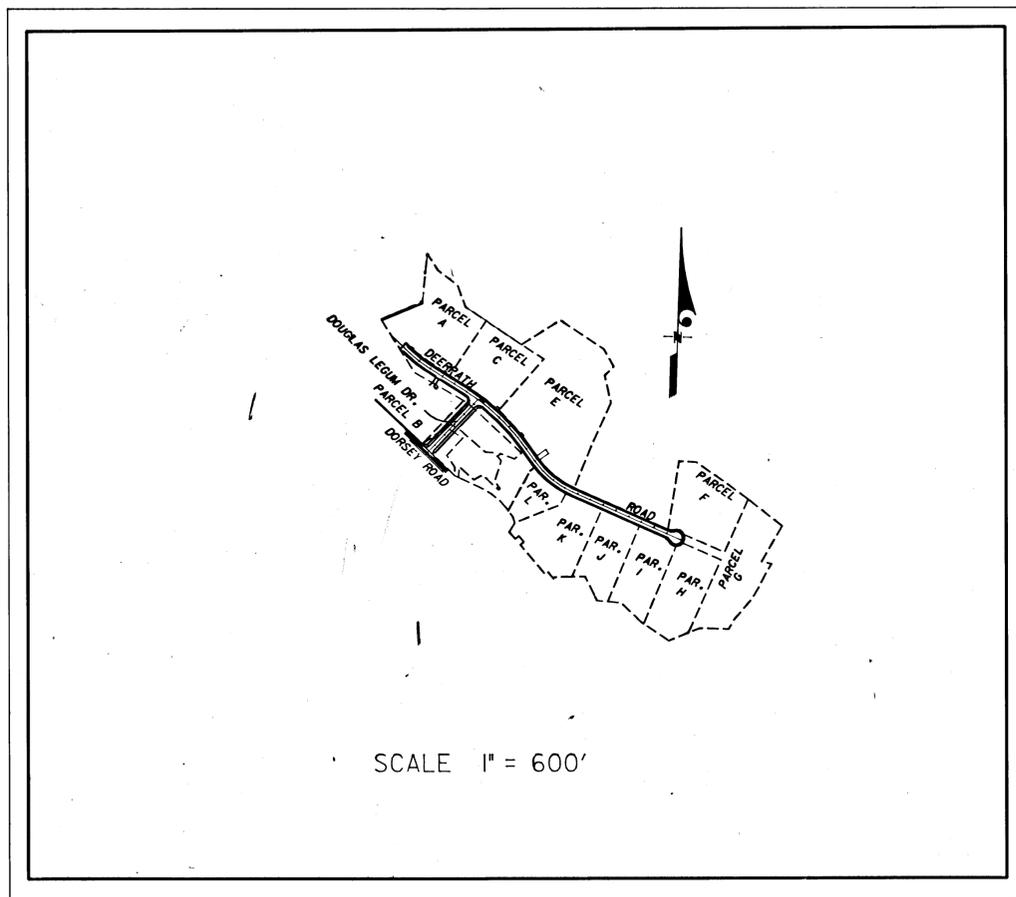


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3	STREET GRADE, STORM DRAIN & PAVING PLAN - DEERPATH ROAD - EAST
4	STREET GRADE, STORM DRAIN & PAVING PLAN - DEERPATH ROAD - WEST
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30	DORSEY ROAD SEDIMENT CONTROL PLAN
31	DORSEY ROAD DETAILS AND NOTES



- ### GENERAL NOTES
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOL. IV, DETAILS AND SPECIFICATIONS FOR CONSTRUCTION.
 - ALL UTILITY COMPANIES SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF CONSTRUCTION.
 - ALL INLETS SHALL BE HOWARD COUNTY STANDARDS UNLESS OTHERWISE SHOWN.
 - ALL STREET CURB RETURNS SHALL HAVE A 30.0' RADIUS UNLESS OTHERWISE NOTED.
 - STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD SPECIFICATIONS.
 - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES WHERE DIRECTED BY THE ENGINEER A MINIMUM OF TWO WEEKS IN ADVANCE OF ANY CONSTRUCTION.
 - TEMPORARY COMPACTED 18" HIGH EARTH FILL DIVERSION DIKES SHALL BE CONSTRUCTED ABOUT THE LIPS OF FILL SLOPES ON THE R.O.W. CONCURRENTLY WITH THE INITIAL GRADING AND DIRECTED TO UNDISTURBED SOIL AREAS AT THE END OF EACH DAY.
 - CONTRACTOR TO NOTIFY THE HOWARD COUNTY DEPT. OF INSPECTIONS AND PERMITS AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE NO. 992-2436.
 - ALL DISTURBED SLOPE AREAS TO BE STABILIZED AS SOON AS GRADING IS COMPLETED.
 - ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3500 P.S.I..
 - ALL SWALES AND SLOPES SHALL BE PERMANENTLY SEEDED. SEE THE SEED SPECIFICATIONS ON SHEET 12.
 - TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1981 REVISED EDITION.
 - POLY-FILTER-X OR EQUAL SHALL BE PLACED UNDER ALL STONE RIP RAP (FULL WIDTH AND LENGTH OF STONE).
 - STONE FOR RIP RAP SHALL BE AS SPECIFIED ON THE DRAWINGS. ALL RIP RAP SHALL BE UNPAVED UNLESS OTHERWISE NOTED.
 - STUBS FOR 6" P.V.C. UNDERDRAIN PIPE TO BE INSTALLED AT CENTER OF EACH WALL OF EVERY INLET.
 - 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 - Underground Electric Distribution Customer Service - 685-0123
 - Baltimore Gas & Electric Company - Underground Gas Distribution Customer Service - 685-0123
 - Chesapeake & Potomac Telephone Company - 725-9976
 - American Telephone & Telegraph - Cable Location Division - 393-3553
 - Street Trees - (145) - The location type and number of trees shown on this plan are tentative and are used for bond purposes only. The final location and variety of trees may vary to accommodate field conditions and builder's landscape program. Bond release is contingent upon Section 15.31 of the Howard County Subdivision Regulations, as approved by the Office of Planning and Zoning.
 - Provide 250 watt Mercury Vapor Lamp (shown as *). Pendant mounted on 30 ft. Aluminum Bronze pole to be located at: DOUGLAS LEGUM DRIVE, STA. 1+25 CT.; DEERPATH RD. (EAST OF DOUGLAS LEGUM DR.), STA. 4+00 CT., STA. 4+50 CT., STA. 5+00 CT., STA. 15+30 CT., STA. 15+15 CT.; DEERPATH RD. (WEST OF DOUGLAS LEGUM DR.), STA. 4+50 RT.

DORSEY BUSINESS CENTER

PHASE I

DORSEY, MARYLAND

CONTRACT NO. 1

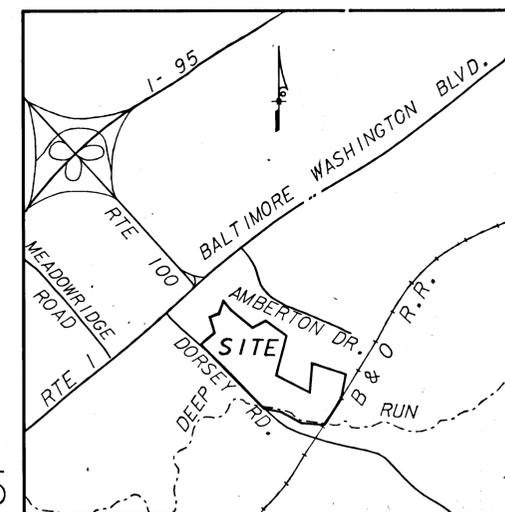
ROAD CONSTRUCTION DRAWINGS

DOUGLAS LEGUM DRIVE STA. 0+00 TO 5+46.71

DEERPATH ROAD (EAST OF DOUGLAS LEGUM DRIVE) STA. 0+00 TO 17+79.15

DEERPATH ROAD (WEST OF DOUGLAS LEGUM DRIVE) STA. 0+00 TO 6+57.48

FIRST ELECTION DISTRICT - HOWARD CO., MARYLAND



VICINITY MAP

SCALE 1" = 200'

F-86-151



Robert H. Marmon
ROBERT H. MARMON, P.E. MD. P.E. #10537

DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Engineering
7-24-86

OFFICE OF PLANNING AND ZONING

Chief, Div. of Land Development & Zoning Administration
7-22-86

DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
7223 PARKWAY DRIVE
HANOVER, MARYLAND 21076
(301) 796-4446

No.	REVISION	DATE	BY
1	SWIM POND #1 WAIVED	5/1/87	RHM



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GREENHORNE & O'MARA, INC.

2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
(301) 948-0900

ANNAPOLIS, MD • ATLANTA, GA • BECKLEY, WV • CULPEPER, VA • DENVER, CO • EXPORT, PA • FAIRFAX, VA
GREENBELT, MD • MOI ROE, MI • RALEIGH, NC • TAMPA, FL • WILLISTON PARK, NY

DORSEY BUSINESS CENTER

SECTION 1

TAX MAP 37.43 LIBER 1300 FOLIO 547

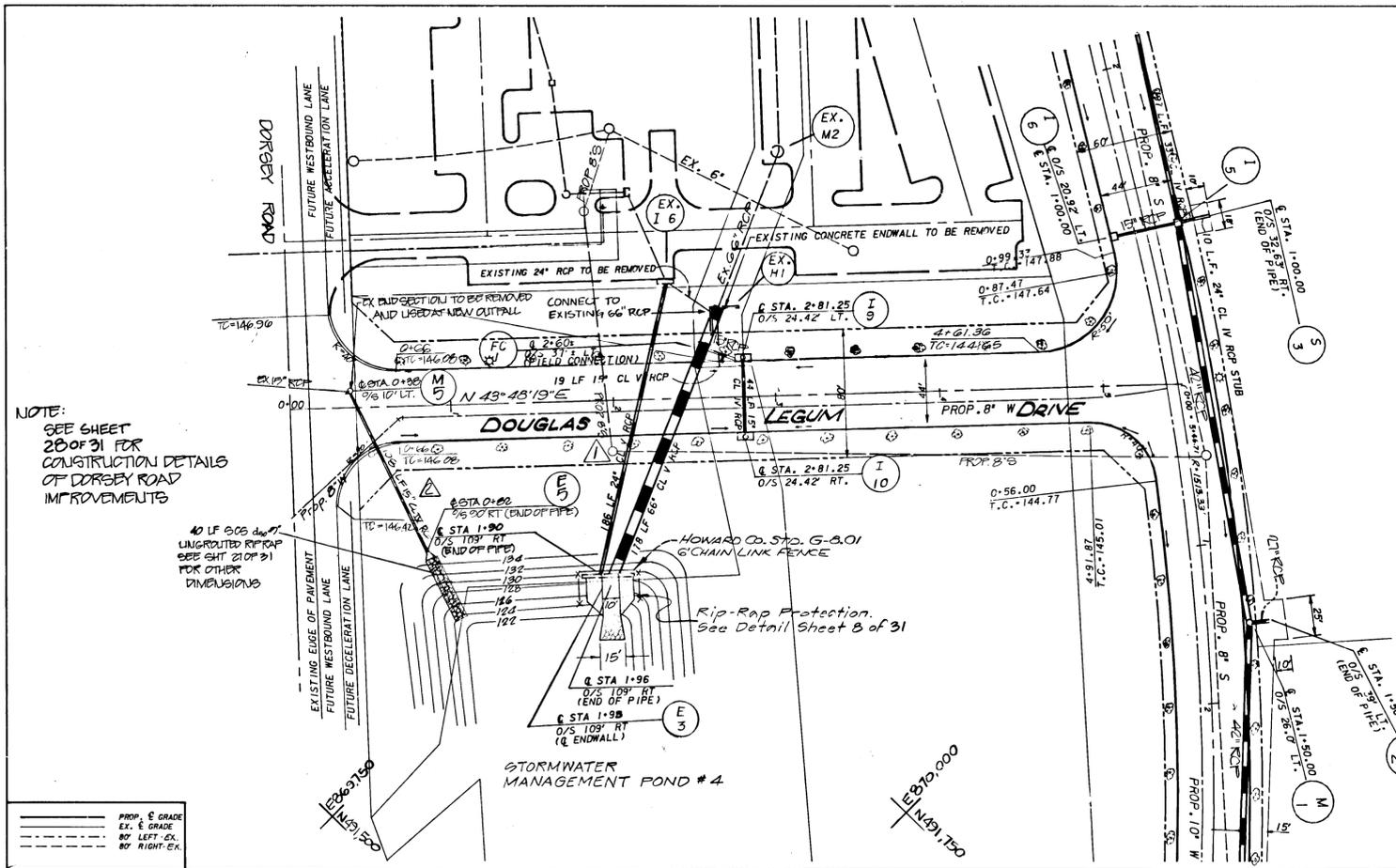
ELECTION DISTRICT #1 HOWARD CO., MD.

JWC DESIGN	SCALE AS SHOWN
CADD DRAWN	1 OF 31
RHM CHECKED	SHEET
MAR 86 DATE	R1266X JOB No. FILE No.

86-151

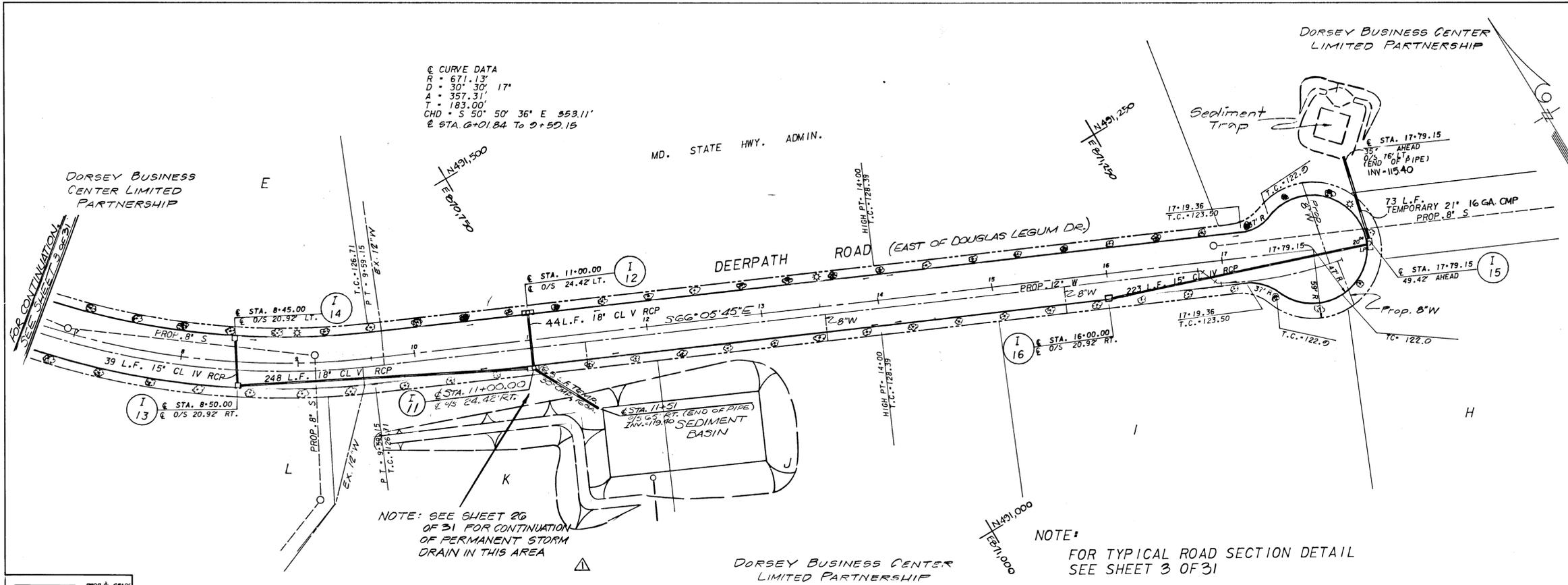
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DATE	
BY	
NO.	
REVISIONS	
PLANNED	
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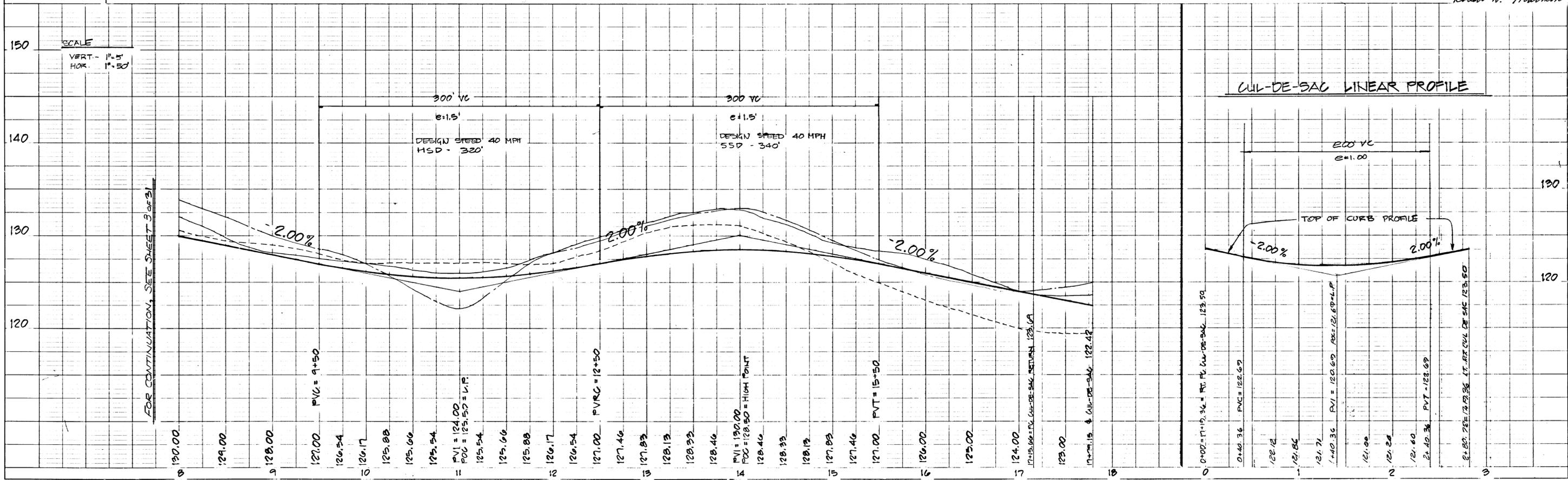


DATE	
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CHECKED	
PLANNED	
ALIGNED	
NOTED	
NO.	

DATE	
BY	
CHECKED	
PLANNED	
ALIGNED	
NOTED	
NO.	



DATE	NO.	REVISION DESCRIPTION
DEPARTMENT OF PUBLIC WORKS		
CHIEF, BUREAU OF ENGINEERING		
DEPARTMENT OF PLANNING AND ZONING ADMINISTRATION		
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION		
DATE: 7-22-80		
DORSEY BUSINESS CENTER		
PHASE - I		
ELECTION DISTRICT NO. 1 HOWARD COUNTY, MD.		
OWNER & DEVELOPER		
DORSEY BUSINESS CENTER LIMITED PARTNERSHIP		
7223 PARKWAY DRIVE		
HANOVER, MARYLAND 2076		
(301) 796-4446		
GREENHORNE AND O'MARA, INC.		
ENGINEERS ARCHITECTS PLANNERS SURVEYORS		
*2 RESEARCH PLACE ROCKVILLE, MARYLAND 20850		
BALTIMORE WASHINGTON		
(301) 323-1929 (301) 948-0900		
TAX MAP NO. 37.43		
1300/547		
TITLE		
DEERPATH ROAD (EAST OF DOUGLAS LEGUM DR.)		
GRADE ESTABLISHMENT		
STORM DRAINAGE AND PAVING PLAN		
DESIGNED BY: J.W.C.	SCALE: 1" = 50'	PROJECT NO.
DRAWN BY: D.C.D.	DATE: MAR, 80	DRAWING NUMBER
CHECKED BY: R.H.M.	APPROVED:	4 OF 31

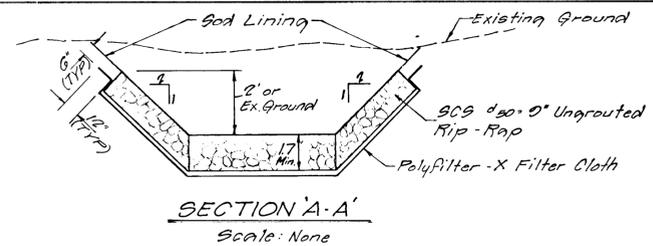
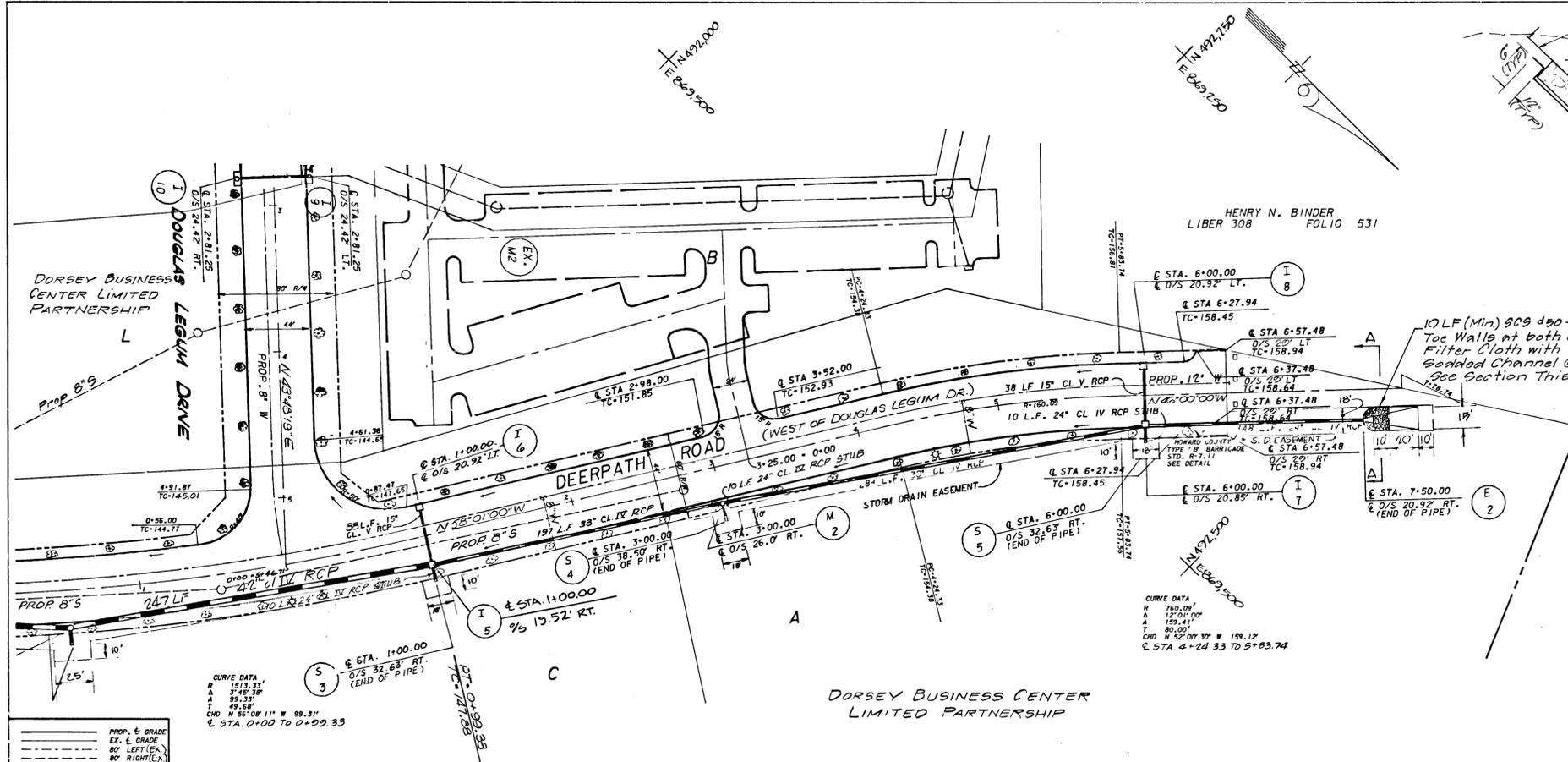


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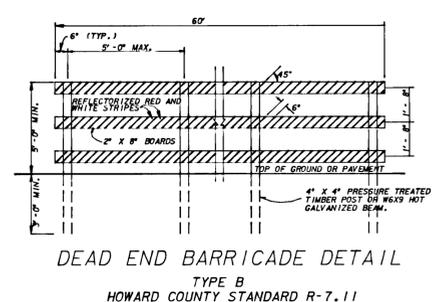
PLAT 1 PLAN PROFILE (P.A.R. & STANDARD)
 OF 12-12-1987 CONSTRUCTION
 PRINTED IN U.S.A.

DATE	
BY	
SUPERVISOR	
DESIGNED	
CHECKED	
IN CHARGE	
NO.	

DATE	
BY	
SUPERVISOR	
DESIGNED	
CHECKED	
IN CHARGE	
NO.	



