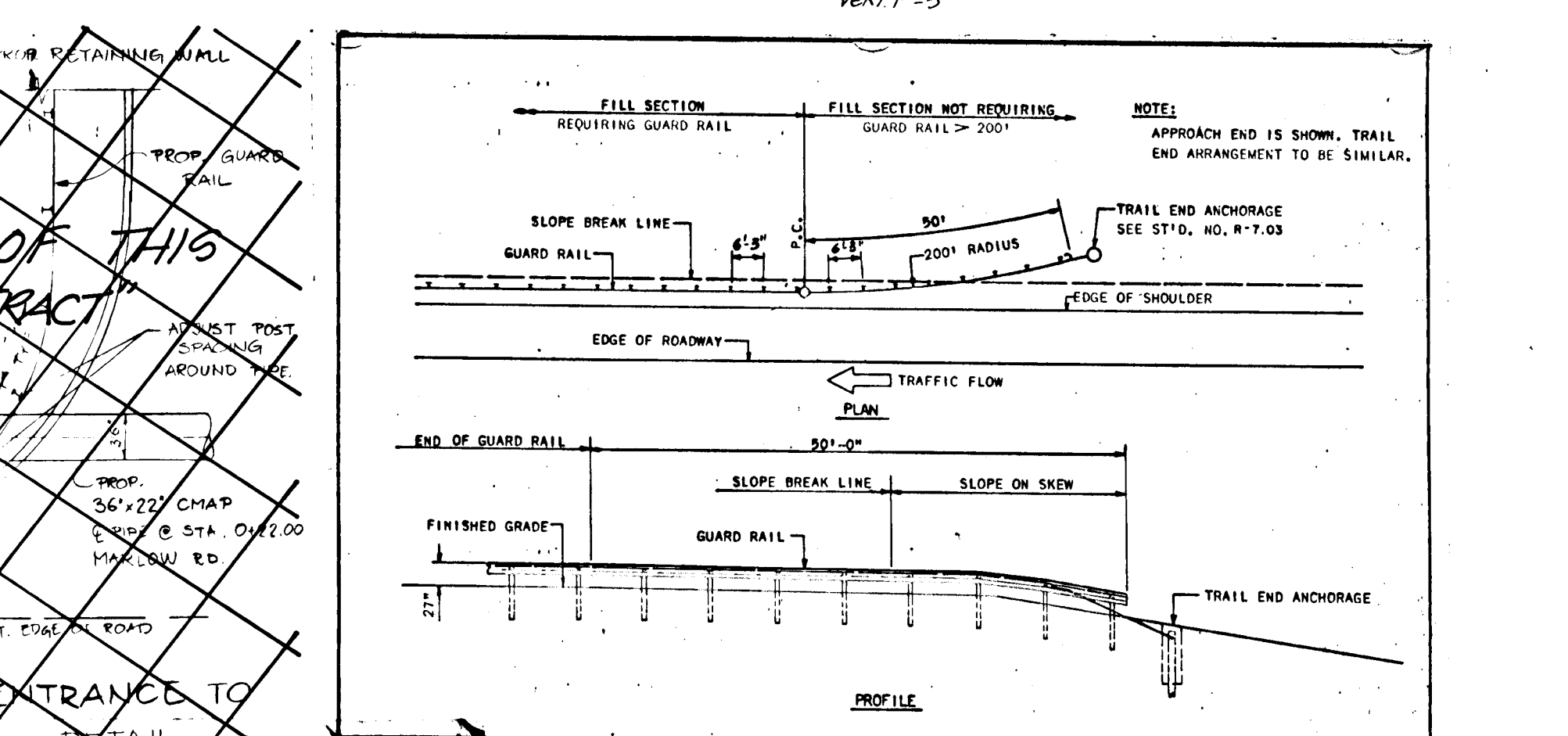
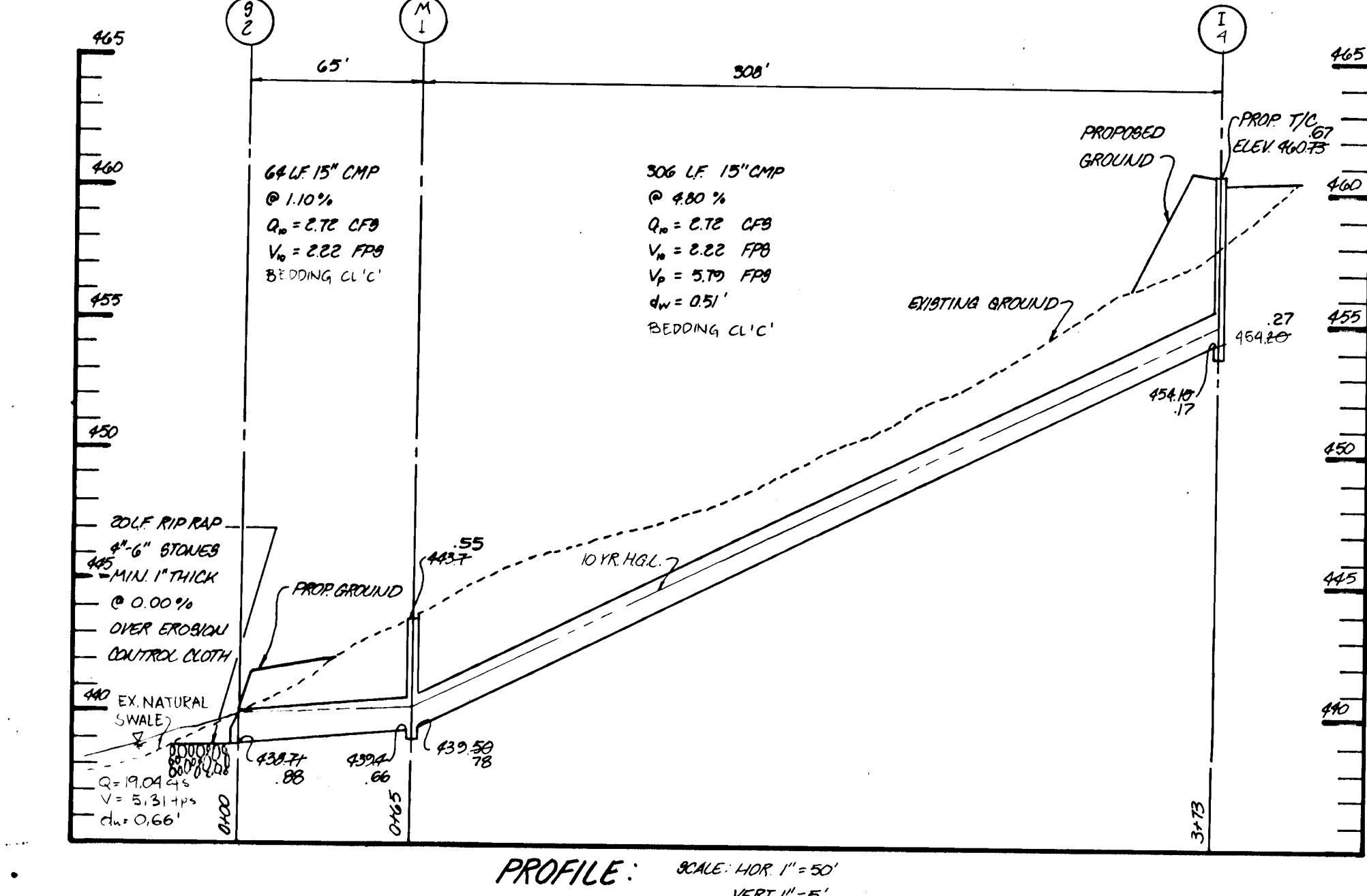
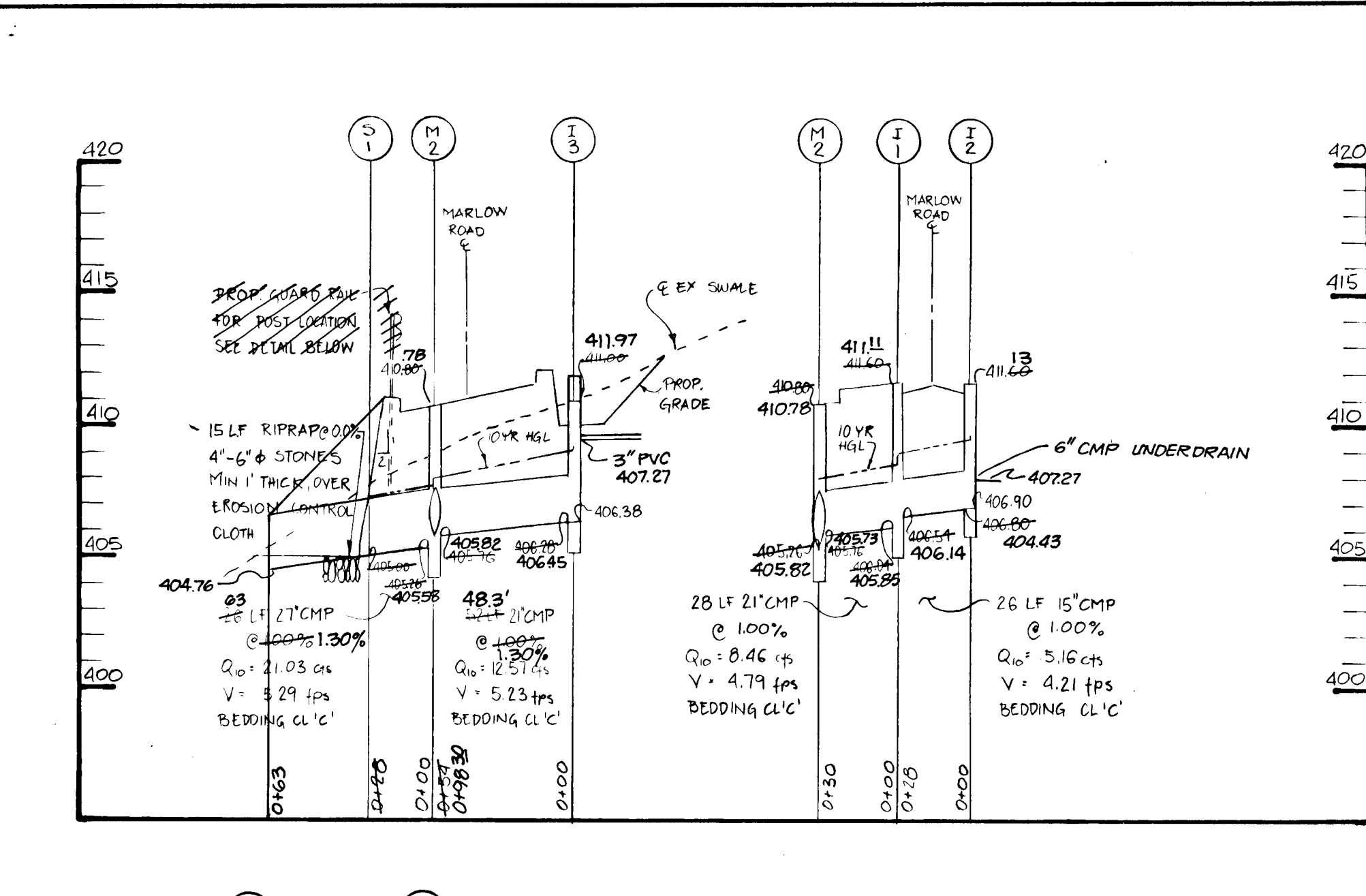
Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 25 bushels per acre of annual ryegrass (0.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 2 lbs per acre of seeding clovergrass (0.05 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use seed.

