



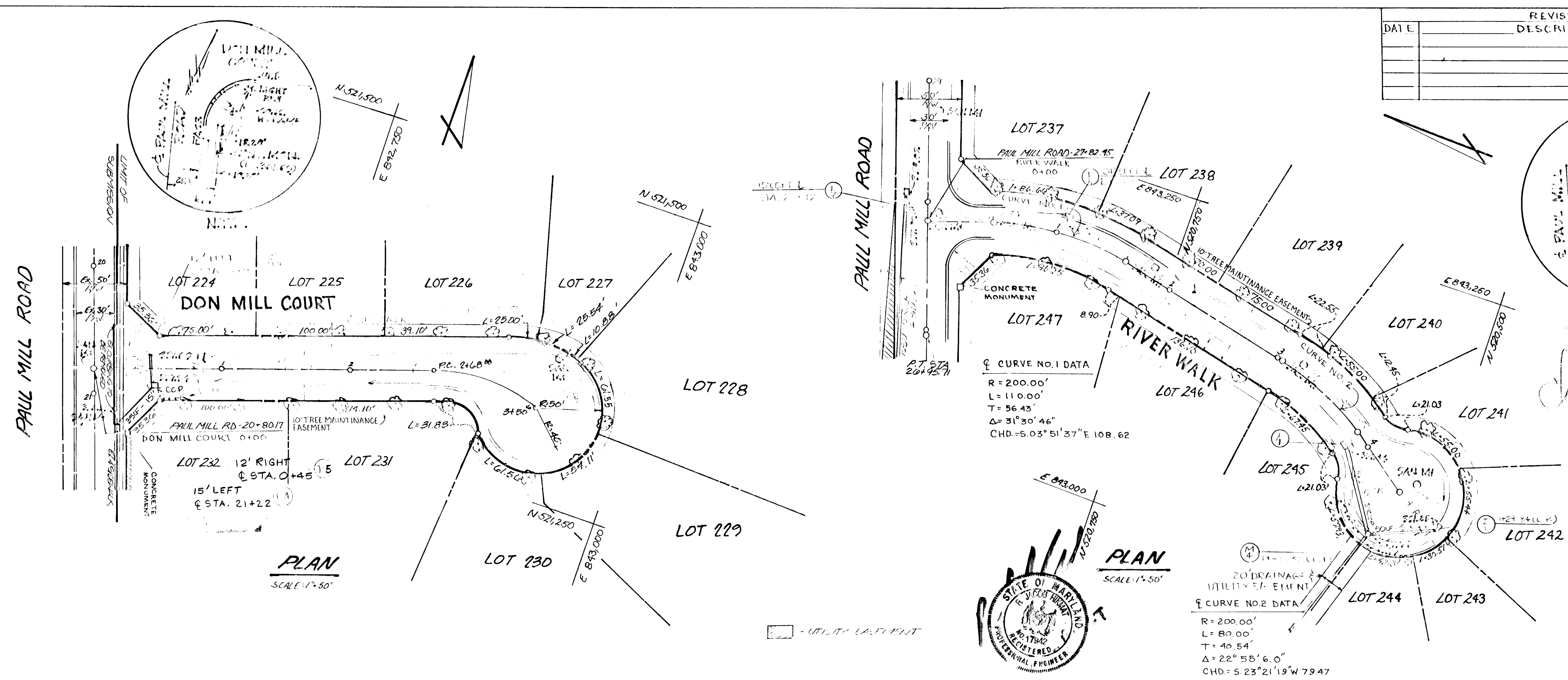
REVISIONS		DATE	DESCRIPTION	BY

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	BY: <i>Ch. M. Stangor</i>	DATE: 10/22/90
Chief, Land Development Division		
<i>Pranice W. Weiland</i>	DATE: 10/18/90	
Chief, Bureau of Highways		
<i>Gregory E. Poley</i>	DATE: 10-23-90	
Chief, Bureau of Engineering		

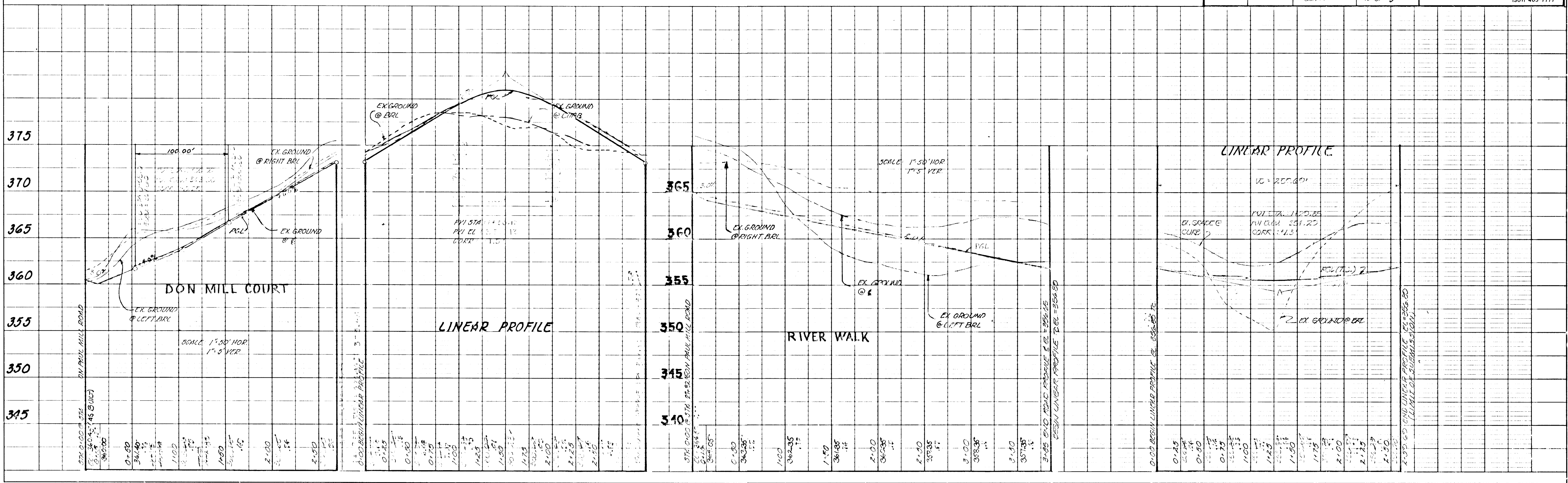
  

APPROVED: DEPARTMENT OF PLANNING AND ZONING	BY: <i>Frank S. Campbell</i>	DATE: 10/19/90
Chief, Division of Community Planning and Land Development		J.B.



TITLE: ROAD CONSTRUCTION PLAN		PROJECT: GRAY ROCK FARM SECT. 5		boender associates inc.	
LOCATION: 2 <sup>ND</sup> ELECTION DISTRICT HOWARD CO., MD.		SCALE: AS NOTED		DESIGNED BY: C.A.S.	
DRAWN BY: J.C.D.		CHECKED BY: P.B. 1000		DATE: 10/18/90	
FIELD BOOK: PAGE NO.:		JOB NO.: 83141		DRAWING NO.: 2 OF 9	

COURTHOUSE SQUARE  
3565 ELLICOTT MILLS DRIVE  
ELLCOTT CITY, MD. 21043  
13011 465-7777



242

DATE	REVISION / DESCRIPTION	BY
3/2/90	NOTE ADDED AT BOTTOM LEFT AND NEW GRADING FOR SWM FACILITY DRAFTED ON PLAN	JH

**DEVELOPER'S CERTIFICATE**  
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A 16-HOUR COURSE OF ENVIRONMENTALLY APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENTATION PRIOR TO BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FORD WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*Chang-ho Lee* 10-23-90  
 DATE

**ENGINEER'S CERTIFICATE**  
 I HEREBY CERTIFY THAT THIS PLAN FOR FORD CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DISTRICT THAT THEY HAVE PROVIDED THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FORD WITHIN 30 DAYS OF COMPLETION.

*Chang-ho Lee* 10-23-90  
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John W. Ferguson* 10/22/90  
 Chief, Land Development Division

*James W. Wetland* 10/18/90  
 Chief, Bureau of Planning

*William R. Ryan* 10-23-90  
 Chief, Bureau of Engineering

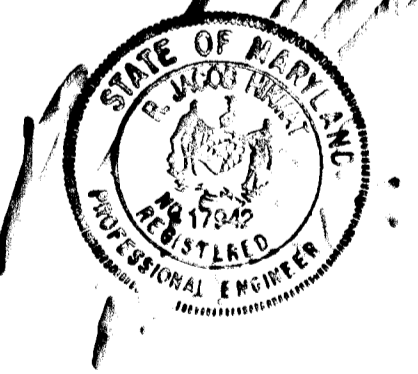
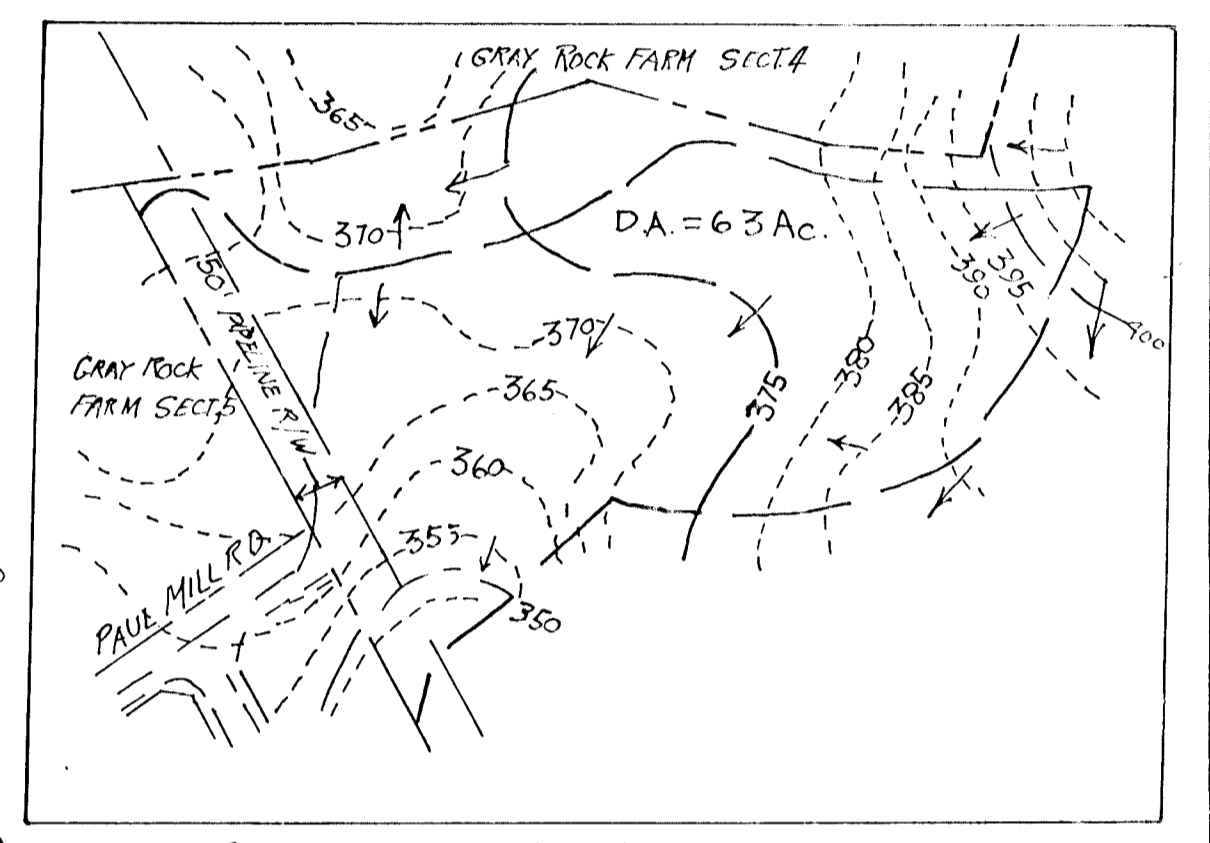
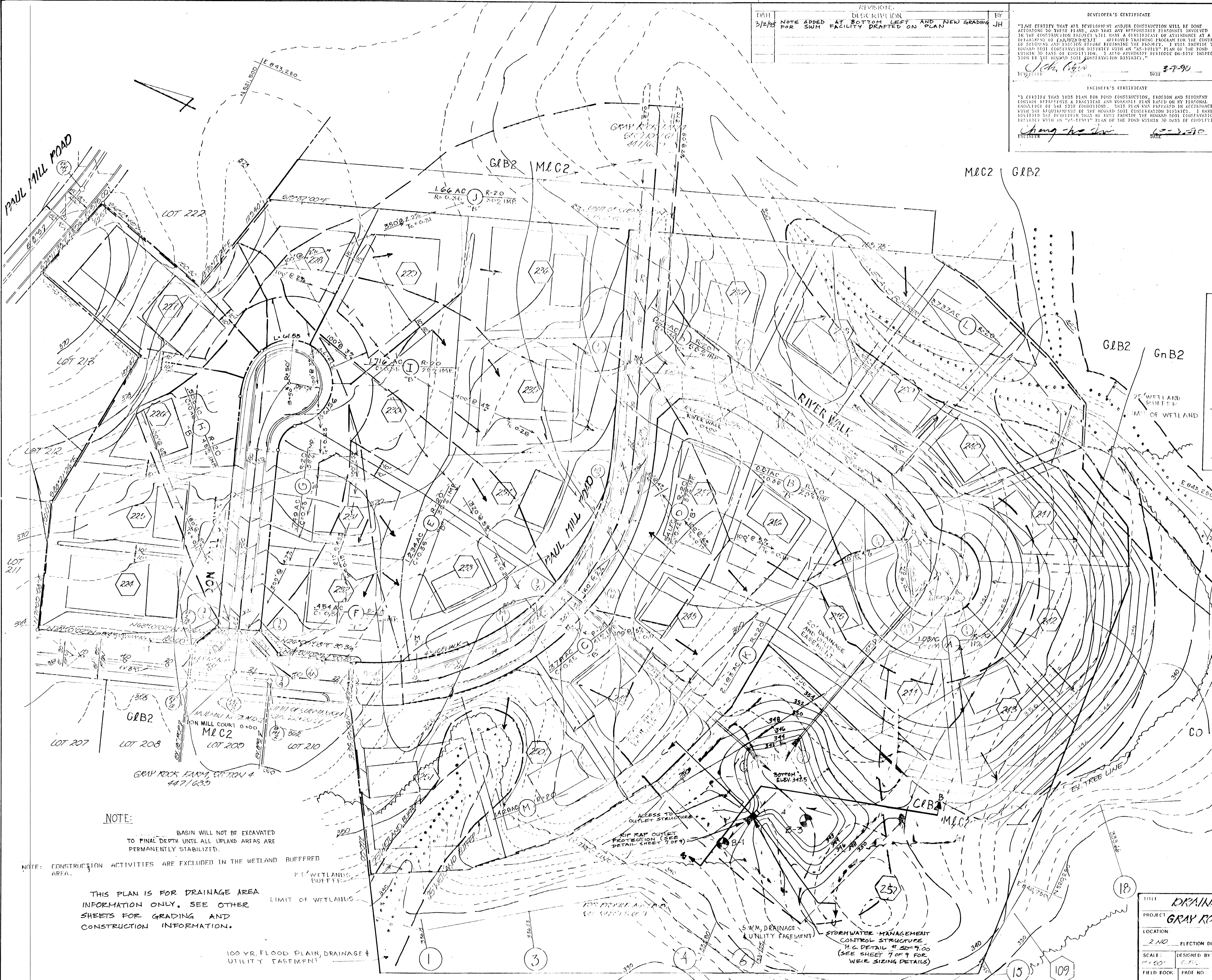
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Frank S. M'Angell* 10/23  
 Chief, Division of Community Planning and Land Development

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.