NOTE:
FOR TYPICAL ROAD SECTION DETAIL
SEE SHEET 3 OF 31



DATE	NO.	REVISION DESCRIPTION
DEPARTMENT OF PUBLIC WORKS		
CHIEF, BUREAU OF ENGINEERING		
DEPARTMENT OF PLANNING AND ZONING ADMINISTRATION		
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION		
7-22-86 DATE		
DORSEY BUSINESS CENTER		
PHASE - I		
ELECTION DISTRICT NO. 1 HOWARD COUNTY, MD.		
OWNER & DEVELOPER		
DORSEY BUSINESS CENTER LIMITED PARTNERSHIP		
7223 PARKWAY DRIVE		
HANOVER, MARYLAND 20776		
(301) 796-4446		
GREENHORNE AND O'MARA, INC.		
ENGINEERS ARCHITECTS PLANNERS SURVEYORS		
*2 RESEARCH PLACE ROCKVILLE, MARYLAND 20850		
BALTIMORE WASHINGTON		
(301) 323-1929 (301) 948-0900		
TAX MAP NO. 37.43		
1300/547		
TITLE		
DEERPETH ROAD (WEST OF DOUGLAS LEGUM DR.)		
GRADE ESTABLISHMENT		
STORM DRAINAGE AND PAVING PLAN		
DESIGNED BY: J.C.	SCALE: 1" = 50'	PROJECT NO.
DRAWN BY: Enald	DATE: Mar. 86	DRAWING NUMBER
CHECKED BY: R.M.	APPROVED:	5 OF 31

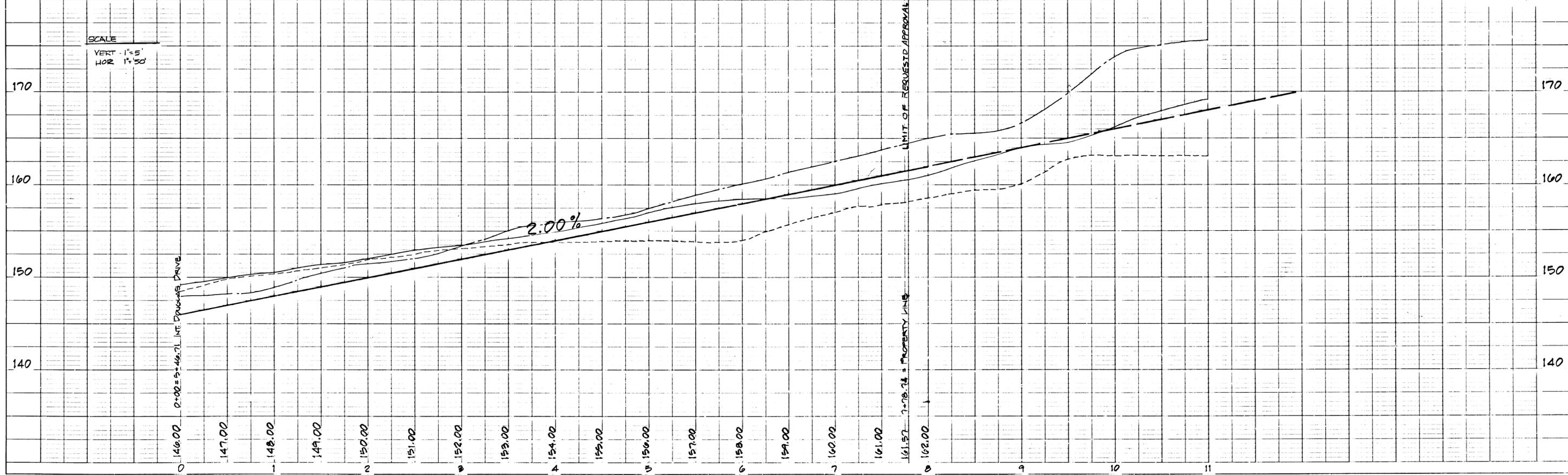
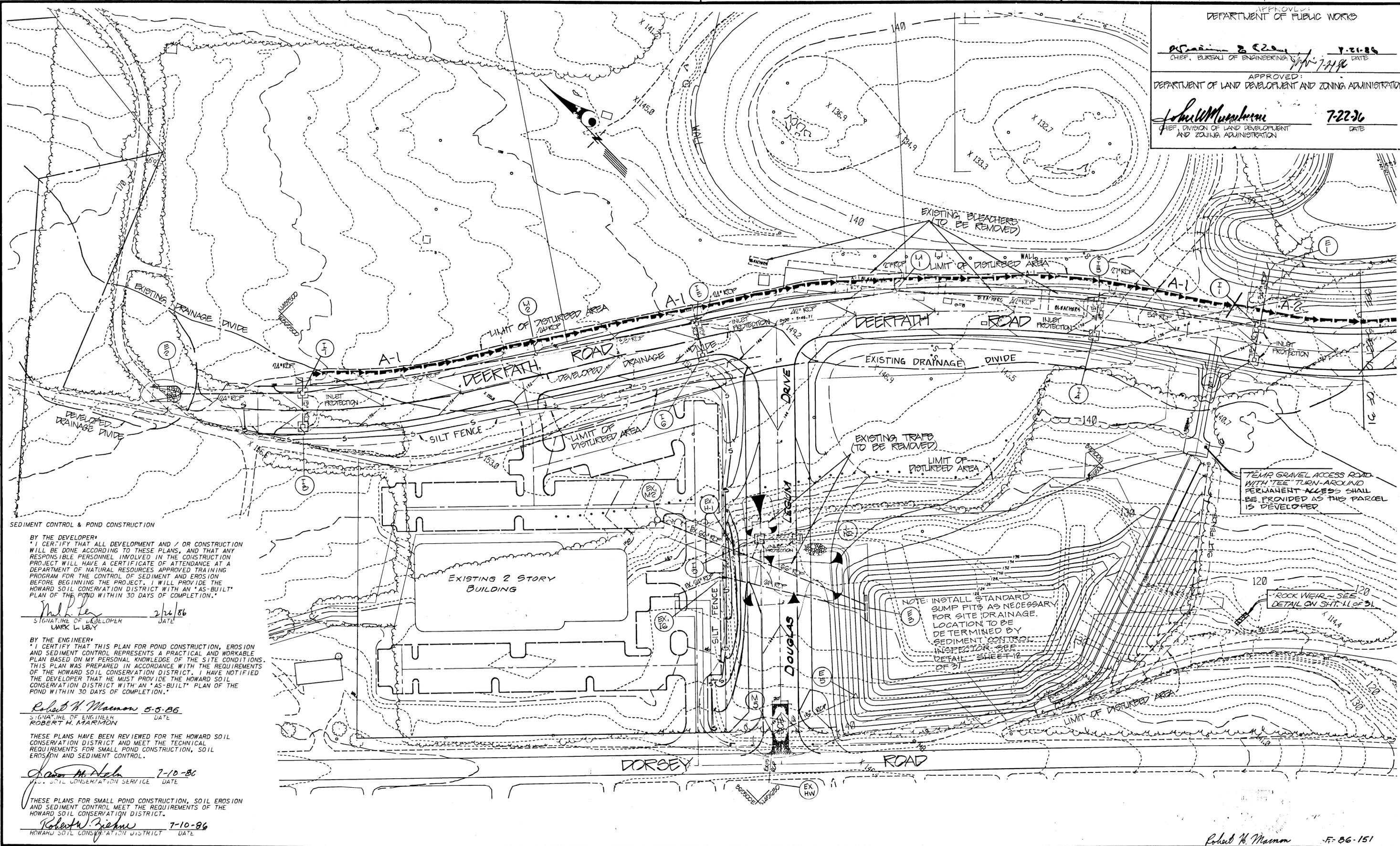


PLATE 1 PLAN PROFILE (D.P. & S.A.) STANDARD
1:1200, CONFORMANCE
LIMITED IN U.S.A.

APPROVED: *Robert H. Marmor* 7-21-86
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: *John M. Marmor* 7-22-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE



SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER:
 * I CERTIFY THAT ALL DEVELOPMENT AND / OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

Mark L. Levy 7/26/86
 SIGNATURE OF DEVELOPER DATE
 MARK L. LEVY

BY THE ENGINEER:
 * 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.

Robert H. Marmor 5-5-86
 SIGNATURE OF ENGINEER DATE
 ROBERT H. MARMON

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. Nolan 7-10-86
 SOIL CONSERVATION SERVICE DATE

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

Robert W. Zickler 7-10-86
 HOWARD SOIL CONSERVATION DISTRICT DATE

TEMP GRAVEL ACCESS ROAD WITH TEE TURN AROUND PERMANENT ACCESS SHALL BE PROVIDED AS THE PARCEL IS DEVELOPED

NOTE: INSTALL STANDARD SUMP PITS AS NECESSARY FOR SITE DRAINAGE. LOCATION TO BE DETERMINED BY SEDIMENT CONTROL INSPECTOR. SEE DETAIL SHEET 12 OF 31

ROCK WEIR - SEE DETAIL ON SHT. 11 OF 31

OWNER:
 DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
 7223 PARKWAY DRIVE
 HANOVER, MARYLAND 21076
 PHONE: (301) 706-4446

No.	REVISION	DATE	BY



ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
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 GREENBELT, MD • ANNAPOLIS, MD • ATLANTA, GA • BECKLEY, WV • CULPEPER, VA • DENVER, CO
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(STREETS ONLY)
 SEDIMENT CONTROL PLAN
DORSEY BUSINESS CENTER
 PHASE I
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

JWC DESIGN	SCALE 1" = 50'
ELP DRAWN	9 OF 31
RHM CHECKED	
MARCH, 86 DATE	R-1266-X FILE No.

APPROVED:
DEPARTMENT OF PUBLIC WORKS
Michael J. Kelly 7-21-86
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED:
DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
John W. Musickum 7-22-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

SEDIMENT BASIN #1
 DRAINAGE AREA = 8.8 AC.
 REQ. STORAGE = 15,840 FT.³
 BOTTOM ELEV. = 118.20
 RIGID CREST ELEV. = 122.50
 TOP OF EMBANKMENT ELEV. = 127.0
 AVG. BOTTOM DIA. = 60' X 135'
 STORAGE DEPTH = 1.8'
 APPROX. STORAGE PROVIDED = 16,000 FT.³
 MAX. SIDE SLOPES = 2:1
 CLEANOUT ELEV. = 118.9
 DISTANCE BELOW TOP OF RIDGE = 3.5'

NOTE: INSTALL STANDARD SUMP PITS AS NECESSARY FOR SITE DRAINAGE. LOCATION TO BE DETERMINED BY SEDIMENT CONTROL INSPECTOR. SEE DETAIL SHEET #12 OF 21

SEDIMENT TRAP #2
 DRAINAGE AREA = 1.3 AC.
 REQ. STORAGE = 2340 FT.³
 BOTTOM ELEV. = 110.0
 CREST ELEV. = 114.0
 CREST LENGTH (b) = 4.0 FT.
 TOP OF EMBANKMENT ELEV. = 118.0
 AVG. BOTTOM DIA. = 25' X 25'
 STORAGE DEPTH = 3.0 FT.
 APPROX. STORAGE PROVIDED = 2352 FT.³
 MAX. SIDE SLOPES = 2:1
 CLEAN OUT ELEV. = 111.5
 FLOW DEPTH (a) = 1.5 FT.

SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER:
 I CERTIFY THAT ALL DEVELOPMENT AND / OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

Mark L. Levy 2/16/86
 SIGNATURE OF DEVELOPER DATE
 MARK L. LEVY

BY THE ENGINEER:
 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.

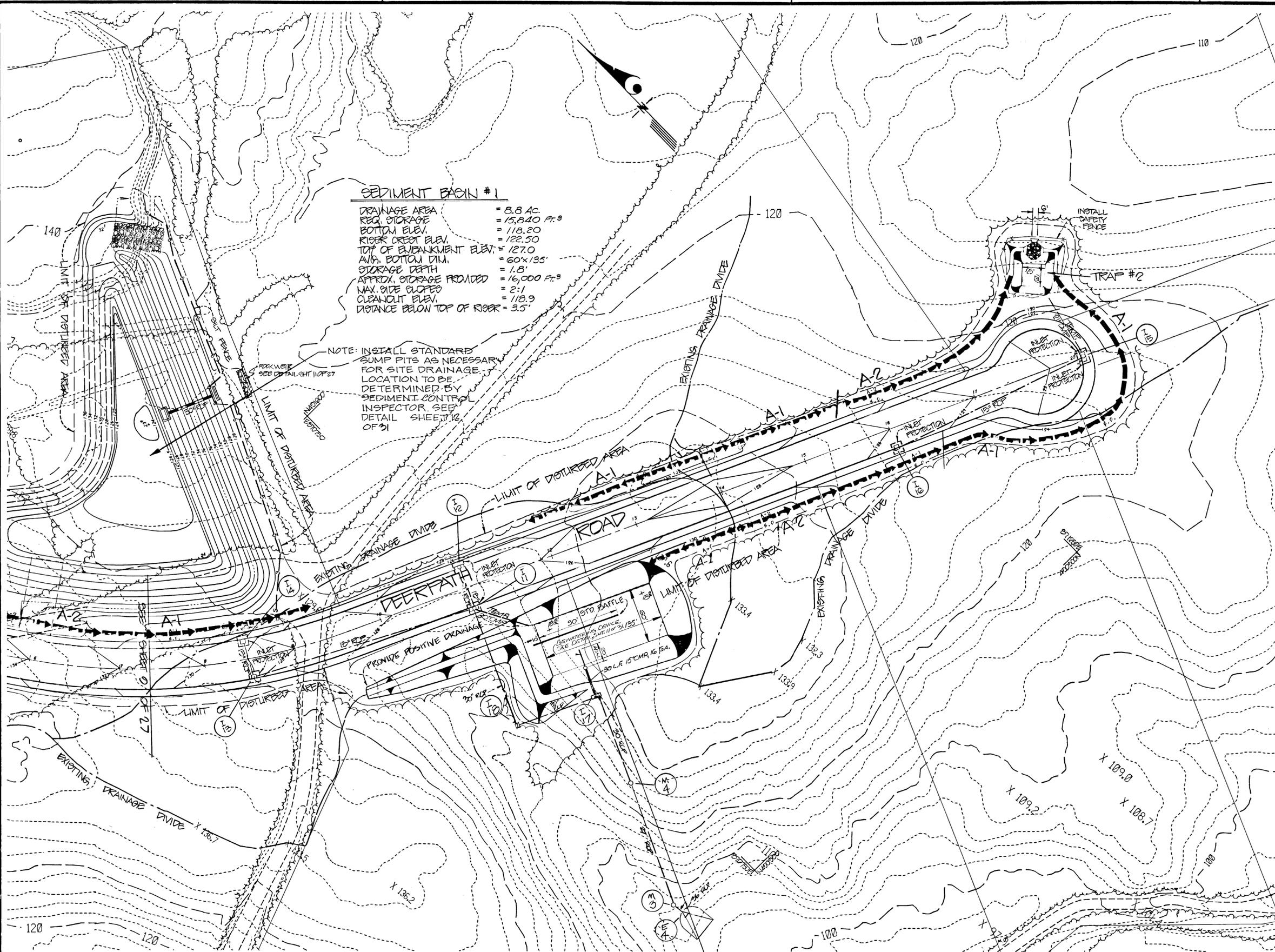
Robert H. Marmor 3-5-86
 SIGNATURE OF ENGINEER DATE

ROBERT H. MARMON
 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. Katz 7-10-86
 U.S. SOIL CONSERVATION SERVICE DATE

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

Robert W. Zickler 7-10-86
 HOWARD SOIL CONSERVATION DISTRICT DATE



OWNER:
 DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
 7223 PARKWAY DRIVE
 HANOVER, MARYLAND 21076
 PHONE: (301) 706-4446

No.	REVISION	DATE	BY

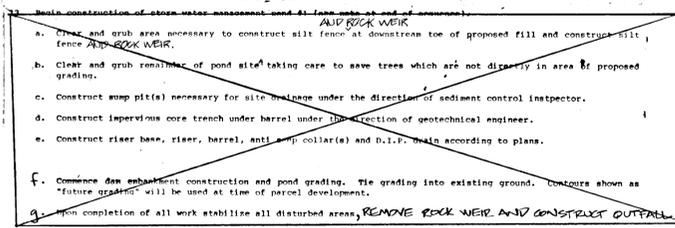


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(STREETS ONLY)
SEDIMENT CONTROL PLAN
DORSEY BUSINESS CENTER
 PHASE 1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

JWC DESIGN	SCALE 1" = 50'
BLP DRAWN	10 OF 31
RHM CHECKED	SHEET
MARTIN, RJC DATE	JOB No. FILE No.

- 1. Clear and grub areas necessary to construct rock weir downstream of proposed storm water management pond #4 and stabilized construction entrance. Construct rock weir and stabilized construction entrance as shown on sheets 9 and 11.
- 2. Remove existing 66 inch concrete outfall which outfalls at Douglas Legum Drive and install additional 178 feet of 66 inch RCP and 186 feet of 24 inch RCP under Douglas Legum Drive making certain to grade as necessary near proposed structure E-3 for drainage pond.
- 3. Construct silt fence along west edge of proposed fill slope necessary to construct Douglas Legum Drive and along south edge of Deeppath Road (west of Douglas Legum Drive).
- 4. Clear and grub areas necessary to construct sediment basin #1 along with I-7 and remainder of outfall system. Clear and grub areas necessary and construct sediment trap #2.
- 5. Clear and grub all areas necessary to construct earth dike along Deeppath Road and remove all bleachers and other structures in race track area. Construct all earth dikes.
- 6. Clear and grub all remaining areas necessary to construct Deeppath Road and Douglas Legum Drive. Begin grading of roads using excess fill material for Douglas Legum Drive. Also begin grading of access roads to pond #3 and #4.
- 7. Begin construction of storm water management pond #4 (see note at end of sequence).
- a. Clear and grub areas necessary to construct silt fence at downstream toe of proposed fill and construct silt fence.
- b. Clear and grub remainder of pond site taking care to save mature trees which are not directly in proposed grading areas.
- c. Construct sump pit(s) necessary for site drainage under the direction of sediment control inspector.
- d. Construct impervious core trench under barrel under the direction of geotechnical engineer.
- e. Remove existing pond embankment and structure as necessary to construct riser base, riser, barrel, D.I.P. drain, low flow pipe and anti seep collar(s) and construct according to plans.
- f. Commence dam embankment construction and grading of pond as shown on plans.
- g. As grading continues construct concrete endwall structure E-3 for 66 inch and 24 inch storm drain pipes at upper end of pond (see sheet B of 25).
- h. Upon completion of all work stabilize all disturbed areas.
- i. Upon stabilization of all contributing areas, remove rock weir downstream of pond embankment and construct riprap outfall structure.
- 8. Begin construction of storm water management pond #3 (see note at end of sequence).
- a. Clear and grub areas necessary to construct silt fence at downstream toe of proposed fill and construct silt fence AND ROCK WEIR.
- b. Clear and grub remainder of pond site taking care to save all trees which are not directly in proposed grading areas.
- c. Construct sump pit(s) necessary for site drainage under the direction of sediment control inspector.
- d. Construct impervious core trench under barrel under the direction of geotechnical engineer.
- e. Construct riser base, riser, barrel, anti seep collar(s) and D.I.P. drain according to plan.
- f. Commence dam embankment construction including emergency spillway.
- g. Begin grading of pond. The grading into existing ground in the rear of pond. Contours shown as "future grading" will be used at time of parcel development.
- h. Upon completion of all work stabilize all disturbed areas, REMOVE ROCK WEIR, AND CONSTRUCT OUTFALL.
- i. Upon completion of rough grading of roads begin utility construction.
- 10. Construct remainder of storm drain pipes and structures including temporary outfalls into sediment basin #1 and sediment trap #2. As each inlet I-1 through I-8 is completed, block off throat of inlet so as not to allow any water into the system. This sediment laden water is to be directed to sediment basin #1 via inlets I-1 through I-14. Use inlet protection for inlets I-13 and I-14.
- 11. Clear and grub areas necessary to construct silt fences along temporary access road to pond #1 and construct silt fences.
- 12. Begin construction of access road according to plan.



- 13. Clear and grub areas necessary to construct silt fence at downstream toe of proposed fill and construct silt fence AND ROCK WEIR.
- 14. Upon completion and certification of utilities, fine grade paving areas and begin curb and gutter construction. Upon completion of curb and gutter begin paving construction.
- 15. Complete any remaining grading and stabilize all remaining disturbed areas.
- 16. Upon completion of all construction and disturbed area stabilization, remove temporary sediment control measures, construct any remaining storm drain system and stabilize all remaining areas.

NOTE: Ponds #1, #3 and #4 may be constructed simultaneously under the option of the contractor.

SEDIMENT CONTROL NOTES

- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3) Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 53) and (Sec. 54), 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 72.4 Acres, Area Disturbed 7.2 Acres, Area to be seeded or paved 2.2 Acres, Area to be vegetatively stabilized 110 Acres, Total Cut 35,000 Cu. yds, Total Fill 35,000 Cu. yds, Offsite waste/borrow area location BARCELLE

8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

9) Additional sediment controls must be provided, if detected necessary by the Howard County DPM sediment control inspector.

10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

D. Pipe Conduits: All pipe denoted as "CMP" may be either corrugated aluminum pipe or asphalt coated corrugated steel pipe. The barrel, riser, trash rack, end section, and anti-seep collars must all be made of the same material (either steel or aluminum).

STORMWATER MANAGEMENT CONSTRUCTION SPECIFICATIONS

A. Site Preparation

Areas under the embankment, structural works, and stream diversion shall be cleared, grubbed, and the topsoil stripped to remove all trees, vegetation, roots, or other objectionable material. To facilitate clean out and restoration, the permanent pool area should be cleared of all brush and trees.

B. Earth Fill

Earth Fill shall conform to SMA specification Article 31.05 and these specifications:

1. Material

The fill material shall be taken from an approved borrow area. The first two feet of excavation under the embankment is to be wasted at the designated soil area. The final decision as to the suitability of the exposed soil shall be made by the Soils Engineer at the time of construction. All material shall be free from roots, stumps, wood, rubbish, oversized stones, frozen or other objectionable materials. The dam embankment should be formed of material conforming to the Unified Soil Classification SC, CL, and ML. As a minimum criteria, the fill material for the dam embankment (except as noted below) will have a maximum density not less than 100 pcf as determined by ASTM 99 Method A. The liquid limit shall not exceed 40 and the Plasticity Index must be between 12 and 25. All material shall contain no stone larger than three inches in the greatest dimension. Such stones shall not be more than 25 percent by volume of the fill material. For dam core trenches, the material used can include clean and organic-free CN and MW material in addition to CL and ML. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least ten percent above the design elevation (including freeboard) unless otherwise shown on the plans.

2. Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in eight-inch maximum thickness (before compaction) layers and shall be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

3. Connection

The movement of hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be compacted to a minimum of 95 percent of the maximum dry density obtained in connection tests of the fill materials performed in accordance with the requirements of the ASTM designation T99 Method A, prior to next lift being spread and be certified by the Soils Engineer at the time of construction. The fill density shall meet minimum specified density regardless of the compaction method used. The moisture content of the embankment material shall be within the designated upper and lower limits of the optimum moisture content. Limits of moisture content may be modified by the engineer during construction depending on material encountered. Fill placed at densities lower than the specified minimum density or at moisture contents outside the specified acceptable range of moisture content or otherwise not conforming to the requirements of the specifications shall be reworked to meet the requirements or removed and replaced by acceptable fill.

A. Core Trench/Cutoff Trench

Where specified, a core trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being 4 feet. The depth shall be at least 4 feet DEEPER AS REQUIRED BY THE GEOTECHNICAL ENGINEER ON SITE. The side slopes of the trench shall be one-one or flatter. The backfill material for the core trench shall be approved prior to use and shall be free of all organic material. The fill for the trench shall be compacted with equipment or rollers to assure that a minimum of 95 percent of the maximum dry density and minimum permeability is achieved. GEOTECHNICAL ENGINEER TO SPECIFY MINIMUM DEPTH DURING CONSTRUCTION INSPECTION.

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material must completely fill all spaces under and adjacent to the structure or pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a concrete structure or pipe unless there is a compacted fill of 24 inches or greater over the structure or pipe.

B. Rip Rap and Slope Protection

Rip rap for slope protection shall conform to SMA specifications and Supplement (August 1990), Article 20.07 (Portland Cement Concrete Mixtures), for Class (SA-1) or (SA-2) concrete and 20.10 for reinforcement. Concrete construction shall conform to SMA Specifications, Articles 34.08 and 34.09.

C. Fencing

When required by the HOWARD SOIL CONSERVATION DISTRICT OWNER link fence fabric, fence posts, top rails, braces, gates, and accessories shall conform to the requirements of Federal Specification RR-F-191. Materials shall be as follows, except as otherwise specified:

Fabric: Type 1, 2-inch mesh, 9-gauge, minimum weight of zinc coating--1.8 ounces per square foot. Barbed Wire: Zinc-coated steel. Posts: Type 1, Class 1, zinc-coated. Top Rails: Type 11, Class 1, zinc-coated. Braces: Zinc-coated steel. Gates: Type 1, zinc-coated steel.

1. Corrugated Metal Pipe

a. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and have full bituminous coating and shall conform to the requirements of ASTM Specification M-190, Type A, with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

b. Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of ASTM Specification M-196 or M-211 with watertight coupling bands. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soil shall be less than nine (9) and greater than four (4). Mechanically corrugated pipe, in addition to the requirements above, shall have either continuously welded seams or have lock seams which are caulked with a neoprene bead.

c. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around and shall be at the proper angle to provide a watertight connection. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.

d. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

e. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

f. Backfilling shall conform to structural backfill as described above.

g. Other details (anti-seep collar, valves, etc.) shall be as shown on the drawings.

2. Reinforced Concrete Pipe

a. Material - This pipe shall conform to SMA specification, Article 20.16. Class IV pipe shall be used unless otherwise specified. Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. Approved equivalents are MWA Specifications C-300, -301, and -302.

b. Bedding - All reinforced concrete pipe shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least ten percent of its diameter with a minimum thickness of three inches.

c. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed on the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.

d. All concrete pipe joints will be sealed with mortar inside and outside.

e. Backfilling shall conform to structural backfill as described above.

E. Concrete

Concrete shall meet minimum requirements set forth in SMA Specification and Supplement (August 1990), Article 20.07 (Portland Cement Concrete Mixtures), for Class (SA-1) or (SA-2) concrete and 20.10 for reinforcement. Concrete construction shall conform to SMA Specifications, Articles 34.08 and 34.09.