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 200 gal per acre (8 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft or higher, use 500 gal per acre (8 gal/1000 sq ft) for anchoring.

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

SEDIMENT CONTROL NOTES

- 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. (667-2437).
- 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 HARTLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all permanent sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days on all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and covered along perimeter around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 HARTLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 31) and (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding data do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operating condition until permits for their removal have been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:
Area Disturbed: 28.13 acres
Area to be seeded or graded: 1.97 acres
Area to be vegetatively stabilized: 1.97 acres
Total fill: 3.94 cu. yds.
Off-site water/narrow area location: 0.00 acres
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County SEDIMENT CONTROL Inspector.
- On all sites with disturbed areas in excess of 3 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment control, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approval may not be authorized until this initial approval by the inspection agency is made.

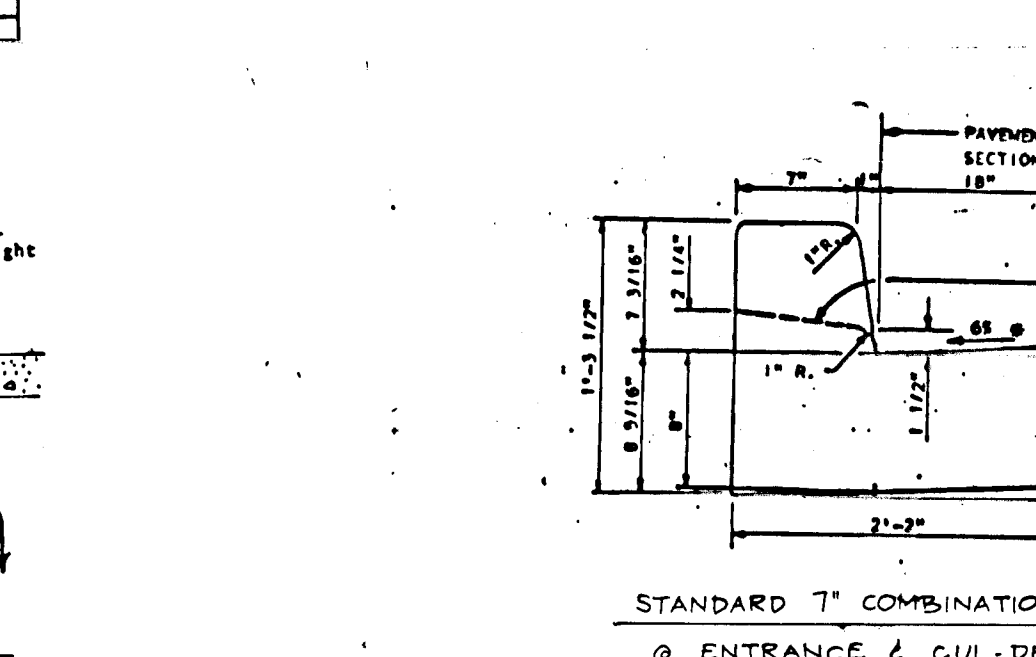


GUARD RAIL 'W' BEAM END TREATMENT IN FILL (NOT TO SCALE)