*James M. Allen* 10/23/90  
 U.S. CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Glenn D. Ziehm* 10/14/90  
 HOWARD SOIL CONSERVATION DISTRICT



**OWNER/DEVELOPER:**  
 THE MILLER LAND COMPANY  
 P.O. BOX 307  
 CULICOTT CITY, MD 21033  
 TEL: 461-8335

*Chang-ho Lee* 10-23-90

**NOTE:** BASIN WILL NOT BE EXCAVATED TO FINAL DEPTH UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED.

**NOTE:** CONSTRUCTION ACTIVITIES ARE EXCLUDED IN THE WETLAND BUFFERED AREA.

THIS PLAN IS FOR DRAINAGE AREA INFORMATION ONLY. SEE OTHER SHEETS FOR GRADING AND CONSTRUCTION INFORMATION.

100 YR. FLOOD PLAIN DRAINAGE & UTILITY FACILITY

31111 DRAINAGE AREA MAP		PROJECT GRAY ROCK FARM, SECTION 5	
LOCATION: 2ND ELECTION DISTRICT HOWARD CO. MD			
SCALE: 1"=60'	DESIGNED BY: C.N.C.	DRAWN BY: J.C.O.	CHECKED BY: J.C.O.
FIELD BOOK:	PAGE NO:	JOB NO: 8941	DATE: JAN, 1990
		DRAWING NO: 3 of 9	

**Boonker Associates**  
 ENGINEERS, PLANNERS, SURVEYORS  
 3230 BETHANY LANE  
 ELICOTT CITY, MD 21043  
 (301) 465-7111 FAX: (301) 465-7956

242

F-90-10

\* NOTE:  
 GRADING IS CONTROLLED  
 BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER'S CERTIFICATE  
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
 DEVELOPER: J. Ch. Cole DATE: 3-2-90

ENGINEER'S CERTIFICATE  
 "I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."  
 ENGINEER: Cheng-ho Liu DATE: 10-3-90

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Alan M. Tangam 10/23/90  
 Chief, Land Development Division Date

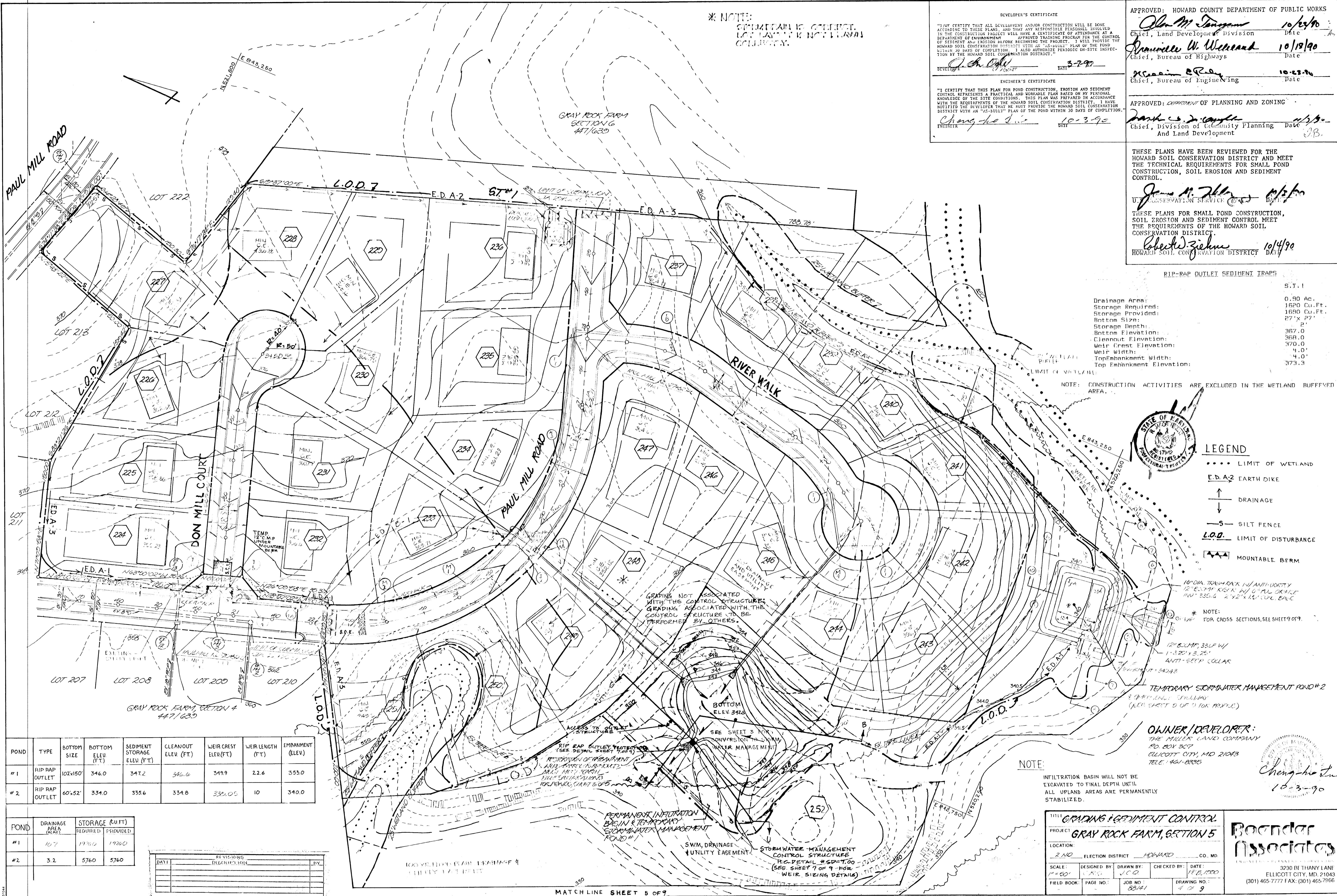
Francis W. Weiland 10/19/90  
 Chief, Bureau of Highways Date

William R. Ray 10-23-90  
 Chief, Bureau of Engineering Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Derek S. Dwyer 10/30/90  
 Chief, Division of Community Planning And Land Development Date

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.  
James M. Zickler 10/30/90  
 U.S. CONSERVATION SERVICE DISTRICT

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
Robert Zickler 10/4/90  
 HOWARD SOIL CONSERVATION DISTRICT DISTRICT



RIP-RAP OUTLET SEDIMENT TRAPS

	S.T. 1
Drainage Area:	0.90 Ac.
Storage Required:	1620 Cu. Ft.
Storage Provided:	1650 Cu. Ft.
Bottom Size:	27" x 27"
Storage Depth:	2'
Bottom Elevation:	367.0
Cleanout Elevation:	368.0
Weir Crest Elevation:	370.0
Weir Width:	4.0'
Top Embankment Width:	4.0'
Top Embankment Elevation:	373.3



- LEGEND
- ..... LIMIT OF WETLAND
  - E.D.A.2 EARTH DIKE
  - ↑ DRAINAGE
  - ↓ DRAINAGE
  - S- SILT FENCE
  - L.O.D. LIMIT OF DISTURBANCE
  - ▲ MOUNTABLE BERM

POND	TYPE	BOTTOM SIZE	BOTTOM ELEV. (FT.)	SEDIMENT STORAGE ELEV. (FT.)	CLEANOUT ELEV. (FT.)	WEIR CREST ELEV. (FT.)	WEIR LENGTH (FT.)	EMBANKMENT (ELEV.)
#1	RIP RAP OUTLET	102x160'	346.0	347.2	346.6	349.9	22.6	355.0
#2	RIP RAP OUTLET	60x52'	334.0	335.6	334.8	332.0	10	340.0

POND	DRAINAGE AREA (ACRES)	STORAGE REQUIRED (CU.FT.)	STORAGE PROVIDED (CU.FT.)
#1	10.7	19260	19260
#2	3.2	5760	5760

DATE	REVISIONS	BY

NOTE: INFILTRATION BASIN WILL NOT BE EXCAVATED TO FINAL DEPTH UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED.

OWNER/DEVELOPER:  
 THE MILLER LAND COMPANY  
 PO BOX 307  
 ELLICOTT CITY, MD 21043  
 TELE: 461-8335

Cheng-ho Liu  
 10-3-90

**Boender Associates**  
 ENGINEERS, PLANNERS & ARCHITECTS  
 3230 BE THANY LANE  
 ELLICOTT CITY, MD 21043  
 (301) 465-7777 FAX: (301) 465-7966

PROJECT: GRADING & SEDIMENT CONTROL  
 GRAY ROCK FARM, SECTION 5  
 LOCATION: 2ND ELECTION DISTRICT HOWARD CO. MD  
 SCALE: 1"=50'  
 DESIGNED BY: J.C.O.  
 DRAWN BY: J.C.O.  
 CHECKED BY: J.C.O.  
 DATE: 11/8/90  
 FIELD BOOK: PAGE NO: 88/141 JOB NO: 88/141 DRAWING NO: 4 OF 9

942

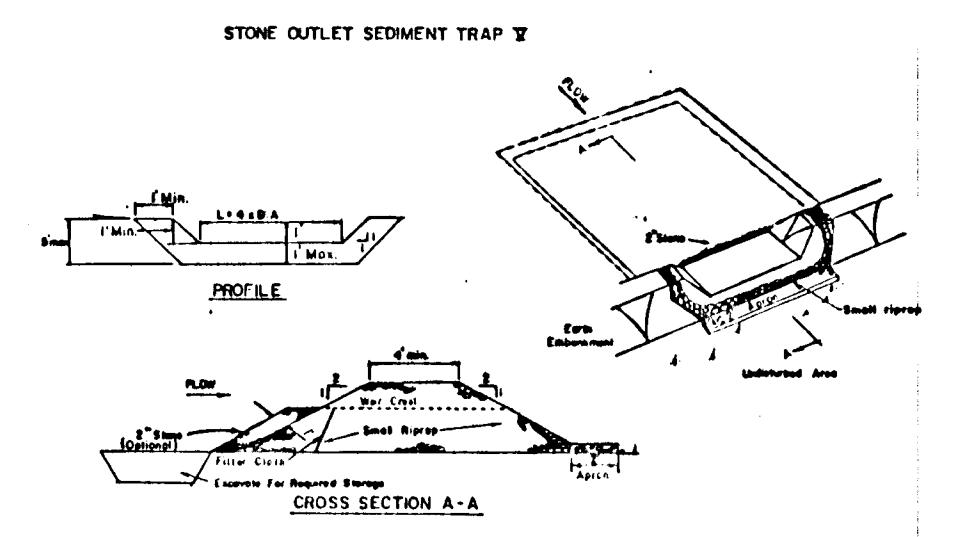
MATCH LINE SHEET 5 OF 9

F-90-147

DATE	REVISIONS DESCRIPTION	BY

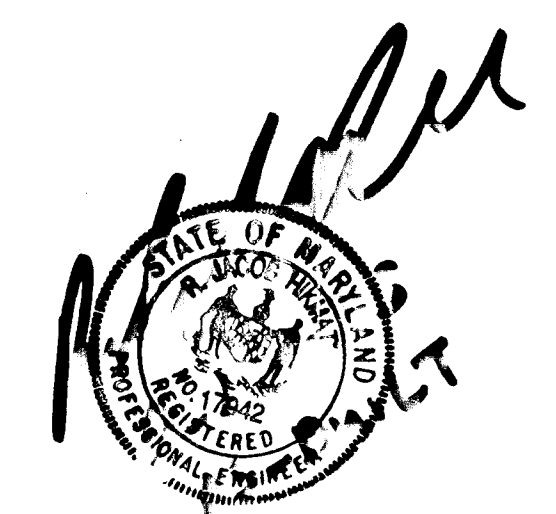
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John M. Tamm* 10/22/90  
 Chief, Land Development Division Date  
*Danielle W. Welland* 10/18/90  
 Chief, Bureau of Highways Date  
*William B. Ray* 10-23-90  
 Chief, Bureau of Engineering Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Paul S. Campbell* 11/2/90  
 Chief, Division of Community Planning And Land Development Date  
 J.B.



- OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the upstream filter cloth.
- CONSTRUCTION SPECIFICATIONS FOR S.W.M.**
- Area under embankment shall be cleared, graded and stripped of any vegetation and rock mts. The post area shall be cleared.
  - 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.
  - All cut and fill slopes shall be 3:1 or flatter.
  - The stone used in the outlet shall be small riprap 4"-8" along with a 1" thickness of 2" aggregate placed on the upstream side on the small riprap 20' subbed filter cloth in the trap.
  - Setback shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 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 minimized.
  - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

NOTE: CONSTRUCTION ACTIVITIES ARE EXCLUDED IN THE WETLAND BUFFERED AREA.



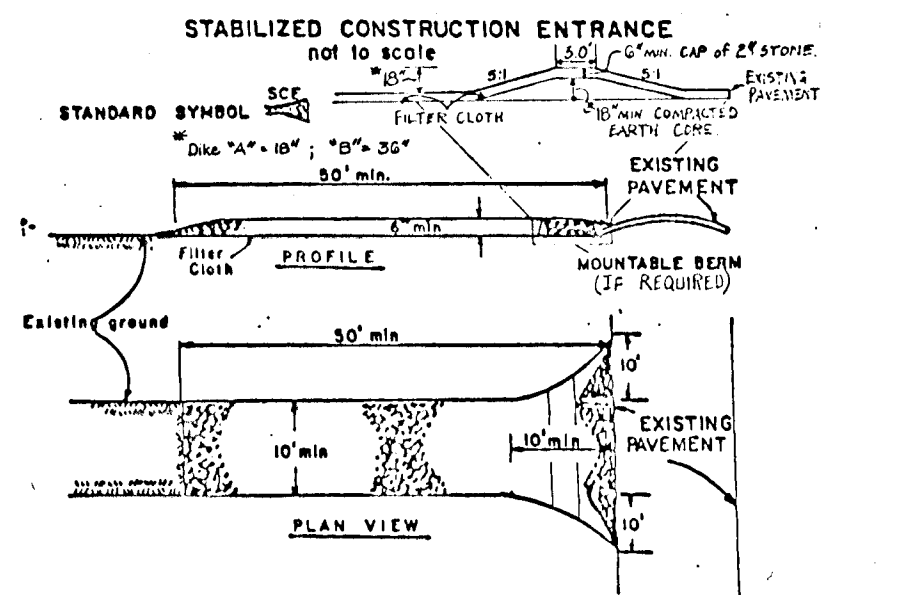
OWNER/DEVELOPER:  
 THE MILLER LAND COMPANY  
 P.O. BOX 307  
 ELLICOTT CITY, MD 21043  
 TELE: 461-0335

TITLE: GRADING & SEDIMENT CONTROL			
PROJECT: GRAY ROCK FARM, SECTION 5			
LOCATION: 2ND ELECTION DISTRICT HOWARD CO., MD.			
SCALE: 1"=50'	DESIGNED BY: C.R.B.	DRAWN BY: J.C.D.	CHECKED BY: DATE: FEB, 1990
FIELD BOOK:	PAGE NO:	JOB NO: 89141	DRAWING NO: 5 OF 9

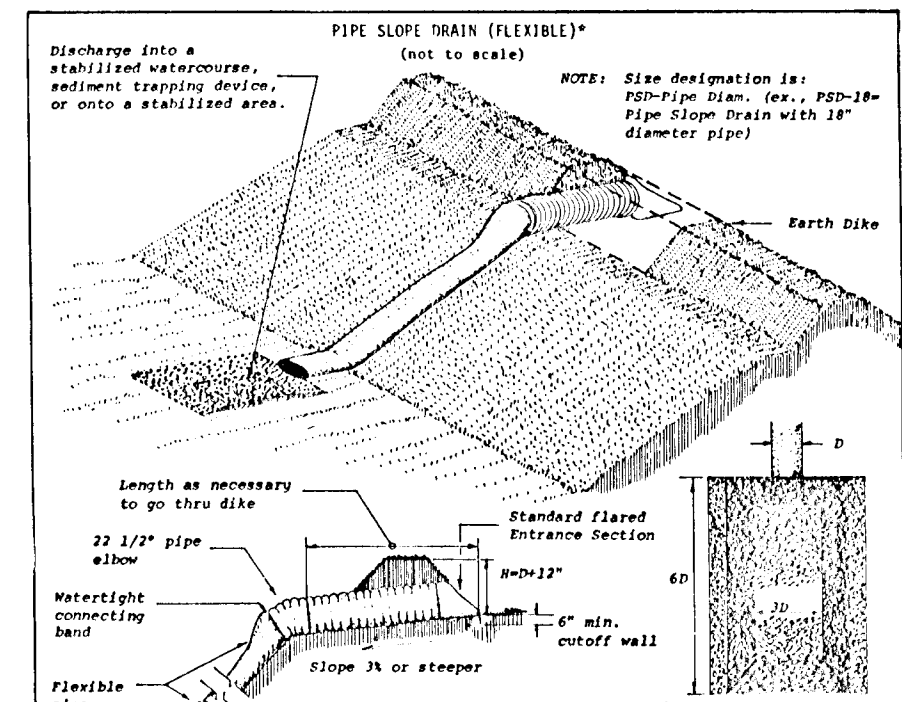
**Boender Associates**  
 ENGINEERS - PLANNERS - SURVEYORS  
 3230 BETHANY LANE  
 ELLICOTT CITY, MD 21043  
 (301) 465-7777 FAX: (301) 465-7966