F. Rip Rap and Slope Protection

Rip rap for slope protection shall conform to SMA specifications and Supplement (August 1990), Article 20.07. Plastic filter cloth shall be placed under all rip rap. Filter cloth shall be "Poly Filter" or approved substitute.

G. Fencing

When required by the HOWARD SOIL CONSERVATION DISTRICT OWNER link fence fabric, fence posts, top rails, braces, gates, and accessories shall conform to the requirements of Federal Specification RR-F-191. Materials shall be as follows, except as otherwise specified:

Fabric: Type 1, 2-inch mesh, 9-gauge, minimum weight of zinc coating--1.8 ounces per square foot. Barbed Wire: Zinc-coated steel. Posts: Type 1, Class 1, zinc-coated. Top Rails: Type 11, Class 1, zinc-coated. Braces: Zinc-coated steel. Gates: Type 1, zinc-coated steel.

H. Stabilization

Borrow areas, spoil areas, and all graded areas of the dam and road shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, and borrow areas shall be stabilized by seeding and applying straw mulch in accordance with these specifications and SMA Specifications, Article 20.07, 20.28, 20.29, 36.04, and 36.05.

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

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

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. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue add mulch with 2 tons/acre well anchored straw.

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

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

I. Reformation

a. Seeding should be planted above the two-year storm pool. Varieties and spacings shall be in accordance with the State Forester, Maryland Forestry Service. The State Forestry Service should be contacted to establish details of Reformation Plan.

J. Construction Inspection by Designated Engineer

The construction of the pond and embankment shall be under the supervision of a registered engineer. The engineer must certify that the pond and embankment have been built in accordance with the plans and submit such a written certification to the HOWARD SOIL CONSERVATION DISTRICT immediately following the completion of the project. The engineer shall have the responsibility and authority to make minor changes in the plans in order to compensate for unusual soils conditions encountered during construction as long as changes do not adversely affect the integrity of the dam. Major changes to the design which may result from site conditions encountered during construction must be reviewed and approved by the Design Engineer and the MDC prior to initiation of construction. CONSTRUCTION INSPECTION TO BE MADE BY GEOTECHNICAL ENGINEER.

K. Care of Water During Construction

All work on permanent structures shall be carried out in areas free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the area to be occupied by the permanent works, and to furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. The diversion and care of the stream will be diverted through the site until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being re-filled shall be maintained below the bottom of the excavation at such locations, which may require draining the water to sumps from which the water shall be pumped.

L. ADDITIONAL INFORMATION

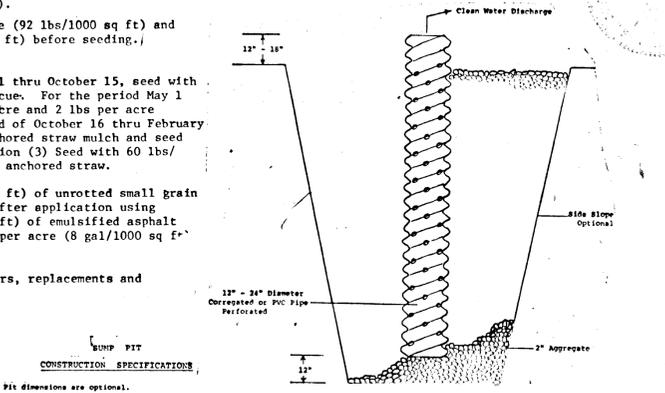
CONSULT GEOTECHNICAL ENGINEERING REPORT PRIOR TO CONSTRUCTION FOR ANY ADDITIONAL REQUIREMENTS.

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John W. Musickman 7-21-86 DATE

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

William B. Pugh 7-21-86 DATE



- 1. Pit dimensions are optional.
- 2. The standpipe should be constructed by prefabricating a 12" - 24" diameter corrugated or PVC pipe.
- 3. A base of 2" aggregate should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with 2" aggregate.
- 4. The standpipe should extend 12" x 18" above the lip of the pit.
- 5. If discharge will be pumped directly to a storm drainage system, the standpipe should be wrapped with filtercloth before installation. If desired, a 1/2" - 3/4" hardware cloth may be placed around the standpipe prior to attaching the filtercloth. This will increase the rate of water seepage into the pipe.

SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER: I CERTIFY THAT ALL DEVELOPMENT AND / OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

Mark L. Levy 2/26/86 DATE

SIGNATURE OF DEVELOPER MARK L. LEVY

BY THE ENGINEER:

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.

Robert H. Marmor 7-2-86 DATE

SIGNATURE OF ENGINEER ROBERT H. MARMON

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.

John M. Helle 7-10-86 DATE

SIGNATURE OF ENGINEER JOHN M. HELLE

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

Roseanne Ziemke 7-10-86 DATE

SIGNATURE OF ENGINEER ROSEANNE ZIEMKE

HOWARD SOIL CONSERVATION DISTRICT

OWNERS: DORSEY BUSINESS CENTER LTD. PARTNERSHIP 7223 PARKWAY DRIVE HANOVER, MARYLAND 21076 PHONE: (301) 795-4146

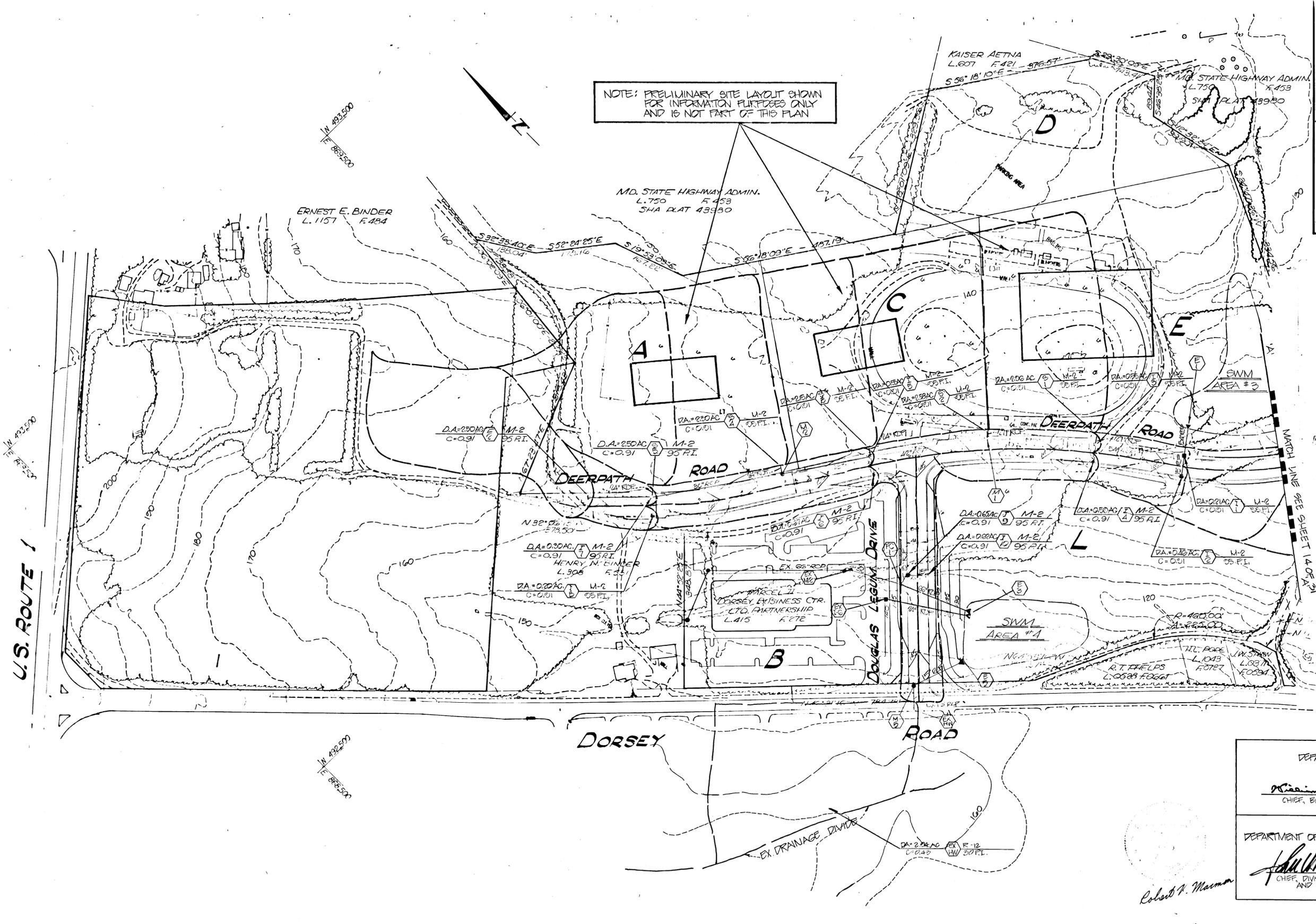
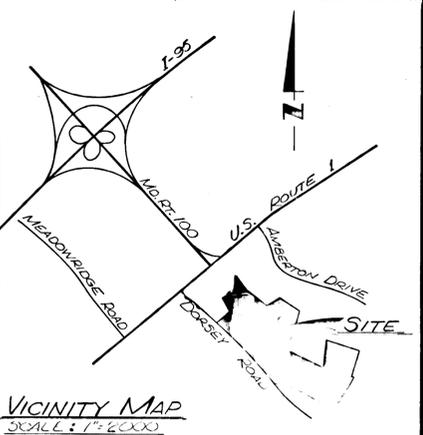
No.	REVISION	DATE	BY
1	SWM #1 WAIVED	3/11/87	RJM

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
GREENHORNE & O'MARA, INC.
2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
(301) 948-0900
GREENBELT, MD • ANNAPOLIS, MD • ATLANTA, GA • BECKLEY, WV • CULPEPER, VA • DENVER, CO
FAIRFAX, VA • GREENSBORO, NC • MONROE, MI • EXPORT, PA • WILLISTON PARK, NY

STORMWATER MANAGEMENT AND SEDIMENT CONTROL PLAN
PHASE I
DORSEY BUSINESS CENTER
ELECTION DISTRICT #1
HOWARD COUNTY, MARYLAND

DESIGN	SCALE NONE
DRAWN	120631
CHECKED	SHEET
DATE	JOB No.

NOTE: PRELIMINARY SITE LAYOUT SHOWN FOR INFORMATION PURPOSES ONLY AND IS NOT PART OF THIS PLAN



APPROVED:
DEPARTMENT OF PUBLIC WORKS
William B. Ray 7-21-86
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED:
DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
John W. Mearns 7-22-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

OWNER:
DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
7223 PARKWAY DRIVE
HANOVER, MARYLAND
PHONE (301) 796-4446

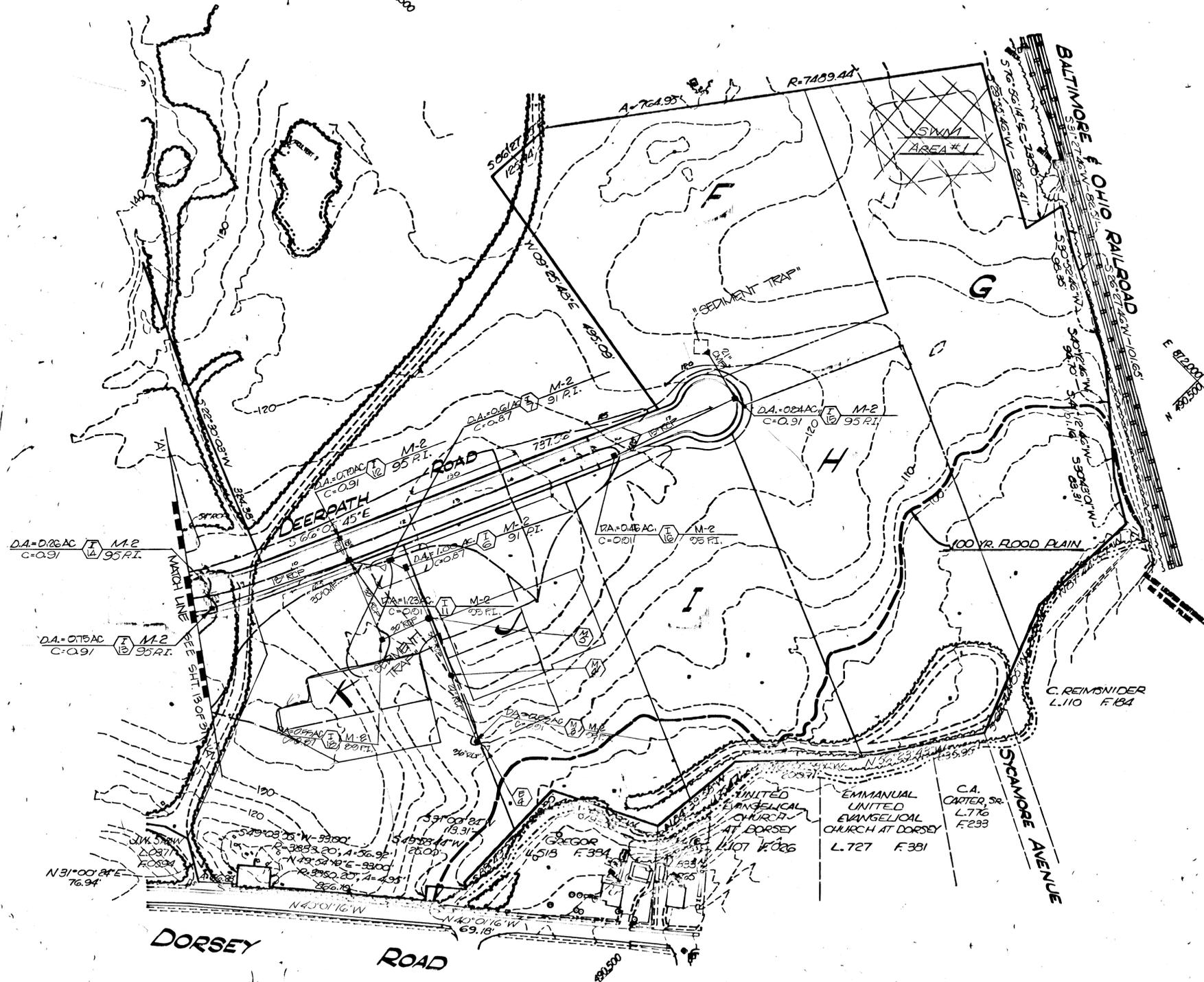
No.	REVISION	DATE	BY



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FAIRFAX, VA • GREENSBORO, NC • MONROE, MI • EXPORT, PA • WILLISTON PARK, NY

DRAINAGE AREA MAP
DORSEY BUSINESS CENTER
PHASE I
TAX MAP 37.43 LIBER 1300 FOLIO 547
ELECTION DISTRICT #1 HOWARD CO., MD.

JWC DESIGN	SCALE 1" = 100'
JEP/BLP DRAWN	13 OF 31
RHM CHECKED	
DATE	JOB No.
FILE No.	R-1265-X



APPROVED:
DEPARTMENT OF PUBLIC WORKS

James P. Ryan 7-21-86
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED:
DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

John W. Murchison 7-22-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE



Robert B. Marmo
F-86-151

OWNER:
DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
7223 PARKWAY DRIVE
HANOVER, MARYLAND 21076
PHONE: (301) 796-4446

No.	REVISION	DATE	BY
3	SWIM POND #1 DELETED	5-1-87	RHM
2	REV. DRAINAGE AREA	5-20-87	JDP
1	EXTENDED STORM DRAIN THROUGH PARCEL K	6-26	WVU



ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.
2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
(301) 948-0900

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FAIRFAX, VA • GREENSBORO, NC • MONROE, MI • EXPORT, PA • WILLISTON PARK, NY

DRAINAGE AREA MAP
DORSEY BUSINESS CENTER
PHASE I

TAX MAP 37.43 LIBER 1300 FOLIO 547
ELECTION DISTRICT #1 HOWARD CO., MD.

JWJC DESIGN	SCALE 1"=100'
JDP/BLP DRAWN	14 OF 31
RHM CHECKED	SHEET
DATE	JOB No. FILE No.

SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER:
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Mark L. Levy 2/26/86
 SIGNATURE OF DEVELOPER DATE
 MARK L. LEVY

BY THE ENGINEER:
 "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."

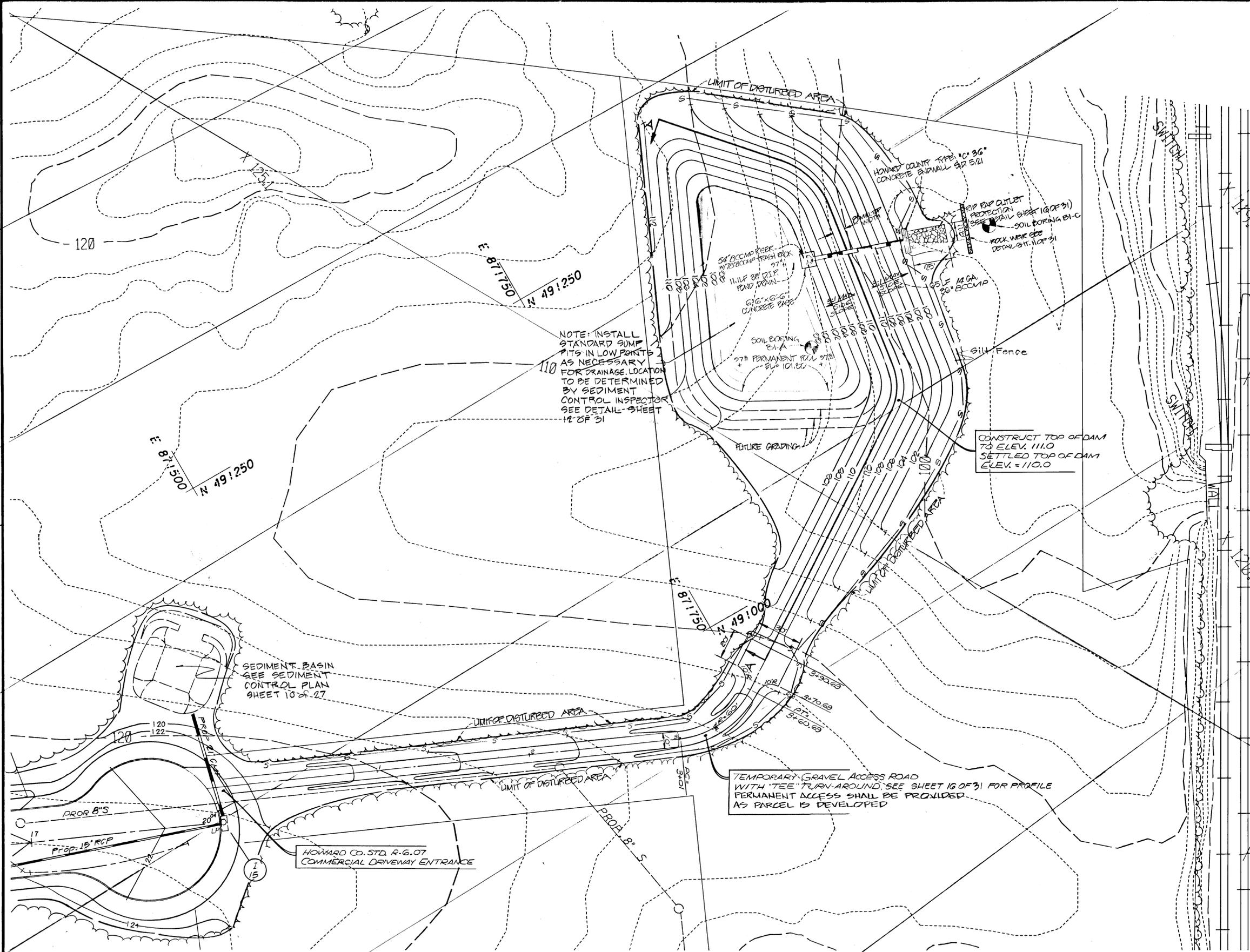
Robert H. Marmon 3-5-86
 SIGNATURE OF ENGINEER DATE
 ROBERT H. MARMON

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.

Robert H. Marmon 7-10-86
 U.S. SOIL CONSERVATION SERVICE DATE

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

Robert W. Ziehm 7-10-86
 HOWARD SOIL CONSERVATION DISTRICT DATE



SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER:
 I CERTIFY THAT ALL DEVELOPMENT AND / OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

Mark L. Levy
 SIGNATURE OF DEVELOPER
 DATE 3/14/86

BY THE ENGINEER:
 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.

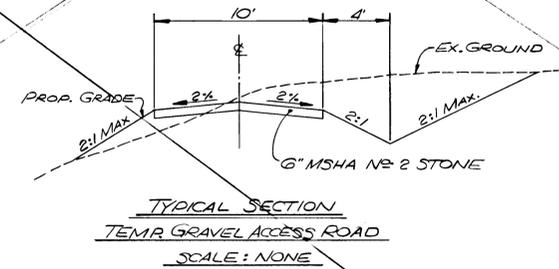
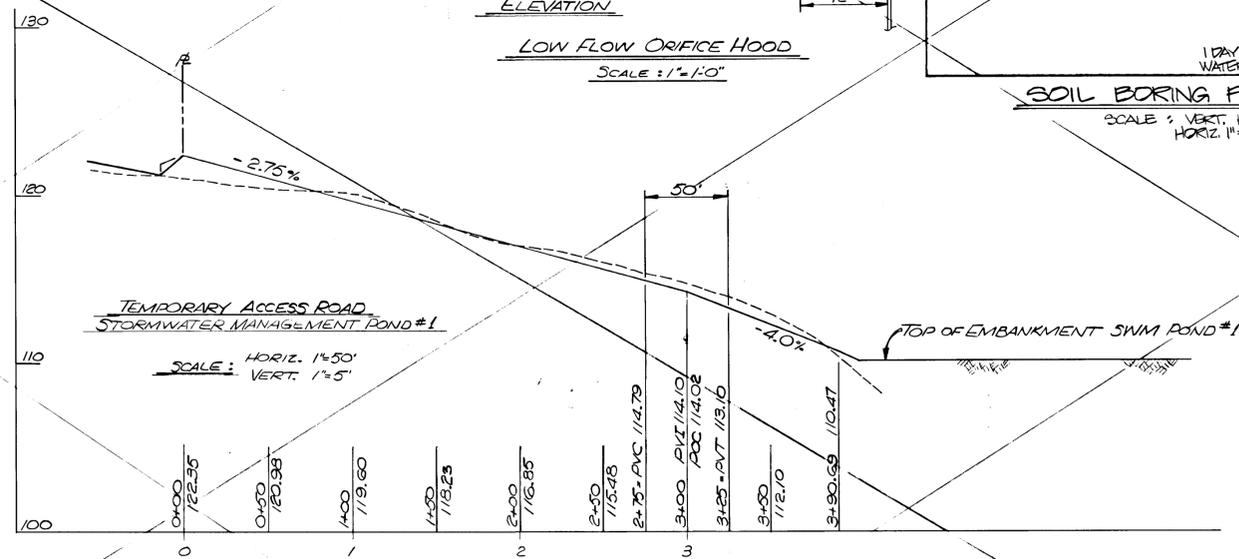
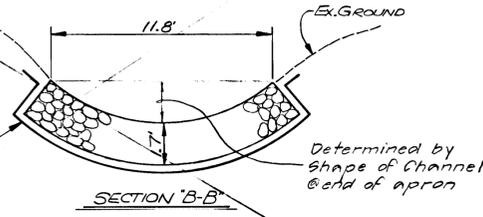
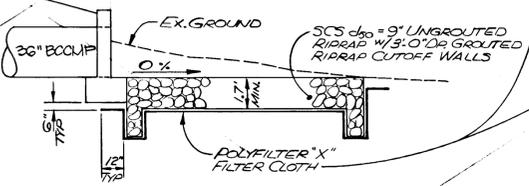
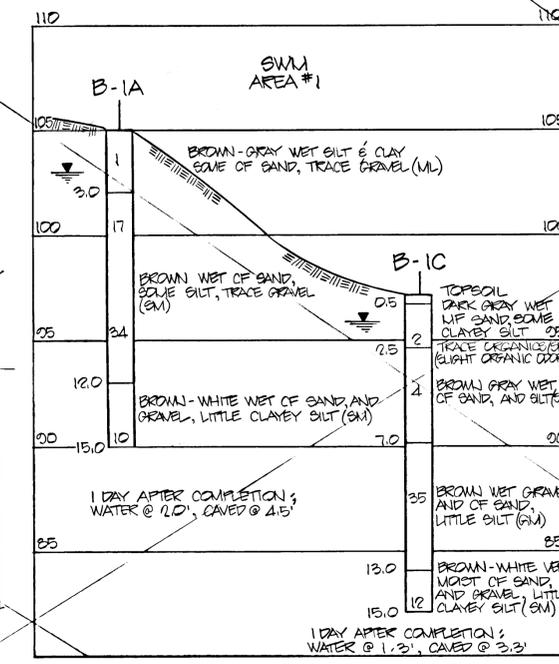
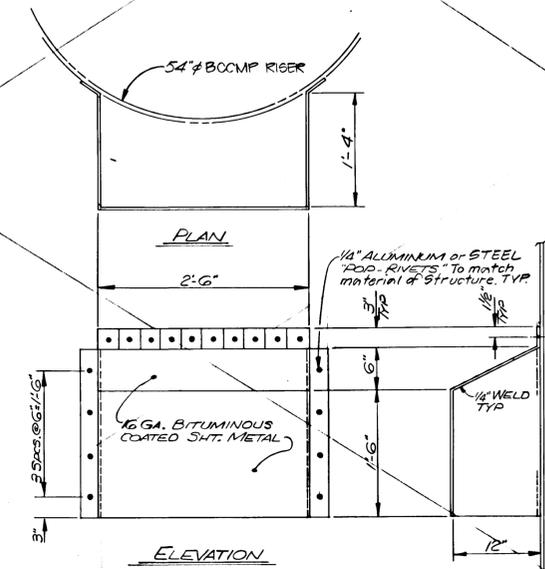
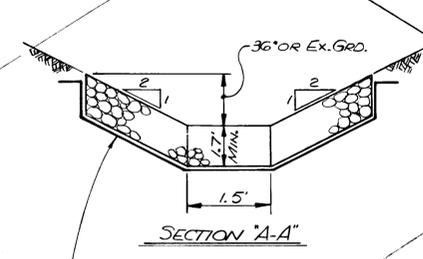
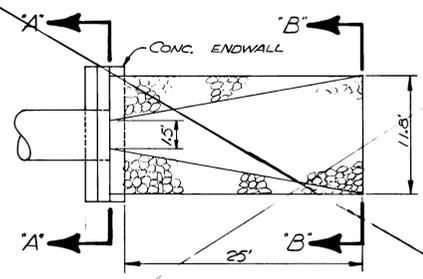
Robert H. Marmon
 SIGNATURE OF ENGINEER
 DATE 5-5-86
 ROBERT H. MARMON