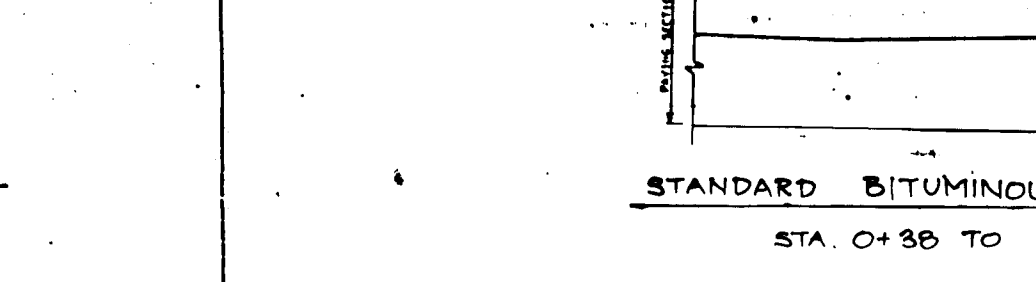
NOTE:
FOR GUARD RAIL CONSTRUCTION STANDARDS SEE HOWARD COUNTY STANDARD DETAIL DRAWINGS NOS. R-701 TO R-704

STRUCTURE SCHEDULE				
NO	TYPE	INV OUT	TOPELEV	REMARKS
I-1	A-5' ON GRADE	406.84	406.14	10.00 STD. DET SD 4.01
I-2	A-10' ON GRADE	406.80	406.90	11.11
I-3	D-1' IN SUMP	406.83	407.27	11.13
I-4	A-5' IN SUMP	406.85	407.07	10.00 STD. DET SD 4.01
M-2	CONC PRECAST	405.58	405.73	10.00 STD. DET SD 4.01
M-1	"	405.58	405.73	10.00 STD. DET SD 4.01
S-1	METAL ENDSECT.	404.76	404.82	10.00 STD. DET SD 5.61
S-2	METAL ENDSECT.	404.76	404.82	10.00 STD. DET SD 5.61

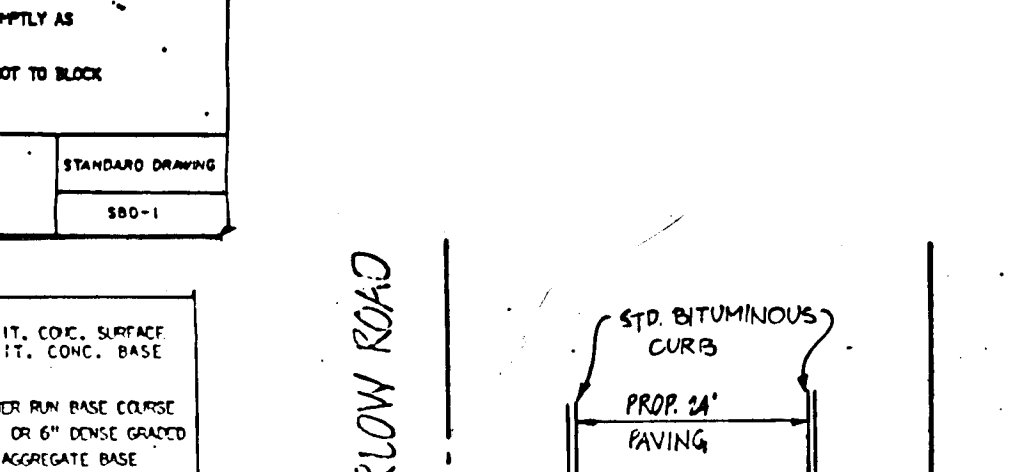
CONSTRUCTION SEQUENCE				
1.	OBTAIN GRADING PERMIT			
2.	NOTIFY THE HOWARD CO. BUREAU OF LICENCE, INSPECTIONS AND PERMITS AND THE CONSTRUCTION INSPECTION/SURVEYS DIVISION @ (301) 792-7272 AT LEAST 24 HOURS PRIOR TO BEGINNING CONSTRUCTION.			
3.	INSTALL TEMPORARY SEDIMENT CONTROL MEASURES (S.C.E., S.F., S.B.D., ST-V-12(3))-1 WEEK			
4.	CONSTRUCT RETAINING WALLS			- 1 WEEK
5.	ROUGH GRADE SITE, STABILIZE WITH TEMPORARY STABILIZATION MEASURES.			- 3 DAYS
6.	INSTALL INLETS & STORM DRAINS STABILIZE DISTURBED AREAS. BLOCK INLETS-			1 WEEK
7.	BRING ROAD TO SUBGRADE			- 1 DAY
8.	CONSTRUCT CONCRETE CURB & GUTTER			- 2 DAYS
9.	PAVE ROAD			- 2 DAYS
10.	CONSTRUCT BITUMINOUS CURB			- 1 DAY
11.	INSTALL GUARD RAIL			- 1 DAY
12.	FINE GRADE SITE, APPLY PERMANENT STABILIZATION MEASURES, FLUSH S.D.			- 1 WEEK
13.	WITH APPROVAL OF HOWARD CO. BUREAU OF LICENCE, INSPECTIONS & PERMITS REMOVE TEMPORARY SEDIMENT CONTROL MEASURES, GRADE SWALE ON LOT B, AND STABILIZE ANY REMAINING DISTURBED AREAS.			