SEDIMENT CONTROL GENERAL NOTES

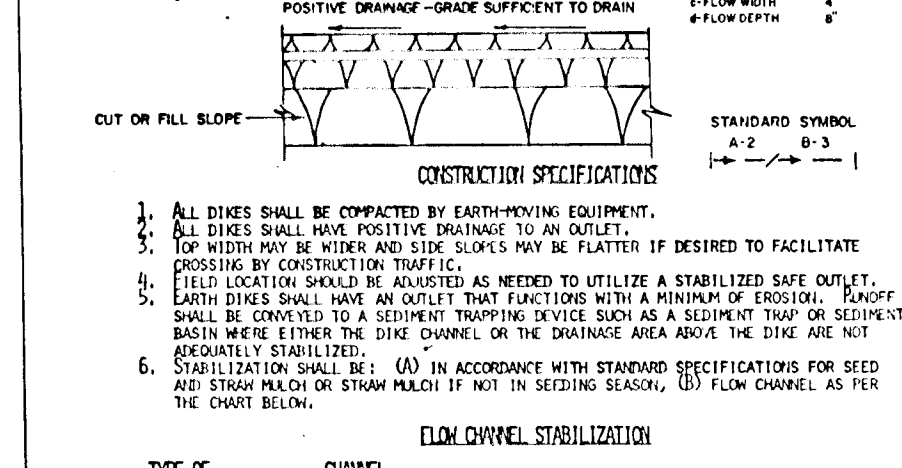
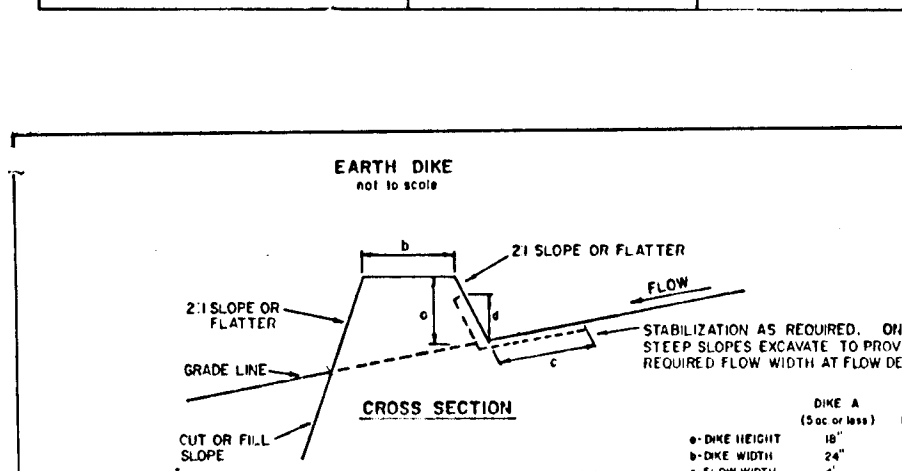
- 1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction... 2. All vegetative and structural practices are to be installed according to the project plan and approved by the Howard County Office of Inspection and Permits... 3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within 7 calendar days for all perimeter sediment control structures, dikes, perimeter ditches and all slopes greater than 3:1. By 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) and temporary seedings (Sec. 52) and mulching (Sec. 53). Temporary stabilization with mulch alone can only be done when recommended seedings 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: 27.02 Acres, Area Disturbed: 1.00 Acres, Area to be roofed or paved: 1.00 Acres, Area to be vegetatively stabilized: 1.00 Acres, Total Cut: 1.00 Cu. Yds., Total Fill: 1.00 Cu. Yds., Borrow Area Location: [Blank]



- 1. Slope Size - Use 2:1 stone, or reinforced or recycled concrete equivalent. 2. Length - As required, but not less than 30 ft. except on a single residence lot where a 30 ft. minimum length would apply. 3. Thickness - No less than 18" (6 inches). 4. Height - Ten (10) ft. 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 Area - All surface water flowing or diverted around construction entrances shall be piped across the entrance. If piping is impractical, a removable curb with 3:1 slope will be permitted. 7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or slipping of sediment onto public right-of-way. This may require periodic regrading with additional stone as conditions demand and repair and/or cleaning of any materials used so that they will be permitted. 8. Mulching - Areas shall be cleaned to remove sediment prior to entrance onto public right-of-way. When mulching is required, it shall be done on an area stabilized with stone and will drain into an approved drainage collection device. 9. Periodic inspection and needed maintenance shall be provided after each rain.



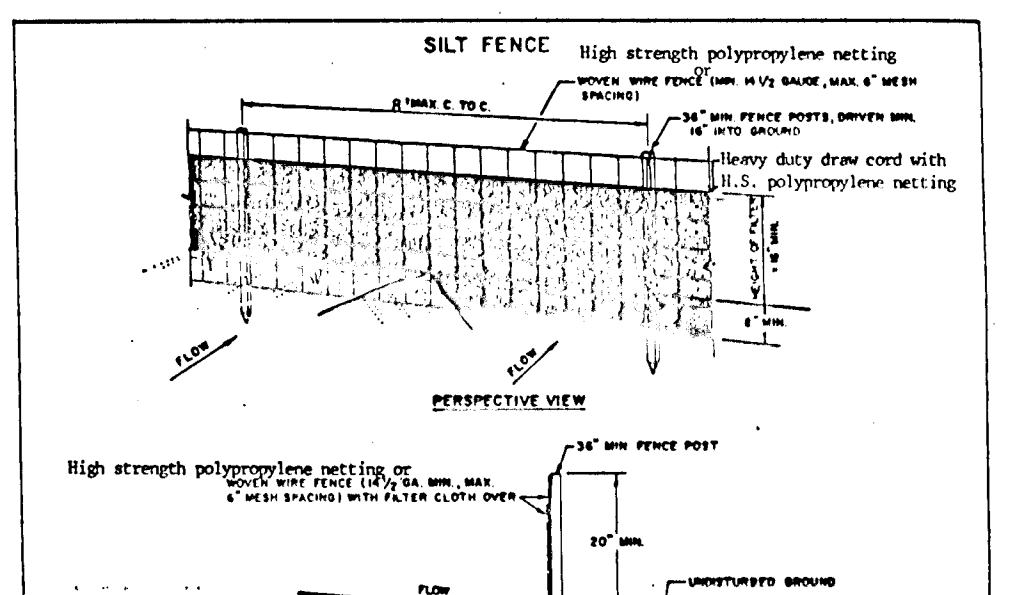
- 1. The inlet pipe shall have a slope of 2% or steeper. 2. The top of the earth dike over the inlet pipe and those dikes carrying water to the pipe shall be at least 1' higher at all points than the top of the inlet pipe. 3. The inlet pipe shall be constructed of metal pipe with a maximum diameter of 24" and shall be supported by a concrete or masonry structure. 4. The flexible tubing shall be of the same diameter as the inlet pipe and shall be constructed of a durable material with a minimum diameter of 24" in diameter. 5. The flexible tubing shall be securely anchored to the inlet pipe at the grommet connection. 6. A riprap apron shall be provided at the outlet. This shall consist of 6" diameter stone placed on a concrete or masonry structure. 7. The soil around and under the inlet pipe and entrance structure shall be hand tamped in 4" lifts to the top of the earth dike. 8. Following inspection and any needed maintenance shall be performed after each storm. 9. Drainage area must not exceed 3 acres.



- 1. ALL DIKES SHALL BE OPERATED BY EARLY-WARNING EQUIPMENT. 2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET. 3. DIKES SHALL BE MAINTAINED AS NECESSARY TO FACILITATE PROPER DRAINAGE. 4. FLEXIBLE TUBING SHALL BE MAINTAINED AS NECESSARY TO FACILITATE PROPER DRAINAGE. 5. FLEXIBLE TUBING SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF FRICTION. 6. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 7. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 8. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 9. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 10. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1.

Table with 4 columns: TYPE OF DRAIN, DRAIN, DRAIN, DRAIN. It lists different types of drains and their specifications.

Table with 3 columns: DATE, DESCRIPTION, BY. It lists dates and descriptions of revisions to the plan.

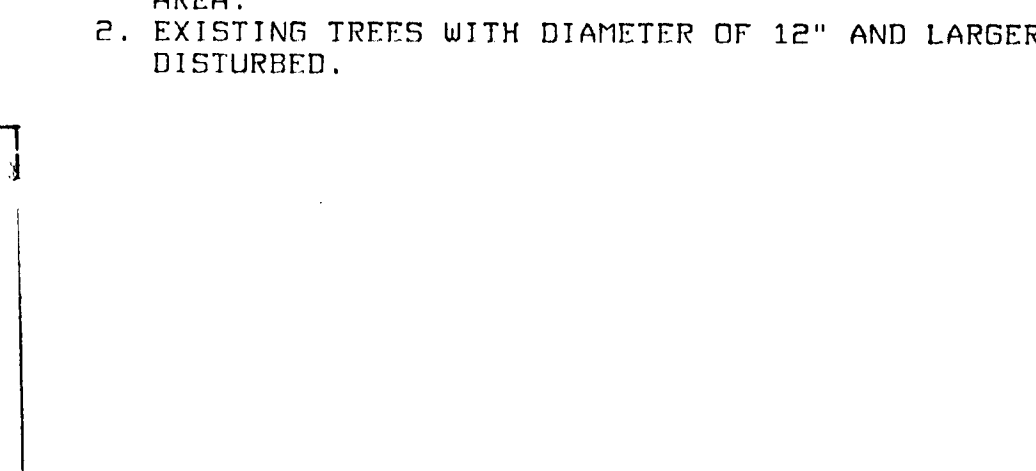


- 1. High strength polypropylene netting or woven wire mesh shall be stretched tautly to fence posts with 12" spacing. 2. Filter cloth to be stretched tautly to fence posts with 12" spacing. 3. When the sections of filter cloth are overlapped, they shall be overlapped by 12" inches and fastened. 4. Maintenance shall be provided as needed. 5. Periodic inspection and needed maintenance shall be provided after each rain.

Table with 3 columns: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, COLLEGE PARK, MARYLAND. It lists the agency and drawing number.

- 1. PRECONSTRUCTION MEETING WITH HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 2. CLEAR GRADING PERMITS. 3. OBTAIN AREA FOR INSTALLATION OF SEDIMENT CONTROL MEASURES... 1 DAY. 4. CONSTRUCT SILT TRAPS S.T. 1 AND TEMPORARY S.W.M. #1 AND TEMPORARY S.W.M. #2... 1 WEEK. 5. INSTALL SEDIMENT CONTROL MEASURES, I.E. STABILIZED CONSTRUCTION ENTRANCE, EARTH DIKES, SILT FENCES... 2 DAYS. 6. CONSTRUCT EARTH DIKES, INSTALL TEMPORARY SUMP AND STORM DRAIN SYSTEM FROM 1-3 TO 5-1 TO DIVERT RUNOFF TO POND #1... 2 WEEKS. 7. INSTALL UTILITIES, FINISH ROADWAY SUBGRADE... 3 WEEKS. 8. REMOVE TEMPORARY SUMP AND EARTH DIKE B-1 UPON PERMISSION OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR... 1 WEEK. 9. FINISH GRADING AND PERMANENT STABILIZATION OF THE ENTIRE SITE... 3 WEEKS. 10. FINISH ROADWAY PAVING & STABILIZE ALL DISTURBED AREAS... 2 WEEKS. 11. REMOVE ALL TEMPORARY RELEASE STRUCTURES, TEMPORARY POND #2 AND S.T. 1 AND PERMANENTLY STABILIZE TEMPORARY POND #2 AND S.T. 1 UPON PERMISSION OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR... 2 DAYS. 12. EXCAVATE STORM WATER MANAGEMENT FACILITY TO FINAL DEPTH WITH NO EQUIPMENT USED IN THE BOTTOM AREA UPON PERMISSION OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR... 1 WEEK. 13. REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ALL REMAINING AREAS UPON PERMISSION OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

- NOTE: 1. CONSTRUCTION ACTIVITIES ARE EXCLUDED IN THE WETLAND BUFFERED AREA. 2. EXISTING TREES WITH DIAMETER OF 12" AND LARGER SHALL NOT BE DISTURBED.

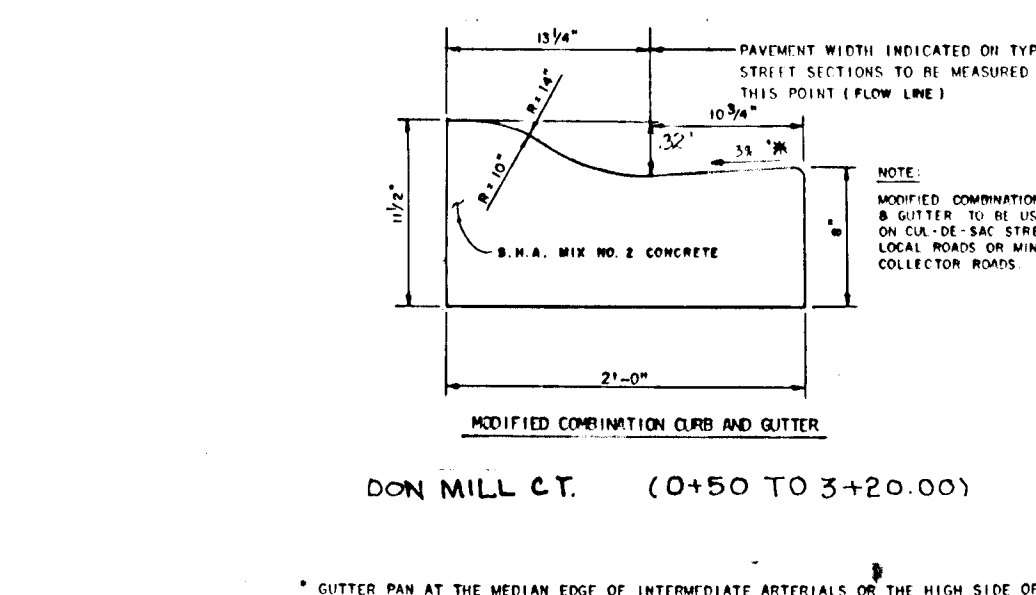


- 1. ALL DIKES SHALL BE OPERATED BY EARLY-WARNING EQUIPMENT. 2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET. 3. DIKES SHALL BE MAINTAINED AS NECESSARY TO FACILITATE PROPER DRAINAGE. 4. FLEXIBLE TUBING SHALL BE MAINTAINED AS NECESSARY TO FACILITATE PROPER DRAINAGE. 5. FLEXIBLE TUBING SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF FRICTION. 6. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 7. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 8. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 9. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 10. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1.

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.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. Chief, Land Development Division. Date: 10/18/90.

APPROVED: CHIEF OF PLANNING AND ZONING. Chief, Division of Community Planning and Land Development. Date: 10/18/90.