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. Vela
 U.S. SOIL CONSERVATION SERVICE
 DATE 7-10-86

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

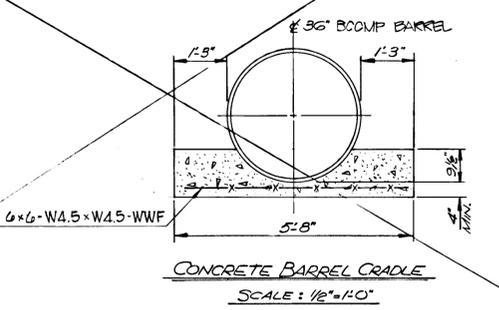
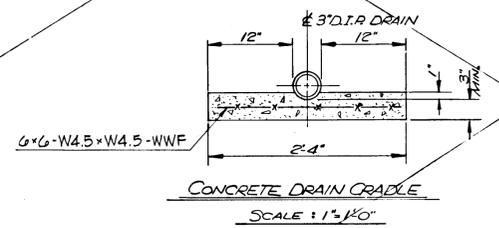
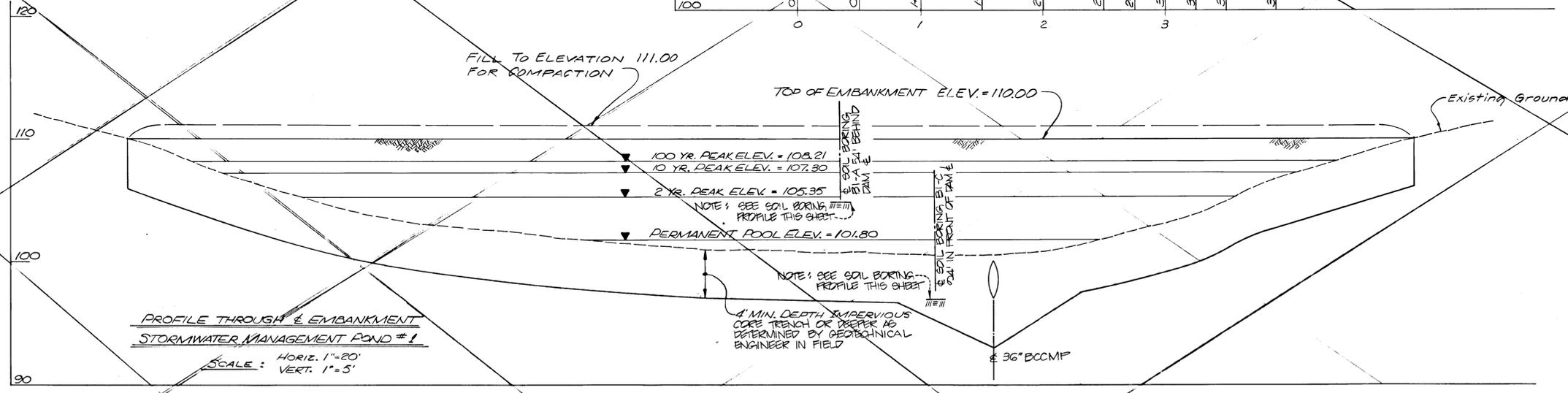
Robert H. Marmon
 HOWARD SOIL CONSERVATION DISTRICT
 DATE 7-10-86



DEPARTMENT OF PUBLIC WORKS
Robert H. Marmon
 CHIEF, BUREAU OF ENGINEERING
 DATE 7-21-86

DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
John W. Marchman
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMIN.
 DATE 7-22-86

Robert H. Marmon



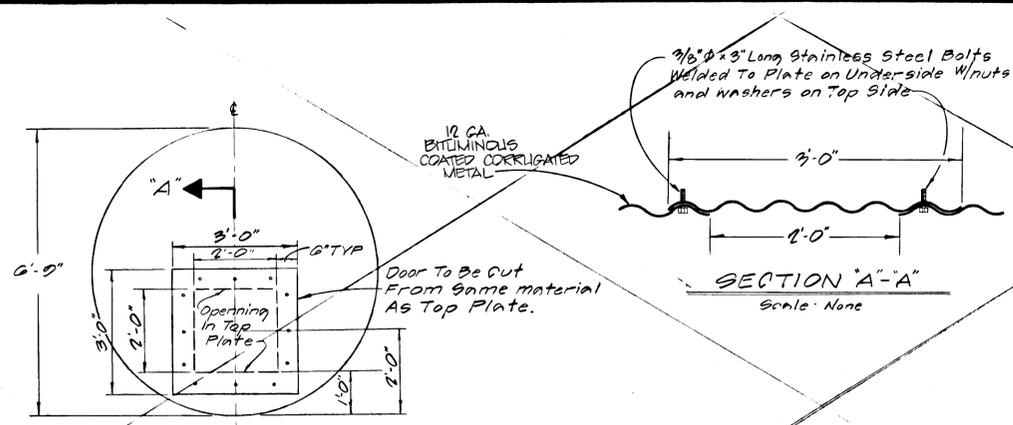
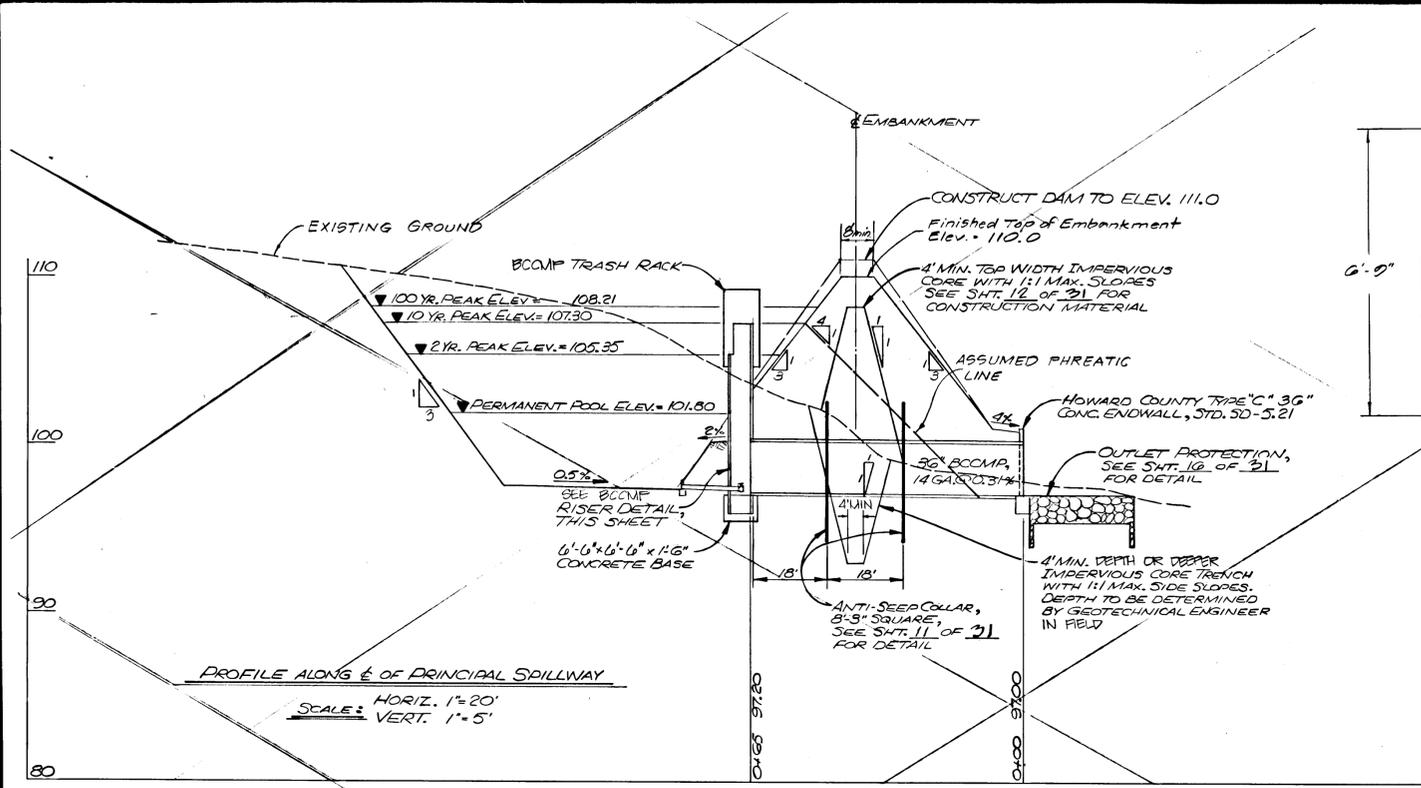
No.	REVISION	DATE	BY
1	SWM POND #1 WAIVED BY DPW 5/1/87 RHM		



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GREENHORNE & O'MARA, INC.
 2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
 (301) 948-0900
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 GREENBELT, MD • MONROE, MI • RALEIGH, NC • TAMPA, FL • WILLISTON PARK, NY

STORMWATER MANAGEMENT POND #1 DETAILS
DORSEY BUSINESS CENTER
 PHASE 1
 TAX MAP 37.43 LIBER 1300 FOLIO 547
 ELECTION DISTRICT #1 HOWARD CO., MD.

JWC DESIGN	SCALE AS SHOWN
JDP DRAWN	16 OF 31
RHM CHECKED	SHEET
MAR, '86 DATE	R-1266-X FILE No.
JOB No.	



SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER:
I CERTIFY THAT ALL DEVELOPMENT AND / OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

3/14/86
DATE

MARK L. LEVY
SIGNATURE OF DEVELOPER

BY THE ENGINEER:
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.

5-5-86
DATE

ROBERT H. MARMON
SIGNATURE OF ENGINEER

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.

7-10-86
DATE

JOHN W. MARMON
SIGNATURE OF ENGINEER

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

7-10-86
DATE

ROBERT W. ZIEHLER
SIGNATURE OF ENGINEER

DEPARTMENT OF PUBLIC WORKS

7-21-86
DATE

ROBERT W. ZIEHLER
CHIEF, BUREAU OF ENGINEERING

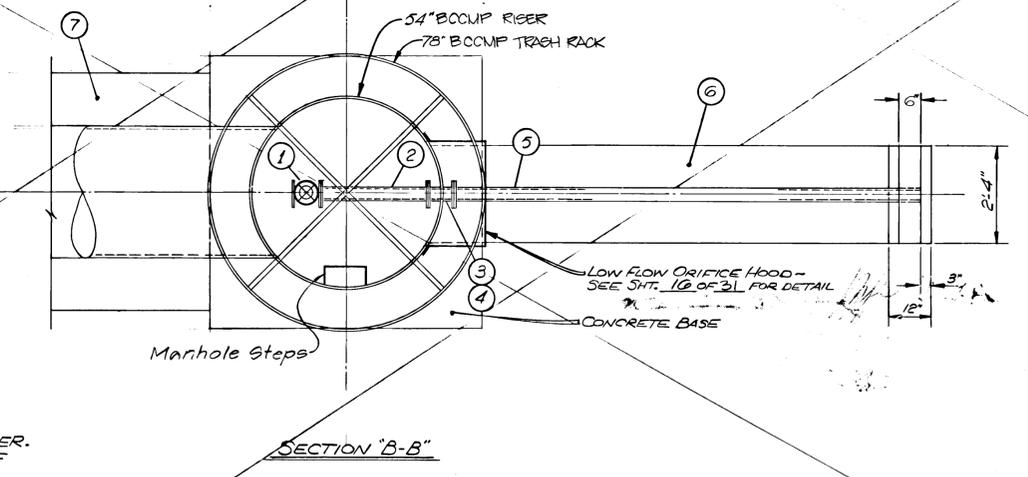
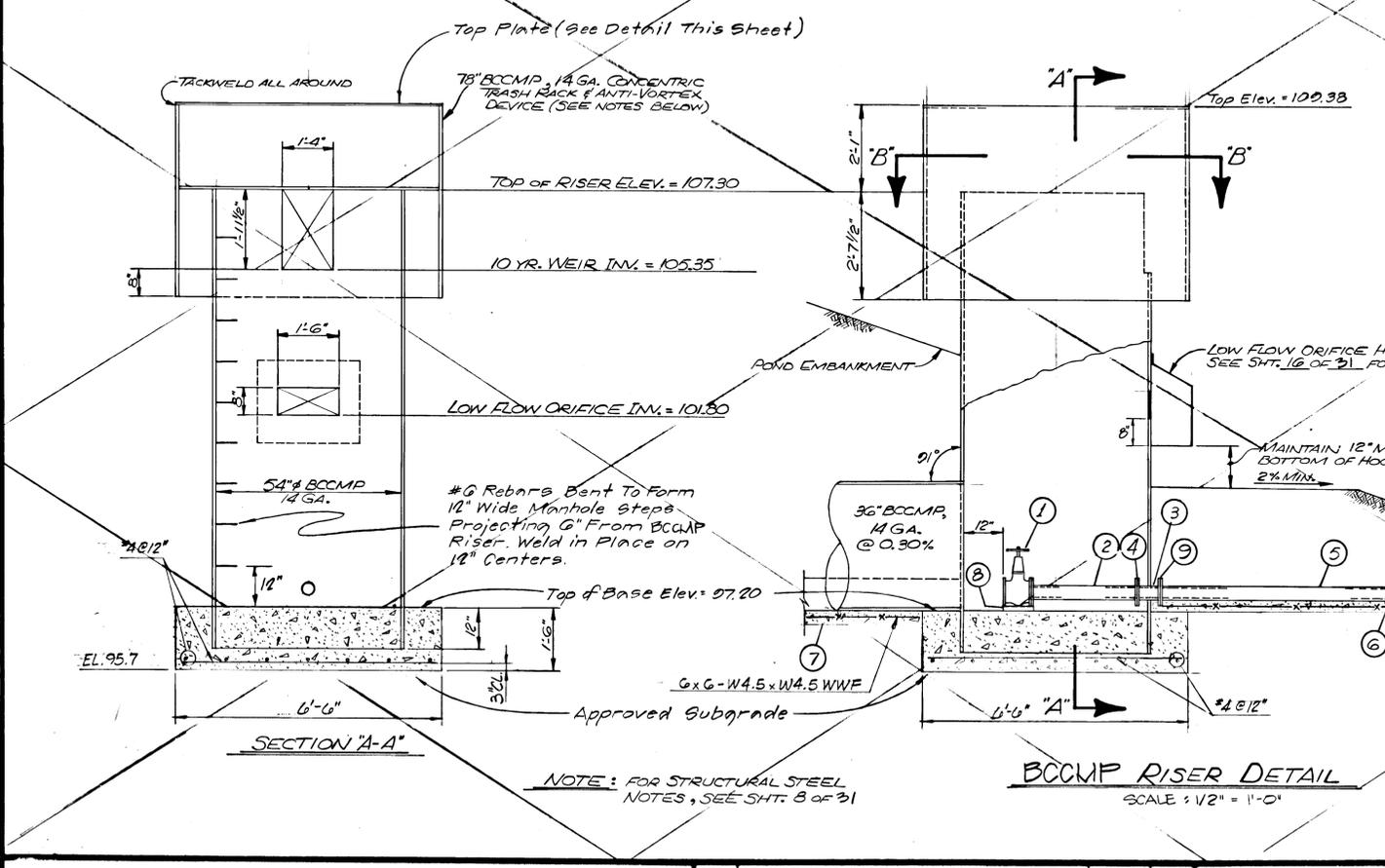
DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

7-22-86
DATE

JOHN W. MARMON
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMIN.

MATERIAL LIST ~ SWIM POND # 1

PART NO.	DESCRIPTION
1	CLOW ANWA 3" F-5070 Double DISC GATE VALVE WITH FLANGED ENDS
2	2'-7" x CLOW F-162 FLANGED JOINT PIPE (3" Ø)
3	7" CLOW F-1431 FLANGED & MECH. JOINT WALL PIPE DRILLED FOR STUDS
4	CLOW F-1940 RED SHEET RUBBER RING GASKETS, F-310 LONG HUB FLANGE & F-1925 MACHINE BOLTS W/ NUTS
5	11'-1" x CLOW F-122 3" MECHANICAL JOINT PIPE W/ ONE PLAIN END
6	CONCRETE DRAIN CRADLE SEE DETAIL SHEET 16 OF 21
7	CONCRETE BARREL CRADLE SEE DETAIL SHEET 16 OF 21
8	6" x 6" x 1/2" STL. PL. ON 1/2" x GROUT & 1" x CONC. PIER
9	CLOW F-915 PLAIN RUBBER GASKET, F-1045 GLAND & F-918 MECH. JOINT BOLTS W/ HEX NUTS



NOTES:
1. TRASH RACK/ANTI-VORTEX DEVICE MUST BE SECURELY FASTENED TO THE TOP OF THE RISER.
2. SUPPORT ANGLES ARE WELDED TO THE TOP OF THE RISER.

No.	REVISION	DATE	BY
1	SWIM POND #1 WAIVED BY DPW	3/11/87	RHM

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GREENHORNE & O'MARA, INC.
2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
(301) 948-0900

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GREENBELT, MD • MONROE, MI • RALEIGH, NC • TAMPA, FL • WILLISTON PARK, NY

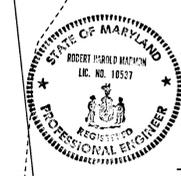
STORMWATER MANAGEMENT POND #1 DETAILS
DORSEY BUSINESS CENTER
PHASE 1
TAX MAP 37,43 LIBER 1300 FOLIO 547
ELECTION DISTRICT #1 HOWARD CO., MD.

JWC DESIGN SCALE As Shown
JDP DRAWN 17 OF 31
RHM CHECKED SHEET
Mar, '86 DATE R-1866-X FILE No.

SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER:
 "I CERTIFY THAT ALL DEVELOPMENT AND / OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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."

Mark L. Levy 7-26-86
 SIGNATURE OF DEVELOPER DATE
 MARK L. LEVY



BY THE ENGINEER:
 "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."

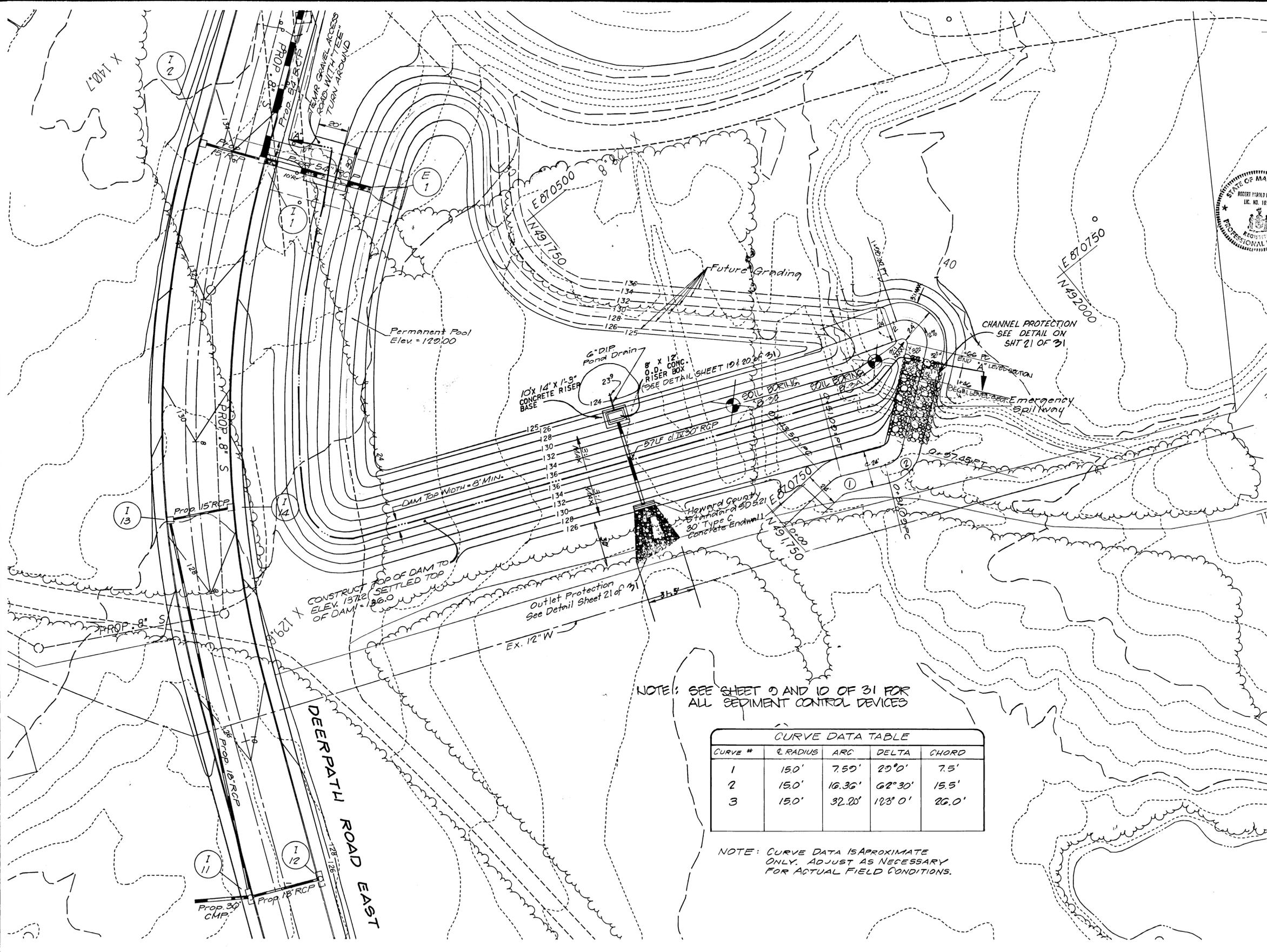
Robert H. Marmon 3-5-86
 SIGNATURE OF ENGINEER DATE
 ROBERT H. MARMON

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.

John M. Nahn 7-10-86
 U.S. SOIL CONSERVATION SERVICE DATE

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

Robert W. Zieher 7-10-86
 HOWARD SOIL CONSERVATION DISTRICT DATE



NOTE: SEE SHEET 9 AND 10 OF 31 FOR ALL SEDIMENT CONTROL DEVICES

CURVE DATA TABLE				
CURVE #	¢ RADIUS	ARC	DELTA	CHORD
1	150'	7.59'	29° 0'	7.5'
2	150'	16.36'	62° 30'	15.5'
3	150'	32.28'	103° 0'	26.0'

NOTE: CURVE DATA IS APPROXIMATE ONLY. ADJUST AS NECESSARY FOR ACTUAL FIELD CONDITIONS.

APPROVED
 DEPARTMENT OF PUBLIC WORKS
Robert W. Zieher 7-21-86
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED
 DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
John W. Murchman 7-22-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMIN. DATE

OWNER:
 DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
 7223 PARKWAY DRIVE
 HANOVER, MARYLAND
 PHONE (301) 796-4446

No.	REVISION	DATE	BY



ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
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 2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
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STORMWATER MANAGEMENT POND # 3
DORSEY BUSINESS CENTER
 PHASE 1
 TAX MAP 37,43 LIBER 1300 FOLIO 547
 ELECTION DISTRICT #1 HOWARD CO., MD.
 JWC DESIGN SCALE 1" = 30'
 CADD DRAWN 18 OF 31
 RHM CHECKED SHEET
 Mar, 86 DATE JOB No. FILE No.

BY THE DEVELOPER:
 I CERTIFY THAT ALL DEVELOPMENT AND / OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

Mark L. Levy 7/26/86
 SIGNATURE OF DEVELOPER DATE
 MARK L. LEVY

BY THE ENGINEER:
 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.

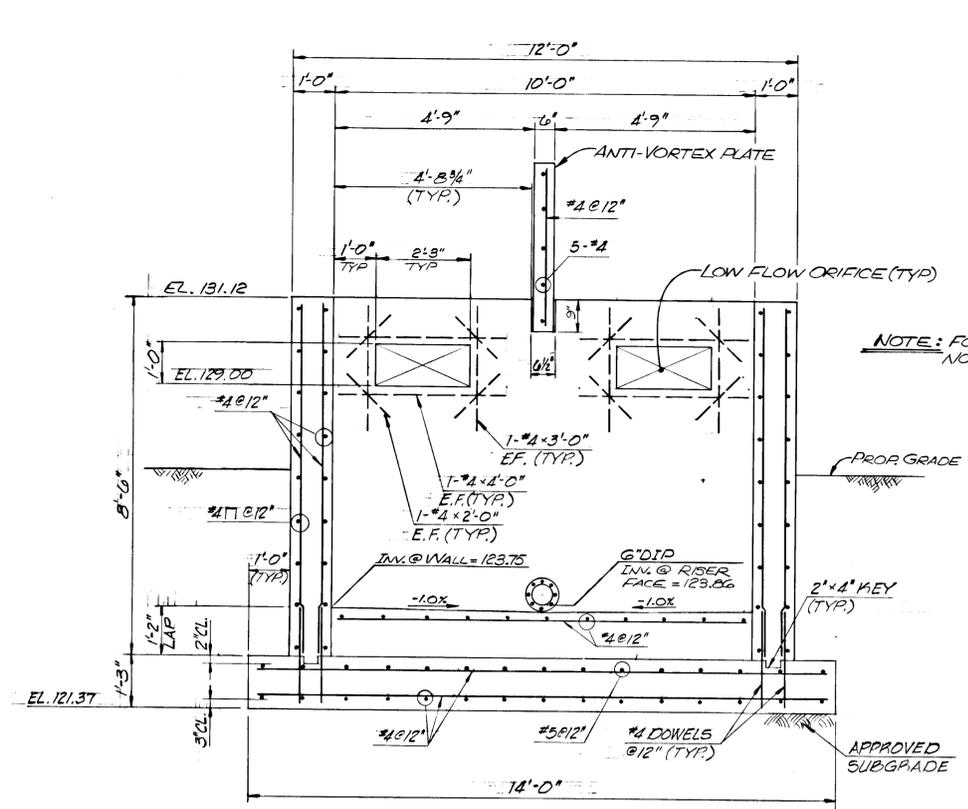
Robert H. Marmo 3-5-86
 SIGNATURE OF ENGINEER DATE
 ROBERT H. MARMO

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.

