

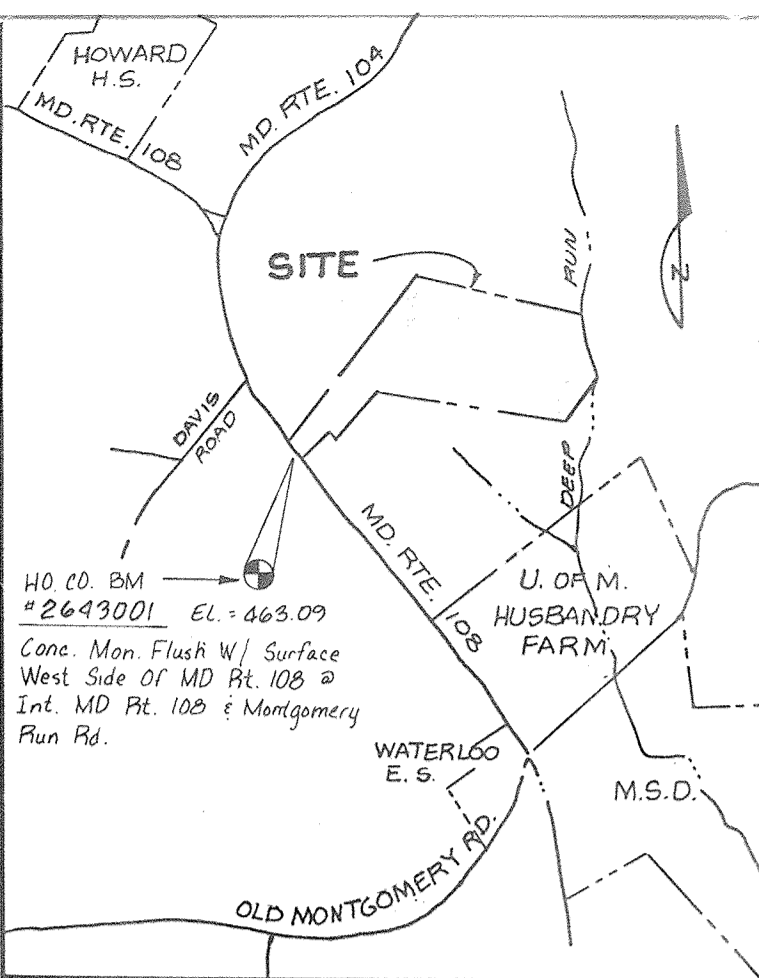
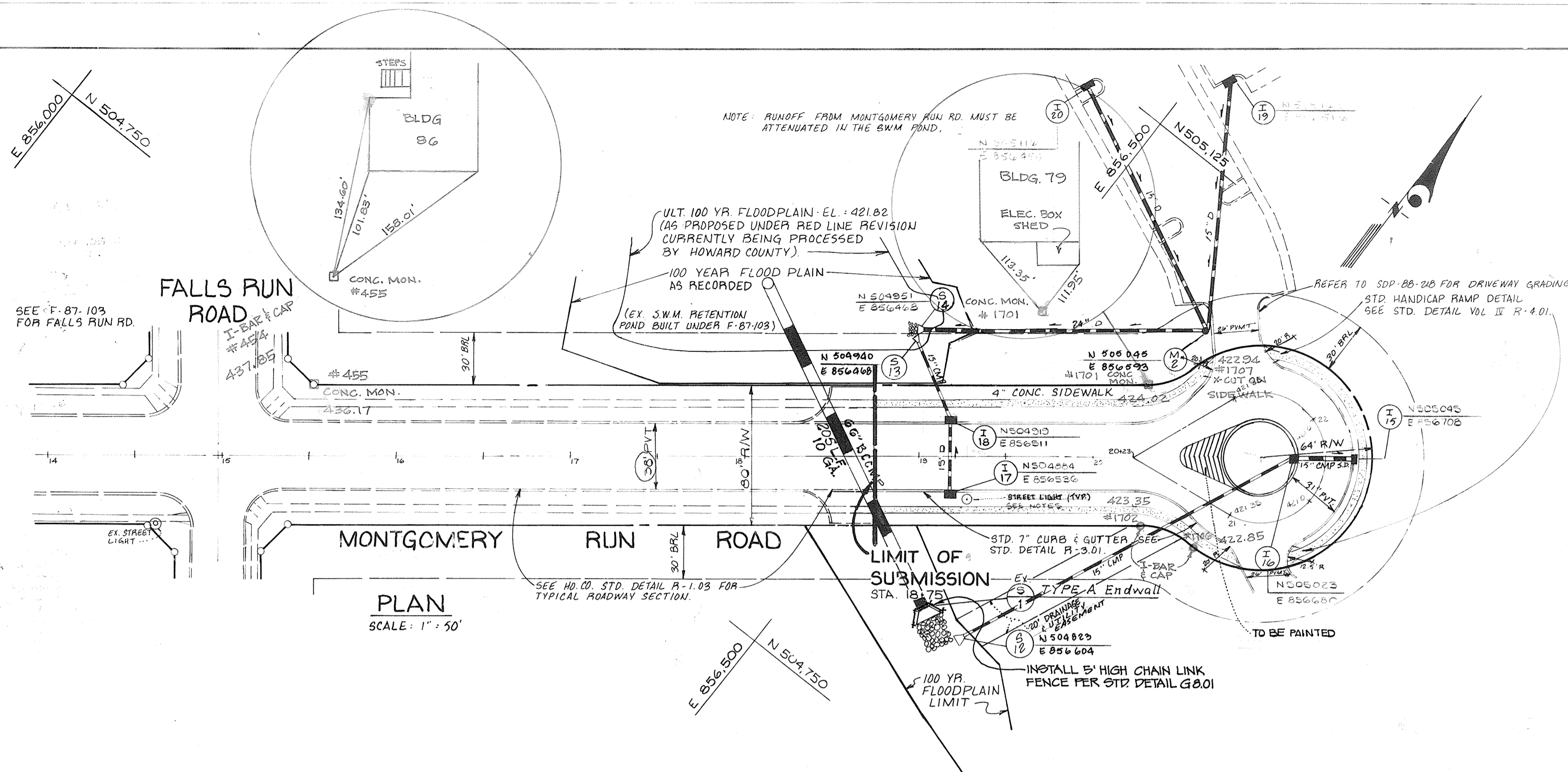
REVISION CHART		
DATE	REVISION	BY
12/19/89	REVISED LINEAR PROFILE	S.A.P.

GENERAL NOTES

- ALL STORM DRAIN & PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST DETAILS AND SPECIFICATION OF HOWARD CO.
- TYPES OF STORM DRAIN STRUCTURES REFER TO THE STANDARD DETAILS OF HOWARD COUNTY.
- TRENCH COMPACTION FOR STORM DRAINS WITHIN ROADS OR STREET RIGHT OF WAY LIMITS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD CO. ROAD CODE. SEE HOWARD COUNTY DESIGN MANUAL VOL. IV.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST FITS, BY HAND, AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF CONSTRUCTION.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

MISS UTILITY	1-800-257-7777
CAP TELEPHONE COMPANY	725-9976
HOWARD CO. BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS & ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	551-5533
HOWARD CO. CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	792-7272
- ALL TRAFFIC CONTROL SERVICES, PARKING AND SIGNING TO BE DONE ON ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", 1984 REVISED EDITION.
- SAG AND CREST VERTICAL CURVES WERE DESIGNED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME III, ROADS & BRIDGES.
- PROVIDE CONCRETE SIDEWALK RAMPS IN CURBS, WHERE SHOWN ON PLAN (MAX. 12:1 SLOPE: SEE HOWARD CO. STD. DETAIL R-4.01)
- MINIMUM COVER OF 12" SHALL BE PROVIDED OVER STORM DRAIN PIPES ON ALL AREAS NOT BEING FINAL GRADED BY THESE PLANS.
- DESIGN SPEED: 30 M.P.H. (MINOR COLLECTOR)
- STREET LIGHTS SHALL BE 175 WATT MODERN MERCURY VAPOR LAMP POST. TOP FIXTURES ON 14 FOOT GRAY FIBERGLASS POLES, INDICATED BY OR 250M ON 30 FEET BRONZE-ALUM (OR 30.)
- ALL HORIZONTAL CONTROLS BASED ON MARYLAND STATE DATUM. VERTICAL ELEVATIONS BASED ON U.S.G.S. DATUM.
- EXISTING TOPOGRAPHY SHOWN WAS FLOWN FEBRUARY, 1985.
- REFER TO THE PREVIOUS F-PLAN 87-103 FOR PHASE 1.
- ZONING: RSA 8
- REFER TO SDP-88-218 FOR ADJACENT SUBDIVISIONS.

NOTE: 2/2/18 - CAPITAL PROJECT D-1188 REPLACED METAL STRUCTURE AND PRINCIPAL SPILLWAY IN SWM POND#3 WITH CONCRETE CONTROL STRUCTURE AND 30" RCP. THERE WAS ALSO SOME MINOR REGRADING.



DESIGNED ATTJA	VILLAGE OF MONTGOMERY RUN	SCALE AS SHOWN
DRAWN SGK	TAX MAPS 31 & 37 PARCELS 180 & 285 SECTION 1, AREA 2	DWG NO. 1 OF 7
CHECKED RA, DW	1ST. ELECTION DISTRICT HOWARD COUNTY, MD.	JOB NO. 1684136
DATE APRIL 1988	ROAD PLAN & PROFILE AND STORM DRAINAGE	FILE NO.