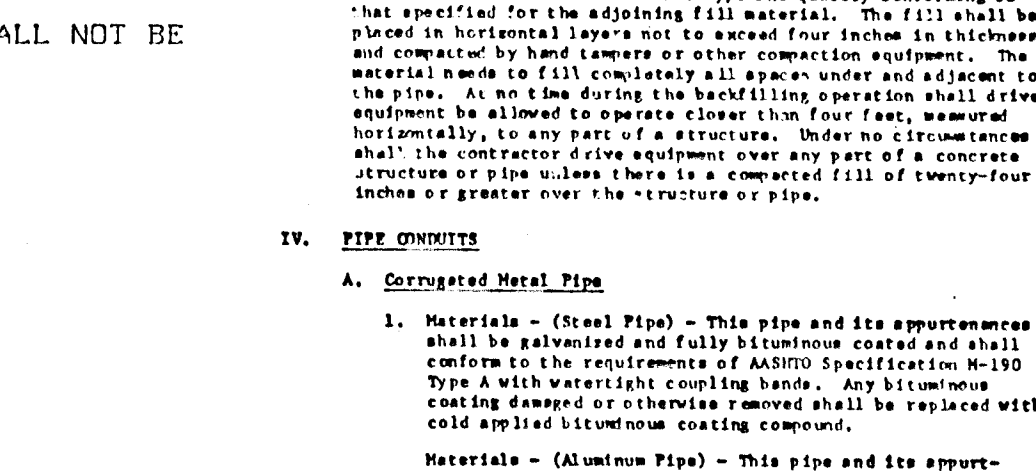


- 1. The curb shall be constructed of concrete or masonry. 2. The gutter shall be constructed of metal or plastic. 3. The curb and gutter shall be supported by a concrete or masonry structure. 4. The curb and gutter shall be maintained in a condition which will prevent tracking or slipping of sediment onto public right-of-way.

Table with 3 columns: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, COLLEGE PARK, MARYLAND. It lists the agency and drawing number.

- 1. PRECONSTRUCTION MEETING WITH HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 2. CLEAR GRADING PERMITS. 3. OBTAIN AREA FOR INSTALLATION OF SEDIMENT CONTROL MEASURES... 1 DAY. 4. CONSTRUCT SILT TRAPS S.T. 1 AND TEMPORARY S.W.M. #1 AND TEMPORARY S.W.M. #2... 1 WEEK. 5. INSTALL SEDIMENT CONTROL MEASURES, I.E. STABILIZED CONSTRUCTION ENTRANCE, EARTH DIKES, SILT FENCES... 2 DAYS. 6. CONSTRUCT EARTH DIKES, INSTALL TEMPORARY SUMP AND STORM DRAIN SYSTEM FROM 1-3 TO 5-1 TO DIVERT RUNOFF TO POND #1... 2 WEEKS. 7. INSTALL UTILITIES, FINISH ROADWAY SUBGRADE... 3 WEEKS. 8. REMOVE TEMPORARY SUMP AND EARTH DIKE B-1 UPON PERMISSION OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR... 1 WEEK. 9. FINISH GRADING AND PERMANENT STABILIZATION OF THE ENTIRE SITE... 3 WEEKS. 10. FINISH ROADWAY PAVING & STABILIZE ALL DISTURBED AREAS... 2 WEEKS. 11. REMOVE ALL TEMPORARY RELEASE STRUCTURES, TEMPORARY POND #2 AND S.T. 1 AND PERMANENTLY STABILIZE TEMPORARY POND #2 AND S.T. 1 UPON PERMISSION OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR... 2 DAYS. 12. EXCAVATE STORM WATER MANAGEMENT FACILITY TO FINAL DEPTH WITH NO EQUIPMENT USED IN THE BOTTOM AREA UPON PERMISSION OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR... 1 WEEK. 13. REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ALL REMAINING AREAS UPON PERMISSION OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

- NOTE: 1. CONSTRUCTION ACTIVITIES ARE EXCLUDED IN THE WETLAND BUFFERED AREA. 2. EXISTING TREES WITH DIAMETER OF 12" AND LARGER SHALL NOT BE DISTURBED.

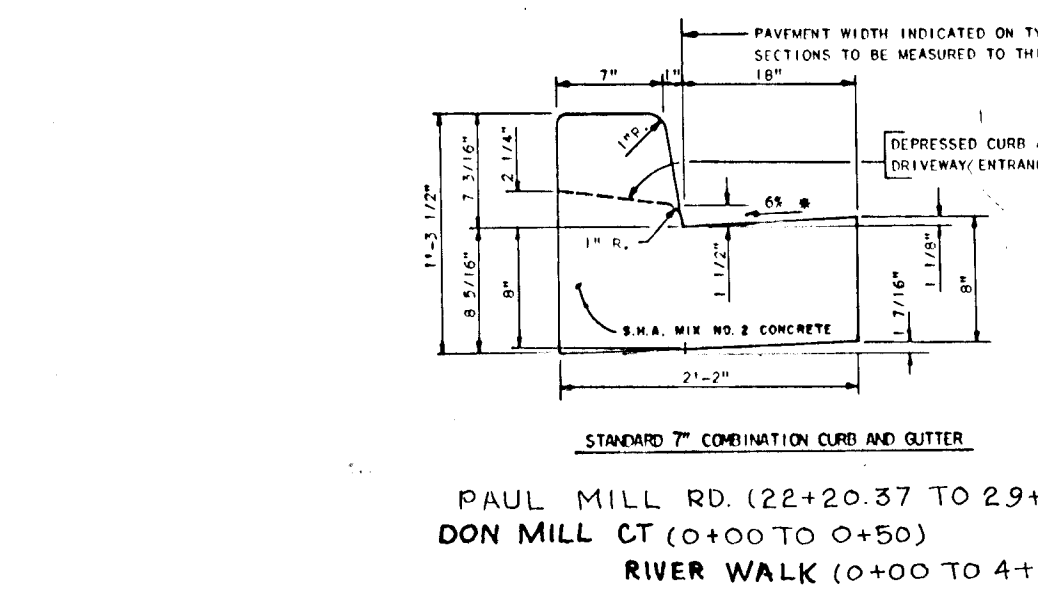


- 1. ALL DIKES SHALL BE OPERATED BY EARLY-WARNING EQUIPMENT. 2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET. 3. DIKES SHALL BE MAINTAINED AS NECESSARY TO FACILITATE PROPER DRAINAGE. 4. FLEXIBLE TUBING SHALL BE MAINTAINED AS NECESSARY TO FACILITATE PROPER DRAINAGE. 5. FLEXIBLE TUBING SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF FRICTION. 6. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 7. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 8. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 9. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1. 10. DIKES SHALL BE CONSTRUCTED TO A SLOPE OF 2:1.

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.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. Chief, Land Development Division. Date: 10/18/90.

APPROVED: CHIEF OF PLANNING AND ZONING. Chief, Division of Community Planning and Land Development. Date: 10/18/90.

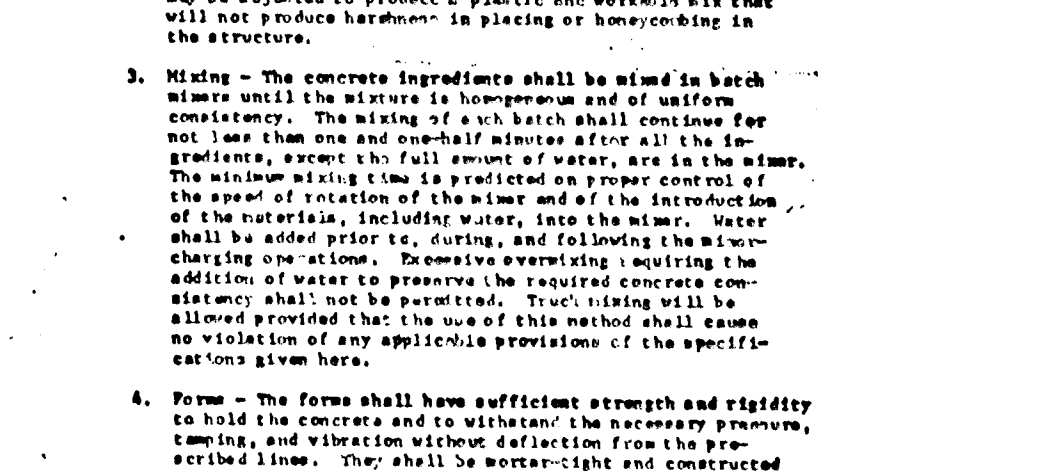


- 1. The curb shall be constructed of concrete or masonry. 2. The gutter shall be constructed of metal or plastic. 3. The curb and gutter shall be supported by a concrete or masonry structure. 4. The curb and gutter shall be maintained in a condition which will prevent tracking or slipping of sediment onto public right-of-way.

Table with 3 columns: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, COLLEGE PARK, MARYLAND. It lists the agency and drawing number.

- 1. PRECONSTRUCTION MEETING WITH HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 2. CLEAR GRADING PERMITS. 3. OBTAIN AREA FOR INSTALLATION OF SEDIMENT CONTROL MEASURES... 1 DAY. 4. CONSTRUCT SILT TRAPS S.T. 1 AND TEMPORARY S.W.M. #1 AND TEMPORARY S.W.M. #2... 1 WEEK. 5. INSTALL SEDIMENT CONTROL MEASURES, I.E. STABILIZED CONSTRUCTION ENTRANCE, EARTH DIKES, SILT FENCES... 2 DAYS. 6. CONSTRUCT EARTH DIKES, INSTALL TEMPORARY SUMP AND STORM DRAIN SYSTEM FROM 1-3 TO 5-1 TO DIVERT RUNOFF TO POND #1... 2 WEEKS. 7. INSTALL UTILITIES, FINISH ROADWAY SUBGRADE... 3 WEEKS. 8. REMOVE TEMPORARY SUMP AND EARTH DIKE B-1 UPON PERMISSION OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR... 1 WEEK. 9. FINISH GRADING AND PERMANENT STABILIZATION OF THE ENTIRE SITE... 3 WEEKS. 10. FINISH ROADWAY PAVING & STABILIZE ALL DISTURBED AREAS... 2 WEEKS. 11. REMOVE ALL TEMPORARY RELEASE STRUCTURES, TEMPORARY POND #2 AND S.T. 1 AND PERMANENTLY STABILIZE TEMPORARY POND #2 AND S.T. 1 UPON PERMISSION OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR... 2 DAYS. 12. EXCAVATE STORM WATER MANAGEMENT FACILITY TO FINAL DEPTH WITH NO EQUIPMENT USED IN THE BOTTOM AREA UPON PERMISSION OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR... 1 WEEK. 13. REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ALL REMAINING AREAS UPON PERMISSION OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

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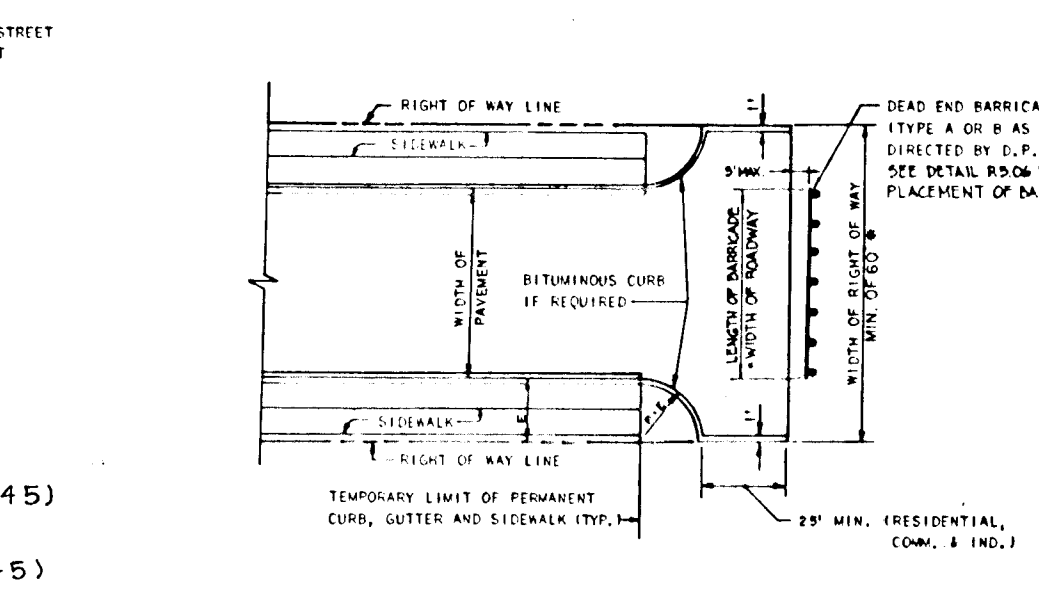


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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. Chief, Land Development Division. Date: 10/18/90.

APPROVED: CHIEF OF PLANNING AND ZONING. Chief, Division of Community Planning and Land Development. Date: 10/18/90.

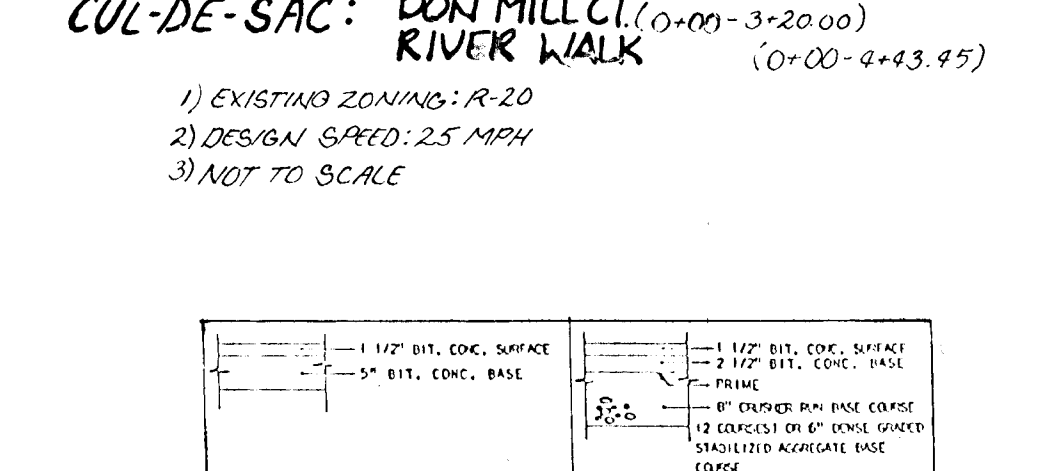


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THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. Chief, Land Development Division. Date: 10/18/90.

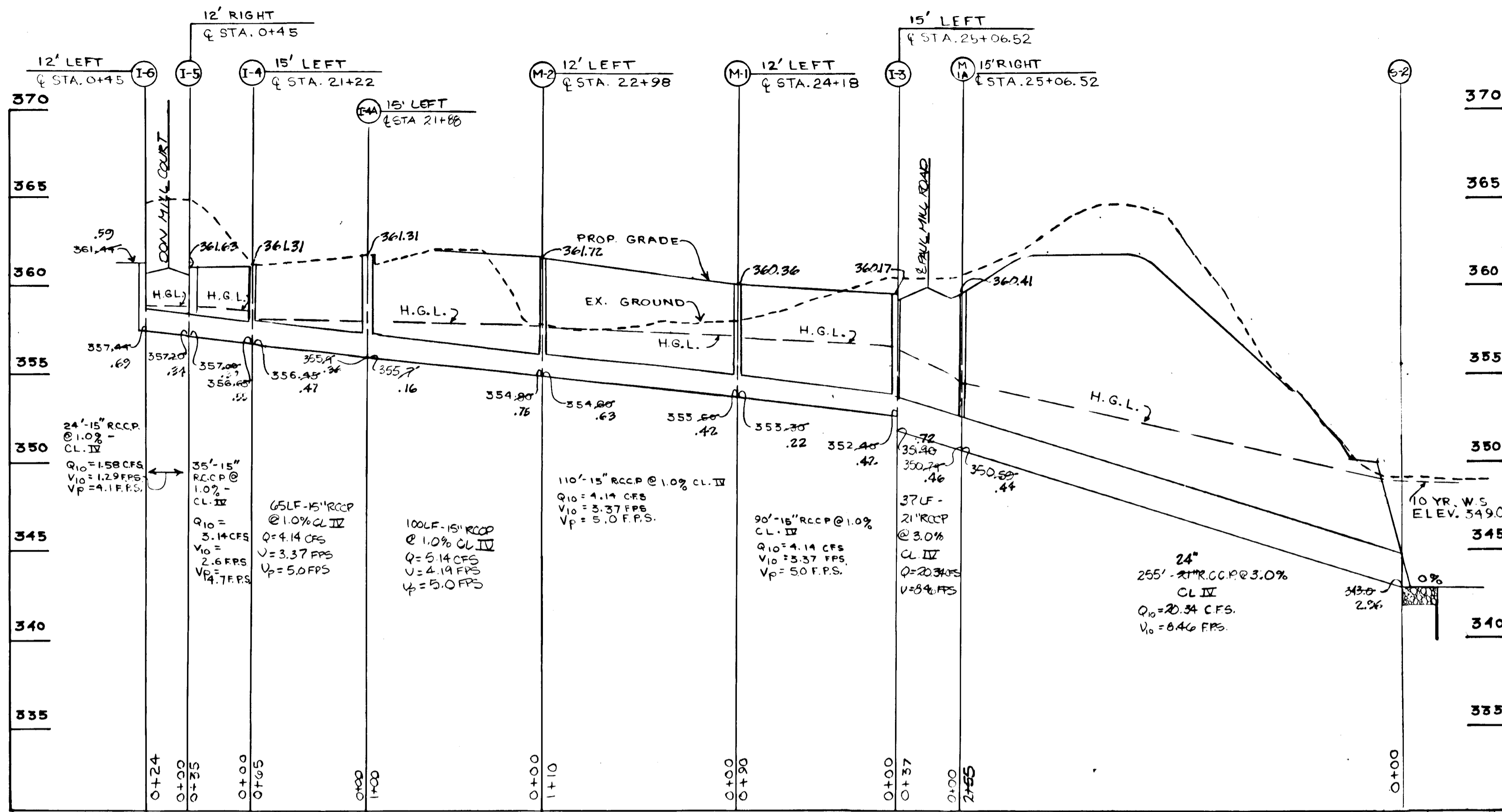
APPROVED: CHIEF OF PLANNING AND ZONING. Chief, Division of Community Planning and Land Development. Date: 10/18/90.