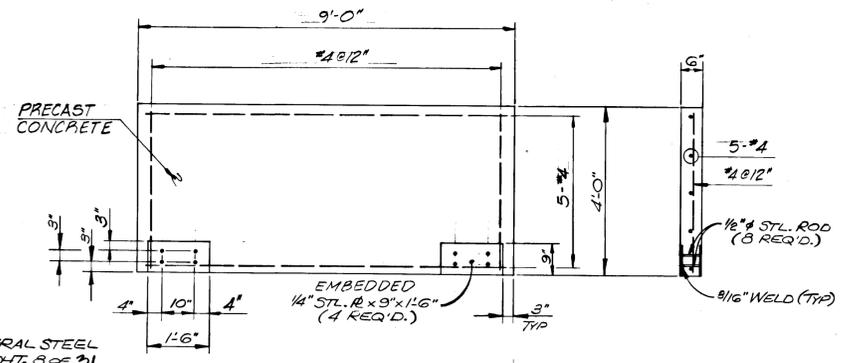
John M. Vel 7-10-86
 U.S. SOIL CONSERVATION SERVICE DATE

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

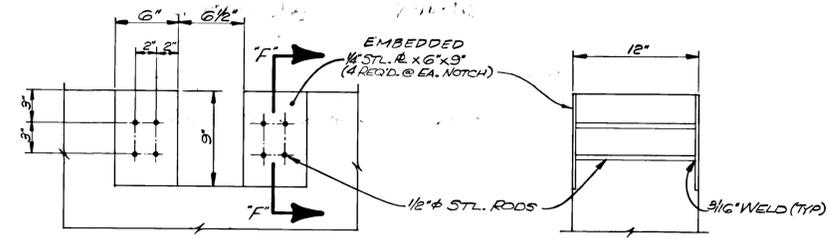
Robert J. Seltman 7-10-86
 HOWARD SOIL CONSERVATION DISTRICT DATE



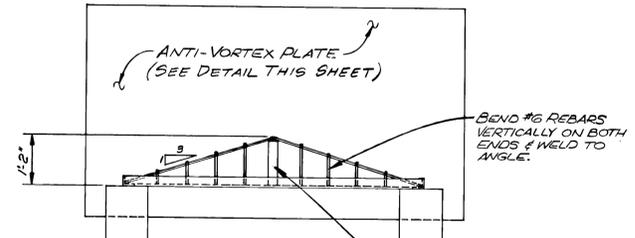
SECTION "E-E"
 SCALE: 1/2"=1'-0"



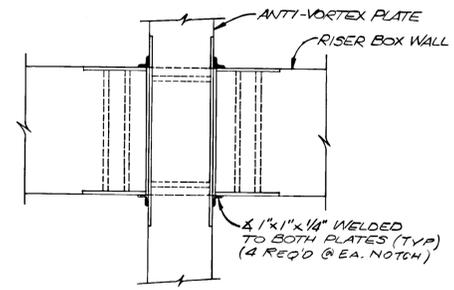
ANTI-VORTEX PLATE
 SCALE: 1/2"=1'-0"



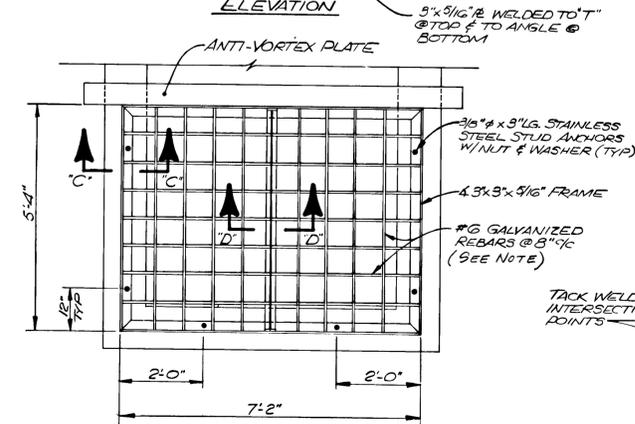
WALL NOTCH DETAIL
 SCALE: 1 1/2"=1'-0"



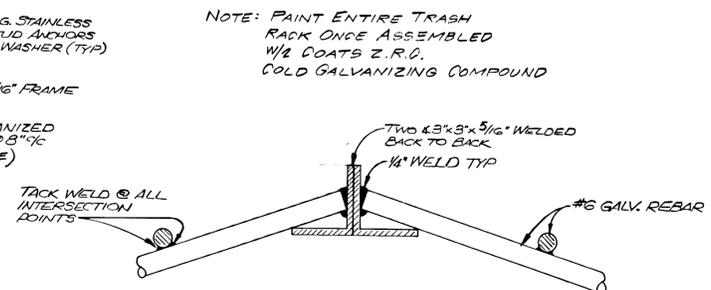
ELEVATION



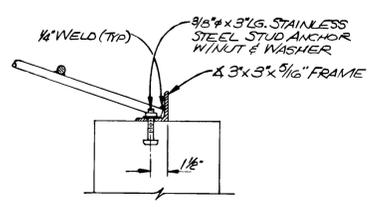
CONNECTION DETAIL
 SCALE: 1 1/2"=1'-0"



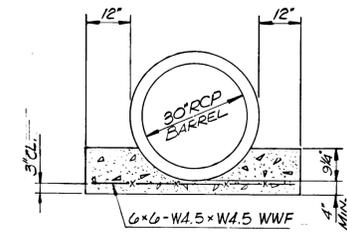
PLAN VIEW
 TRASH RACK (2 REQ'D.)
 SCALE: 1/2"=1'-0"



SECTION "D-D"
 SCALE: NONE



SECTION "C-C"
 SCALE: NONE



LOW CRADLE FOR BARREL
 SCALE: 1/2"=1'-0"

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
John M. Vel 7-22-86
 CHIEF, DIV. OF LAND DEVELOPMENT & ZONING ADMIN. DATE

APPROVED:
 HOWARD COUNTY DEPT. OF PUBLIC WORKS
Robert J. Seltman 7-10-86
 CHIEF, BUREAU OF ENGINEERING DATE



OWNER:
 DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
 7223 PARKWAY DRIVE
 HANOVER, MARYLAND
 PHONE (301) 796-4446

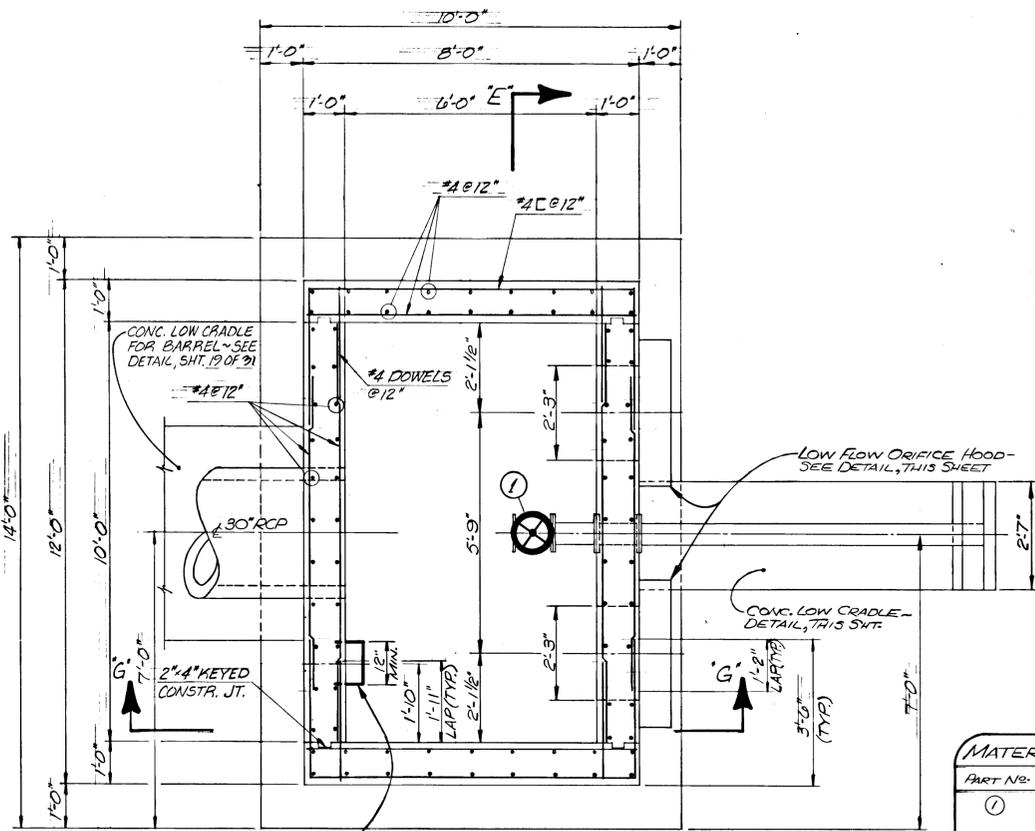
No.	REVISION	DATE	BY



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GREENHORNE & O'MARA, INC.
 2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
 (301) 948-0900
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 GREENBELT, MD • GREENSBORO, NC • MONROE, MI • RALEIGH, NC • TAMPA, FL • WILLISTON PARK, NY

STORMWATER MANAGEMENT POND # 3 DETAILS
DORSEY BUSINESS CENTER
 PHASE 1
 TAX MAP 37.43 LIBER 1300 FOLIO 547
 ELECTION DISTRICT #1 HOWARD CO., MD.

JWVC DESIGN	SCALE AS SHOWN
JDP DRAWN	19 OF 31
RHM CHECKED	SHEET
MAR. '86 DATE	JOB No. R-1266-X FILE No.



MATERIAL LIST - SWM POND #3

PART NO.	DESCRIPTION
1	CLOW F-5070 ANWA DOUBLE DISC G" GATE VALVE
2	CLOW F-1925 HEX HEAD MACHINE BOLTS W/ HEX NUTS
3	CLOW F-162 6" FLANGED JOINT PIPE, 1'-0" LG.
4	CLOW F-131 6" FLANGED MECH. JOINT WALL PIPE W/TAPPED FLANGES
5	CLOW F-132 STUDS W/ HEX NUTS FOR FLANGED JOINT & F-919 STUDS W/ HEX NUTS FOR MECH. JOINT SIDE
6	CLOW F-122 6" MECH. JOINT PIPE, 8'-2" LG., W/ ONE PLAIN END @ 0.5% SLOPE
7	6"x6"x1/2" STL. PL. ON 1/2" ± GROUT & 6" ± CONC. PIER

NOTE: USE CLOW F-1910 LONG HUB FLANGE WITH F-1940 RED SHEET RUBBER RING GASKETS AT ALL FLANGE JOINTS AND CLOW F-1045 GLAND WITH F-915 PLAIN RUBBER GASKETS AT ALL MECHANICAL JOINTS.

SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER:
I CERTIFY THAT ALL DEVELOPMENT AND / OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

Mark L. Levy 3/14/86
MARK L. LEVY DATE

BY THE ENGINEER:
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.

Robert H. Marmon 6/12/86
ROBERT H. MARMON DATE

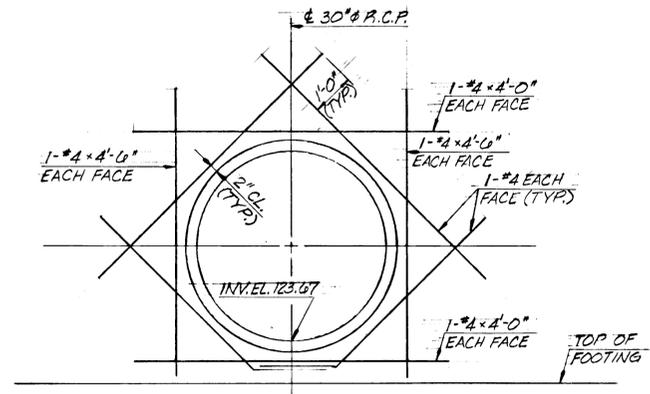
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

J. Helm 7-10-86
J. HELM DATE

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

Robert W. Ziehm 7-10-86
ROBERT W. ZIEHM DATE

NOTE: FOR STRUCTURAL STEEL NOTES, SEE SHT. 8 OF 27



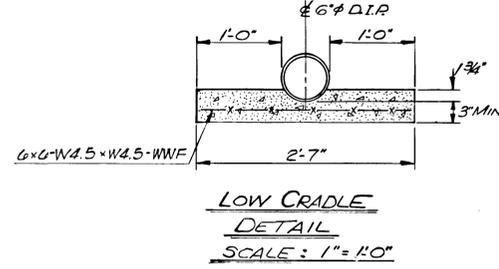
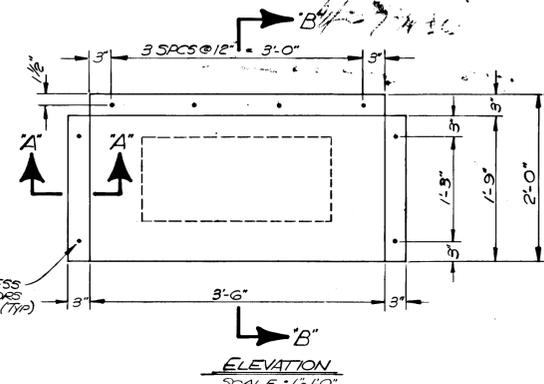
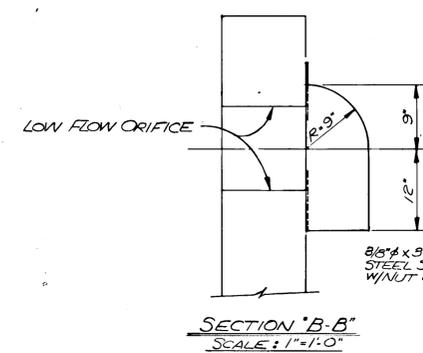
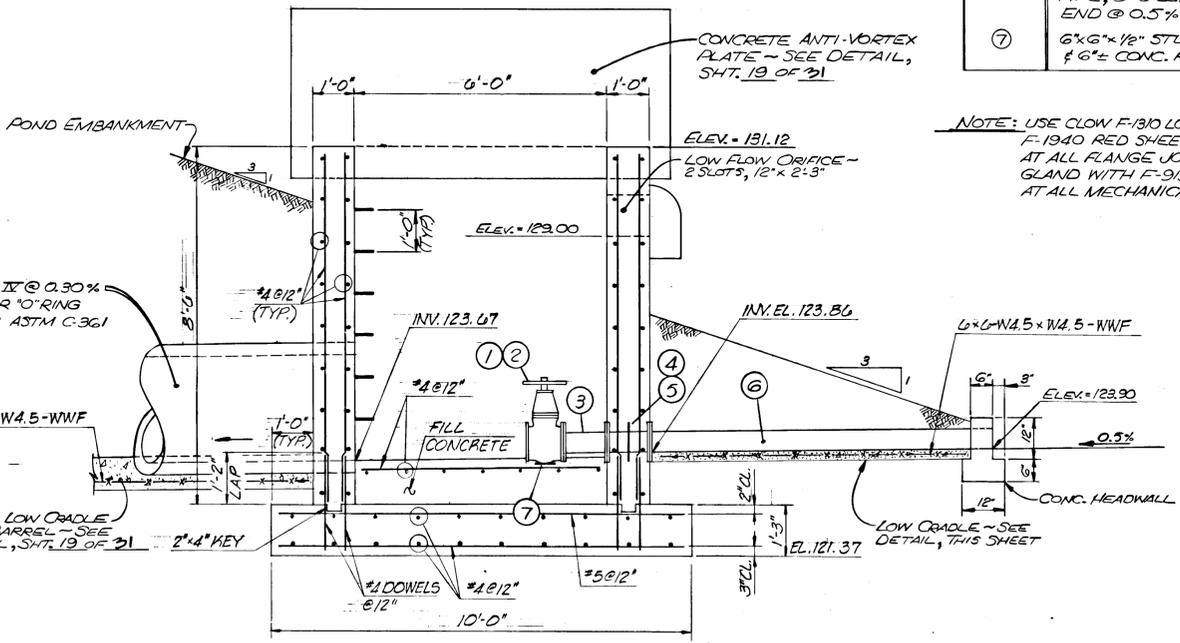
ADDITIONAL REINFORCING @ 30" R.C.P.
SCALE: 1/2" = 1'-0"

DEPARTMENT OF PUBLIC WORKS

Robert H. Marmon 7-21-86
CHIEF, BUREAU OF ENGINEERING DATE

DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

John M. Marmon 7-22-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMIN. DATE



OWNER:
DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
7223 PARKWAY DRIVE
HANOVER, MARYLAND 21076
PHONE: (301) 796-4446

No.	REVISION	DATE	BY



ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

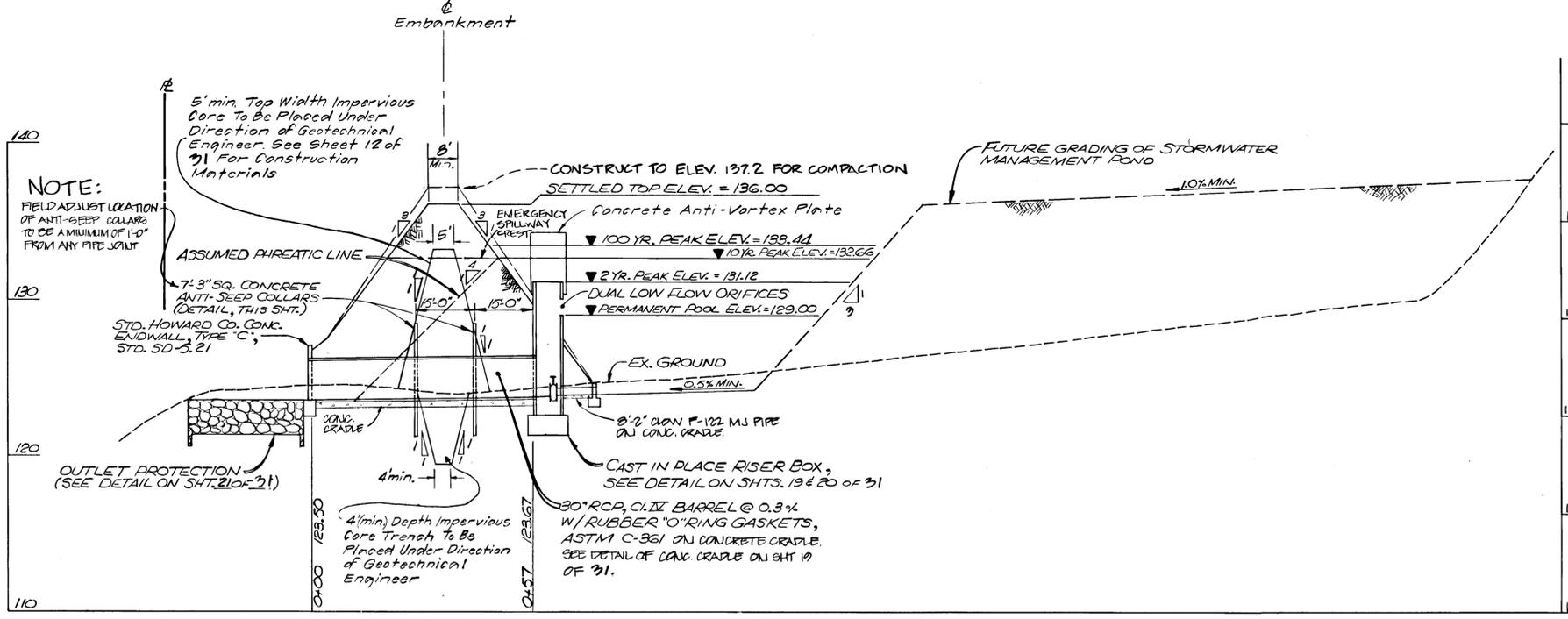
GREENHORNE & O'MARA, INC.
2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
(301) 948-0900

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GREENBELT, MD • GREENSBORO, NC • MUNROE, MI • RALEIGH, NC • TAMPA, FL • WILLISTON PARK, NY

STORMWATER MANAGEMENT POND #3 DETAILS
DORSEY BUSINESS CENTER
PHASE I
TAX MAP 37, 43 LIBER 1300 FOLIO 547
ELECTION DISTRICT #1 HOWARD CO., MD.

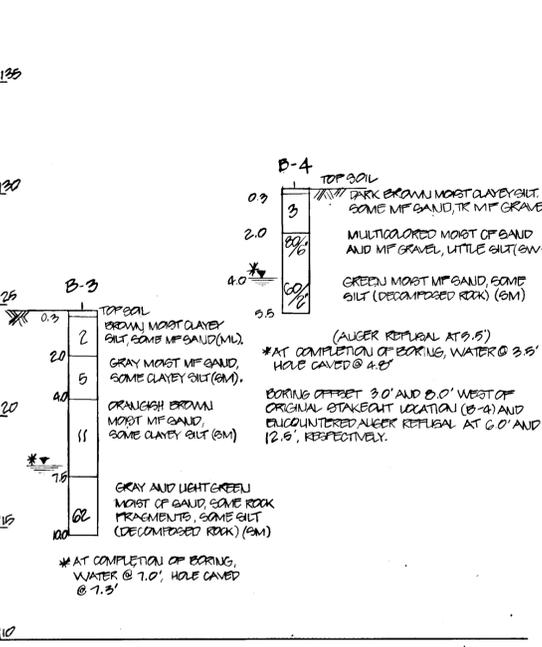
JWC DESIGN	SCALE AS SHOWN
JDP DRAWN	20 OF 31
RHM CHECKED	SHEET
MAR, 86 DATE	JOB No. R-1266-X FILE No.

SEDIMENT CONTROL & POND CONSTRUCTION



PROFILE ALONG CENTERLINE OF PRINCIPAL SPILLWAY

SCALE: HORIZ. 1"=20'
VERT. 1"=5'



SOIL BORING PROFILES - GMM POND #4

SCALE: HOR. 1"=40' VERT. 1"=5'

BY THE DEVELOPER:
I CERTIFY THAT ALL DEVELOPMENT AND / OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

Mark L. Levy
SIGNATURE OF DEVELOPER DATE 2/24/86

BY THE ENGINEER:
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.

Robert H. Marmor
SIGNATURE OF ENGINEER DATE 3-5-86
ROBERT H. MARMON

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.