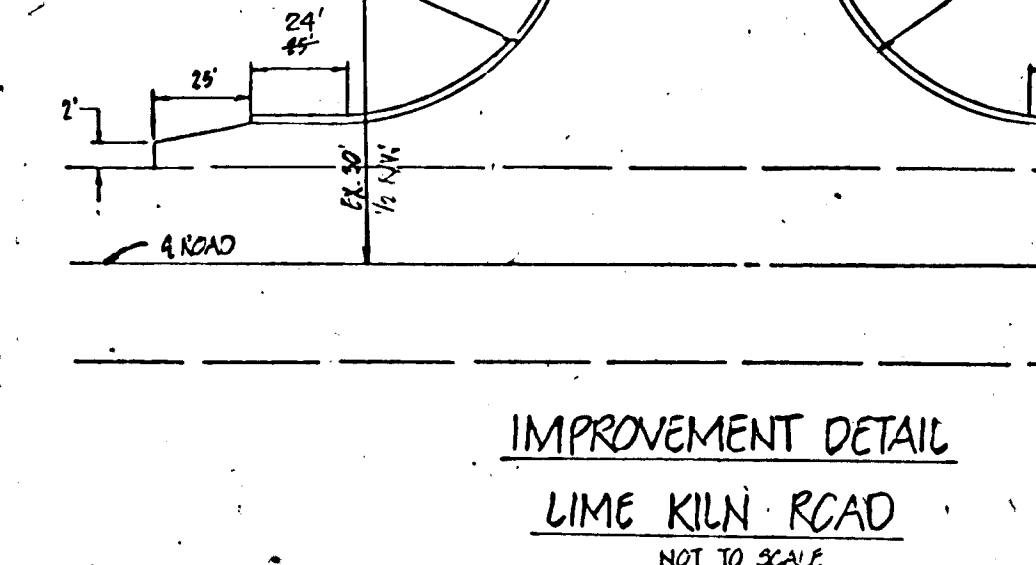
STANDARD 7" COMBINATION CURB & GUTTER @ ENTRANCE & CUL-DE-SAC ONLY



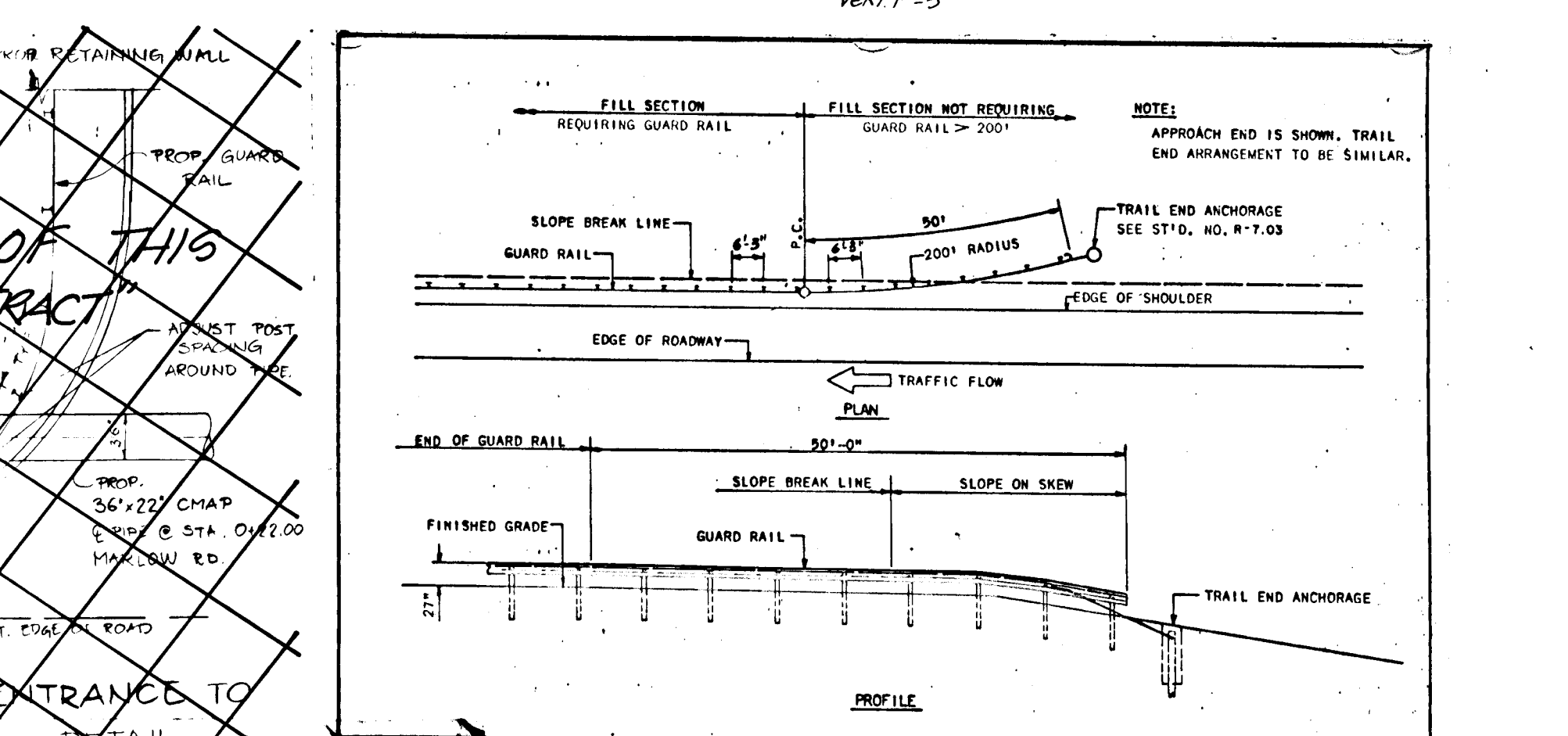
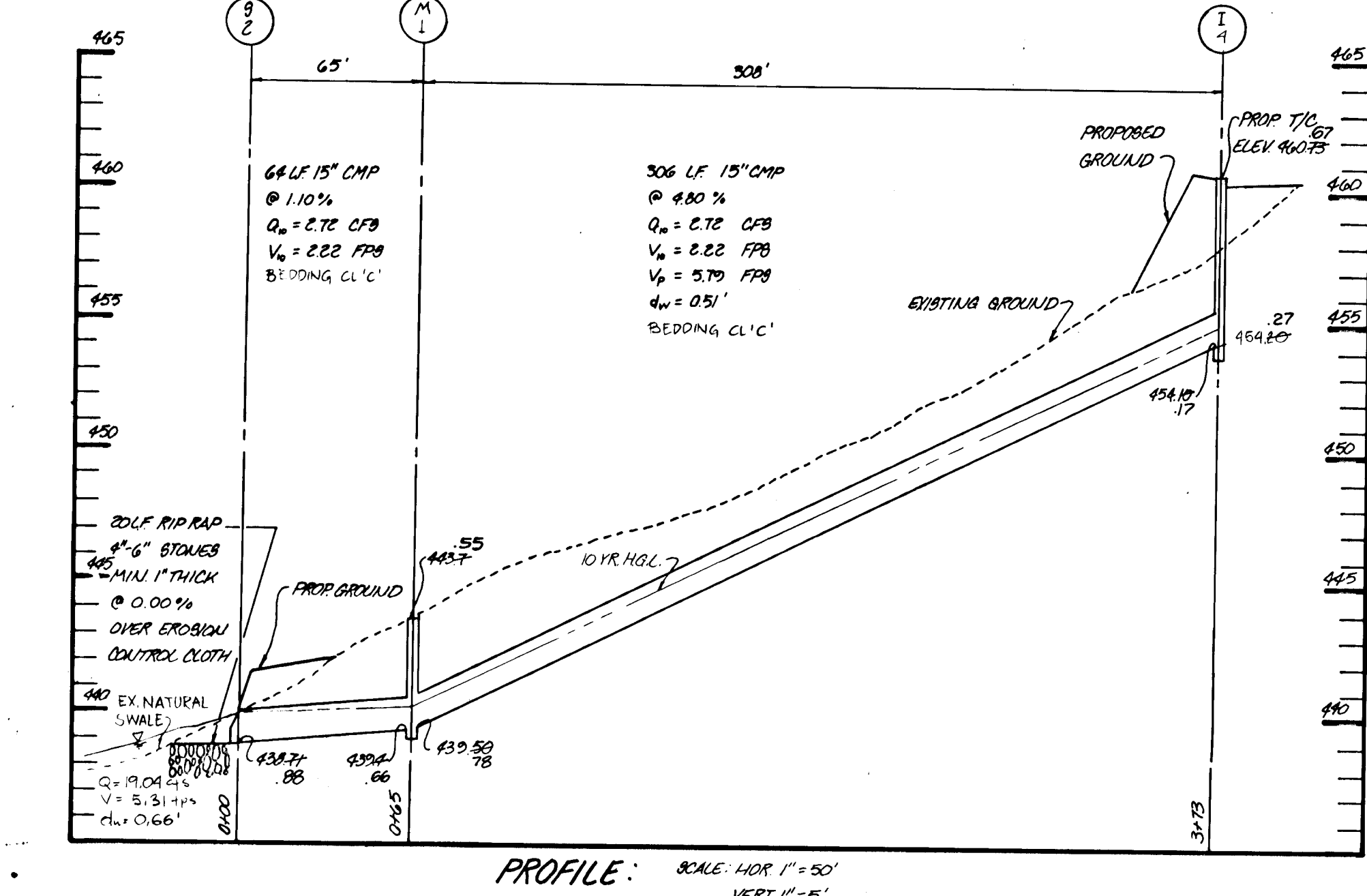
STANDARD BITUMINOUS CURB