OWNER:
NEWMISS LTD. PARTNERSHIP
6615 REISTERSTOWN ROAD
SUITE 201
BALTIMORE, MARYLAND 21215

DEVELOPER:
MACKS & MACKS, INC.
6615 REISTERSTOWN ROAD
BALTIMORE, MARYLAND 21215

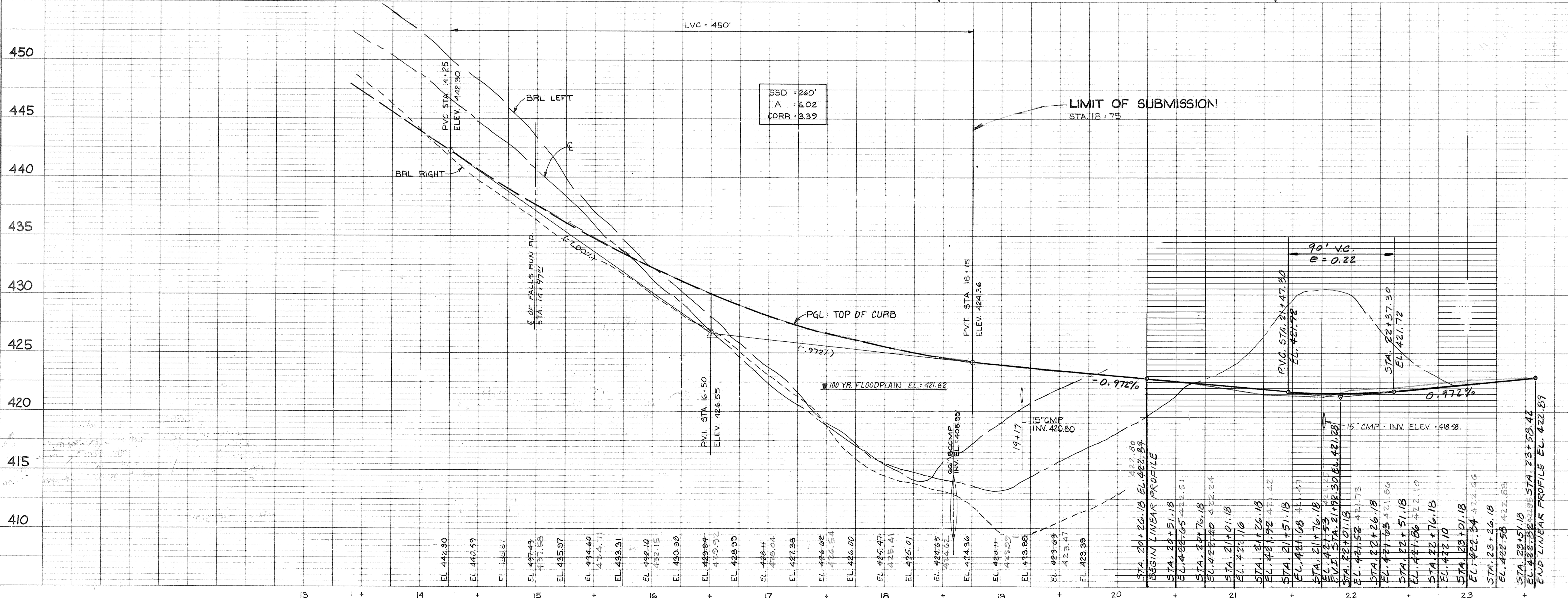
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Frank J. Taylor 10-3-88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Paul J. Seaman 9/27/88
 Chief, Land Development Division
Braville W. Weneand 9/26/88
 Chief, Bureau of Highways
Gregory E. ... 9-27-88
 Chief, Bureau of Engineering

APRIL 1988 AS SHOWN

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS

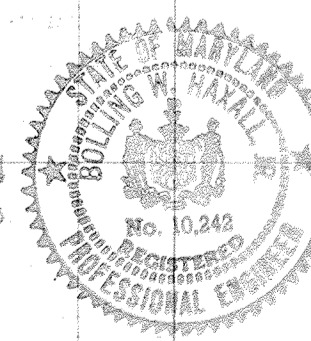
John A. More
PROFESSIONAL ENGINEER



ENGINEERS CERTIFICATE

I hereby certify that to the best of my knowledge and belief that the as-built information shown hereon is accurate and complete and that the ponds as constructed meet the requirements of the Standards & Specifications for Ponds.