Robert H. Marmor
U.S. SOIL CONSERVATION SERVICE DATE 7-10-86

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

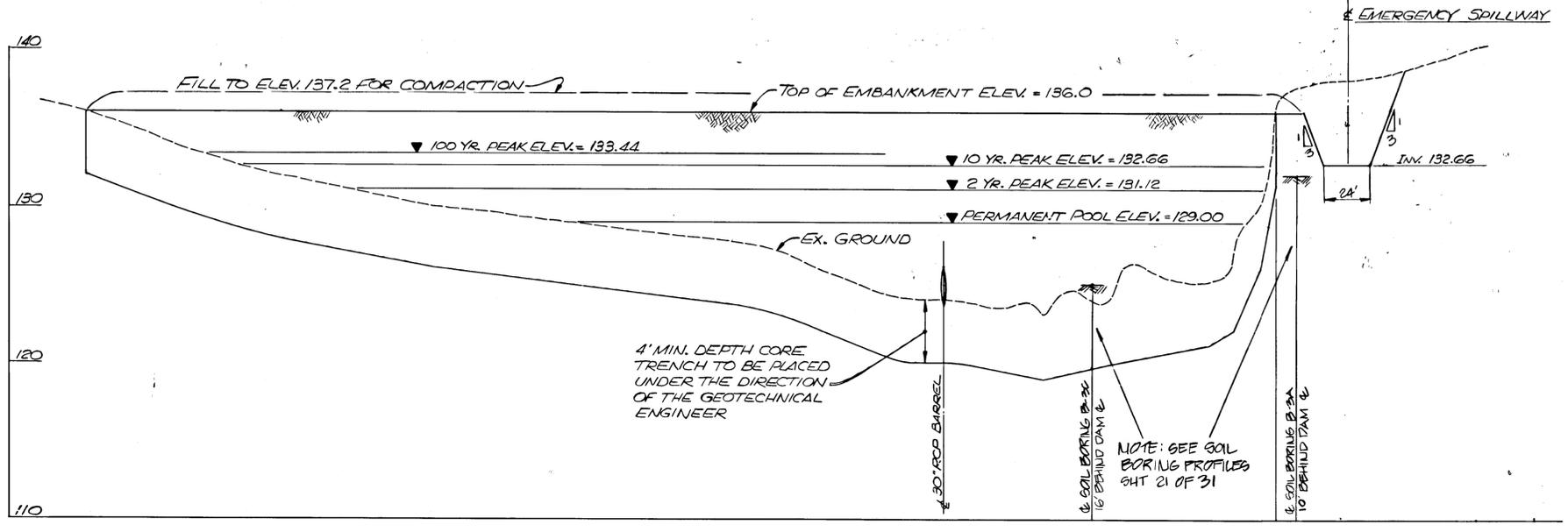
Robert L. Zehm
HOWARD SOIL CONSERVATION DISTRICT DATE 7-10-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John W. Murchman
CHIEF, DIV. OF LAND DEVELOPMENT & ZONING ADMIN. DATE 7-22-86

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

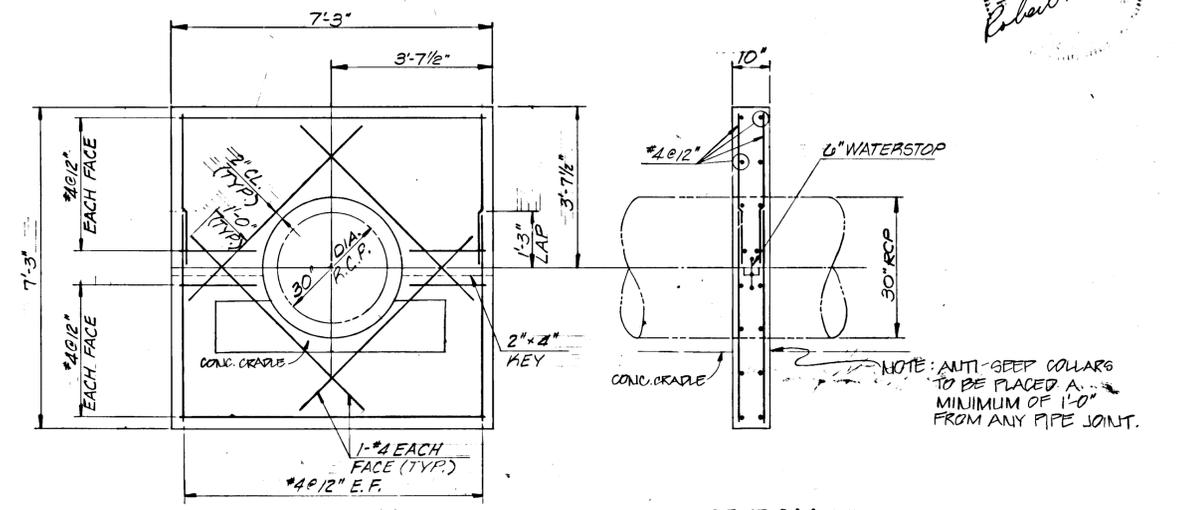
John W. Murchman
CHIEF, BUREAU OF ENGINEERING DATE 7-21-86



PROFILE ALONG CENTERLINE OF EMBANKMENT SECTION 2-A

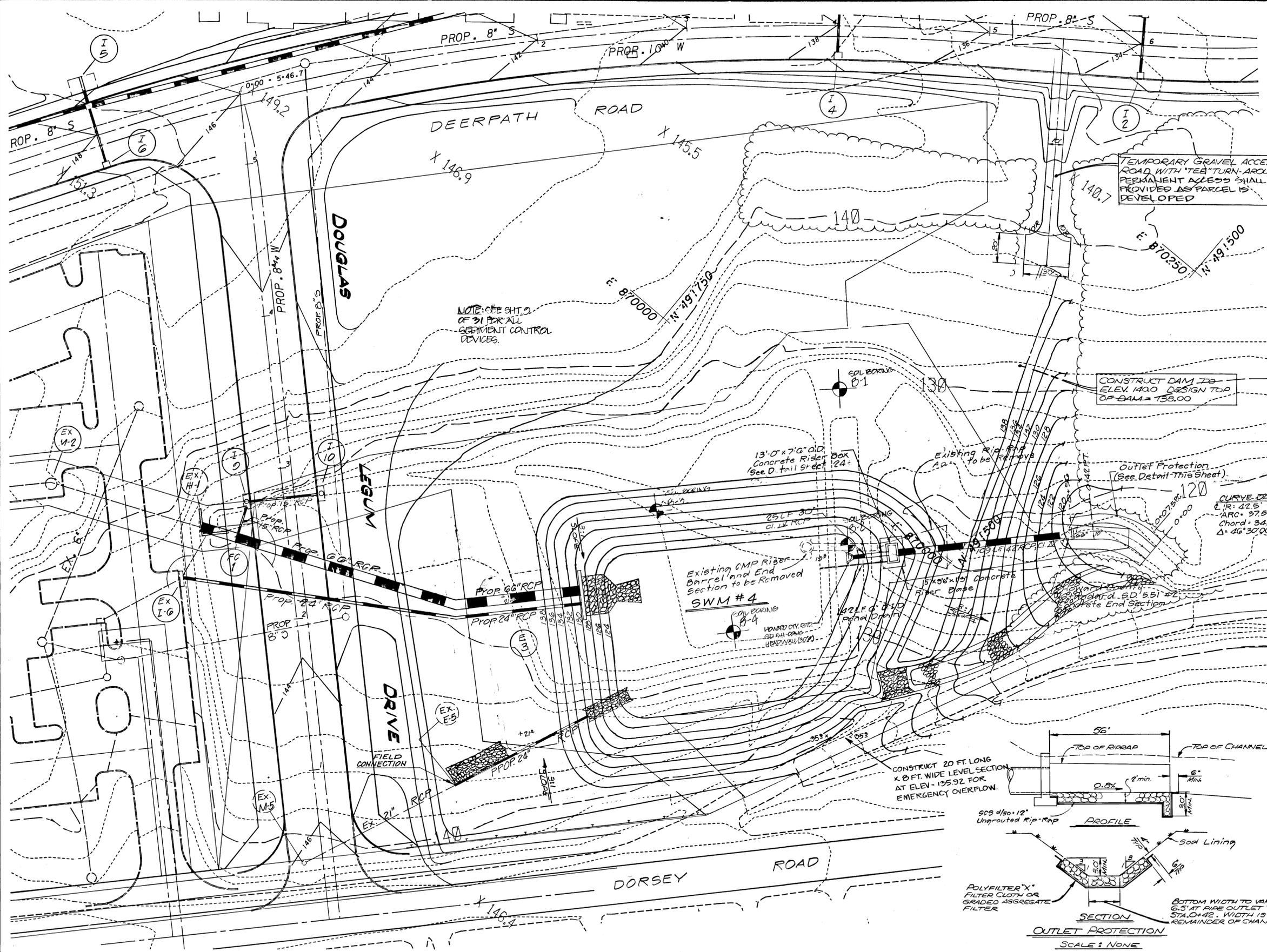
SCALE: HORIZ. 1"=40'
VERT. 1"=5'

NOTE: FOR STRUCTURAL STEEL NOTES, SEE SHT. 8 OF 31



ELEVATION SECTION CONCRETE ANTI-SEEP COLLAR (2 REQ'D)

SCALE: 1/2"=1'-0"



SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER:
 I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

Signature: *Mark L. Levy* DATE: 2/26/86
 SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:
 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.

Signature: *Robert W. Mason* DATE: 3-5-86
 SIGNATURE OF ENGINEER DATE

ROBERT W. MASON
 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.

Signature: *Sam M. Nelson* DATE: 7-10-86
 U.S. SOIL CONSERVATION SERVICE DATE

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

Signature: *Robert W. Zieher* DATE: 7-10-86
 HOWARD SOIL CONSERVATION DISTRICT DATE

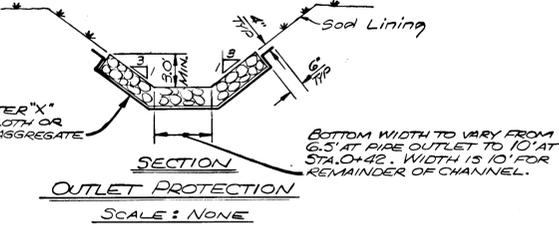
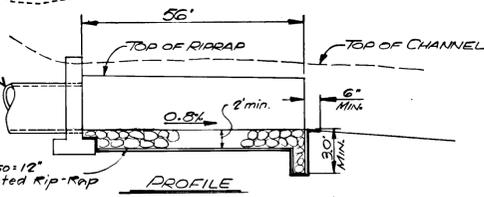
TEMPORARY GRAVEL ACCESS ROAD WITH 'TEE' TURN-AROUND PERMANENT ACCESS SHALL BE PROVIDED AS PARCEL IS DEVELOPED

CONSTRUCT DAM TO ELEV. 1400 DESIGN TOP OF DAM = 138.00

CURVE DATA
 R = 42.5'
 ARC = 37.5'
 CHORD = 34.5'
 Δ = 46°30'00"

NOTE: Curve Data Given is Approximate Only Make Adjustments For Actual Field Conditions

Existing CMP Riser Barrel and End Section to be Removed
 SWM #4



APPROVED:
 DEPARTMENT OF PUBLIC WORKS

Signature: *William E. Kelly* DATE: 7-21-86
 CHIEF, BUREAU OF ENGINEERING

DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

Signature: *William E. Kelly* DATE: 7-22-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMIN.

OWNER:
 DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
 7223 PARKWAY DRIVE
 HANOVER, MARYLAND
 PHONE (301) 796-4446

No.	REVISION	DATE	BY
1	REVISED STORMWATER MANG. POND #4	7-17-89	KRM



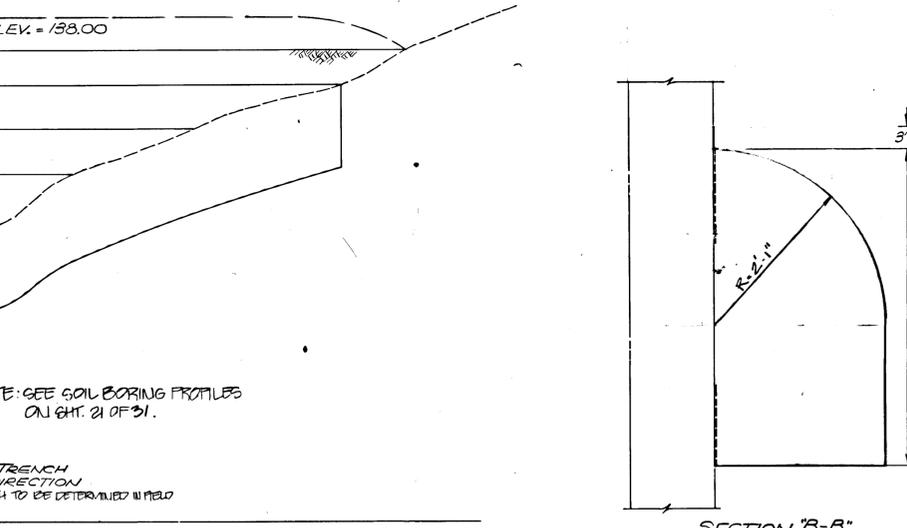
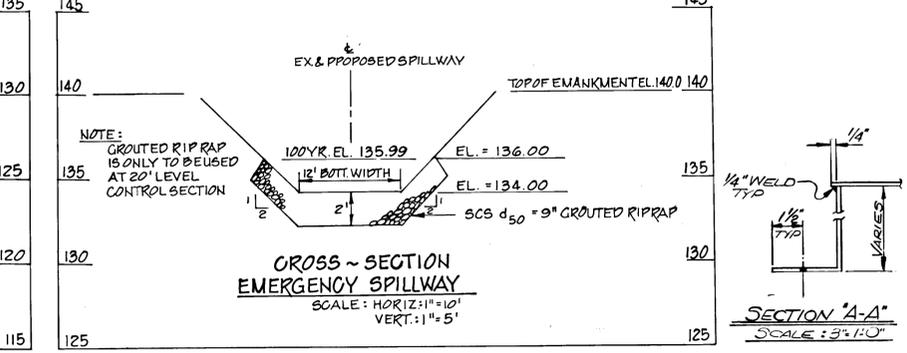
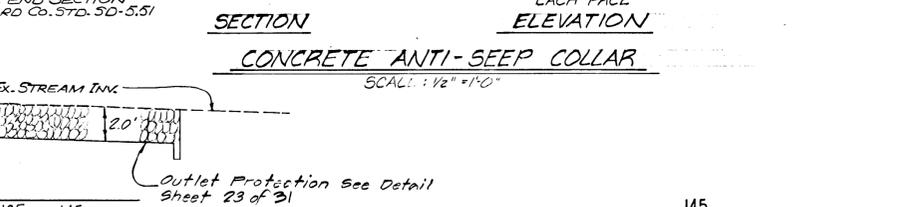
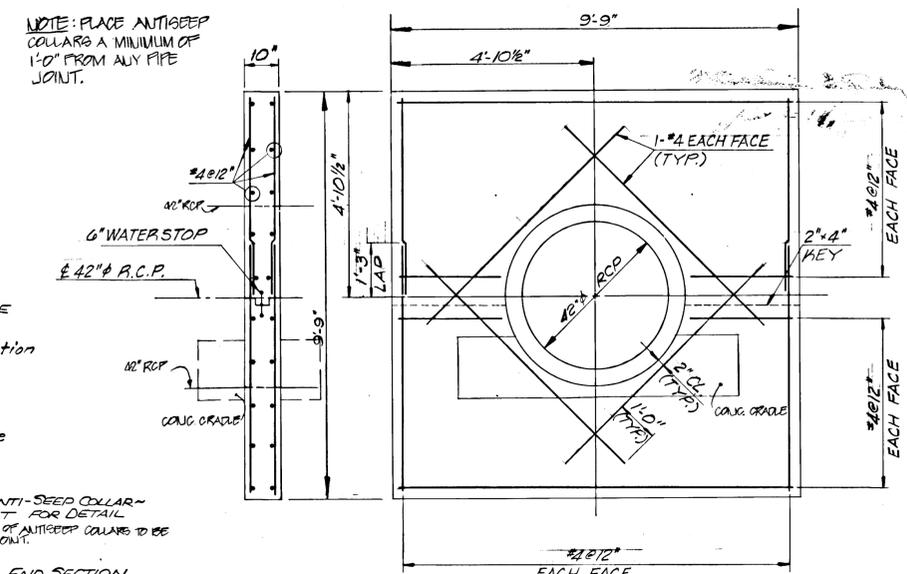
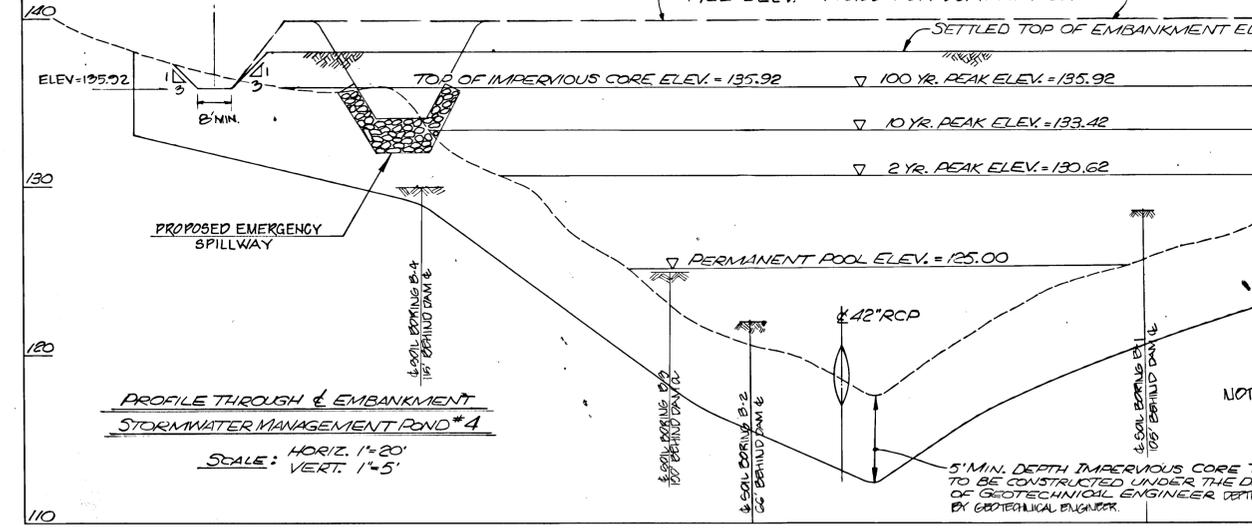
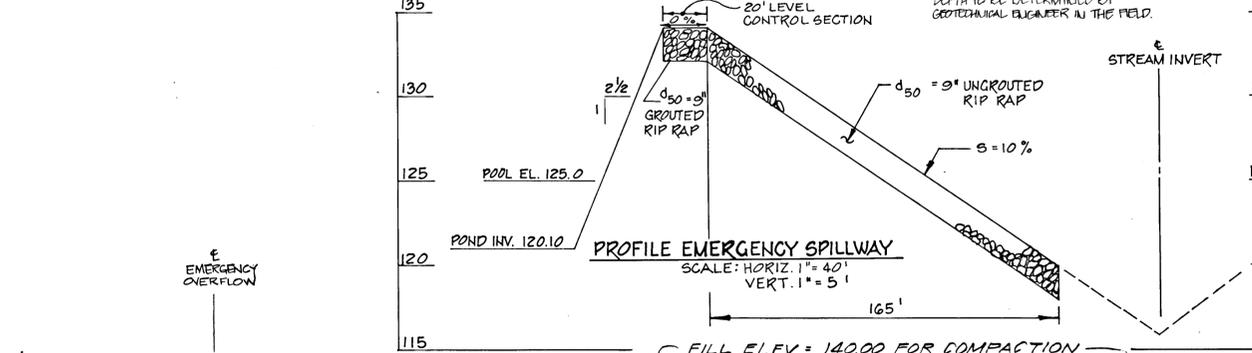
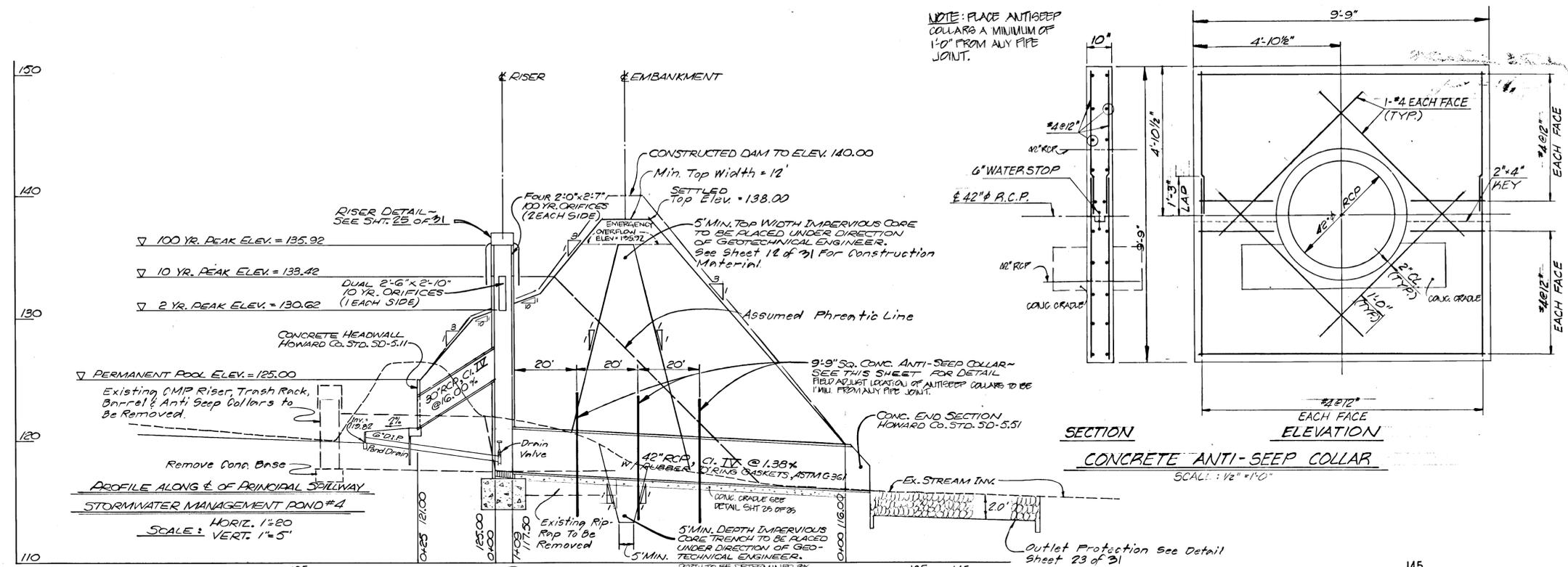
ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.
 2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
 (301) 948-0900

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STORMWATER MANAGEMENT POND #4 PLAN
DORSEY BUSINESS CENTER
 PHASE I
 TAX MAP 37.43 LIBER 1300 FOLIO 547
 ELECTION DISTRICT #1 HOWARD CO., MD.

JWC DESIGN	SCALE	1" = 30'
CADD/RW DRAWN		23 OF 31
RHM CHECKED	SHEET	
MAR, '86 DATE	JOB No.	F-1266-X
	FILE No.	



SEDIMENT CONTROL & POND CONSTRUCTION

BY THE DEVELOPER:
 I CERTIFY THAT ALL DEVELOPMENT AND / OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION 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.

Mark L. Levy 3/14/86
 SIGNATURE OF DEVELOPER
 MARK L. LEVY

BY THE ENGINEER:
 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.

Robert H. Marmor 5-5-86
 SIGNATURE OF ENGINEER
 ROBERT H. MARMON

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.

Robert H. Marmor 7-10-86
 U.S. SOIL CONSERVATION SERVICE DATE

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

Robert H. Marmor 7-10-86
 HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS

Robert H. Marmor 7-22-86
 CHIEF, BUREAU OF ENGINEERING DATE

DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

Robert H. Marmor 7-22-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMIN. DATE

No.	REVISION	DATE	BY
1	ADDED EMERG. SPILLWAY PROFILES	7-17-86	ARM

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STORMWATER MANAGEMENT POND #4 DETAILS
DORSEY BUSINESS CENTER
 PHASE I

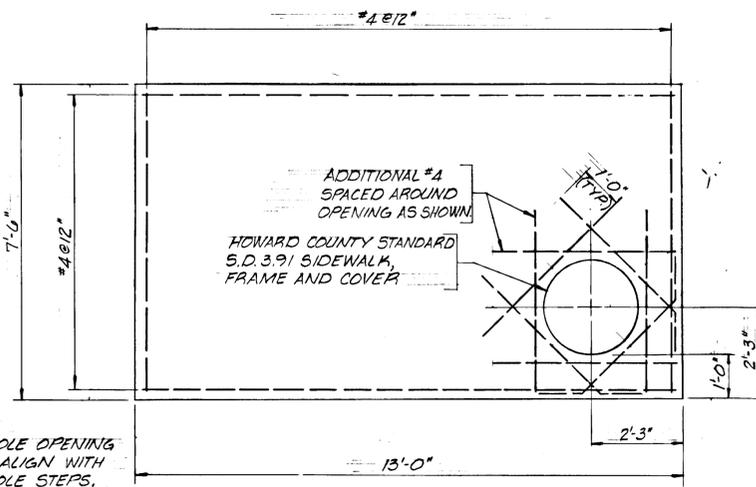
TAX MAP 37.43 / LIBER 1300 FOLIO 547
 ELECTION DISTRICT #1 HOWARD CO., MD.

JWC DESIGN	SCALE AS SHOWN
JDP DRAWN	24 OF 31
RHM CHECKED	SHEET
MAR. '86 DATE	R-1266-X JOB No. FILE No.

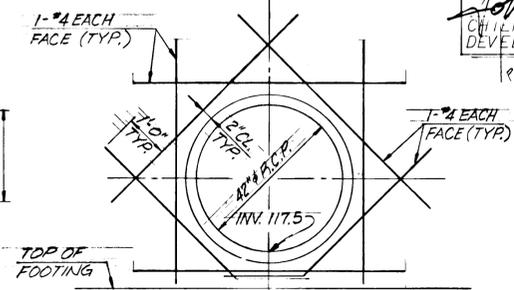
F-86-151

MATERIAL LIST ~ SWM POND # 4	
PART NO.	DESCRIPTION
①	CLOW AWMA F-5070 6" DOUBLE DISC GATE VALVE W/ FLANGED ENDS
②	1'-1" LG. CLOW F-162 6" DUCTILE IRON FLANGED JOINT PIPE
③	1'-0" LG. CLOW F-1431 6" FLANGED & MECHANICAL JOINT WALL PIPE TAPPED FOR STUDS
④	CLOW F-1940 RED SHEET RUBBER RING GASKETS, F-1310 LONG HUB FLANGES & F-1932 STUDS OR F-1925 BOLTS & NUTS @ ALL FLANGE JOINTS & CLOW F-916 PLAIN RUBBER GASKETS, F-1045 GLANDS & F-918 BOLTS OR F-919 STUDS & NUTS @ ALL MECHANICAL JOINTS.
⑤	42" CLOW F-122 6" DUCTILE IRON MECHANICAL JOINT PIPE @ 3.53% SLOPE
⑥	LOW CRADLE - SEE DETAIL, SHT. 20 OF 31
⑦	CONCRETE BARREL CRADLE - SEE DETAIL, SHT. 25 OF 31
⑧	LOW CRADLE FOR BARREL - SEE DETAIL, SHT. 19 OF 31
⑨	6" x 6" x 1/2" STL P. ON 1/2" GROUT & 6" CONCRETE PIER

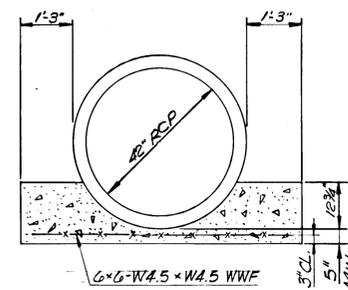
NOTE:
MANHOLE OPENING SHALL ALIGN WITH MANHOLE STEPS.