CURB DETAILS NOT TO SCALE



IMPROVEMENT DETAIL LIME KILN ROAD



GUARD RAIL 'W' BEAM END TREATMENT IN FILL (NOT TO SCALE)

NO.	REVISION	DATE	BY
1	REMOVE GUARD RAIL DETAIL	10/22/87	JCO
2	TRAP DETAIL, 30" DIA. 30" DIA. CHANGES; SEDIMENT TRAP DETAILS MOVED	11/14/87	JCO
3	REMOVE SEDIMENT TRAP PROFILE	11/14/87	JCO

CONSTRUCTION SEQUENCE

- OBTAIN GRADING PERMIT
- NOTIFY THE HOWARD CO. BUREAU OF LICENCE, INSPECTIONS AND PERMITS AND THE CONSTRUCTION INSPECTION/SURVEYS DIVISION @ (301) 792-7272 AT LEAST 24 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- INSTALL TEMPORARY SEDIMENT CONTROL MEASURES (S.C.E., S.F., S.B.D., ST-V-12(3))-1 WEEK
- CONSTRUCT RETAINING WALLS - 1 WEEK
- ROUGH GRADE SITE, STABILIZE WITH TEMPORARY STABILIZATION MEASURES. - 3 DAYS
- INSTALL INLETS & STORM DRAINS STABILIZE DISTURBED AREAS. BLOCK INLETS- 1 WEEK
- BRING ROAD TO SUBGRADE - 1 DAY
- CONSTRUCT CONCRETE CURB & GUTTER - 2 DAYS
- PAVE ROAD - 2 DAYS
- CONSTRUCT BITUMINOUS CURB - 1 DAY
- INSTALL GUARD RAIL - 1 DAY
- FINE GRADE SITE, APPLY PERMANENT STABILIZATION MEASURES, FLUSH S.D. - 1 WEEK
- WITH APPROVAL OF HOWARD CO. BUREAU OF LICENCE, INSPECTIONS & PERMITS REMOVE TEMPORARY SEDIMENT CONTROL MEASURES, GRADE SWALE ON LOT B, AND STABILIZE ANY REMAINING DISTURBED AREAS.

AS-BUILT SURVEY CERTIFIED BY
LUTHER E. BATHURST, MD. RE. NO. 11373, ON OCT 31, 1988

OWNER & DEVELOPER
WINKLER JOINT VENTURE
3715 SHADY LANE
GLENWOOD, MARYLAND 21737

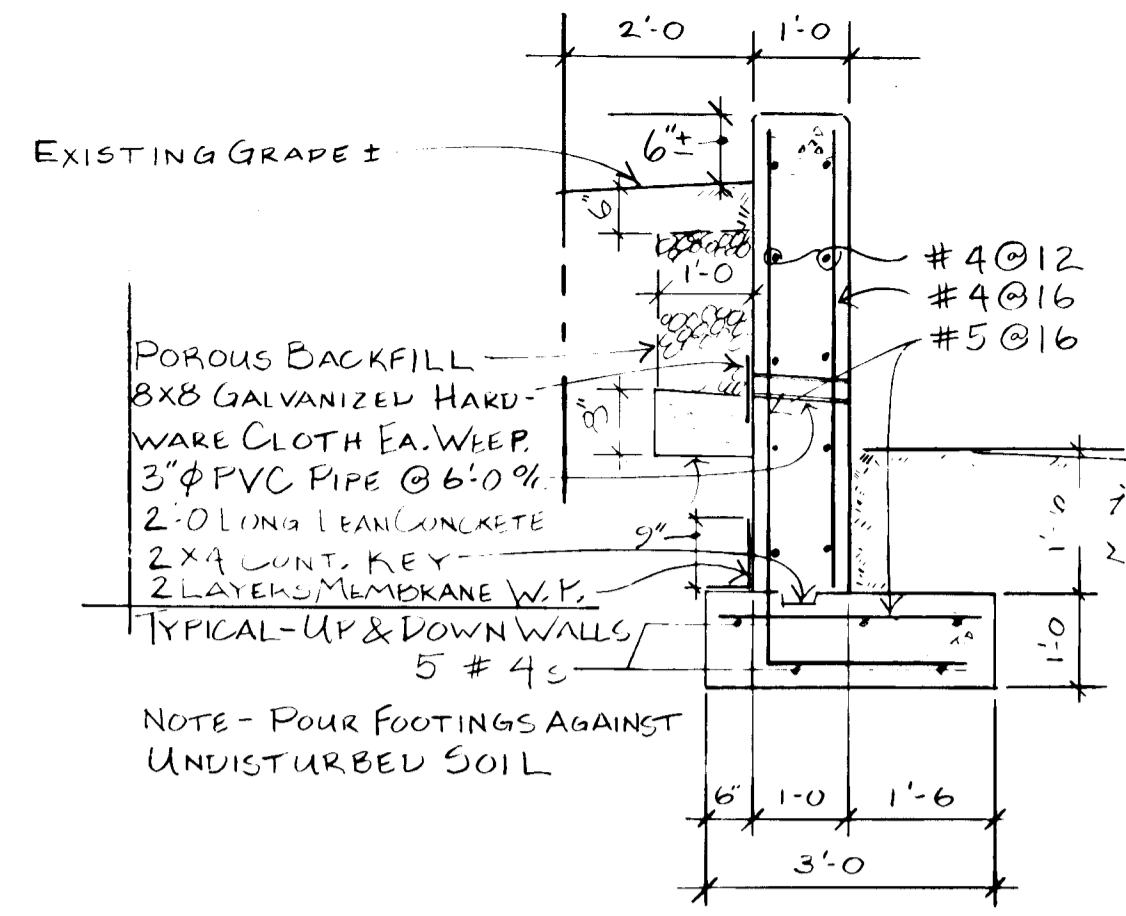
CONSULTING ENGINEERS
boender associates inc.
land surveyors
land planners