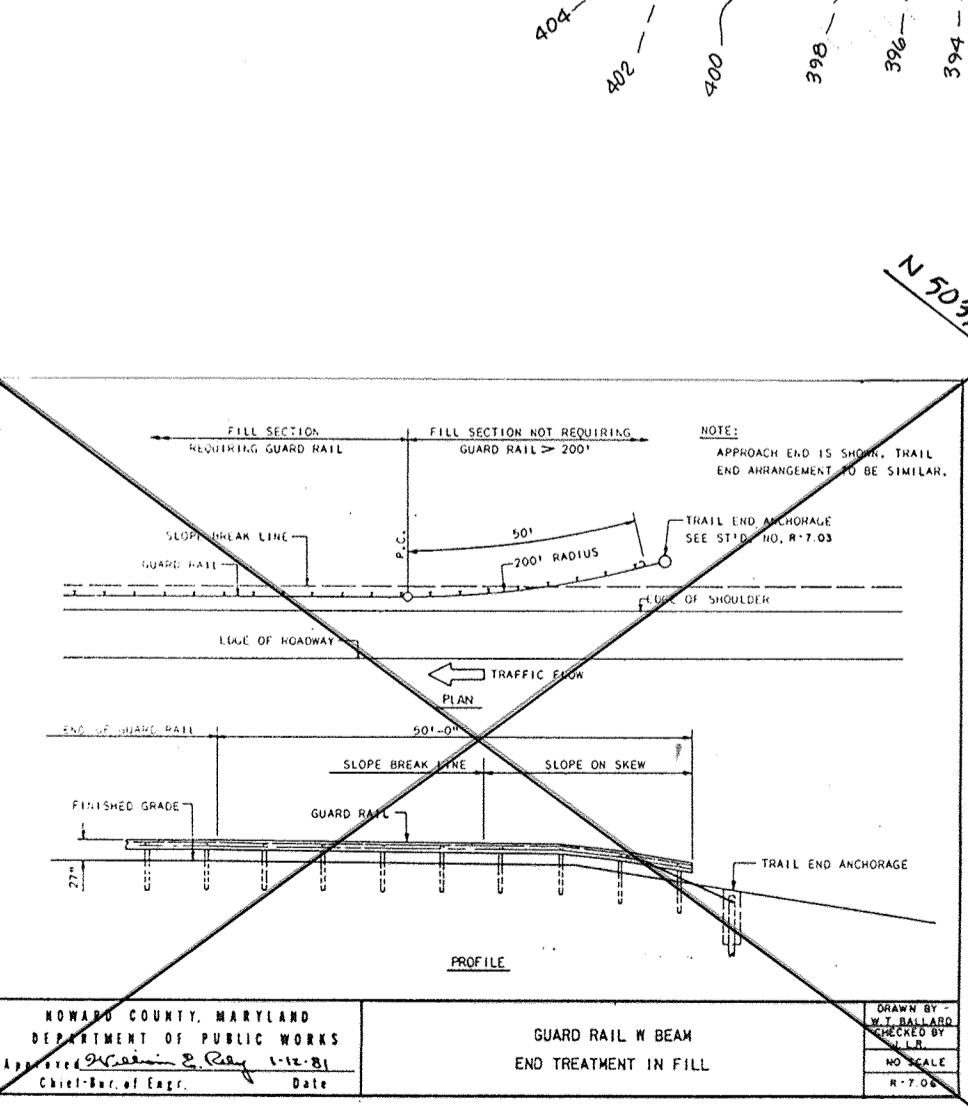
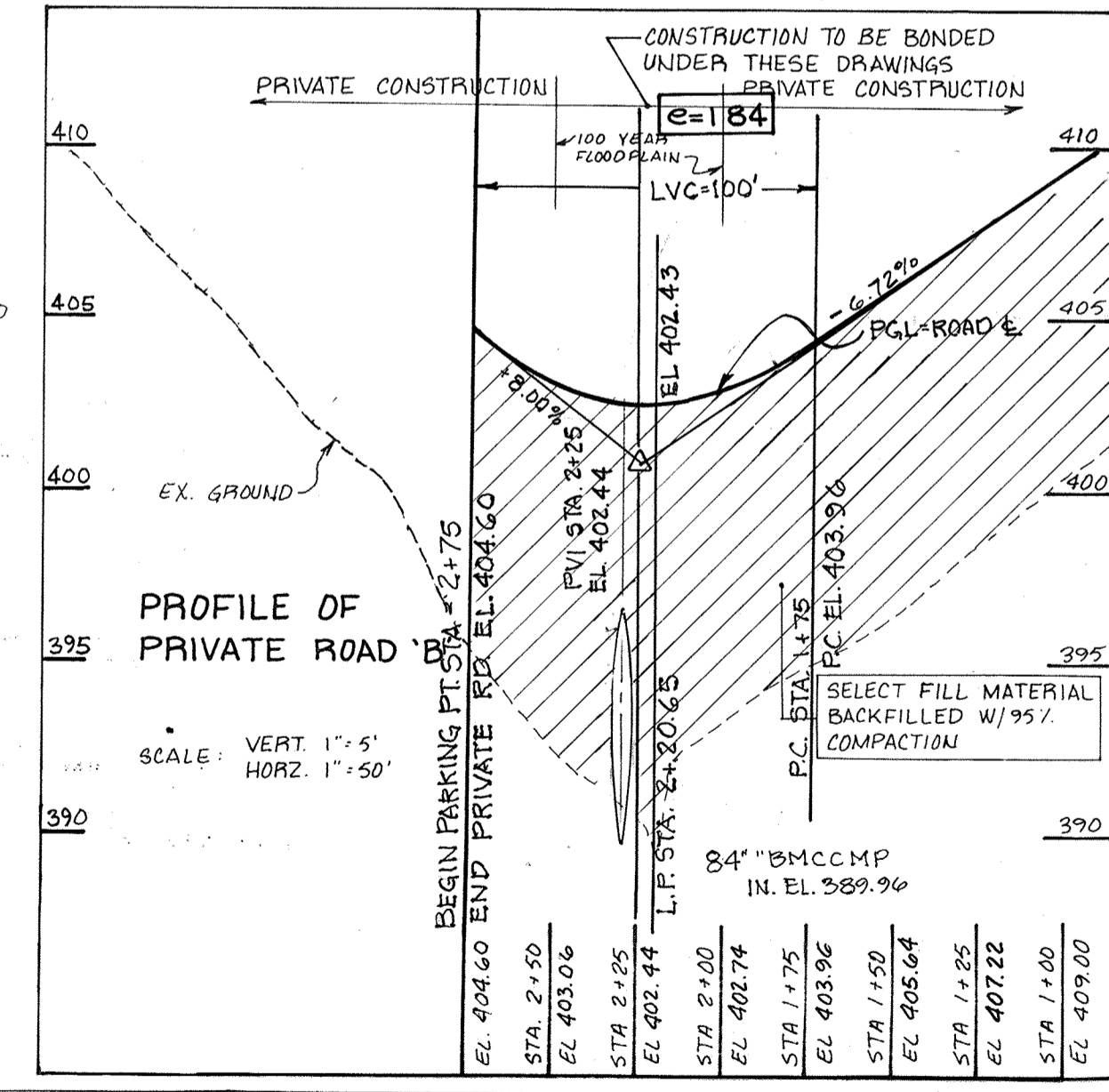
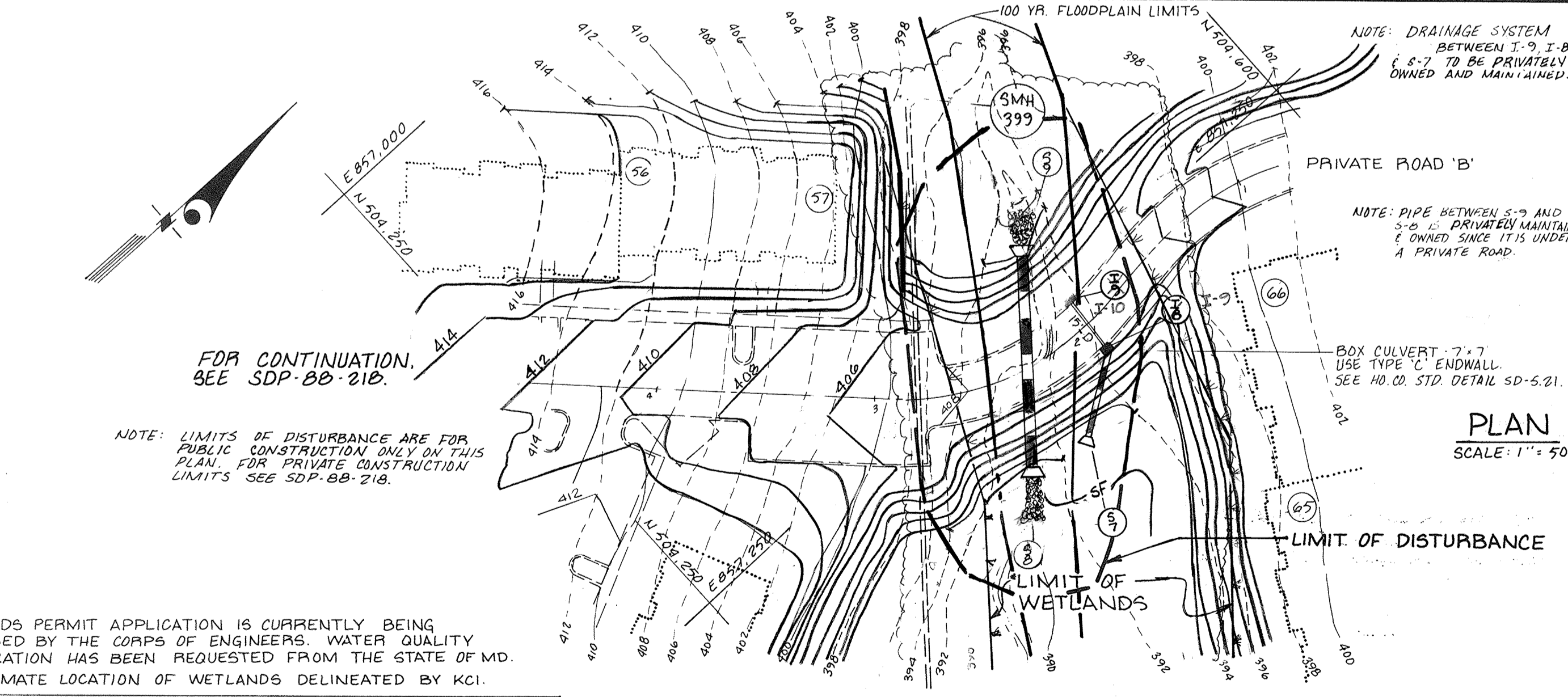
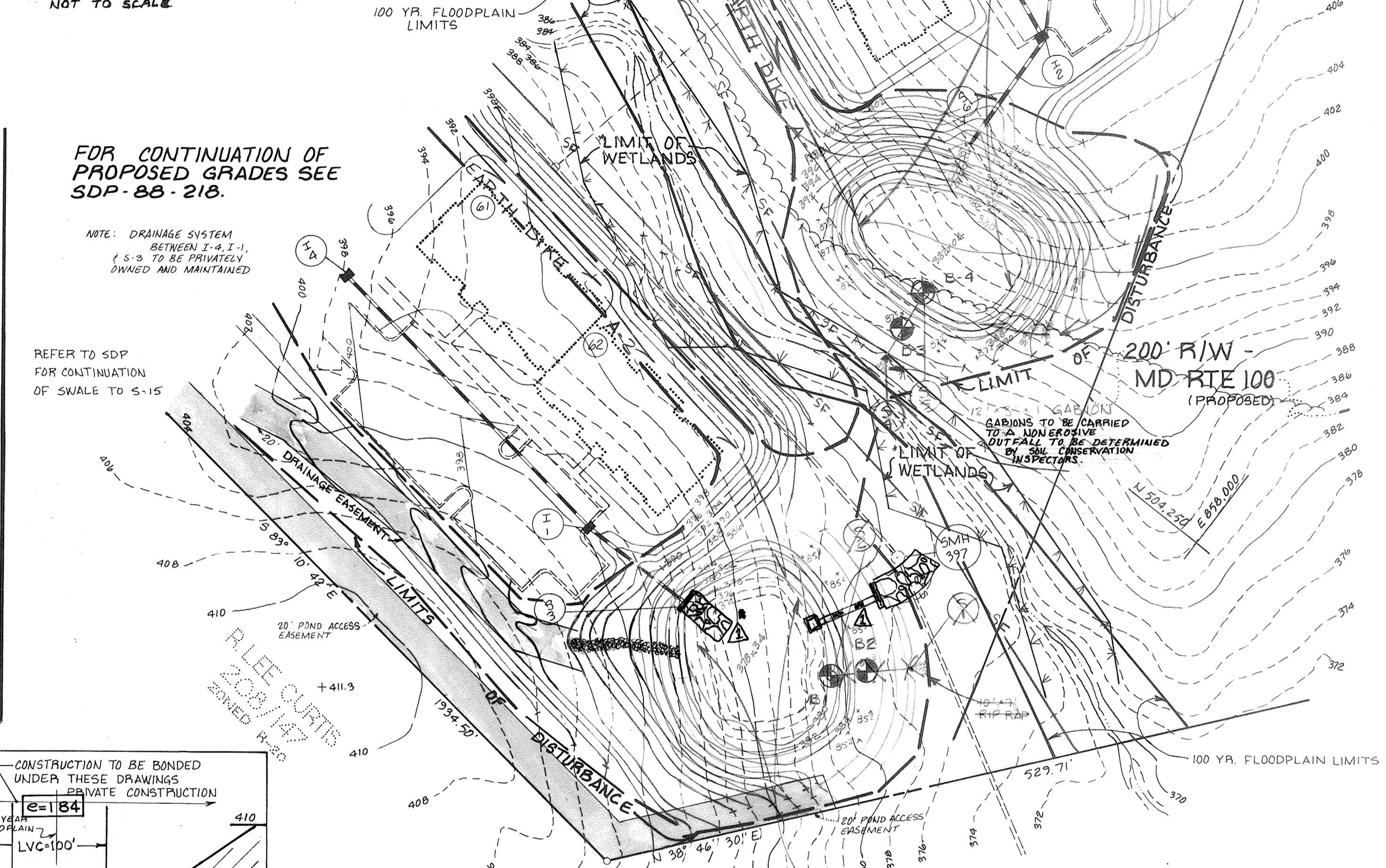
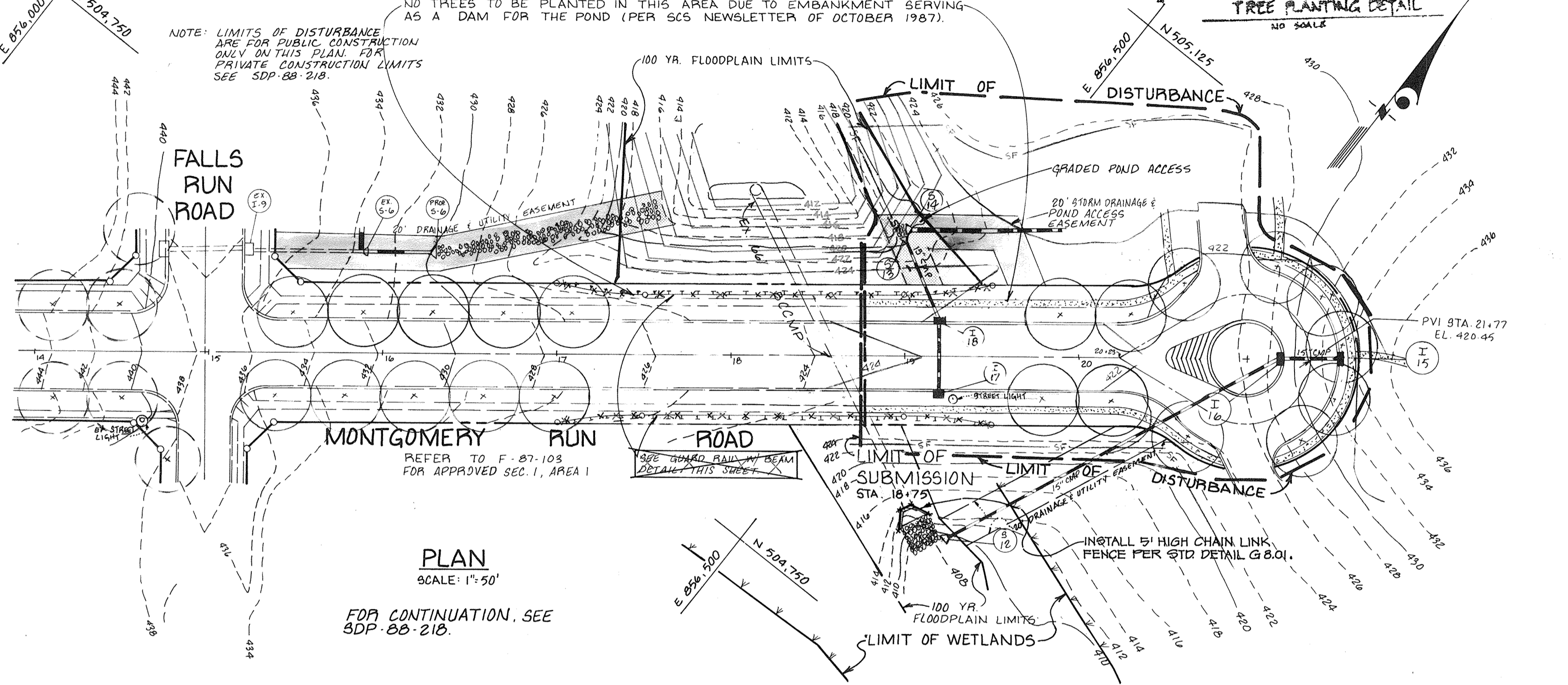
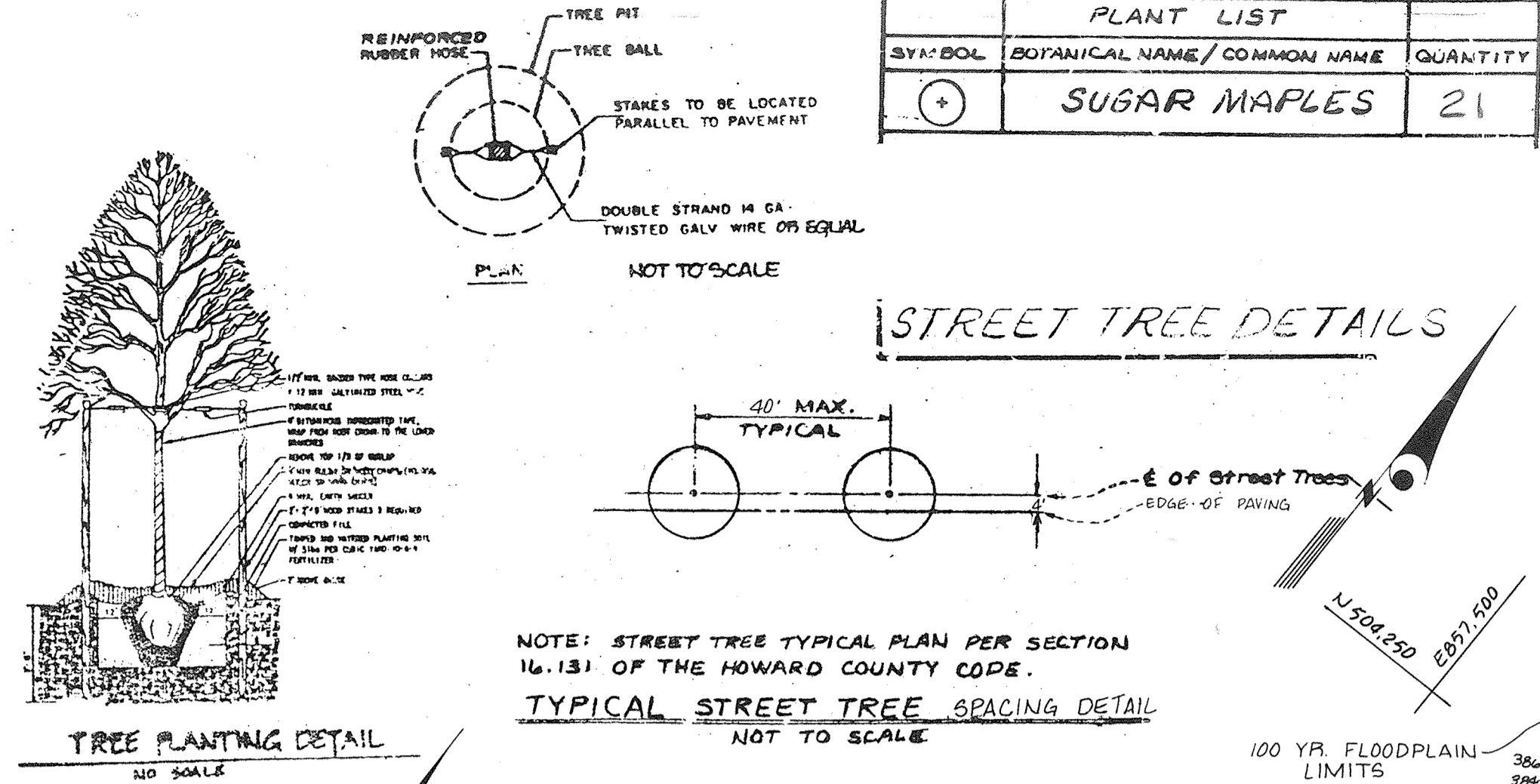
Braville W. Weneand 3/17/94
 Reg. Prof. Engineer No. 10242