TOP SLAB DETAIL
SCALE 1/2" = 1'-0"



ADDITIONAL REINFORCING
AT 42" R.C.P.
SCALE 1/2" = 1'-0"



CONCRETE BARREL CRADLE
SCALE 1/2" = 1'-0"

DEPARTMENT OF PUBLIC WORKS
22-86
CHIEF, BUREAU OF ENGINEERING
DATE 7-7-86

DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
John W. M...
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMIN.
DATE 7-22-86

SEDIMENT CONTROL & POND CONSTRUCTION

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

Signature: Mark L. Levy
DATE: 3/4/86

BY THE ENGINEER:
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.

Signature: Robert H. Marmor
DATE: 5-5-86

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.

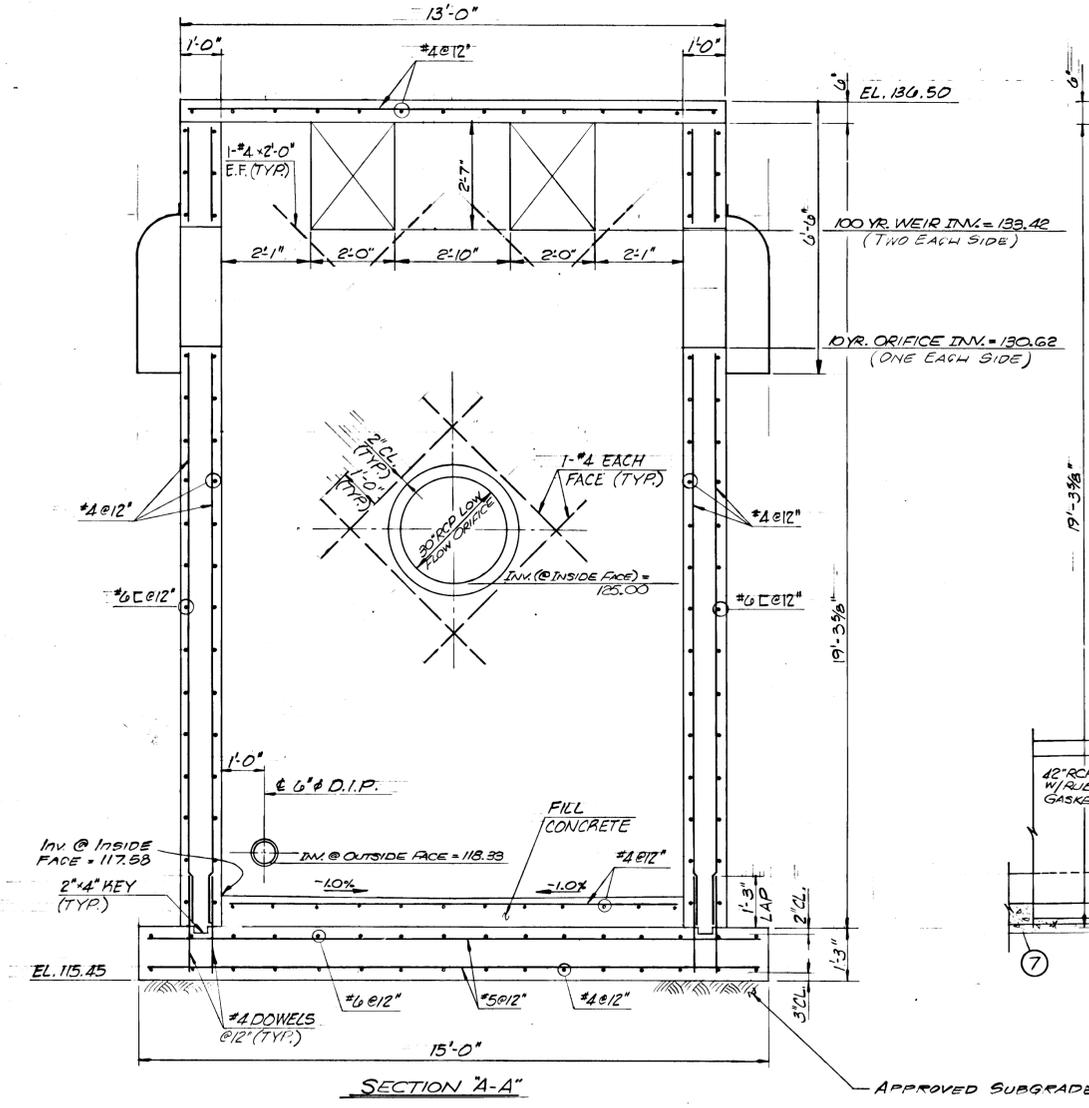
Signature: James M. Allen
DATE: 7-10-86

U.S. SOIL CONSERVATION SERVICE

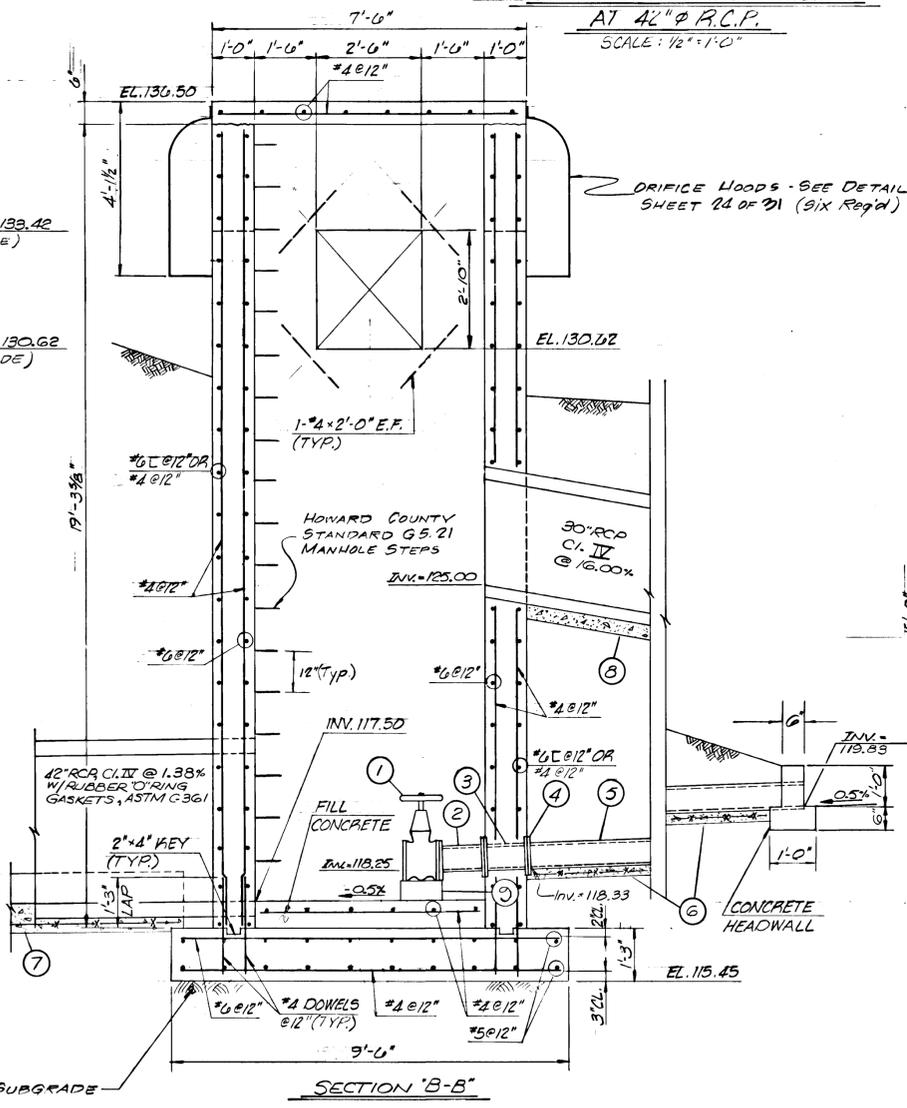
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: Robert W. Ziehm
DATE: 7-10-86

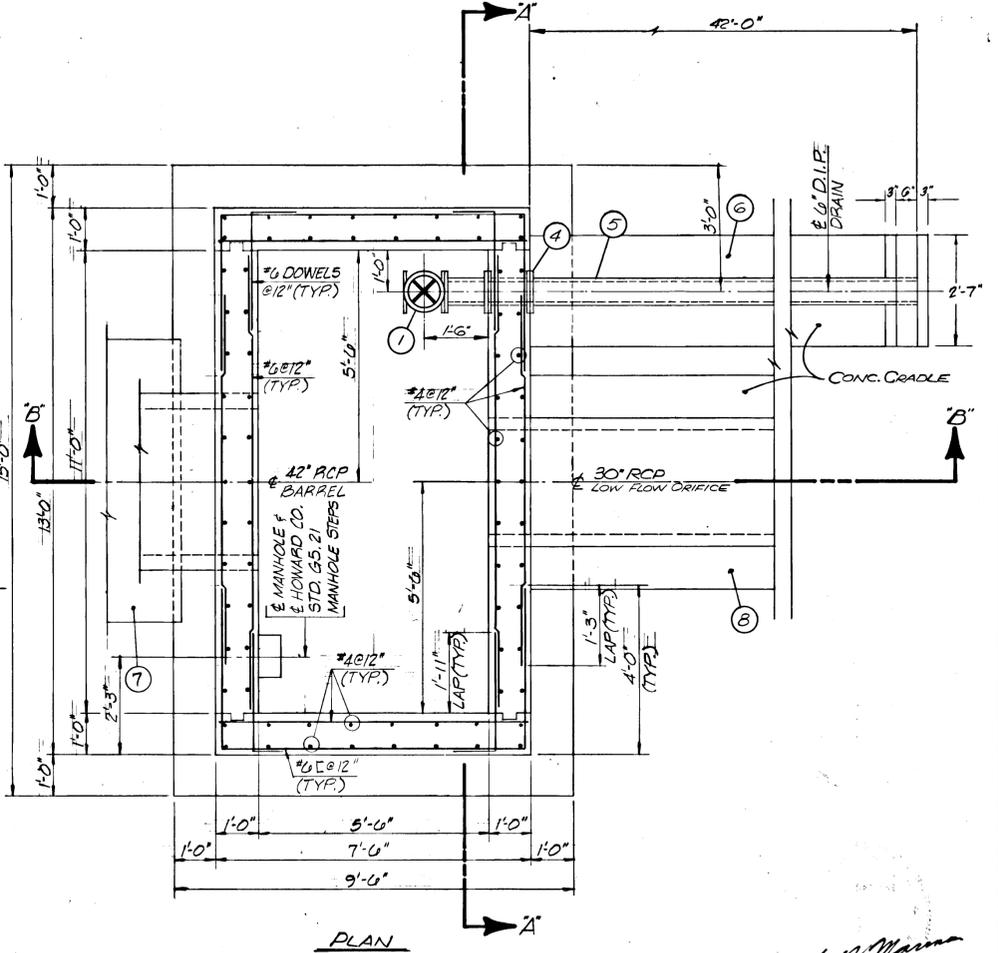
HOWARD SOIL CONSERVATION DISTRICT



SECTION A-A



RISER DETAIL
SCALE 1/2" = 1'-0"



PLAN

No.	REVISION	DATE	BY



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STORMWATER MANAGEMENT POND # 4 DETAILS
DORSEY BUSINESS CENTER
PHASE I

TAX MAP 57.4B LIBER 1300 FOLIO 547
ELECTION DISTRICT #1 HOWARD CO., MD.

JWC DESIGN	SCALE AS SHOWN
JDP DRAWN	25 OF 31
RHM CHECKED	SHEET
Mar., 86 DATE	R-1266-X FILE No.
	JOB No.

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John W. Marchese 7-22-86
CHIEF DIV. OF LAND DEVELOPMENT & ZONING ADMIN. DATE

APPROVED:
HOWARD COUNTY DEPT. OF PUBLIC WORKS

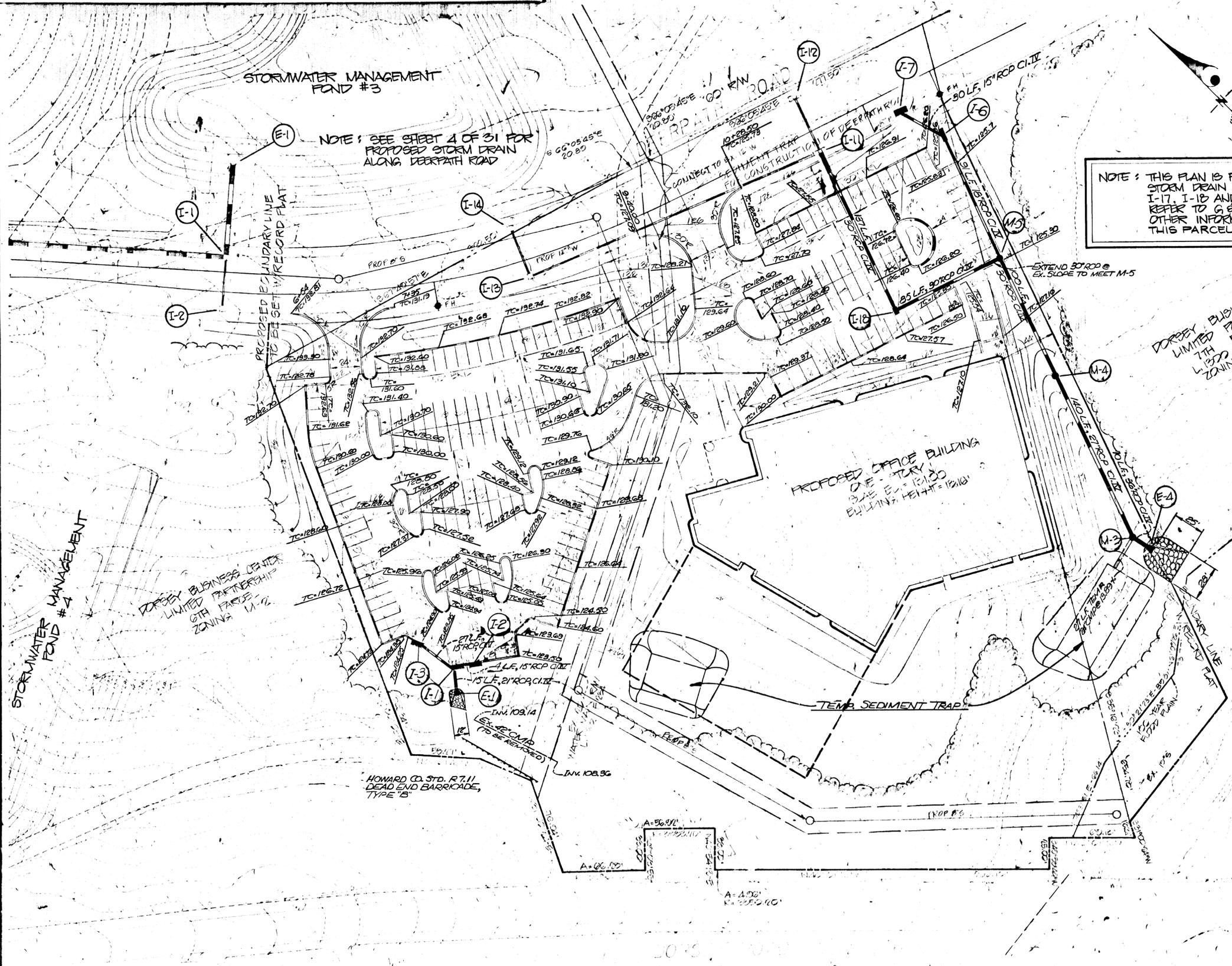
William E. Kelly 7-21-86
CHIEF BUREAU OF ENGINEERING DATE

STORMWATER MANAGEMENT FOND #3

NOTE: SEE SHEET 4 OF 31 FOR PROPOSED STORM DRAIN ALONG DEERPATH ROAD

NOTE: THIS PLAN IS FOR THE CONSTRUCTION OF STORM DRAIN STRUCTURES E-4, M-3, M-4, I-17, I-18 AND ALL CONNECTING PIPE ONLY. REFER TO G & O PLAN R-1327-X FOR ALL OTHER INFORMATION PERTAINING TO THIS PARCEL.

NOTE: REFER TO R-1327-X FOR CONSTRUCTION OF NEW STORM DRAIN STRUCTURES I-7, I-6, M-5 AND RAISING GRADE OF STRUCTURE I-18. STRUCTURE M-5 IS TO REPLACE EX. STRUCTURE I-17.



DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
7TH FLOOR
LIBER 1300 FOLIO 347
ZONING M-2

PROPOSED OFFICE BUILDING
ONE STORY
BASE ELEV. 121.00
BUILDING HEIGHT = 121.00'

TEMP. SEDIMENT TRAP

100 YEAR FLOOD PLAIN

GREGOR
LIBER 518 FOLIO 334

STORMWATER MANAGEMENT FOND #4

DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
6TH FLOOR
LIBER 1300 FOLIO 347
ZONING M-2

HOWARD CO. STD. R.T.11
DEAD END BARRICADE,
TYPE 'B'



DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
7223 PARKWAY DRIVE,
HANOVER, MARYLAND 21076
PHONE (301) 796-4446

NO.	REVISION	DATE	BY
2	GENERAL STORM DRAIN REVISIONS	5-20-87	JDP
1	ADDED TO ROAD CONSTRUCTION DRAWINGS	6-86	JWC

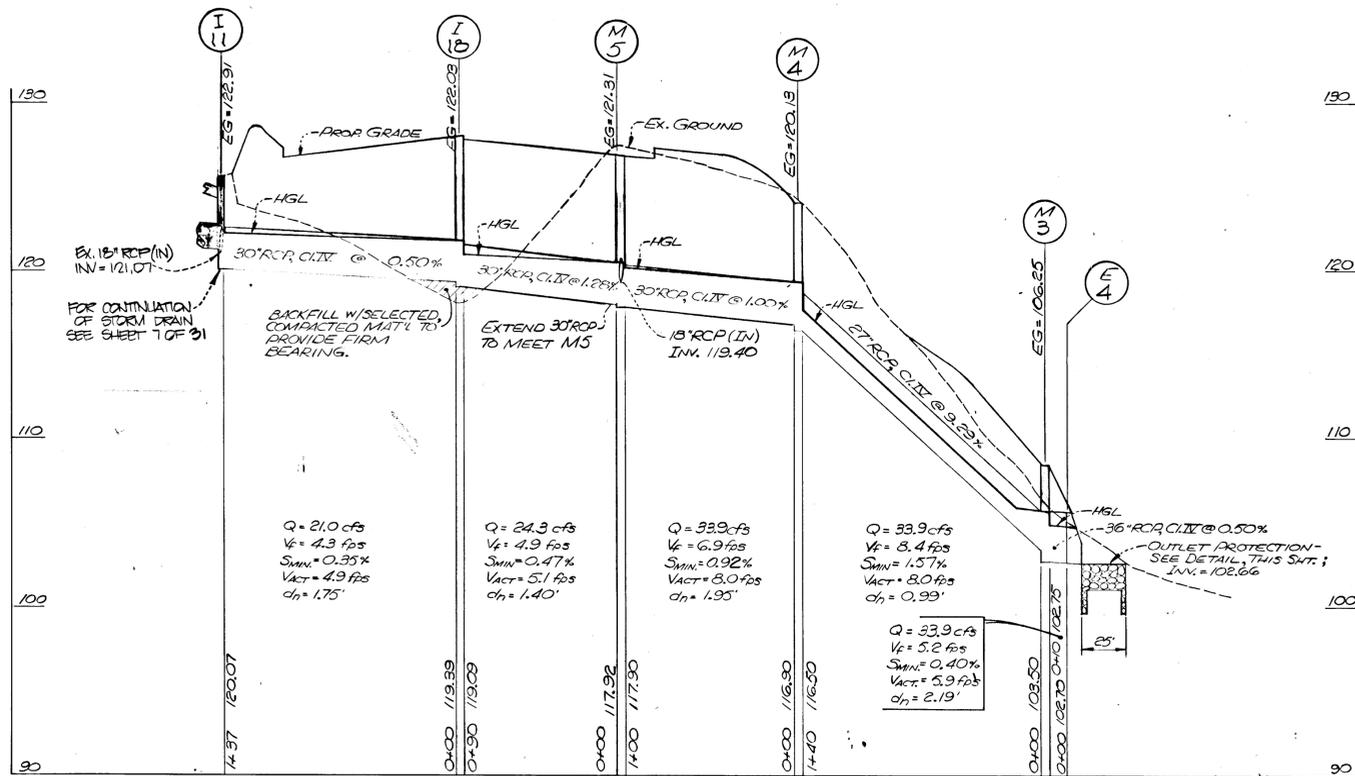


GREENHORNE & O'MARA, INC.
2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
(301) 948-0900

STORM DRAIN PLAN
DORSEY BUSINESS CENTER
PHASE I
TAX MAP 57.43 LIBER 1300 FOLIO 347
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

JWC CH. SIGN.	SCALE
JDP ENGR.	20' = 1"
RHM CH. PERM.	SHEET
MAY, 1986	R-1266-X

1224



PROFILE SCALES:
 HORIZ.: 1"=50'
 VERT.: 1"=5'

No.	STRUCTURE TYPE	INVERT		TOP ELEV.		STANDARD NUMBER
		IN	OUT	UPPER	LOWER	
M-5	5'-0" PRECAST MH	118.00	117.90	127.00	127.00	HOWARD CO. STD. G 5.13
E-4	DOUBLE "S" INLET INSIDE WIDTH = 3'-1"	119.39	119.03	TOP OF GRATE 128.00		HOWARD CO. STD. SD 4.23
E-5	21" CONCRETE TYPE C ENDWALL	136.00	136.00			HOWARD CO. STD. SD 5.21

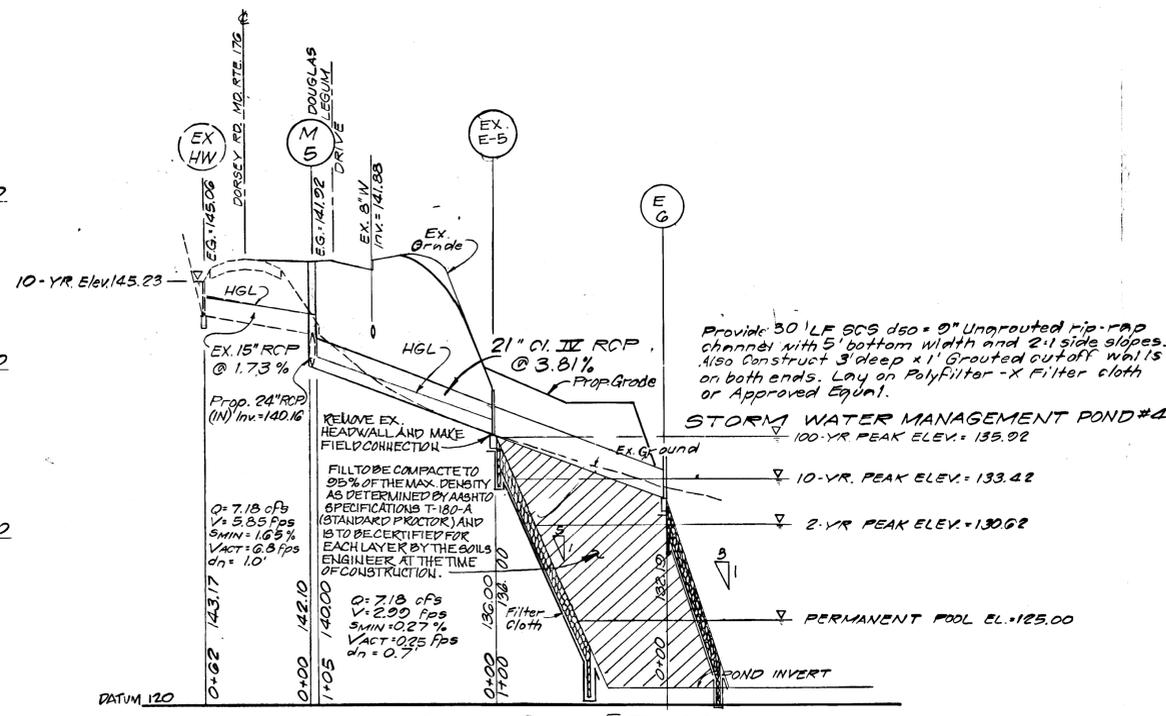
NOTE 1. 1.000 SHEET 8 OF 31 FOR CONTINUATION OF STRUCTURE SCHEDULE.
 2. STRUCTURE M-5 IS TO REPLACE EX. STR. I-17 (A-10 INLET)

I-7	A-10 INLET INSIDE WIDTH = 2'-6"		121.60	125.60	125.60	HOWARD CO. STD. SD 4.02
I-6	A-10 INLET INSIDE WIDTH = 2'-6"	121.40	120.65	125.60	125.60	HOWARD CO. STD. SD 4.02

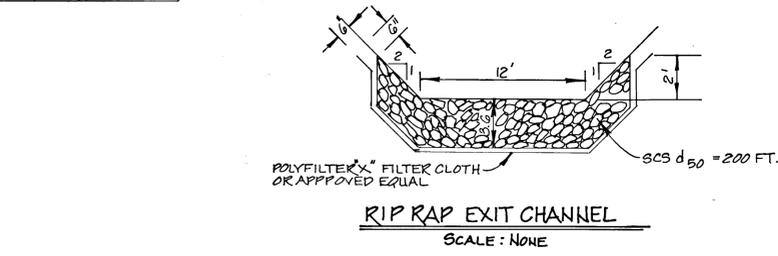
GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOL. IV, DETAILS AND SPECIFICATIONS FOR CONSTRUCTION.
- ALL UTILITY COMPANIES SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF CONSTRUCTION.
- ALL INLETS SHALL BE HOWARD COUNTY STANDARDS UNLESS OTHERWISE SHOWN.
- ALL STREET CURB RETURNS SHALL HAVE A 30.0' RADIUS UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD SPECIFICATIONS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES WHERE DIRECTED BY THE ENGINEER A MINIMUM OF TWO WEEKS IN ADVANCE OF ANY CONSTRUCTION.
- TEMPORARY COMPACTED 18" HIGH EARTH FILL DIVERSION DIKES SHALL BE CONSTRUCTED ABOUT THE LIPS OF FILL SLOPES ON THE R.O.W. CONCURRENTLY WITH THE INITIAL GRADING AND DIRECTED TO UNDISTURBED SOD AREAS AT THE END OF EACH DAY.
- CONTRACTOR TO NOTIFY THE HOWARD COUNTY DEPT. OF INSPECTIONS AND PERMITS AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE NO. 992-2436.
- ALL DISTURBED SLOPE AREAS TO BE STABILIZED AS SOON AS GRADING IS COMPLETED.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3500 P.S.I..
- ALL SWALES AND SLOPES SHALL BE PERMANENTLY SEEDED. SEE THE SEED SPECIFICATIONS ON SHEET 12.
- TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1991 REVISED EDITION.
- POLY-FILTER-X OR EQUAL SHALL BE PLACED UNDER ALL STONE RIP RAP (FULL WIDTH AND LENGTH OF STONE).
- STONE FOR RIP RAP SHALL BE AS SPECIFIED ON THE DRAWINGS. ALL RIP RAP SHALL BE UNPAVED UNLESS OTHERWISE NOTED.
- STUBS FOR 6" P.V.C. UNDERDRAIN PIPE TO BE INSTALLED AT CENTER OF EACH WALL OF EVERY INLET.
- Contractor shall notify the following utilities or agencies at least five (5) working days before starting work shown on these plans:

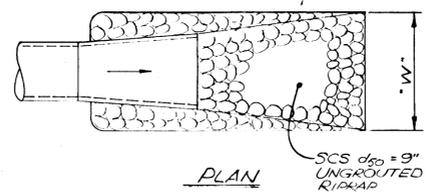
- State Highway Administration - 531-5533
- Baltimore Gas & Electric Company - Underground Electric Distribution Customer Service - 685-0123
- Baltimore Gas & Electric Company - Underground Gas Distribution Customer Service - 685-0123
- Chesapeake & Potomac Telephone Company - 725-9976
- American Telephone & Telegraph - Cable Location Division - 393-3553



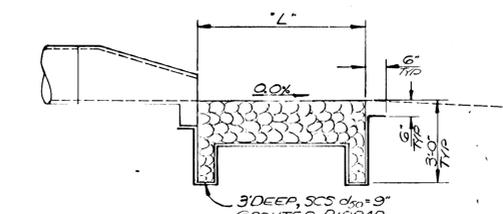
Provide 30' LF SCS d50 = 9" Ungrouted rip-rap channel with 5' bottom width and 2:1 side slopes. Also construct 3' deep x 1' grouted cutoff walls on both ends. Lay on PolyFilter-X Filter cloth or approved equal.