TITLE: PROFILES & DETAILS
PROJECT: HICKORY HILL FARM
LOCATION: 5TH ELECTION DISTRICT HOWARD CO. MD.
SCALE: DESIGNED BY: DRAWN BY: CHECKED BY: DATE:
AS NOTED JJ JJ W.N.
FIELD BOOK: PAGE NO.: JOB NO.: DRAWING NO.:
8-193 8-193 5 of 6

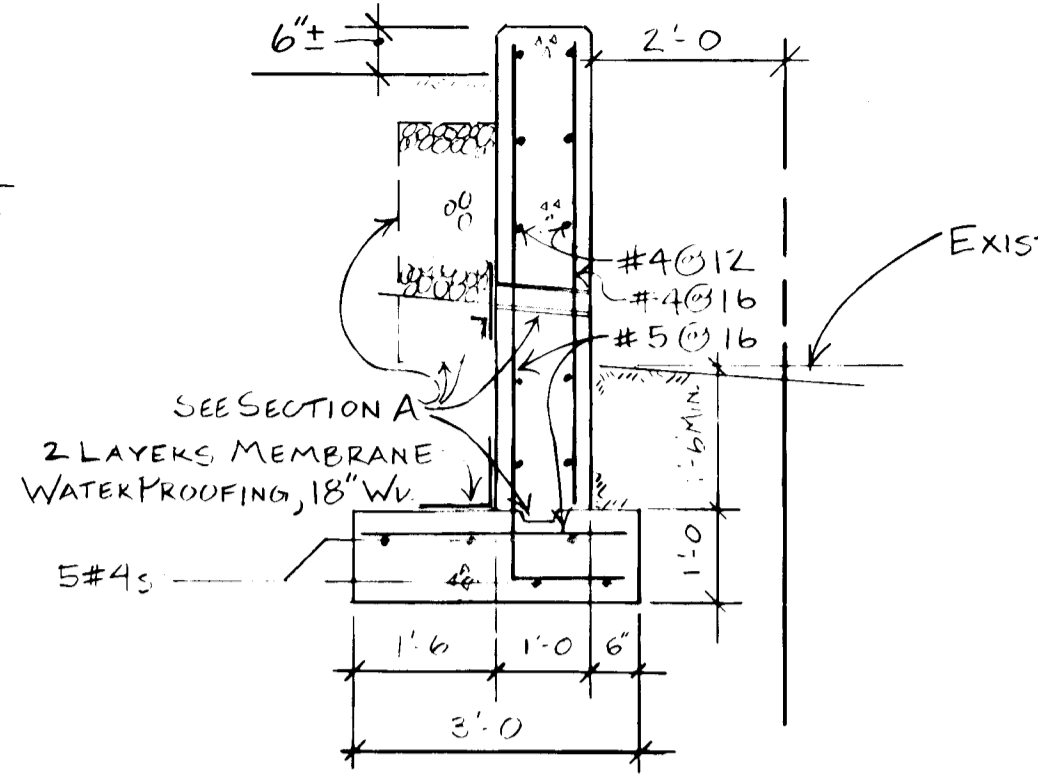
AS-BUILT 10-31-88 F-87-224

STRUCTURAL NOTES

- FOUNDATIONS AND EARTH WORK:**
- A: FOOTINGS ARE DESIGNED FOR AN ALLOWABLE BEARING CAPACITY OF 3000 PSF. THE CONTRACTOR SHALL ASCERTAIN PROPER BEARING AT FOOTING ELEVATIONS AND ADJUST DEPTHS AS REQUIRED.
 - B: BACKFILL SHALL CONSIST OF CLEAN POROUS MATERIAL, PLACED IN 8" LAYERS AND COMPACTED WITH APPROPRIATE EQUIPMENT.
 - C: CONCRETE:
 - A. ALL CONCRETE SHALL DEVELOP COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS, AND SHALL HAVE 5% AIR ENTRAINMENT.
 - B. CONCRETE WORK SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, A.C.I. 318, BY THE AMERICAN CONCRETE INSTITUTE, LATEST EDITION.
 - C. REINFORCING STEEL SHALL BE ASTM A 615 GRADE 60, EPOXY COATED.
 - D. PROVIDE SPACERS, CHAIRS AND TIES AS REQUIRED TO SUPPORT REINFORCING IN POSITION. PROVIDE 3" CLEARANCE TO FOOTING STEEL AND 1-1/2" COVER ON WALL REINFORCING.
 - E. CONTINUOUS REINFORCING SHALL BE LAPPED A MINIMUM OF 36 BAR DIAMETERS AT SPLICES.
 - F. PATCH ALL TIE HOLES AND PROVIDE HAND RUBBED FINISH.
 - G. PROVIDE 3/4" CHAMFER AT EXPOSED EDGES AND JOINTS.
 - H. MEMBRANE WATERPROOFING SHALL BE PER MARYLAND DOT SHA SPECIFICATIONS SECTION 614.