PROFILE
 DRAWN BY: ...
 CHECKED BY: ...
 DATE: ...

1262

NO. OF SOIL EXPLORATION	NO. OF SOIL EXPLORATION	NO. OF SOIL EXPLORATION	NO. OF SOIL EXPLORATION
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Paul J. Seaman 9/20/88
Chief, Land Development Division Date

Pranville W. Weiland 9/26/88
Chief, Bureau of Highways Date

William E. Riley 9-27-88
Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Mark S. J. Taylor 10-3-88
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Robert W. Zilmer 9/12/88
Howard Soil Conservation District Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

James M. A. [Signature] 9-12-88
U.S. Soil Conservation Service 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."

John Blahnik 5-11-88
Signature of Eng. neer Date

By the Developer:

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of 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. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

[Signature] 5/11/88
Signature of Developer Date

DEVELOPER:

MACKS & MACKS
6615 REISTERSTOWN RD
SUITE 205
BALTIMORE, MD 21215
(301) 358-4934

OWNER:

NEWMISS LTD. PARTNERSHIP
6615 REISTERSTOWN RD
SUITE 201
BALTIMORE, MD 21215
(301) 358-4934

VILLAGE OF MONTGOMERY RUN

SECTION 1, AREA 2

TAX MAP 31 & 37 PARCEL 108 & 285
1ST ELECTION DISTRICT HOWARD COUNTY, MD

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET, SUITE 30, LAUREL, MD 20707
PHONE (301) 453-1821 FAX (301) 792-8086 (Rt. 1)

SHEET 2 OF 7

DATE APRIL 1988 SCALE AS SHOWN

1262

SOIL CONSERVATION SERVICE
MARYLAND
CONSTRUCTION SPECIFICATIONS
FOR
PONDS

These specifications are appropriate to ponds within the scope of the Standard for practice 378.

I. SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the pond or reservoir will be cleared of all trees, brush, logs, fence, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

II. EARTH FILL

Material

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, oversize stones, frozen or other objectionable materials. 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 above the design elevation (including freeboard) as shown on the plans.

Placement

Areas on which fill is to be placed shall be certified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

Compaction

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and is to be certified by the Engineer.

Cutoff Trench

Where specified, a cutoff 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 as shown on the drawings, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

III. STRUCTURAL BACKFILL

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 needs to fill completely all spaces under and adjacent to the 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 equipment be driven over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

IV. PIPE CONDUITS

All pipe shall be circular in cross section.

A. Corrugated Metal Pipe

1. **Materials - (Steel Pipe)** - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO 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.

Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings are commercially available: Hexon, Plasti-Cote, Blue-Road, and Beth-Co-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminized Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274-791 with watertight coupling bands or flanges.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. 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 soils shall be less than 9 and greater than 4.

2. **Connections** - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dipple bands are not considered to be watertight.

3. **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.

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

5. **Backfilling** shall conform to structural backfill as shown above.

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

V. CONCRETE

1. Materials

a. **Cement** - Normal Portland cement shall conform to the latest ASTM Specification C-150.

b. **Water** - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.

c. **Sand** - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.

d. **Coarse Aggregate** - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1 1/2) inches.

e. **Reinforcing Steel** - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

2. **Design Mix** - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/2 to 6 U.S. Gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

3. **Mixing** - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixer and of the introduction of the materials, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overmixing requiring the addition of water to preserve the required concrete consistency shall not be permitted. Track mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.

4. **Forms** - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed.

Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

5. **Reinforcing Steel** - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

6. **Consolidating** - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be supplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.