OWNER/DEVELOPER: THE MILLER LAND COMPANY, 7035 BALTIMORE NATIONAL PIKE, ELICOTT CITY, MD 21043. TEL: 461-2100.

PAVING SECTION P-2. DETAIL SHEET. PROJECT: GRAY ROCK FARM, SECT. 5. LOCATION: 2ND ELECTION DISTRICT, HOWARD CO., MD. SCALE: AS SHOWN. DESIGNED BY: S.W.A. CHECKED BY: DATE: FEB. 1990. FIELD BOOK: PAGE NO.: JOB NO.: 88191. DRAWING NO.: 6 OF 9.

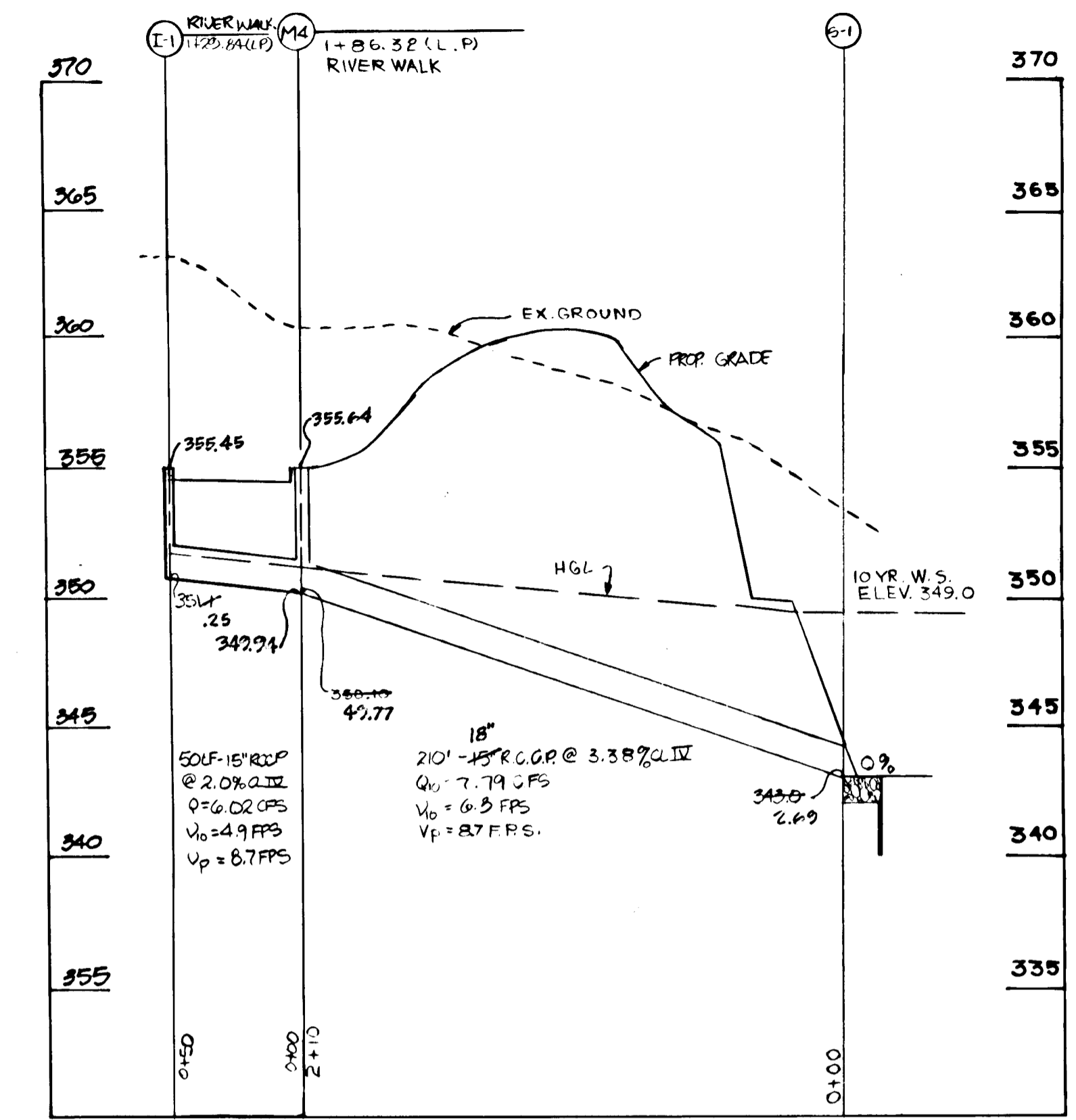
Boandar Associates, INC. 3330 BETHANY LANE, ELICOTT CITY, MD 21043. (301) 465-7777 FAX: (301) 465-7966.