RIP RAP EXIT CHANNEL
 SCALE: NONE

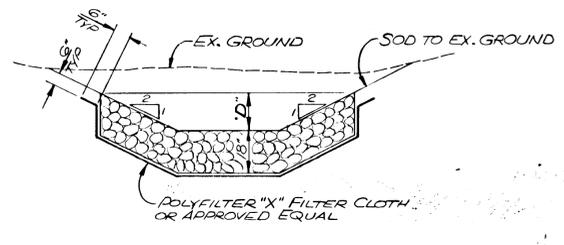


PLAN



ELEVATION

STRUCTURE No.	"L" (FT)	"W" (FT)	"D" (FT)
E-4	25	23	2.5



SECTION

OUTLET PROTECTION DETAIL
 SCALE: NONE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
John M. ... 7-22-86
 CHIEF DIV. OF LAND DEVELOPMENT & ZONING ADMIN. DATE

APPROVED:
 HOWARD COUNTY DEPT. OF PUBLIC WORKS
... 7-21-86
 CHIEF BUREAU OF ENGINEERING DATE

DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
 7223 PARKWAY DRIVE
 HANOVER, MARYLAND 21076
 PHONE (301) 798-4446

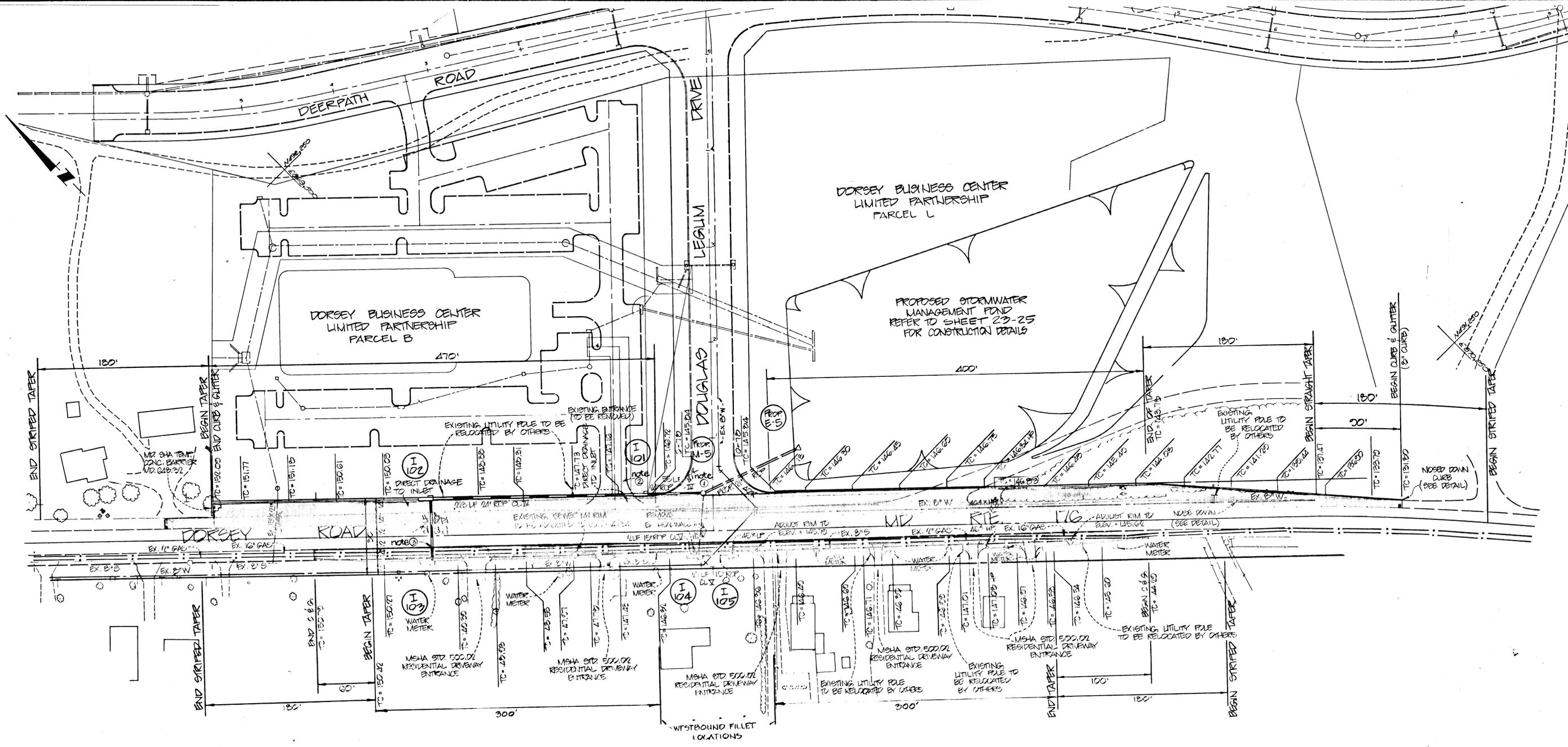
No.	REVISION	DATE	BY
3	EXTENDED SD EXTENSION PROFILE	7-17-89	MM
2	REV. STR. SCHED. & PROFILE @ M-5	5-20-87	JOP
1	ADDED TO ROAD CONSTRUCTION DRAWINGS	6-26	NW



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STORM DRAIN PROFILES & DETAILS
DORSEY BUSINESS CENTER
 PHASE I
 TAX MAP 37.43 LIBER 1300 FOLIO 547
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

JWC DESIGN	SCALE AS SHOWN
JOP DRAWN	27 OF 31
RHM CHECKED	SHEET
DATE	JOB No.
	FILE No.



- NOTES:**
1. REFER TO CONTRACT F-86-151 FOR ALL CONSTRUCTION DETAILS FOR DOUGLAS LEGUM DRIVE, PROPOSED STORM DRAIN STRUCTURES E-5, M-5 AND ALL CONNECTING PIPE.
 2. ENTRANCE TO PARCEL B IS TO BE CLOSED OFF WHEN NEW ENTRANCE OFF DEERPETH ROAD IS COMPLETE.
 3. REPLACE PAVEMENT ACCORDING TO MSHA STD. MD-578.01 PAVEMENT REPAIR.

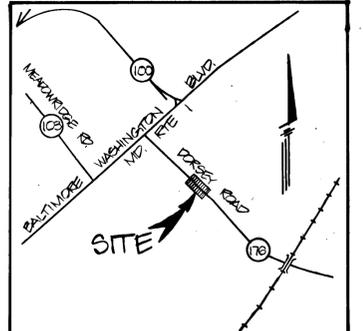


APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

Howard W. [Name] 7-17-86
CHIEF DIV. OF LAND DEVELOPMENT & ZONING ADMIN. DATE

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

William J. [Name] 7-21-86
CHIEF BUREAU OF ENGINEERING DATE



PHASE I

OWNER:
 DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
 7223 PARKWAY DRIVE
 HANOVER, MARYLAND 21076
 PHONE : (301) 796-4446

No.	REVISION	DATE	BY



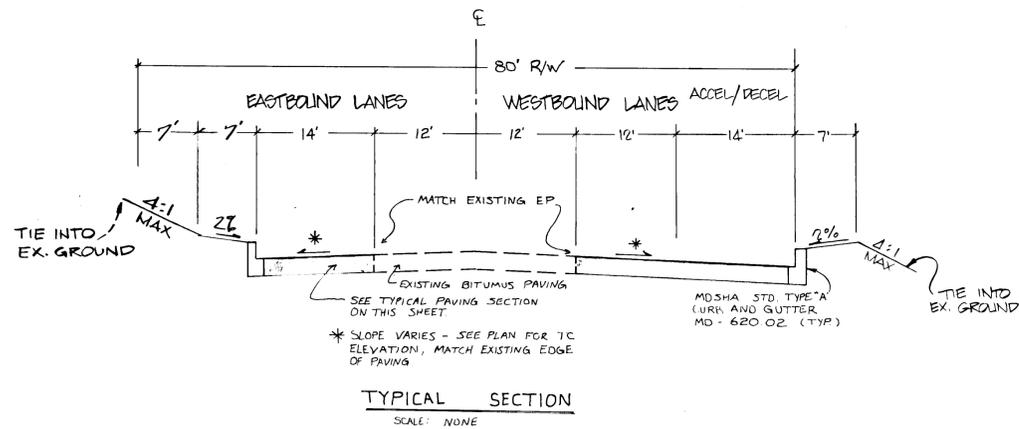
ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

GREENHORNE & O'MARA, INC.
 2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
 (301) 948-0900

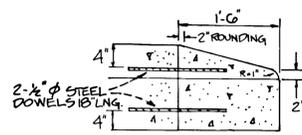
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DORSEY ROAD (MD. 176) IMPROVEMENTS
 FROM U.S. ROUTE 1 TO DOUGLAS LEGUM DRIVE
 HOWARD COUNTY, MARYLAND

JWC DESIGN	SCALE 1" = 50'
JDP/BJP DRAWN	28 OF 31
RHM CHECKED	SHEET
JLW/BJP DATE	JOB No. R-1266-X FILE No.

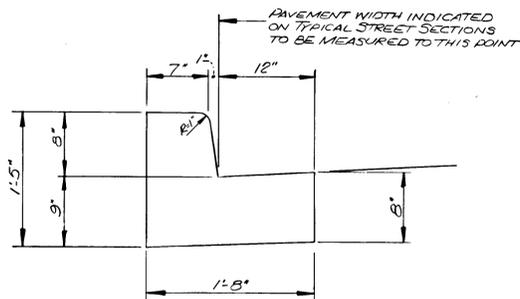


TYPICAL SECTION
SCALE: NONE



NOSED DOWN CURB DETAIL

SCALE: NONE



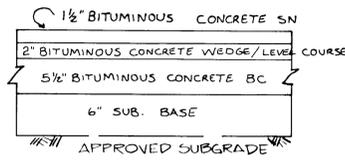
COMB. CONCRETE CURB & GUTTER
MDSHA STD. MD-620.02
SCALE: NONE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

John W. Murchman 7-17-86
CHIEF DIV. OF LAND DEVELOPMENT & ZONING ADMIN. DATE

APPROVED:
HOWARD COUNTY DEPT. OF PUBLIC WORKS

K. Reid & Reilly 7-21-86
CHIEF BUREAU OF ENGINEERING DATE



TYPICAL PAVING SECTION

SCALE: NONE

GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH MARYLAND STATE HWY. ADMINISTRATION DETAILS AND SPECIFICATIONS FOR CONSTRUCTION.
- ALL UTILITY COMPANIES SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF CONSTRUCTION.
- ALL INLETS SHALL BE MDSHA STANDARDS UNLESS OTHERWISE SHOWN.
- ALL STREET CURB RETURNS SHALL HAVE A 30.0' RADIUS UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD SPECIFICATIONS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES WHERE DIRECTED BY THE ENGINEER A MINIMUM OF TWO WEEKS IN ADVANCE OF ANY CONSTRUCTION.
- TEMPORARY COMPACTED 18" HIGH EARTH FILL DIVERSION DIKS SHALL BE CONSTRUCTED ABOUT THE LIPS OF FILL SLOPES ON THE R.O.W. CONCURRENTLY WITH THE INITIAL GRADING AND DIRECTED TO UNDISTURBED SOG AREAS AT THE END OF EACH DAY.
- CONTRACTOR TO NOTIFY THE MARYLAND STATE HIGHWAY INSPECTION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE NO. 445-5515.
- ALL DISTURBED SLOPE AREAS TO BE STABILIZED AS SOON AS GRADING IS COMPLETED.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF CURE PERIOD.
- ALL SWALES AND GROUES SHALL BE PERMANENTLY NEEDED. SEE THE NEED SPECIFICATIONS ON SHEET 02.
- TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE MATERIAL ON HIGHWAY TRAFFIC CONTROL DEVICES, 1988 REVISED EDITION.
- POLY FILTER FABRIC SHALL BE PLACED UNDER ALL STONE OR RIP RAP FILL WITHIN AND LENGTH OF 10 FEET.
- STONE FOR RIP RAP SHALL BE AS SPECIFIED ON THE DRAWINGS. ALL RIP RAP SHALL BE UNPAVED UNLESS OTHERWISE NOTED.
- STUBS FOR 6" P.V.C. UNDERDRAIN PIPE TO BE INSTALLED AT CENTER OF EACH WALL OF EVERY INLET.

State Highway Administration - 531-5533

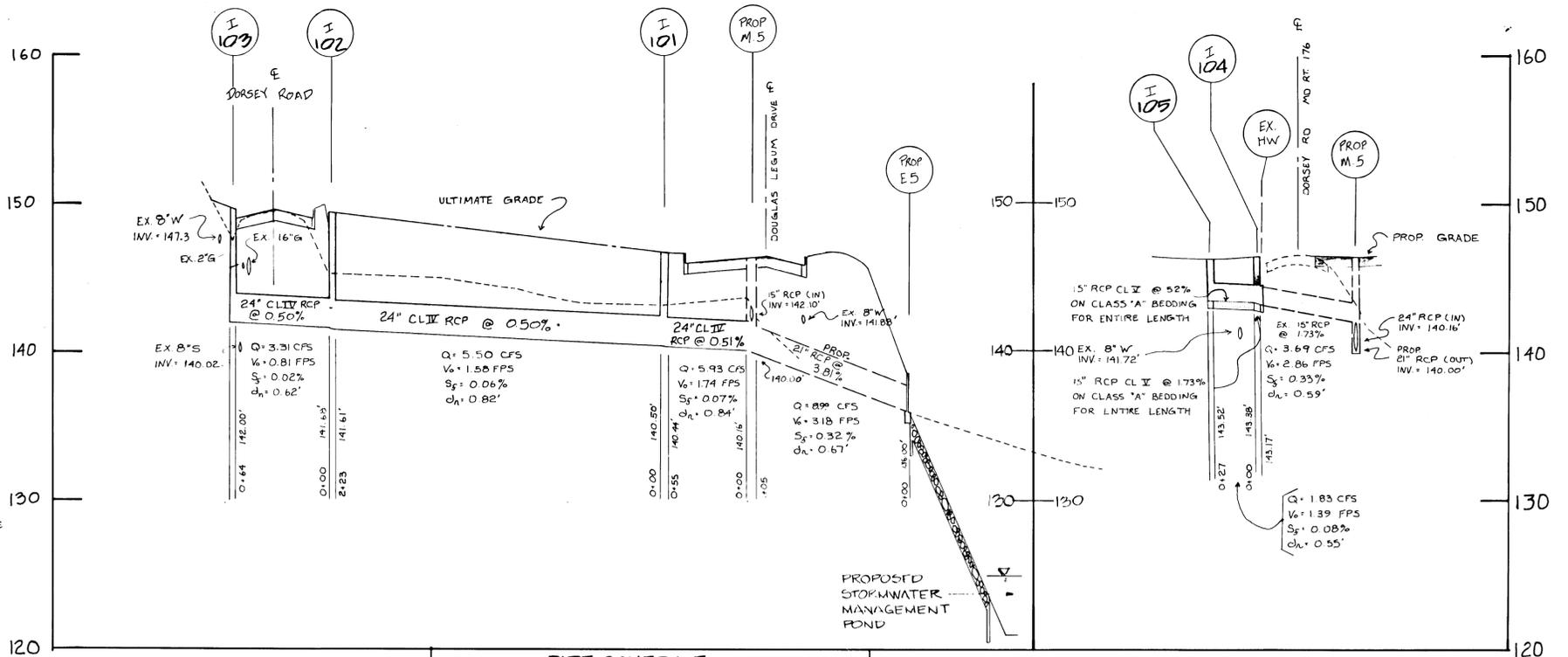
Baltimore Gas & Electric Company - Underground Electric Distribution Customer Service - 685-0123

Baltimore Gas & Electric Company - Underground Gas Distribution Customer Service - 685-0123

Chesapeake & Potomac Telephone Company - 725-9976

American Telephone & Telegraph - Cable Location Division - 393-3553

Howard County Department of Inspections and Permits - 592-2436



PIPE SCHEDULE

SIZE (IN)	TYPE	LENGTH (FT.)
15	CL V RCP	29
24	CL II RCP	342

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

STRUCTURE SCHEDULE

STRUCTURE NUMBER	STRUCTURE TYPE	INVERT		TOP ELEVATION		STANDARD NUMBER
		IN	OUT	UPPER	LOWER	
I.101	15 FT. COG INLET	140.50	140.44	146.99	146.81	MDSHA STD. NO. MD-374.31
I.102	15 FT. COG INLET	141.68	141.61	149.61	149.43	"
I.103	15 FT. COG INLET	—	142.00	149.85	149.67	"
I.104	15 FT. COG INLET	143.38	143.17	146.60	146.44	"
I.105	10 FT. COG INLET	—	143.52	146.31	146.31	"
C-1	CURB OPENING	—	—	—	—	MDSHA STD. NO. MD-640.02
C-2	CURB OPENING	—	—	—	—	—

ADJACENT OUTGOING CHANNELS TO BE SLOPED TO 2.0% AND DIRECT DRAINAGE INTO THROAT OF CURB INLETS.

F-86-151

OWNER:

DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
7223 PARKWAY DRIVE
HANOVER, MARYLAND 21076
(301) 796-4446

No.	REVISION	DATE	BY



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DORSEY ROAD (MD. 176) IMPROVEMENTS

FROM U.S. ROUTE 1 TO
DOUGLAS LEGUM DRIVE

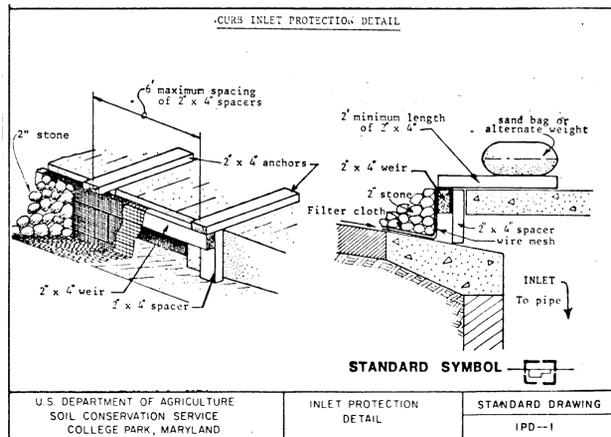
HOWARD COUNTY, MARYLAND

JWJC DESIGN SCALE As Shown

RF DRAWN 29 OF 31

RHM CHECKED SHEET

JUNE 1986 DATE JOB No. R-1266 X FILE No.



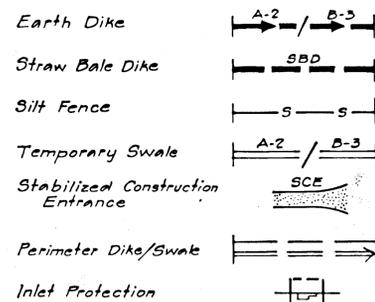
Curb Inlet Protection.

1. Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

SEQUENCE OF CONSTRUCTION

1. Clear and grub areas necessary and construct silt fence at toe of proposed fill slope north of Dorsey Road.
2. Begin construction of storm drain inlets and connecting pipe.
3. Construct inlet protection at all inlets and begin grading.
4. Construct curb and gutter leaving entrance to Parcel 8 open until such time that new entrance off Deeppath Road can be used.
5. Fine grade paving areas and begin paving.
6. At such time all work is completed stabilize all remaining disturbed areas.
7. Upon stabilization of all areas, remove sediment control devices at the approval of the on-site inspector.

STANDARD SYMBOLS



APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
John W. Murchison 7-17-86
 UNIT

APPROVED: HOWARD COUNTY DEP. OF PUBLIC WORKS
William B. Riley 7-21-86
 CHIEF BUREAU OF ENGINEERING

SEDIMENT CONTROL NOTES

- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3) Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52.) Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector
- 7) Site Analysis:
 Total Area of Site 2.4 Acres
 Area Disturbed 1.7 Acres
 Area to be roofed or paved 0.5 Acres
 Area to be vegetatively stabilized 0.8 Acres
 Total Cut Cu. yds
 Total Fill Cu. yds
 Offsite waste/borrow area location
- 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- 9) Additional sediment controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.
- 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

PERMANENT SEEDING NOTES

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

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

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. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

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

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

TEMPORARY SEEDING NOTES

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

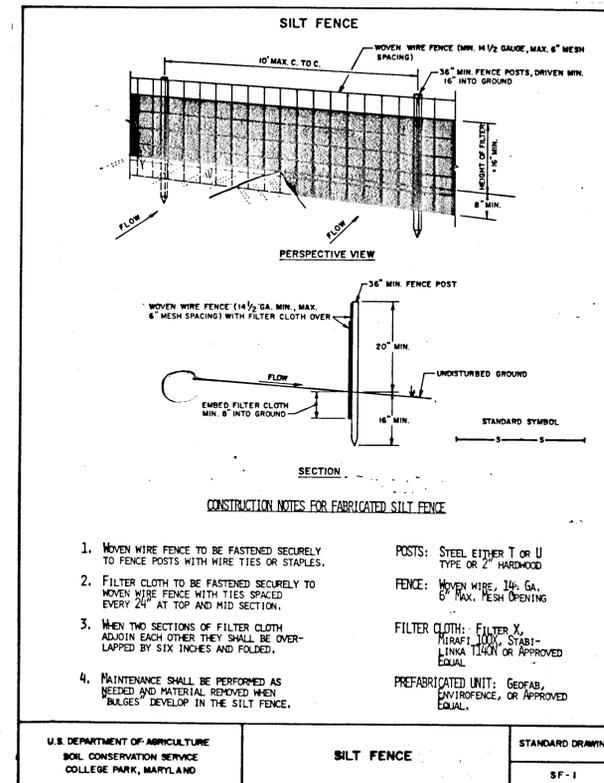
Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

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

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



- 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 "BULGES" DEVELOP IN THE SILT FENCE.
- POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD
 FENCE: WOVEN WIRE, 1/4" GA. 6" MAX. MESH OPENING
 FILTER CLOTH: FILTER X, TRAP, LOCK, STABILINKA 1140N OR APPROVED EQUAL
 PREFABRICATED UNIT: GEOFAB, ANTIROFENCE, OR APPROVED EQUAL.

SEDIMENT CONTROL

Provide the following certification blocks on sediment control plans:

By the Developer:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project."

Mark L. Lewy 7/11/86
 Signature of Developer
 MARK L. LEWY Date

By the Engineer:

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Robert H. Marmon 7-14-86
 Signature of Engineer
 ROBERT H. MARMON Date

Reviewed for HOWARD CO. S.C.D.

Name

and meets Technical Requirements.

Margaret Ann Rando 7/17/86
 U.S. Soil Conservation Service Date

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

Howard S.C.D. 7-17-86
 Howard S.C.D. Date

NOTES AND DETAILS

F-86-151

OWNER:
 DORSEY BUSINESS CENTER LIMITED PARTNERSHIP
 7223 PARKWAY DRIVE
 HANOVER, MARYLAND 21076
 (301) 796-4446

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 FROM U.S. ROUTE 1 TO
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 HOWARD COUNTY, MARYLAND

JWC DESIGN	SCALE NONE
EG DRAWN	31 OF 31
RHM CHECKED	SHEET
JUNE 86 DATE	R1266 X FILE No.