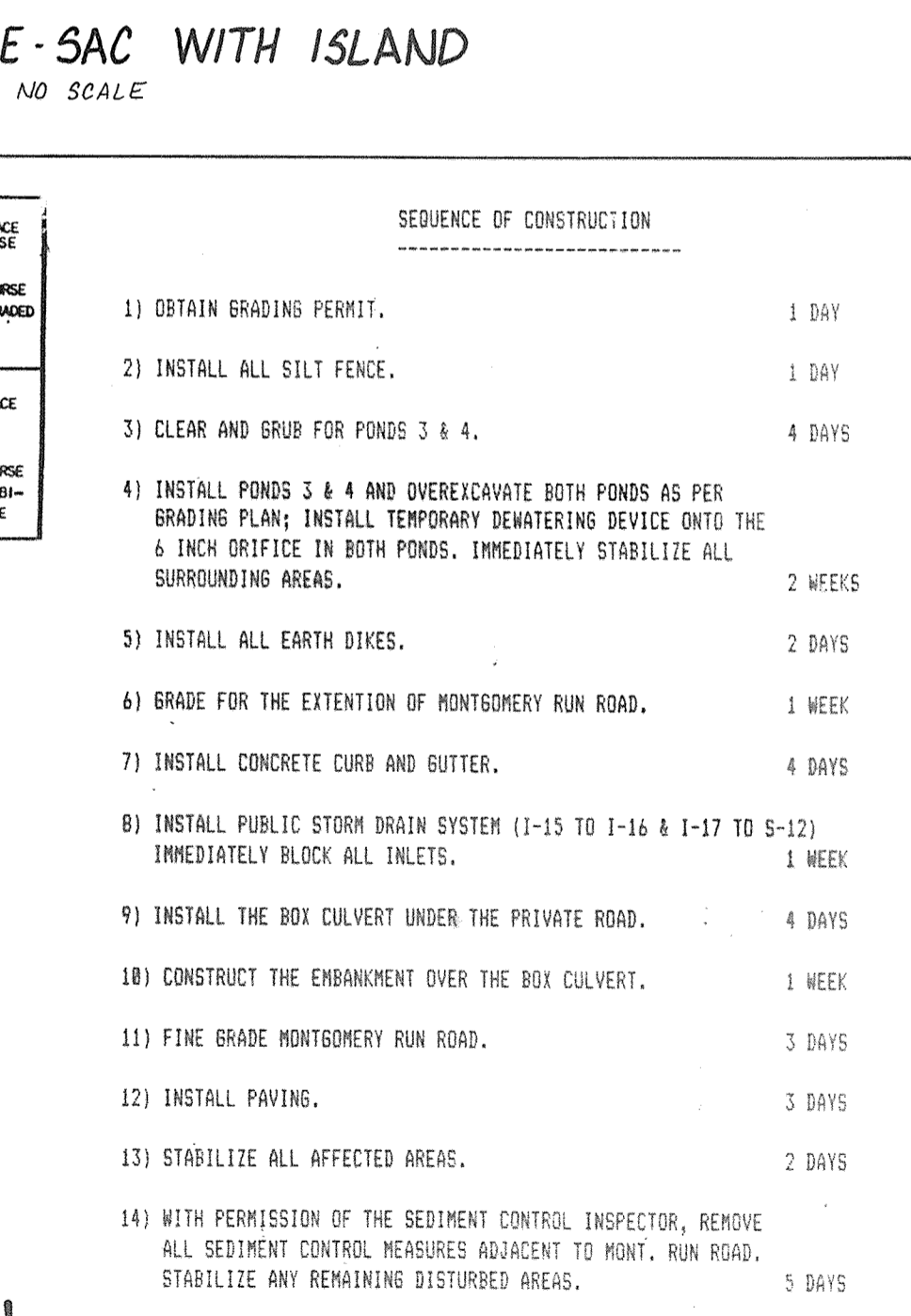
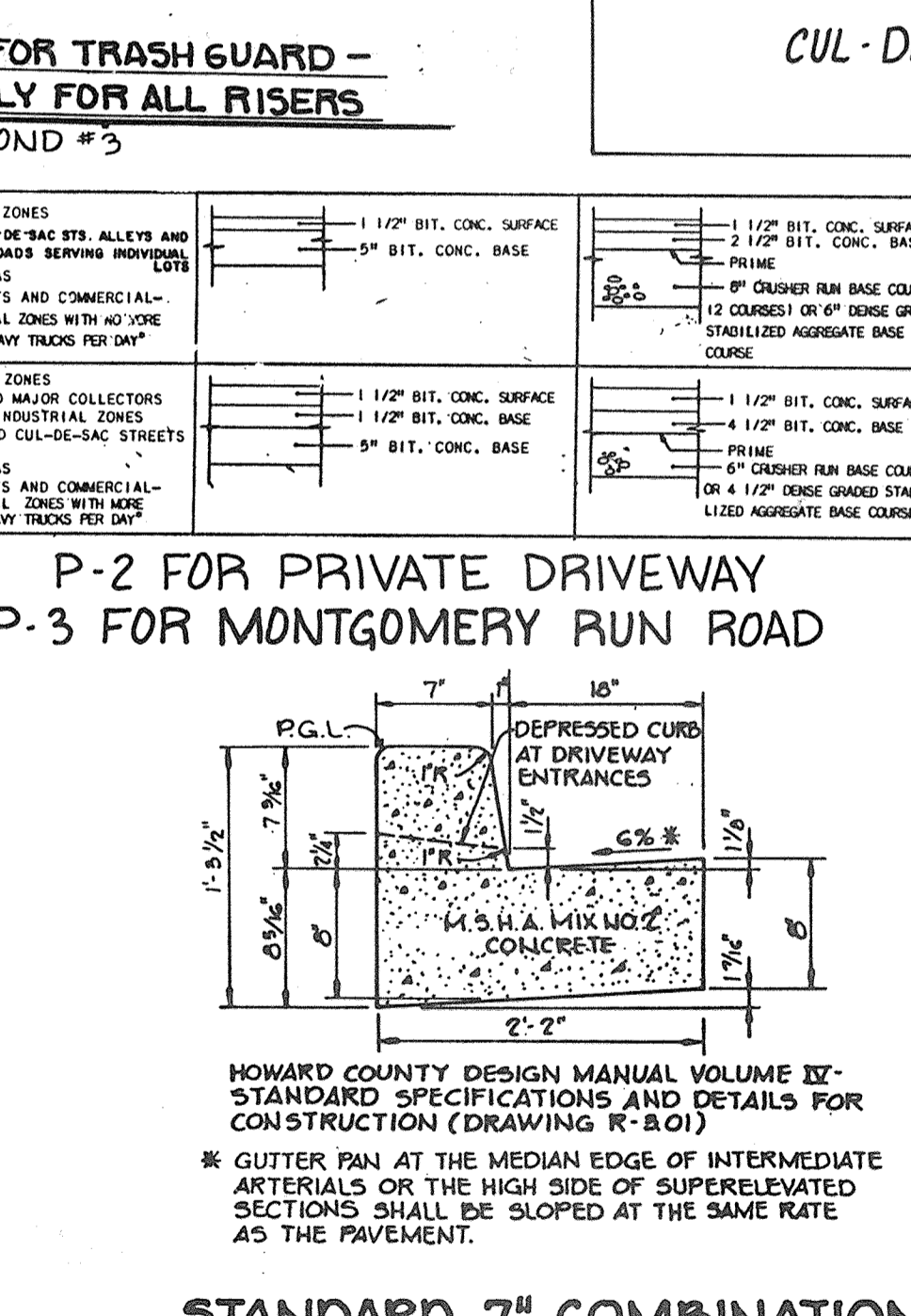
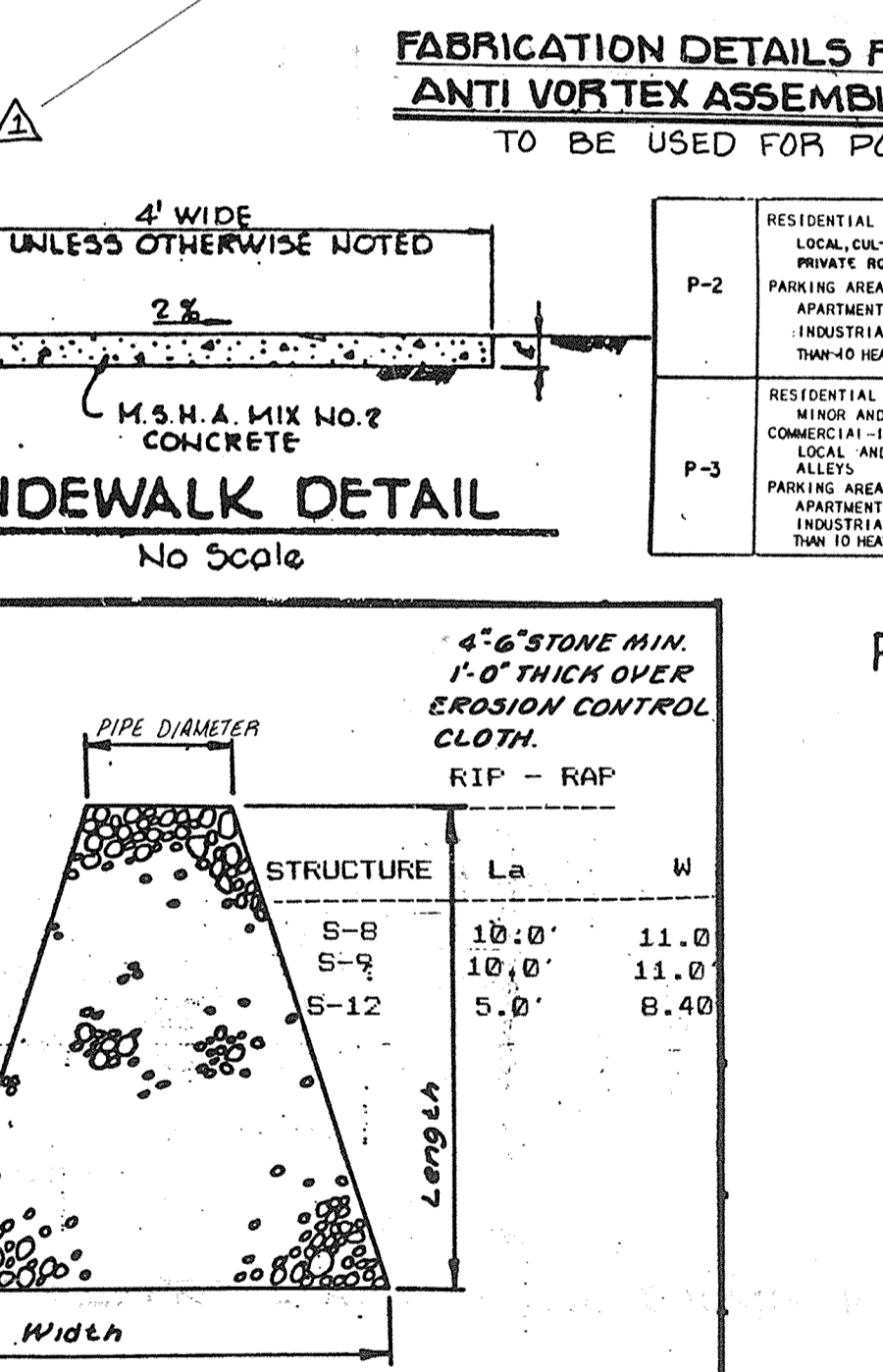