F-90-147



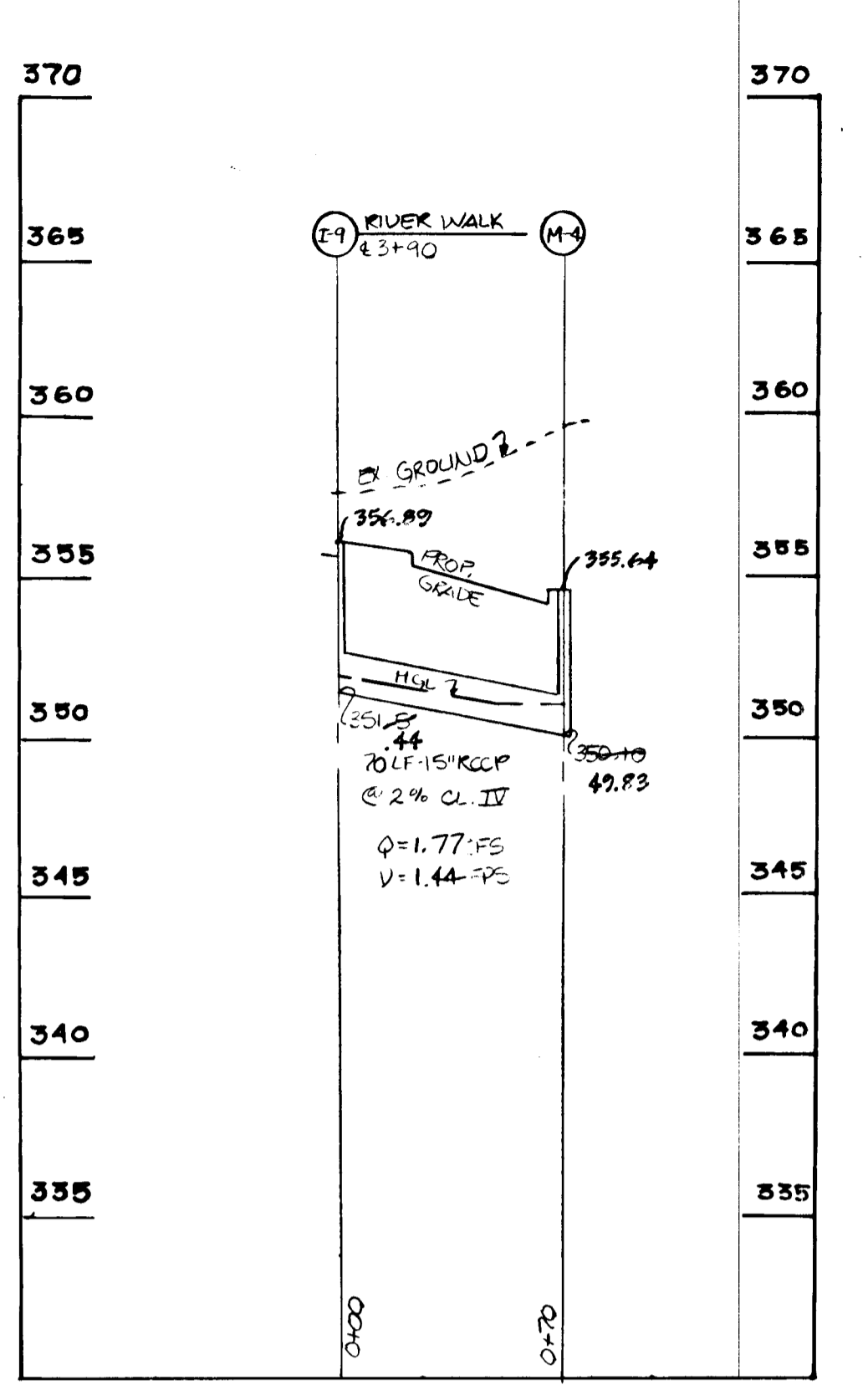
PROFILE

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



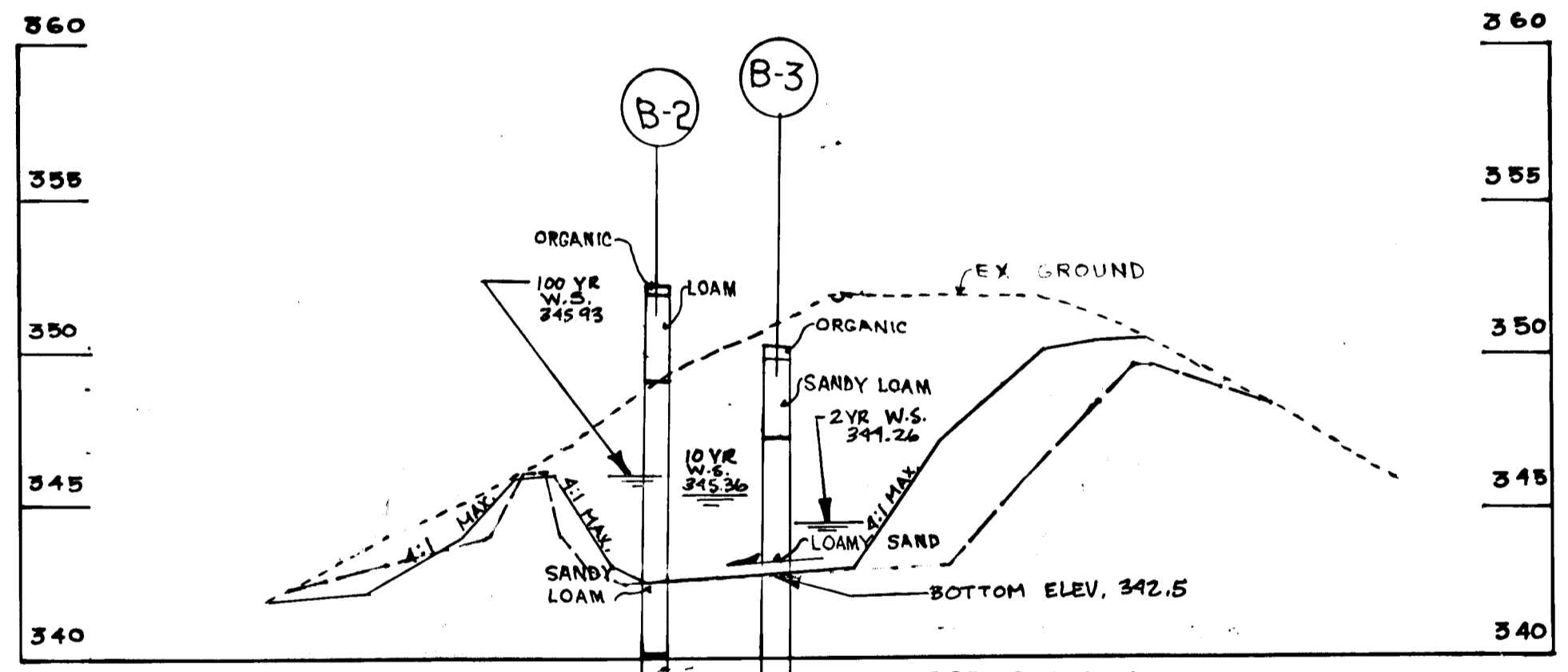
PROFILE

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



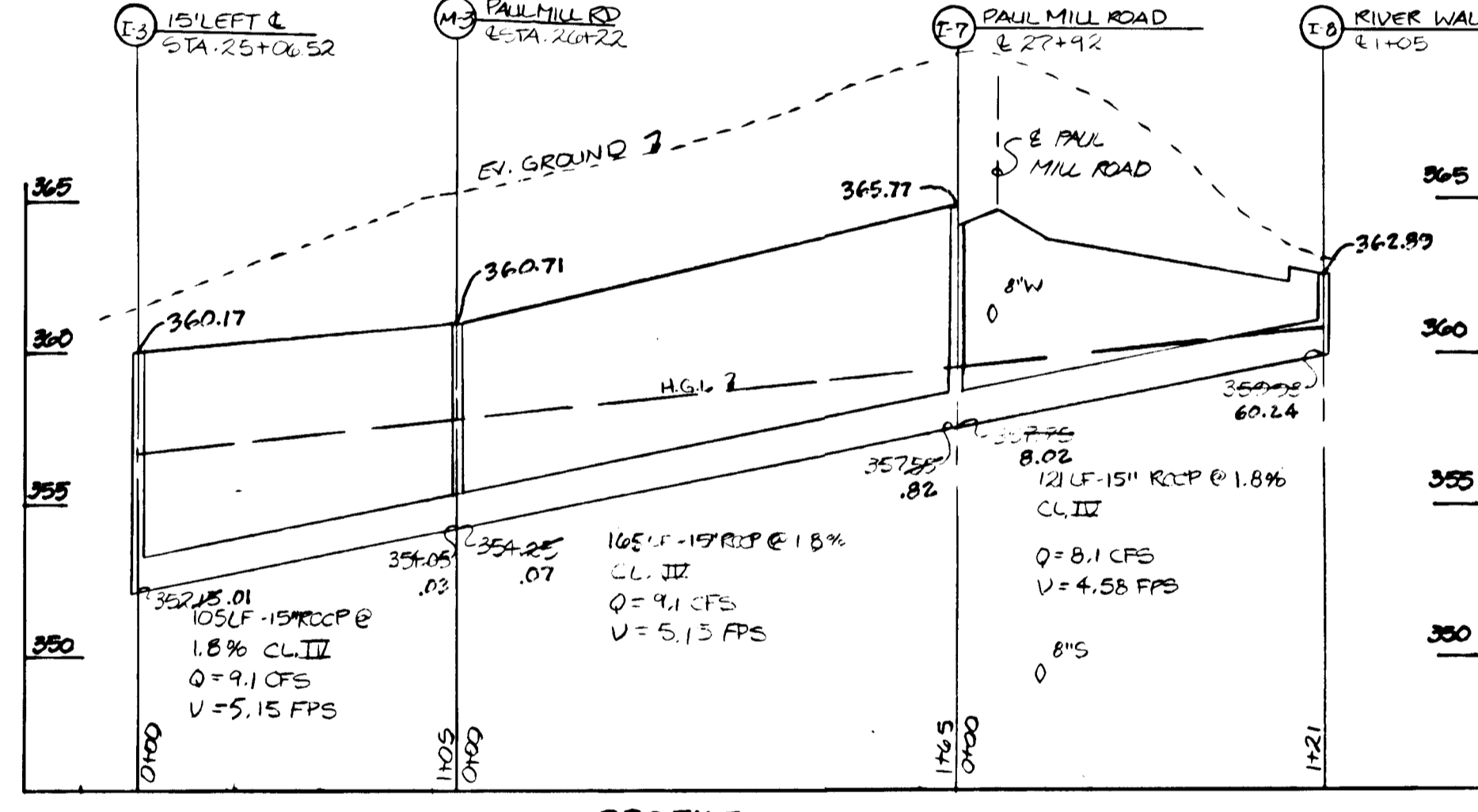
PROFILE

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



SECTION B-B

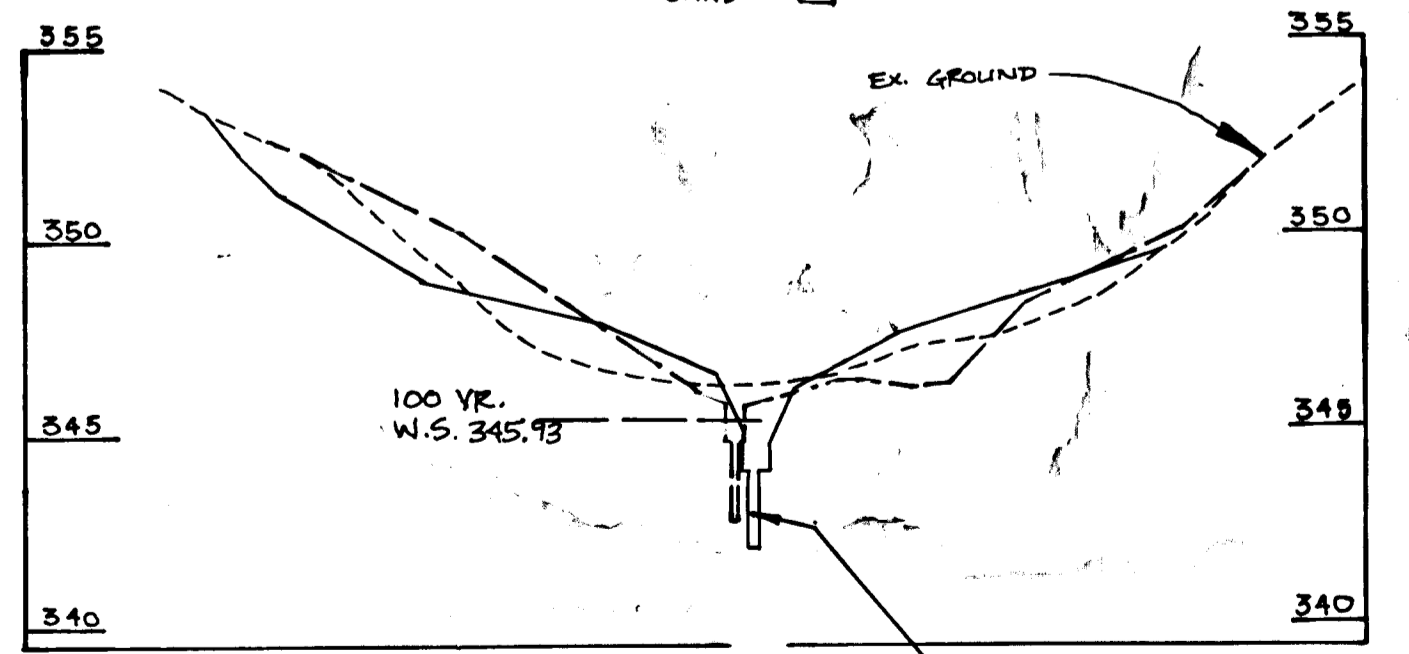
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



PROFILE

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

STRUCTURE SCHEDULE					
STRUCTURE	TYPE	INVERT	OUT	TOP ELEV.	DETAIL NO.
I-1	A-10	351.10	351.10	354.44	SD-4.02
I-2	A-5	356.00	352.40	361.17	SD-4.01
I-3	A-10	352.40	352.15	361.17	SD-4.02
I-4	A-5	356.45	356.45	361.17	SD-4.01
I-5	A-5	357.20	357.20	361.17	SD-4.01
I-6	A-5	357.44	357.44	361.17	SD-4.01
I-7	A-10	357.55	357.55	361.17	SD-4.02
S-1	END SECT.	342.00			SD-5.52
S-2	END SECT.	342.00			SD-5.52
M-1	M.H.	353.80	353.80	360.27	G-5.01
M-2	M.H.	354.80	354.80	361.27	G-5.01
M-3	M.H.	354.80	354.80	361.27	G-5.01
M-4	M.H.	354.80	354.80	361.27	G-5.01
I-4A	A-5	355.90	355.90	361.27	SD-4.01
I-4	A-5	355.90	355.90	361.27	SD-4.01
I-2	A-5	356.45	356.45	361.27	SD-4.01



SECTION C-C

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

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.

James M. Akhn  
U.S. CONSERVATION SERVICE  
DATE: 10/3/90

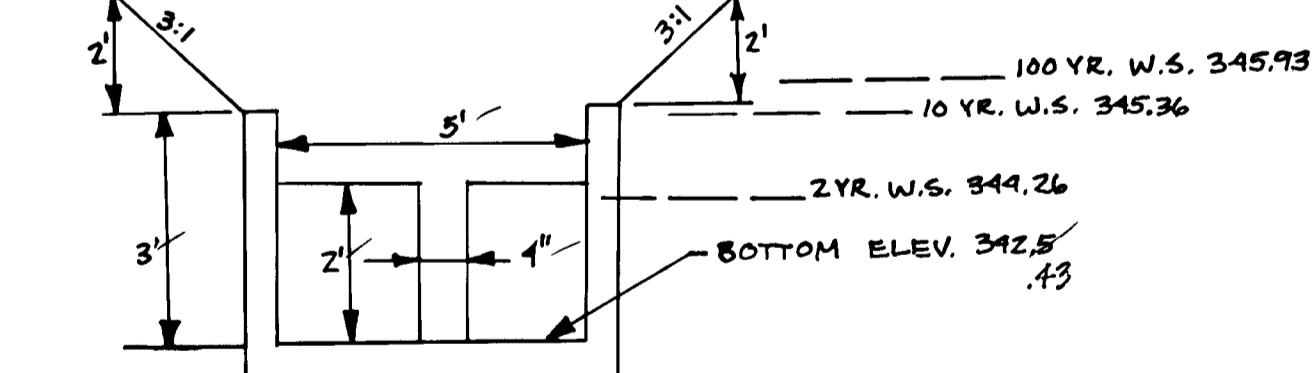
Blaise Ziehm  
HOWARD SOIL CONSERVATION DISTRICT  
DATE: 10/4/90

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Chief, Land Development Division  
Date: 10/24/90

Francis W. Wehner  
Chief, Bureau of Highways  
Date: 10/18/90

James B. Rieg  
Chief, Bureau of Engineering  
Date: 10-23-90

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Chief, Division of Community Planning  
And Land Development  
Date: 11/18/90



WEIR SIZING DETAIL FOR CONTROL STRUCTURES

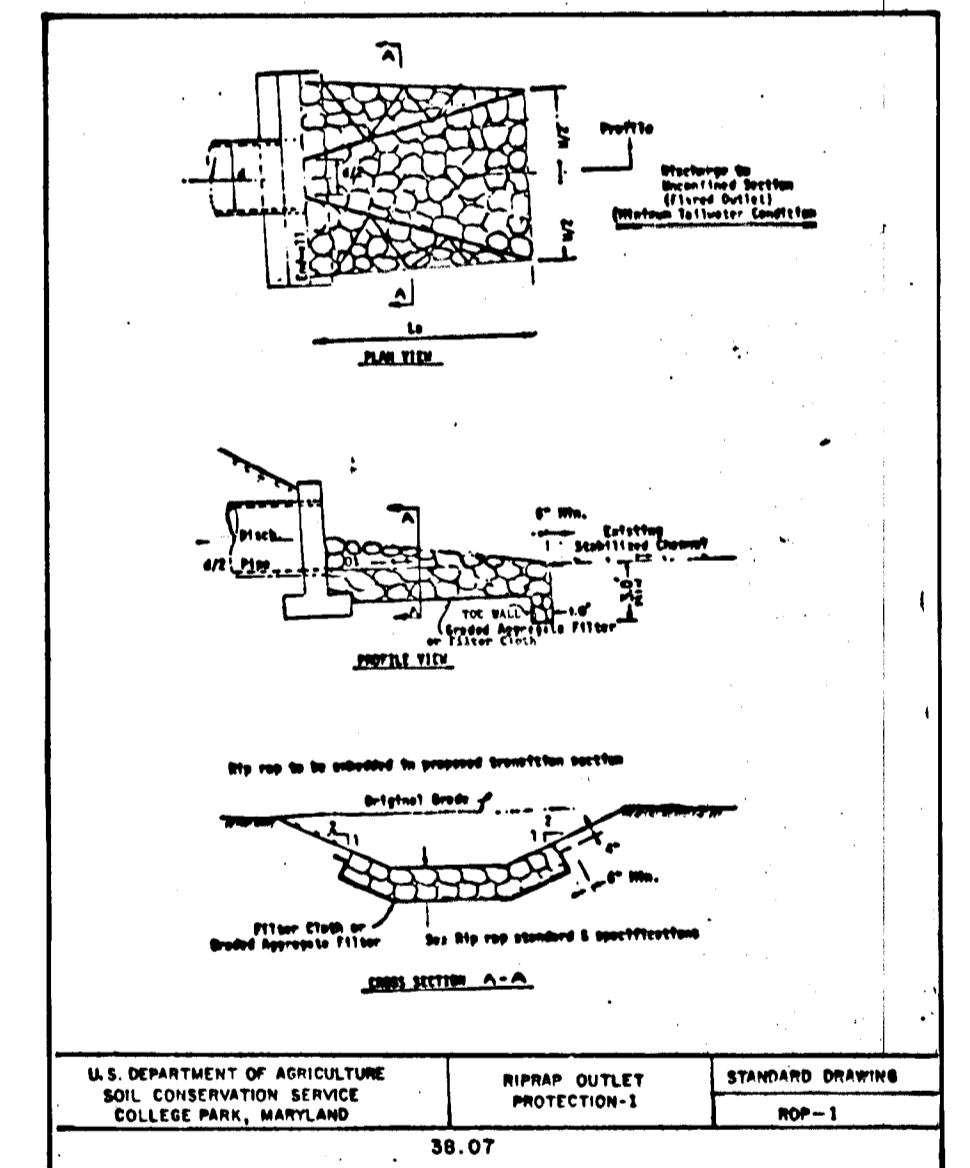
NOTE: CONSTRUCTION ACTIVITIES ARE EXCLUDED IN THE WETLAND BUFFERED AREA.

DEVELOPER'S CERTIFICATE  
"I AM CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF PUBLIC WORKS APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Chang-ho Lim  
DATE: 9-27-90

ENGINEER'S CERTIFICATE  
"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

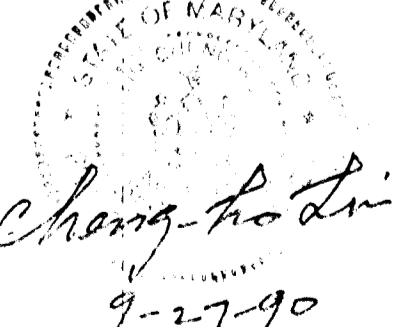
Chang-ho Lim  
DATE: 9-27-90



PIPE OUTLET PROTECTION

LOCATION	LENGTH	WIDTH	STONE SIZE (d <sub>50</sub> )	THICKNESS
S-1	10.0'	5.25'	6"	14"
S-2	20.0'	9.5'	6"	14"
RISER	10.0'	7.0'	6"	14"

OWNER/DEVELOPER:  
THE MILLER LAND COMPANY  
2036 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MD 21043  
TELE: 461-2100



TITLE		PROJECT	
PROFILES		GRAY ROCK FARM, SECTION 5	
LOCATION: 200 ELECTION DISTRICT HOWARD CO., MD.			
SCALE:	DESIGNED BY: C.R.S.	DRAWN BY: J.C.O.	CHECKED BY: J.C.O.
FIELD BOOK:	PAGE NO.:	JOB NO.:	DRAWING NO.:
		88141	7 OF 9

**Boander Associates**  
ENGINEERS - PLANNERS - SURVEYORS  
3230 BETHANY LANE  
ELLCOTT CITY, MD 21043  
(301) 465-7777 FAX: (301) 465-7966