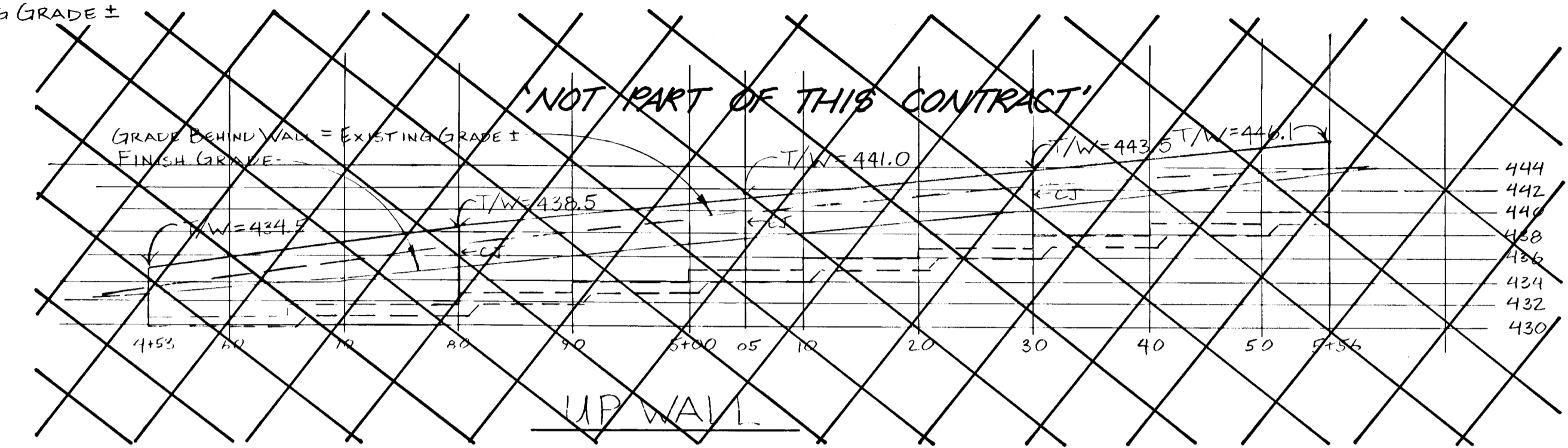


SECTION A - UP WALL



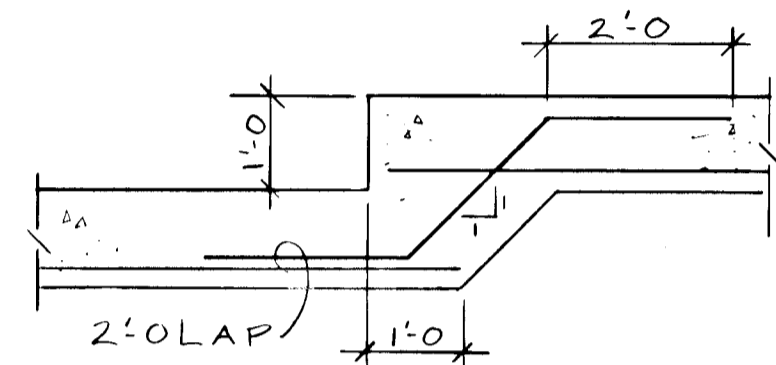
SECTION B - DOWN WALL

SCALE 1/2" = 1'-0"

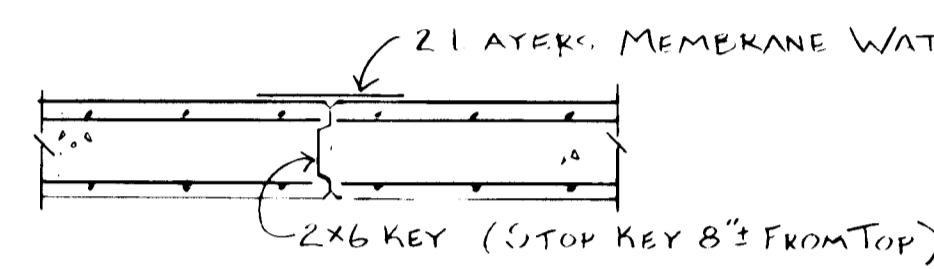


NOT PART OF THIS CONTRACT

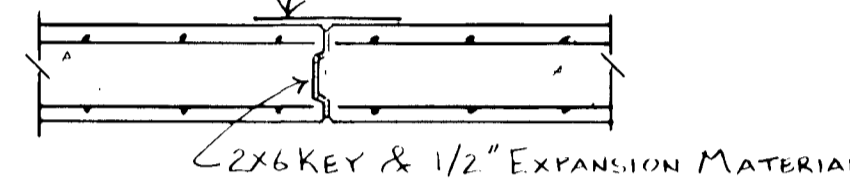
UP WALL



TYPICAL FOOTING STRIP

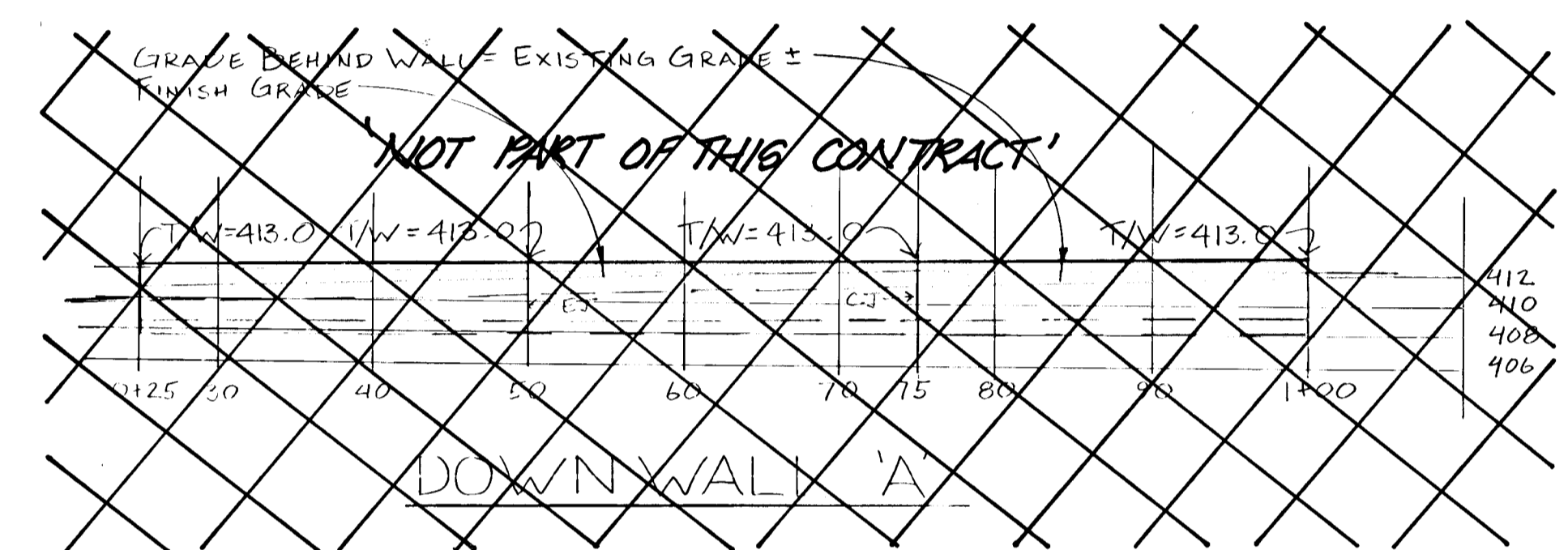


CONTROL JOINT - 'CJ'