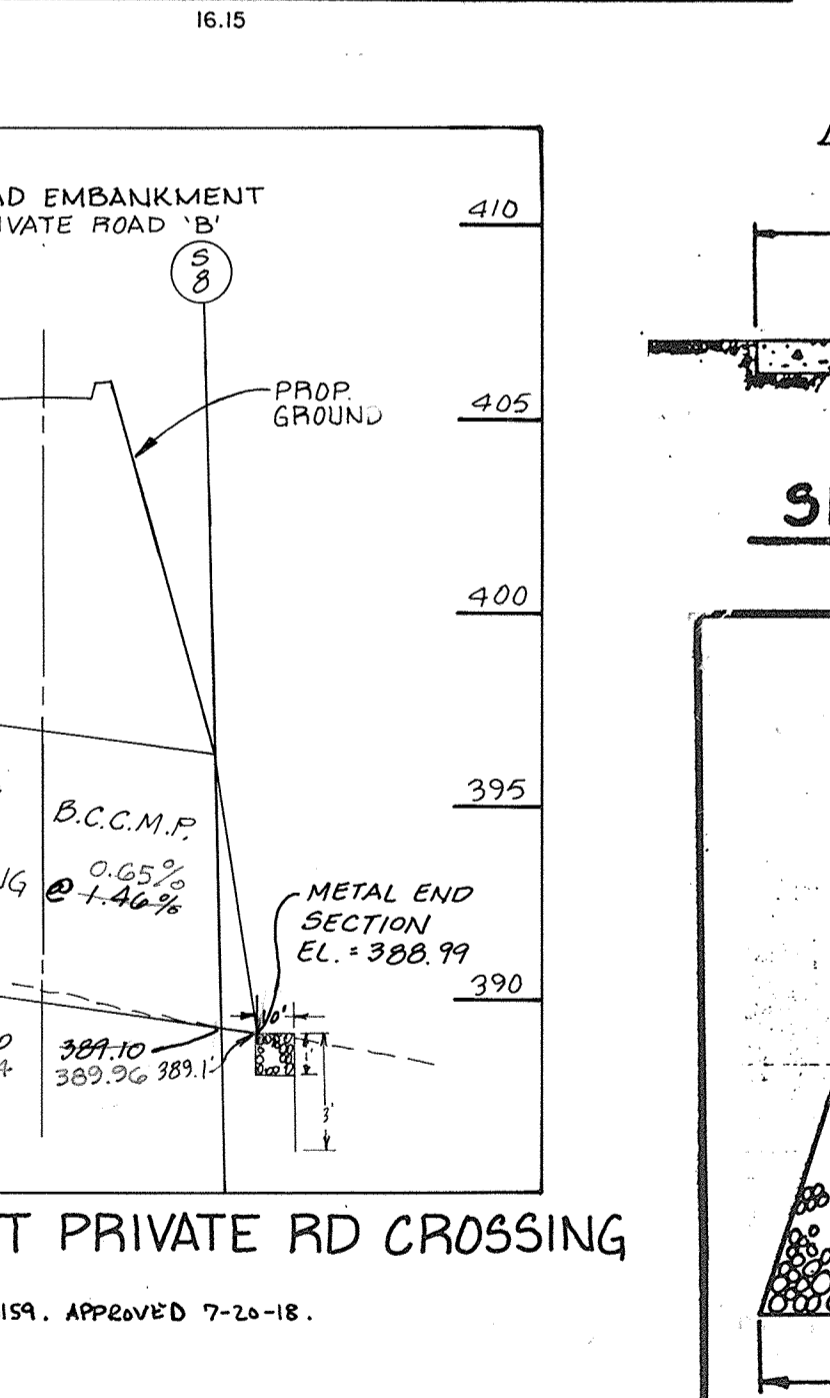
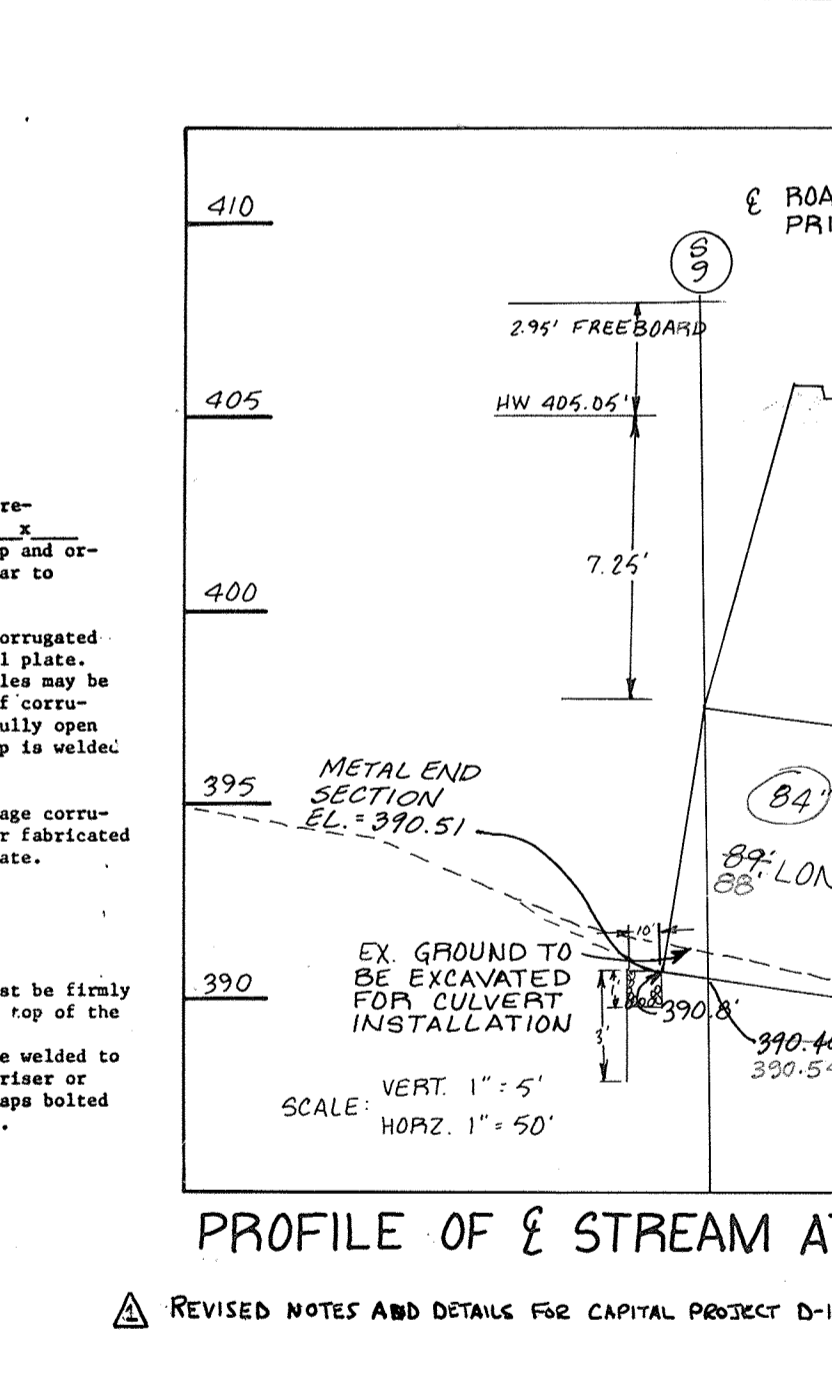
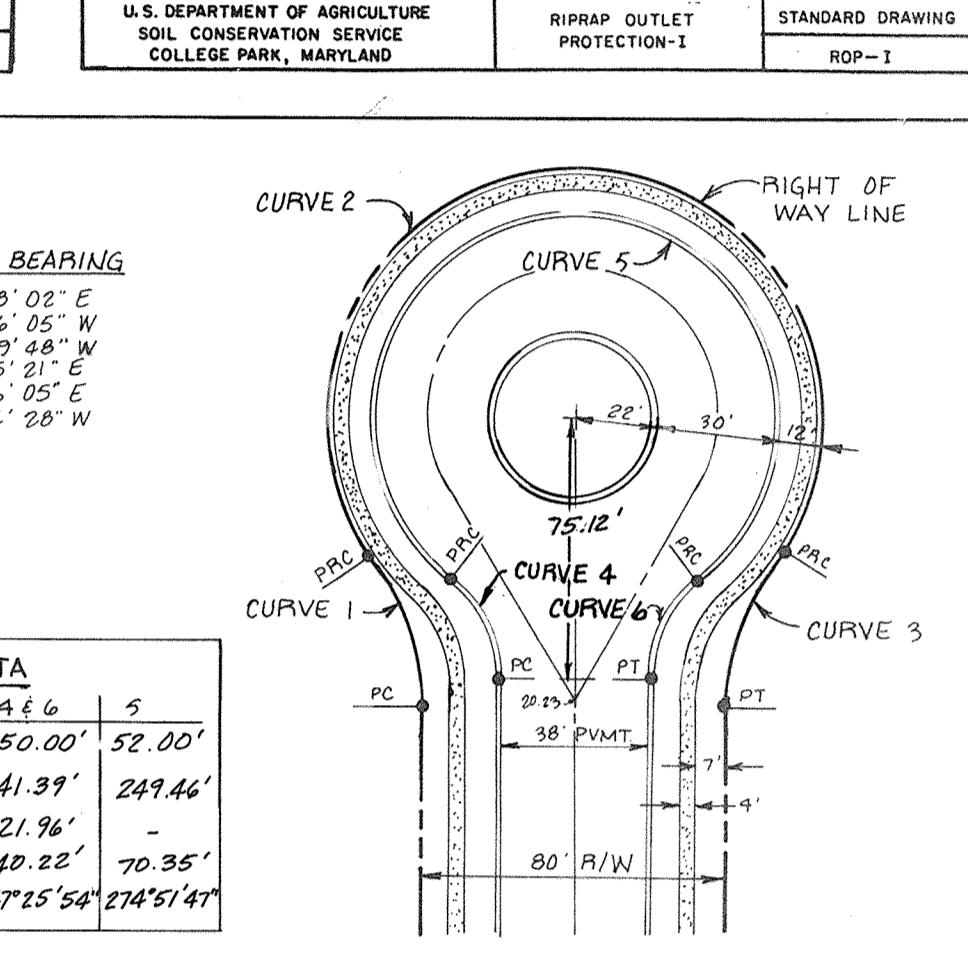