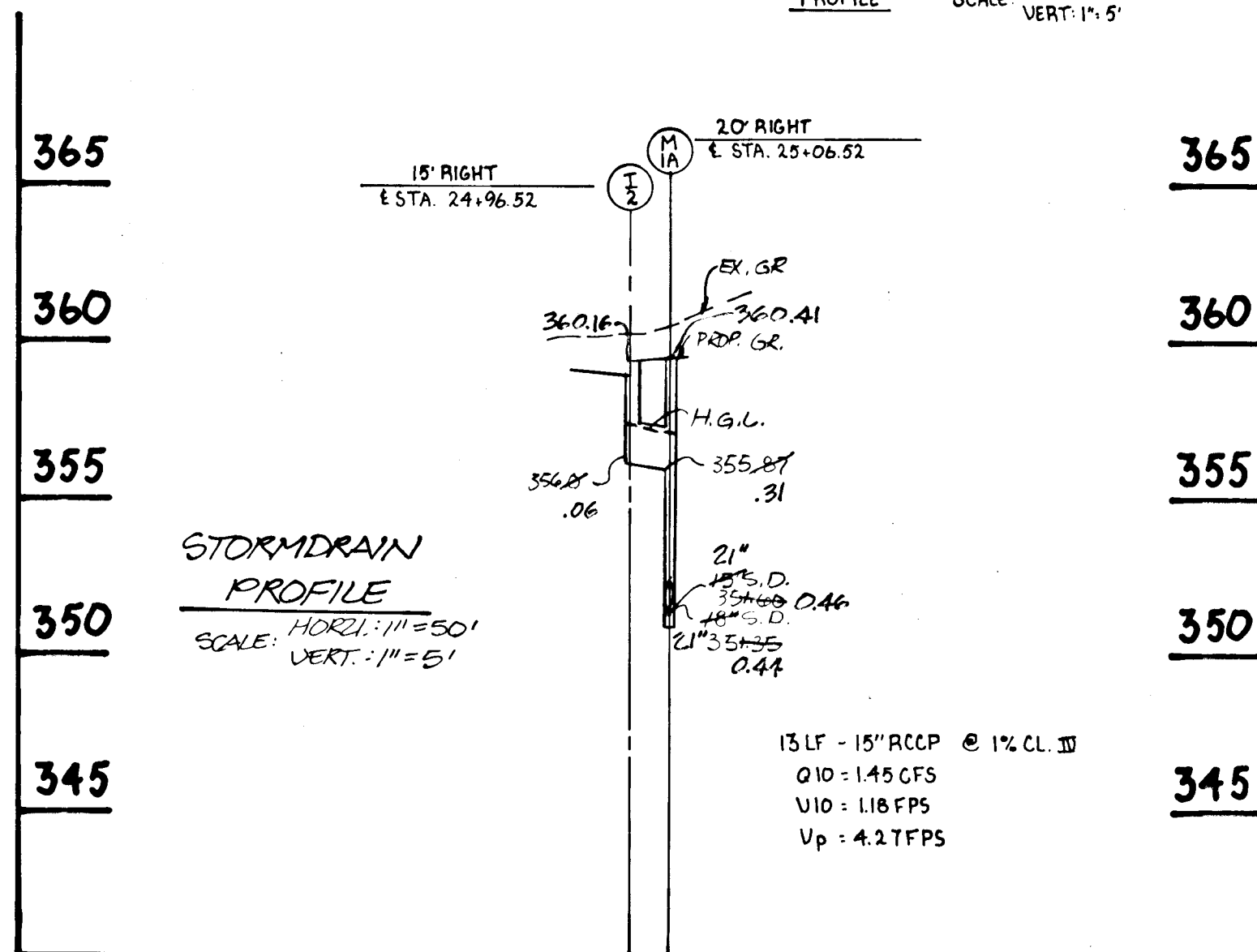
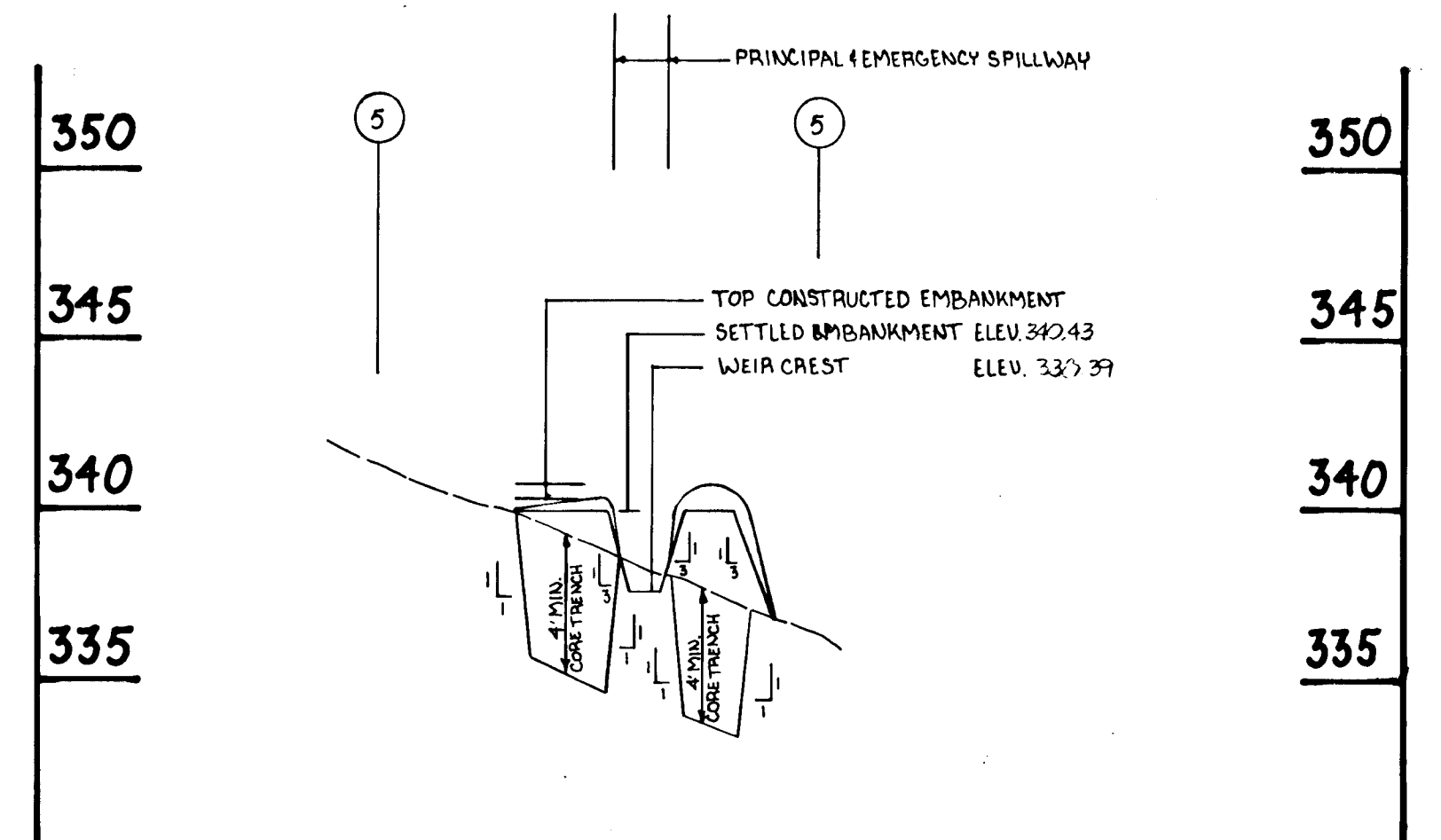
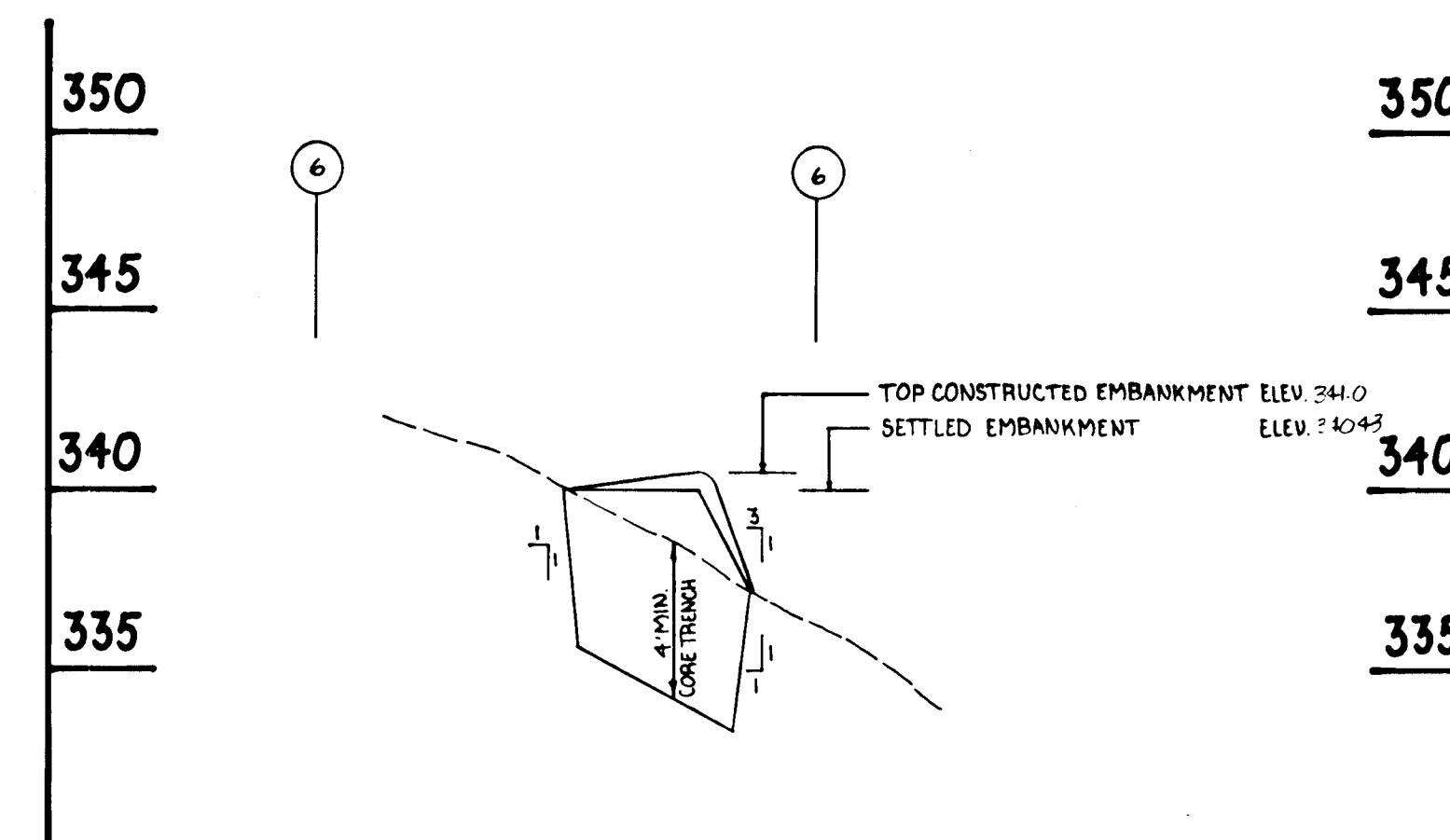
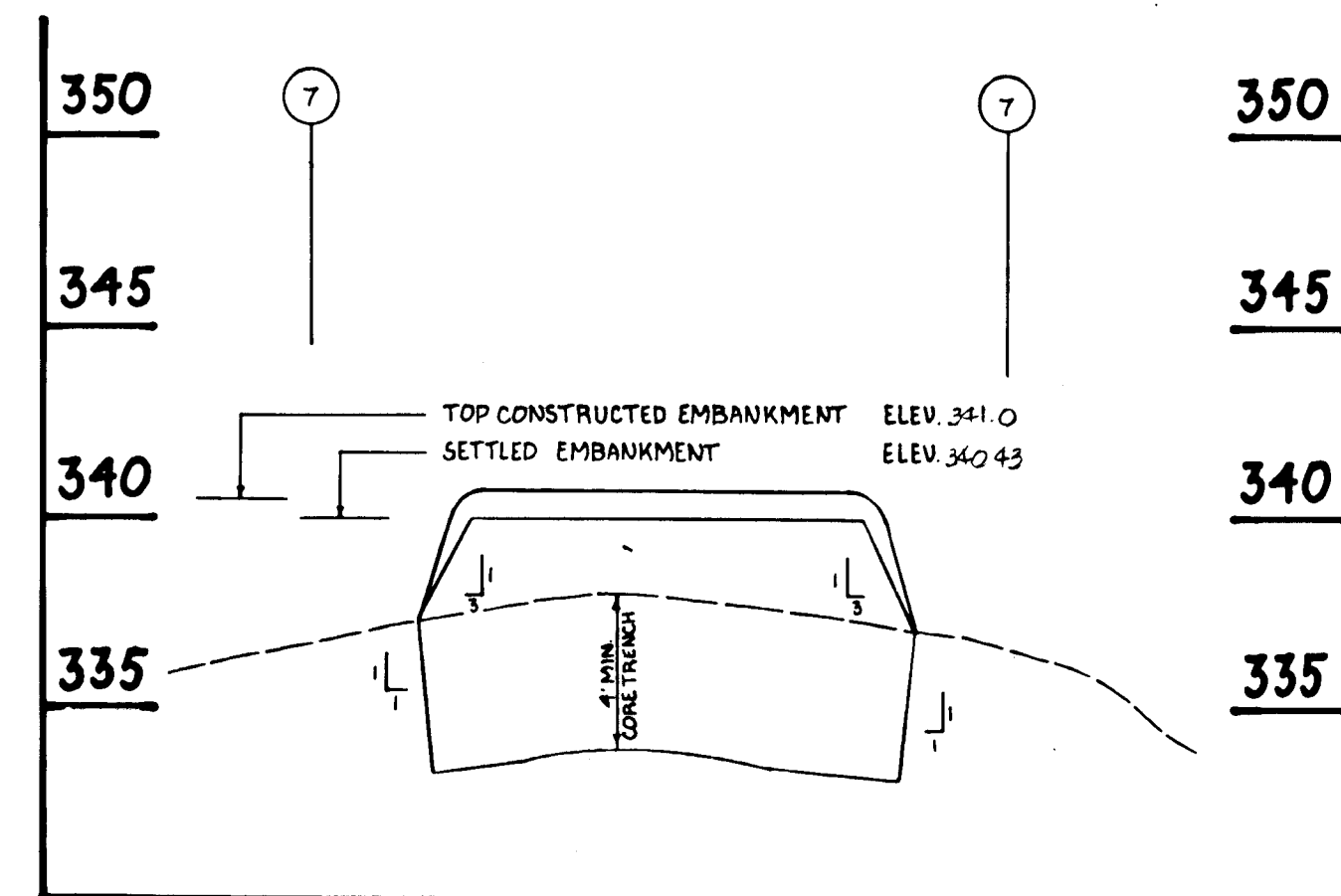
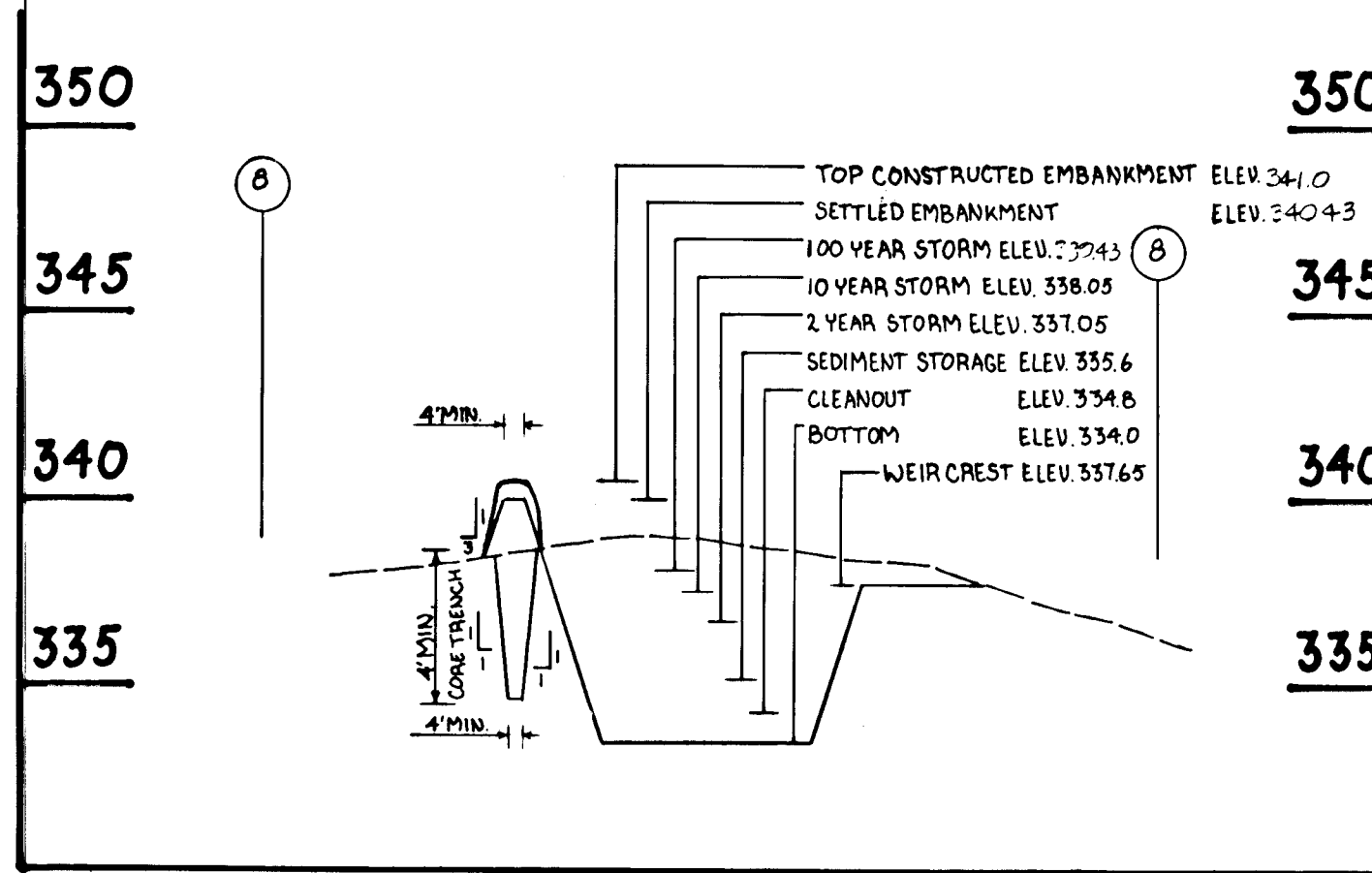
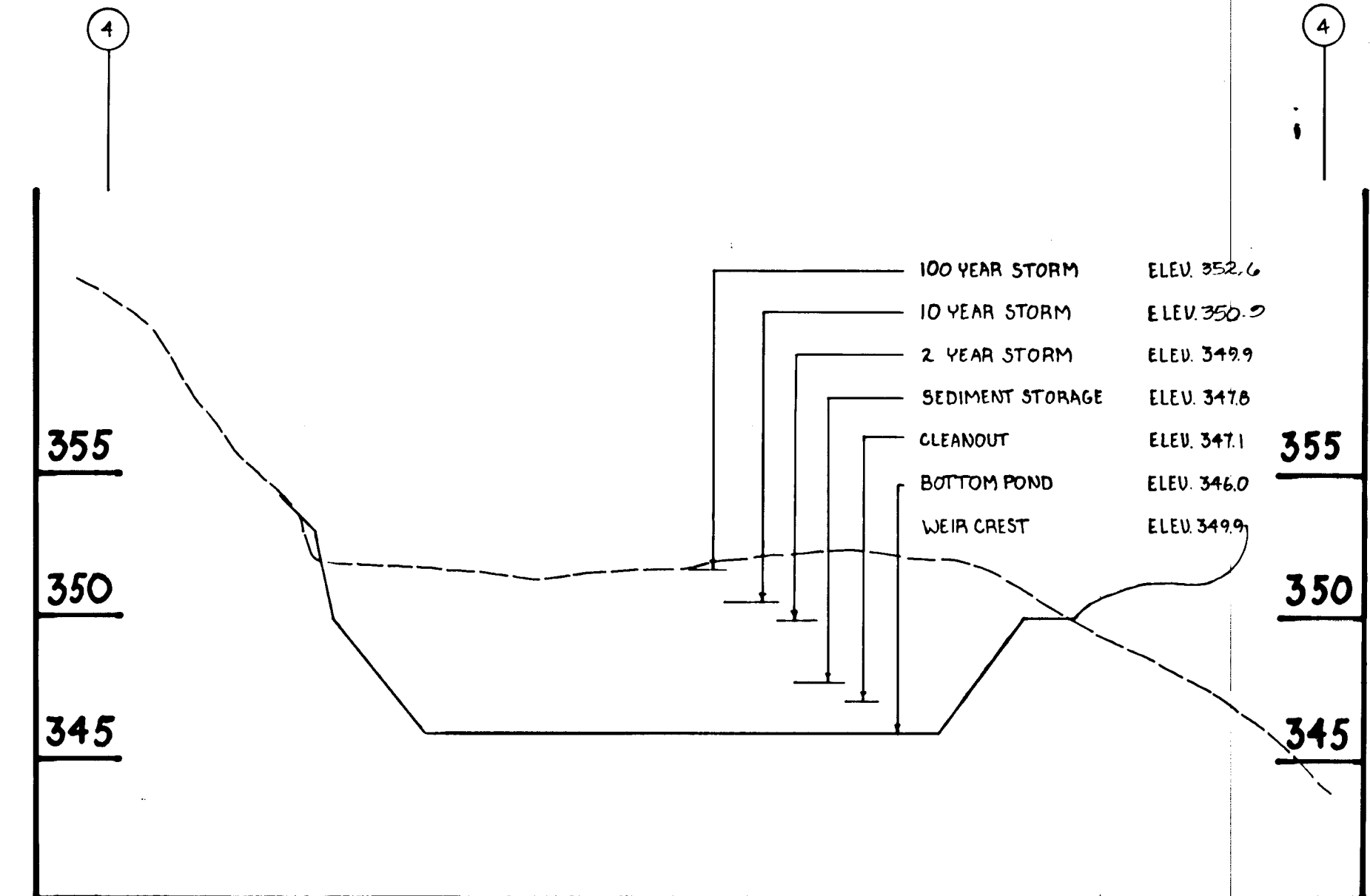
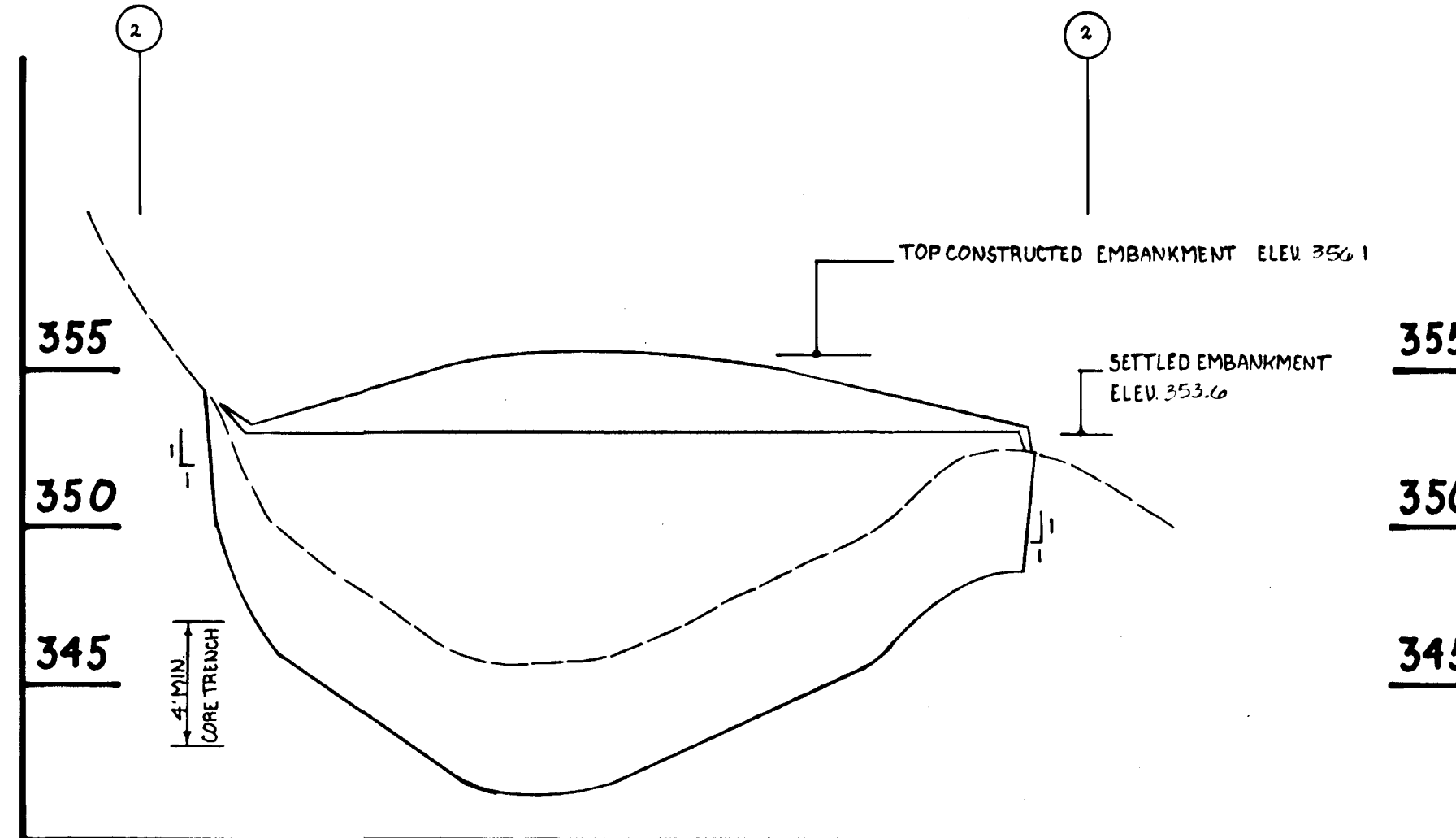
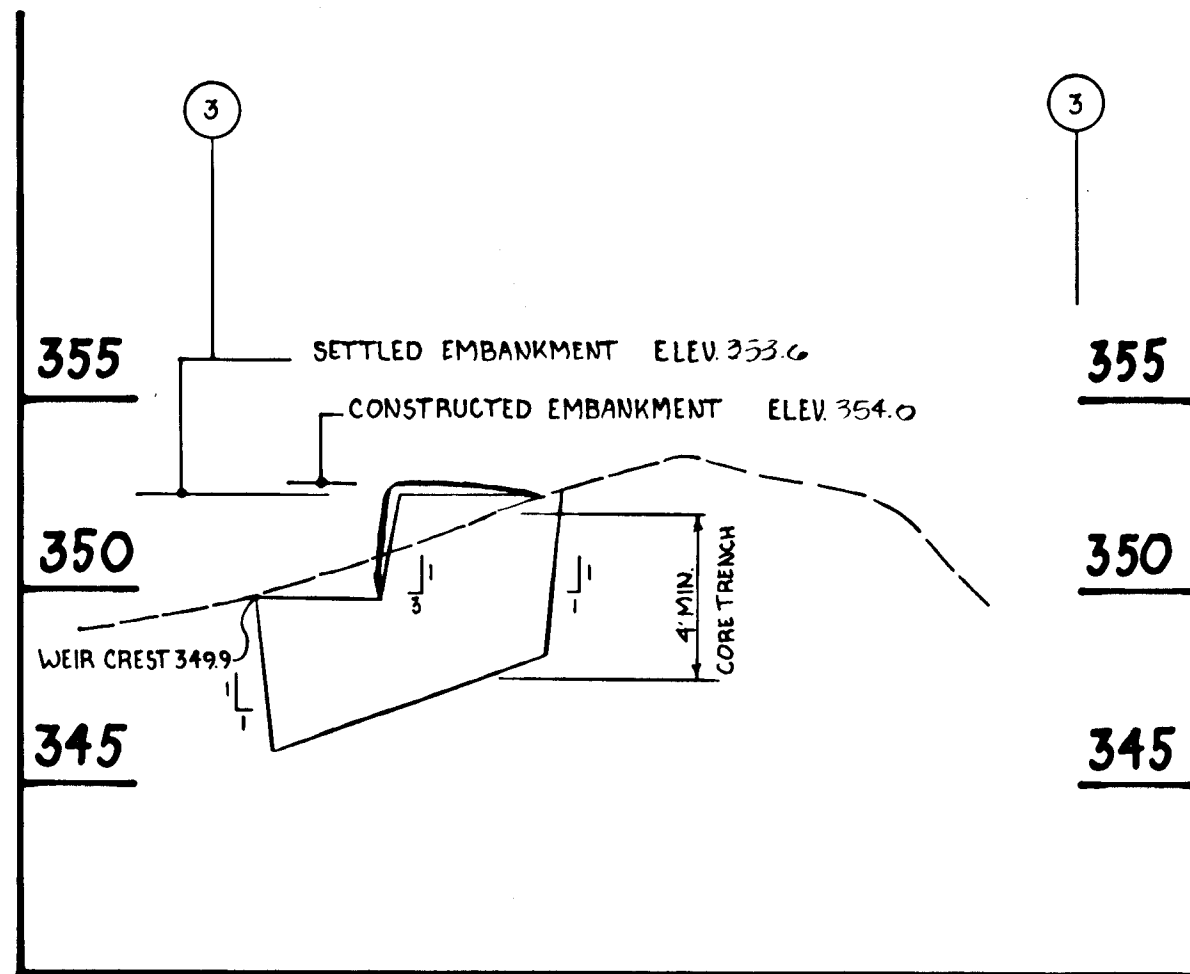
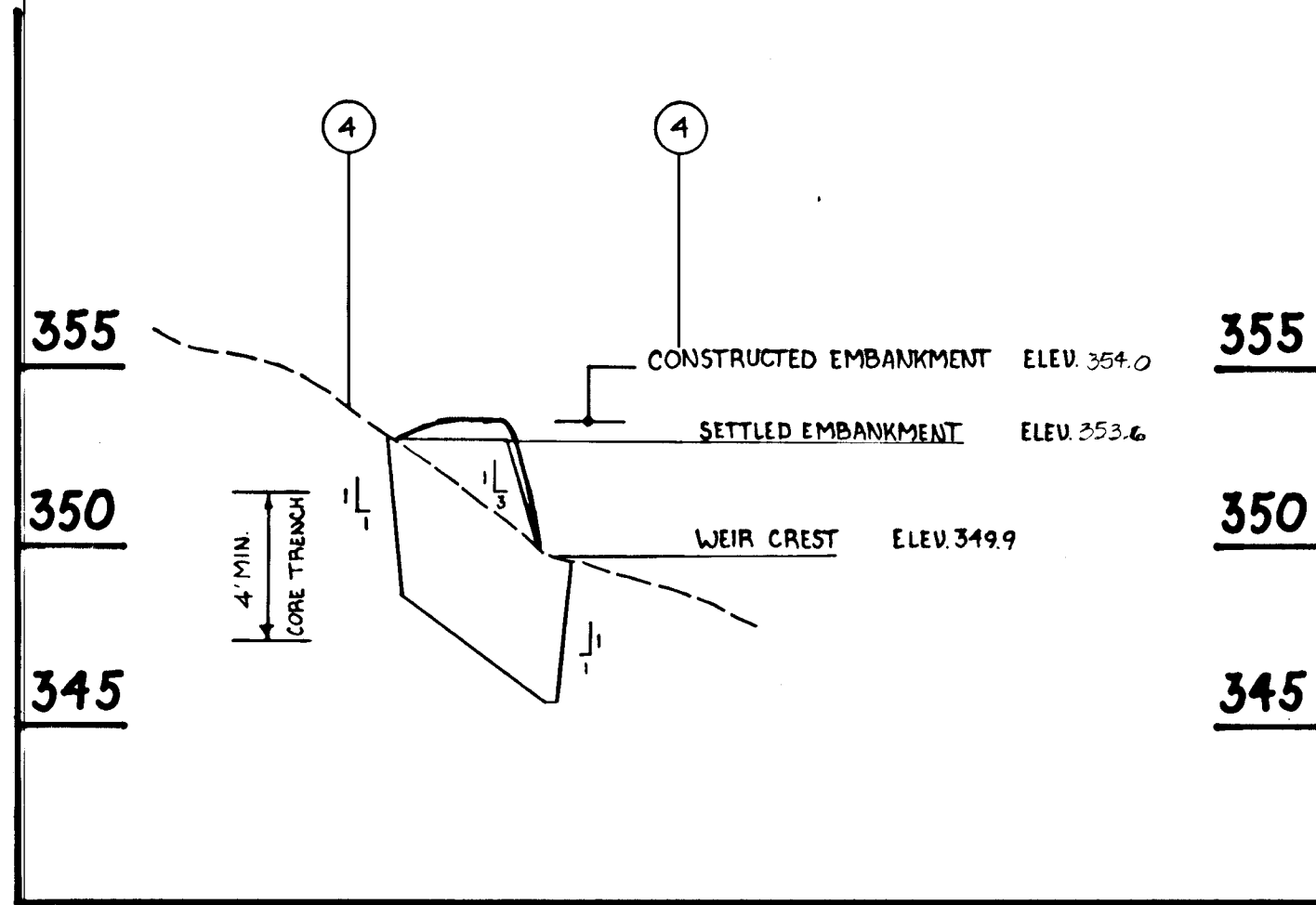
272