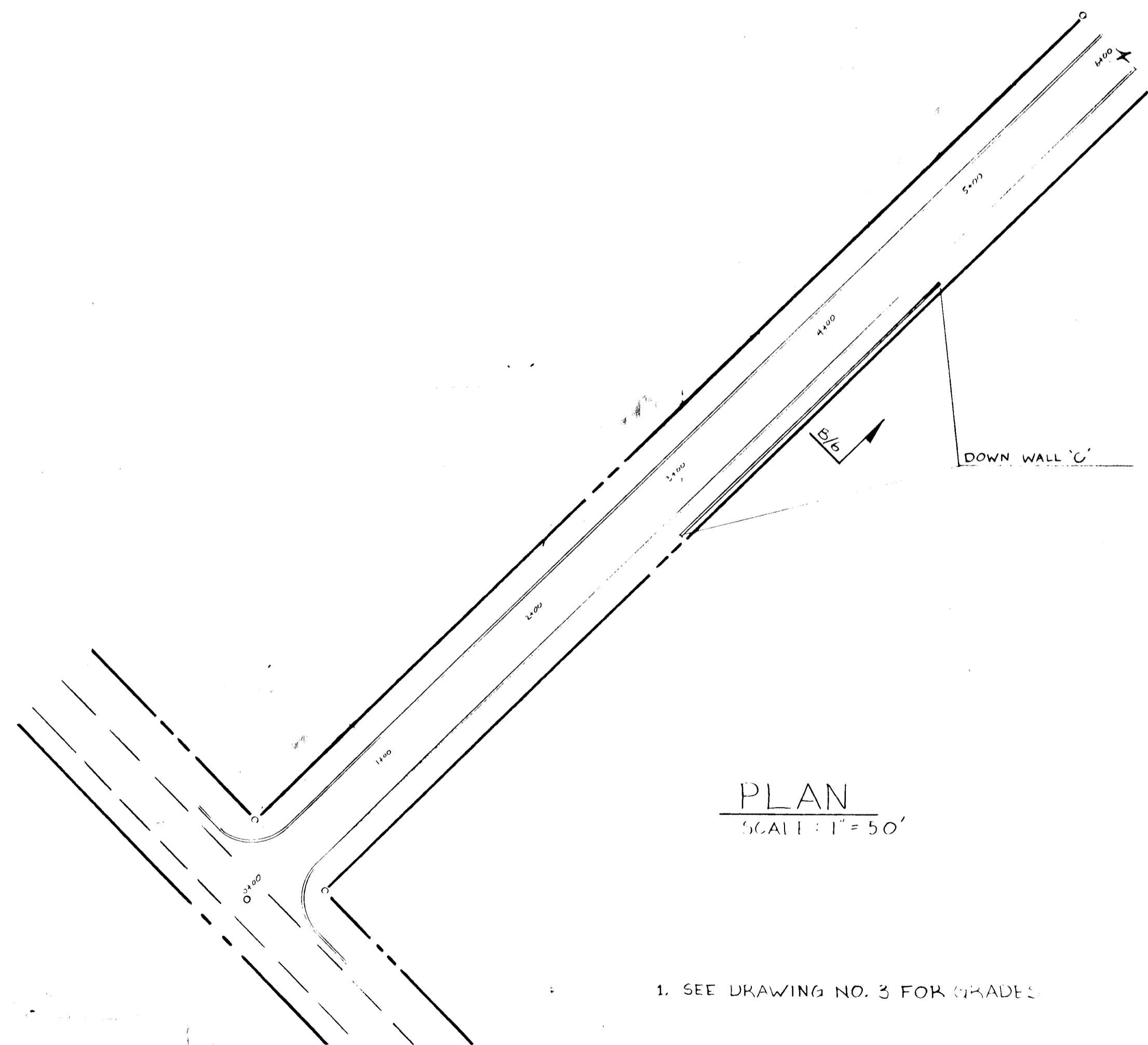
EXPANSION JOINT - 'EJ'

SCALE 1/2" = 1'-0"



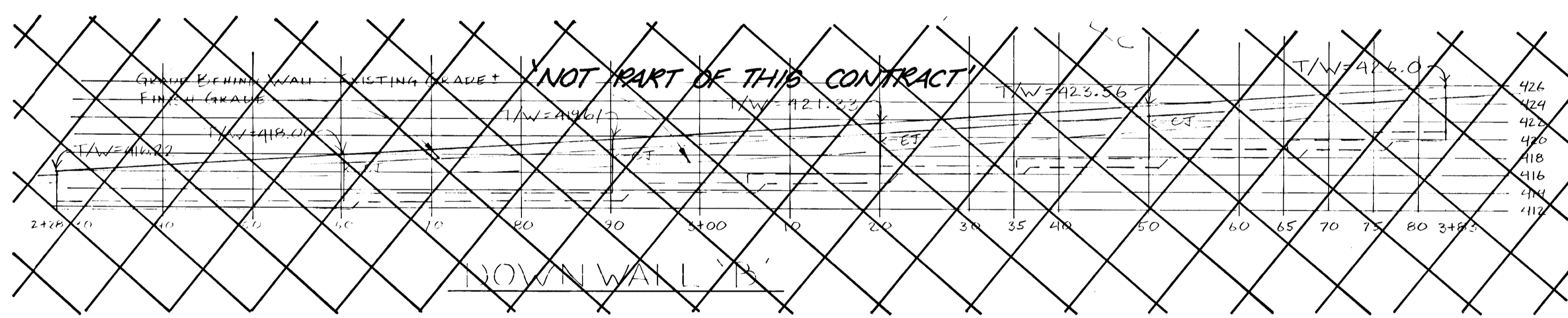
NOT PART OF THIS CONTRACT

DOWN WALL 'A'



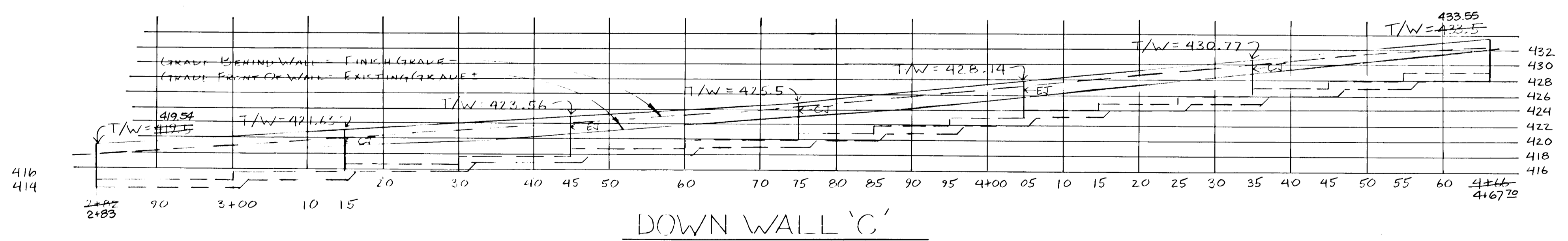
PLAN
SCALE 1" = 50'

1. SEE DRAWING NO. 3 FOR GRADES



NOT PART OF THIS CONTRACT

DOWN WALL 'B'



DOWN WALL 'C'

SCALE 1" = 10'-0"
T/W DESIGNATES TOP OF WALL ELEVATIONS.

AS-BUILT SURVEY CERTIFIED BY LUTHER E. BATHURST, MD. P.E. No. 11393, ON OCT. 31, 1988

OWNER & DEVELOPER
WINKLER JOINT VENTURE
3775 SHADY LANE
GLENWOOD, MARYLAND 21751

APPROVED: OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
10-23-87
CHIEF LAND DEVELOPMENT DIVISION
10/26/87
CHIEF BUREAU OF HIGHWAYS
CHIEF BUREAU OF ENGINEERING



TITLE
DETAILS - RETAINING WALLS
PROJECT
HICKORY HILL FARM
LOCATION: TAX MAP 40 PARCEL 134
FIFTH ELECTION DISTRICT HOWARD CO. MD
SCALE AS NOTED
DESIGNED BY DES
DRAWN BY DES
CHECKED BY DES
DATE 10-6-87
FIELD BOOK PAGE NO. JOB NO. 8613 DRAWING NO. 6 OF 6

DSA
DONALD SIMMONS ASSOCIATES
CONSULTING ENGINEERS
4875 ELSHIRE COURT
ELECTIC CITY, MD 21031
301-462-7344

AS-BUILT 10-28-88

F-87-224