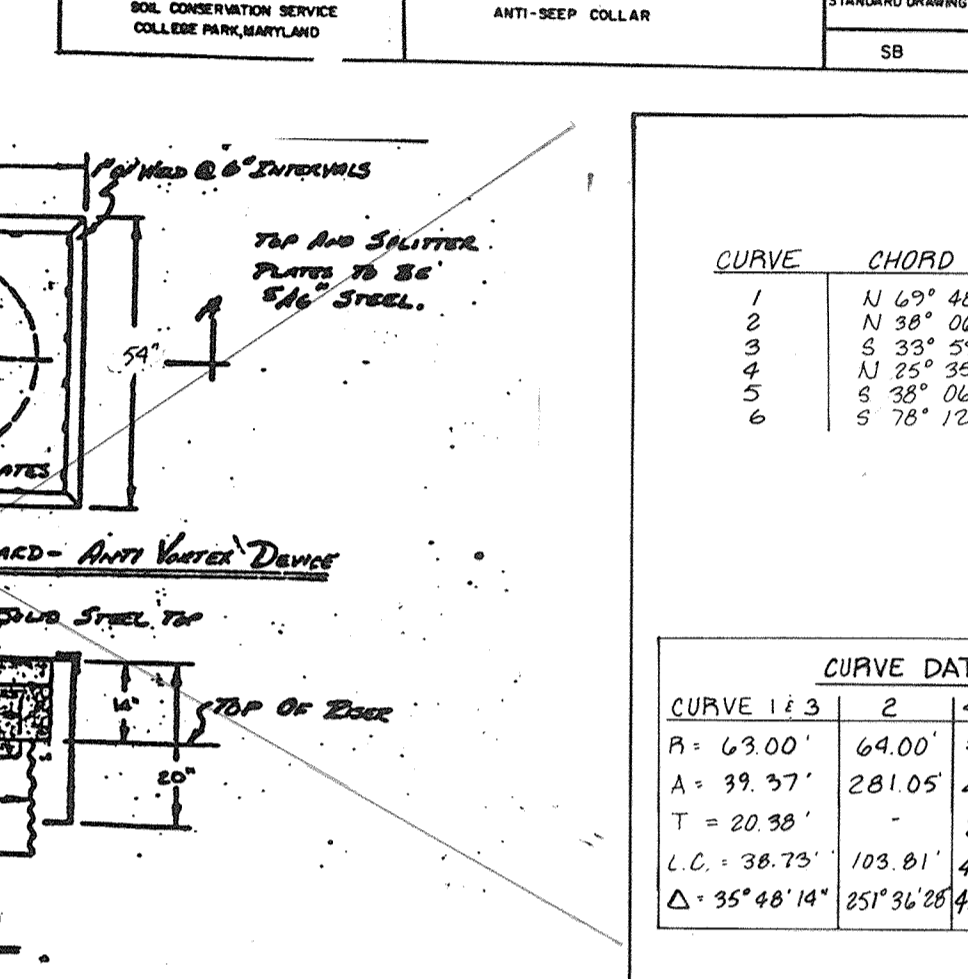
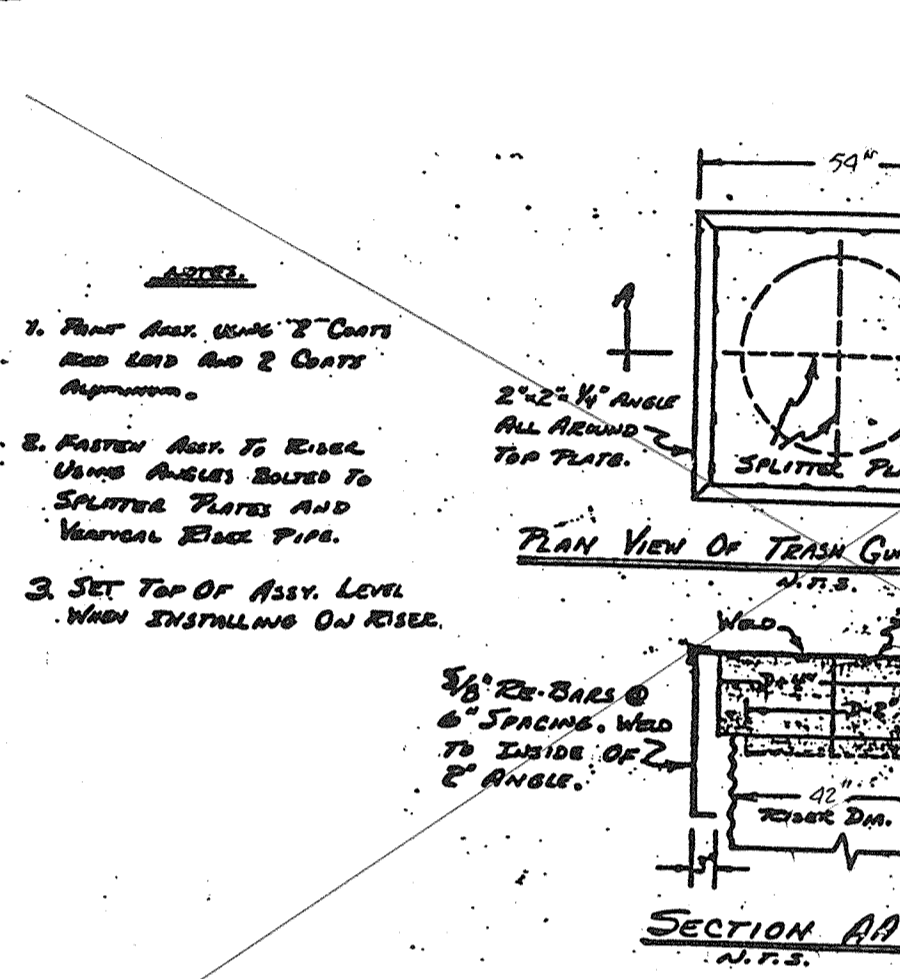
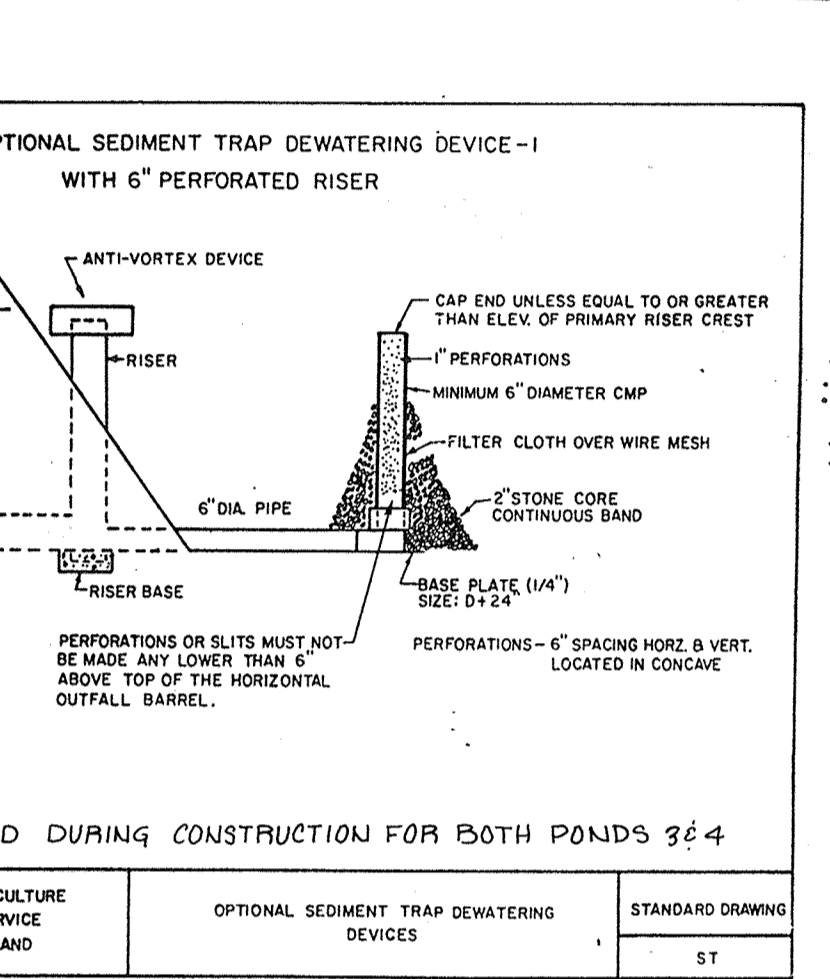
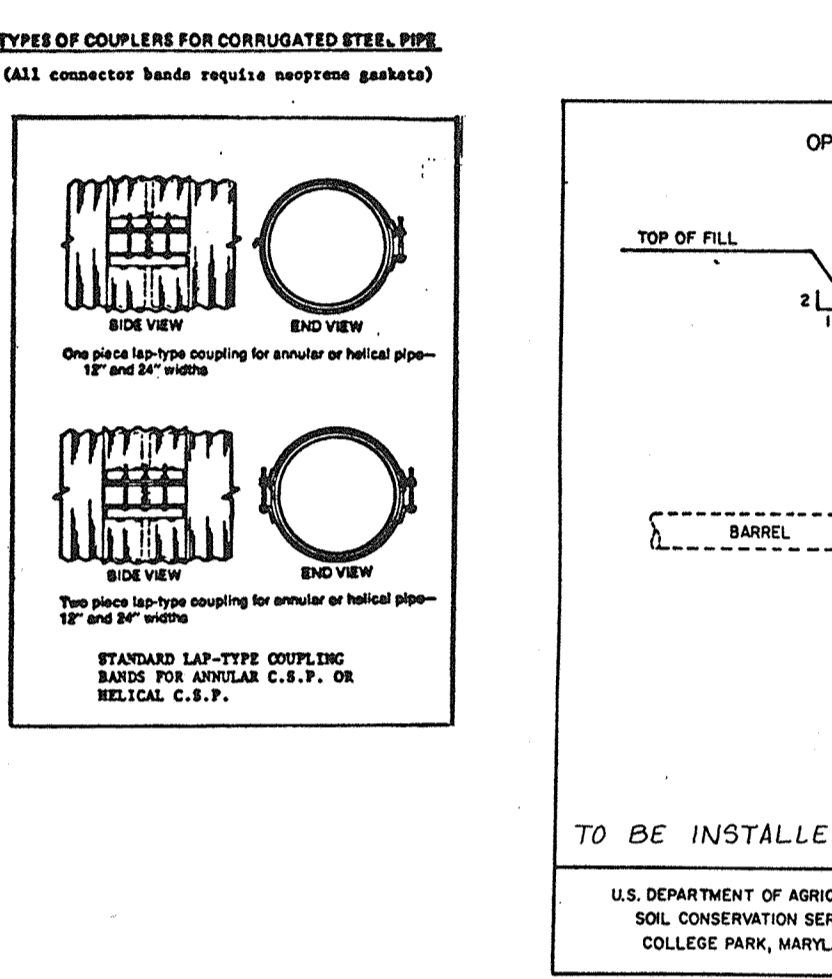