SEE SHEET 4 OF 9 FOR SECTIONS

DATE	DESCRIPTION	BY
3/3/95	REVISE POND SECTIONS, ADD WEIR DETAIL	JH

11/13/95

F-90-147



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.

James M. Rhee 10/15/90  
U.S. CONSERVATION SERVICE DATE

Robert Ziehm 10/14/90  
HOWARD SOIL CONSERVATION DISTRICT DATE

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER: Chang-ho Lin 9-27-90 DATE

ENGINEER'S CERTIFICATE

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ENGINEER: Chang-ho Lin 9-27-90 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chang-ho Lin 10/24/90  
Chief, Land Development Division Date

Danielle W. Wallace 10/18/90  
Chief, Bureau of Highways Date

William E. Riley 10-23-90  
Chief, Bureau of Engineering Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chang-ho Lin 10/18/90  
Chief, Division of Community Planning And Land Development Date

STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
Chang-ho Lin  
10-27-90

OWNER/DEVELOPER  
THE MILLER LAND COMPANY  
P.O. BOX 307  
ELLICOTT CITY, MD. 21043  
TELE. 301-461-8355

NOTE: CONSTRUCTION ACTIVITIES ARE EXCLUDED IN THE WETLAND BUFFERED AREA.

TITLE: DETAILS & PROFILES - S.W.M. PONDS 1&2  
PROJECT: GRAY ROCK FARM, SEC. 5  
LOCATION: 2ND ELECTION DISTRICT HOWARD CO., MD.

SCALE: AS SHOWN DESIGNED BY: FL DRAWN BY: HCP CHECKED BY: DATE: AUG. 1990  
FIELD BOOK: PAGE NO.: JOB NO.: 5811 DRAWING NO.: 8019

Boender Associates  
ENGINEERS, PLANNERS, SURVEYORS  
3230 BETHANY LANE  
ELLICOTT CITY, MD. 21043  
(301) 465-7777 FAX: (301) 465-7966

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