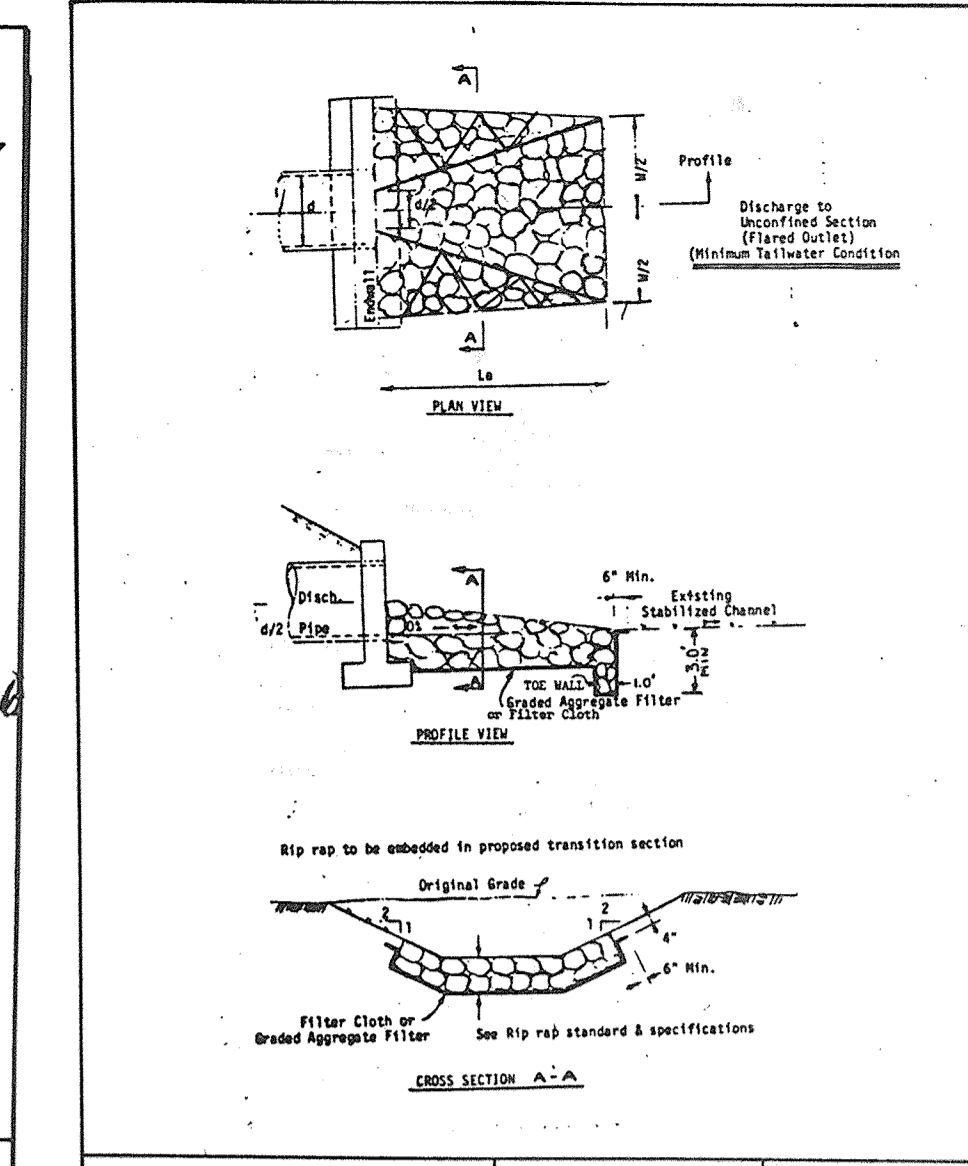
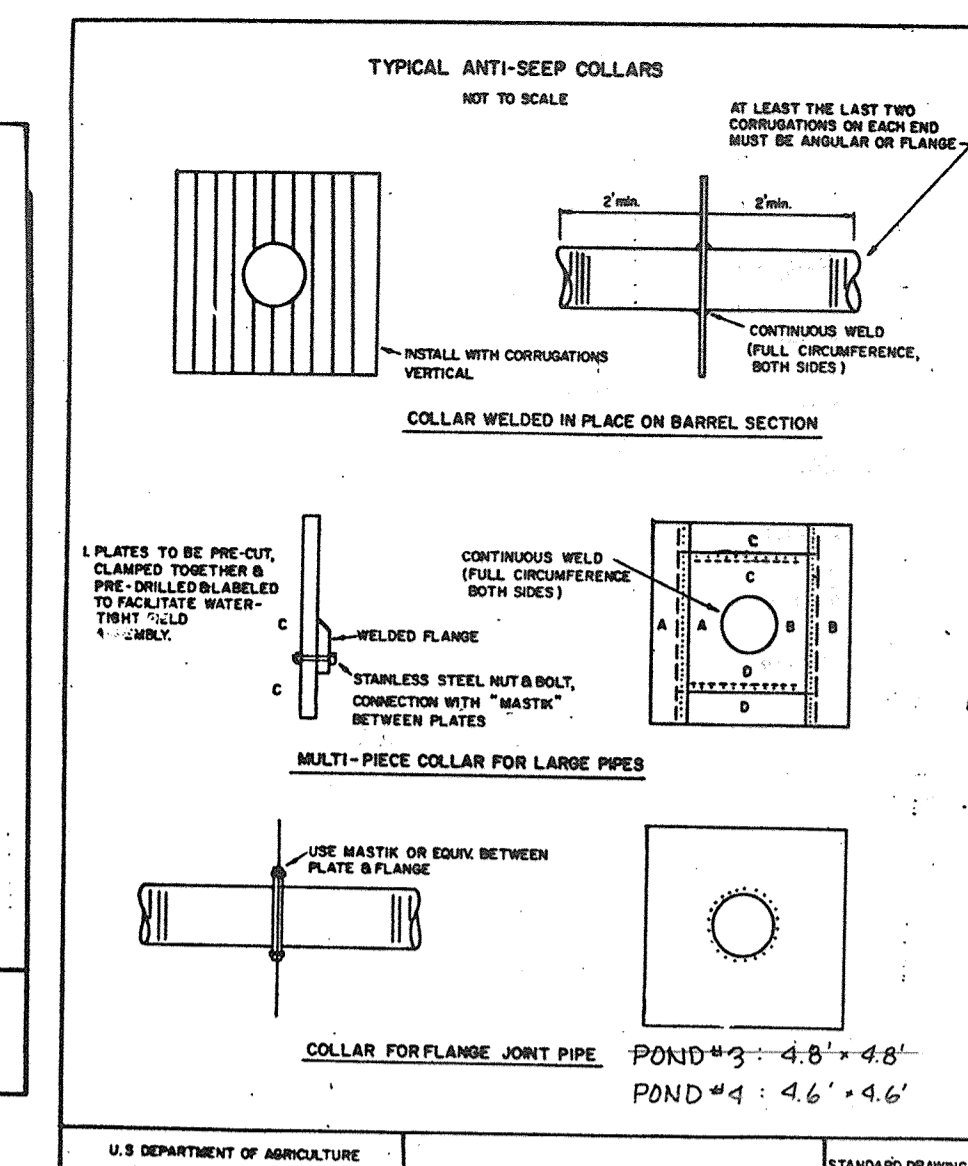
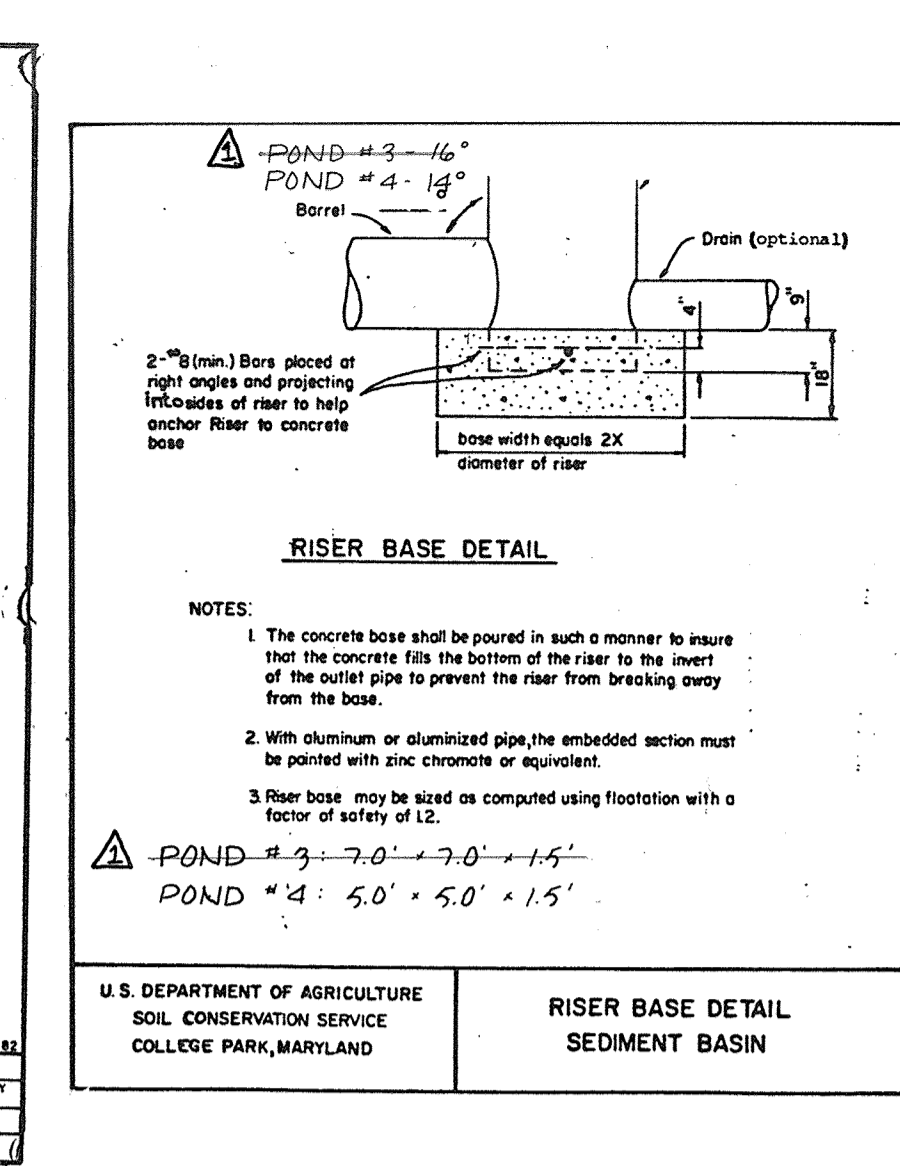
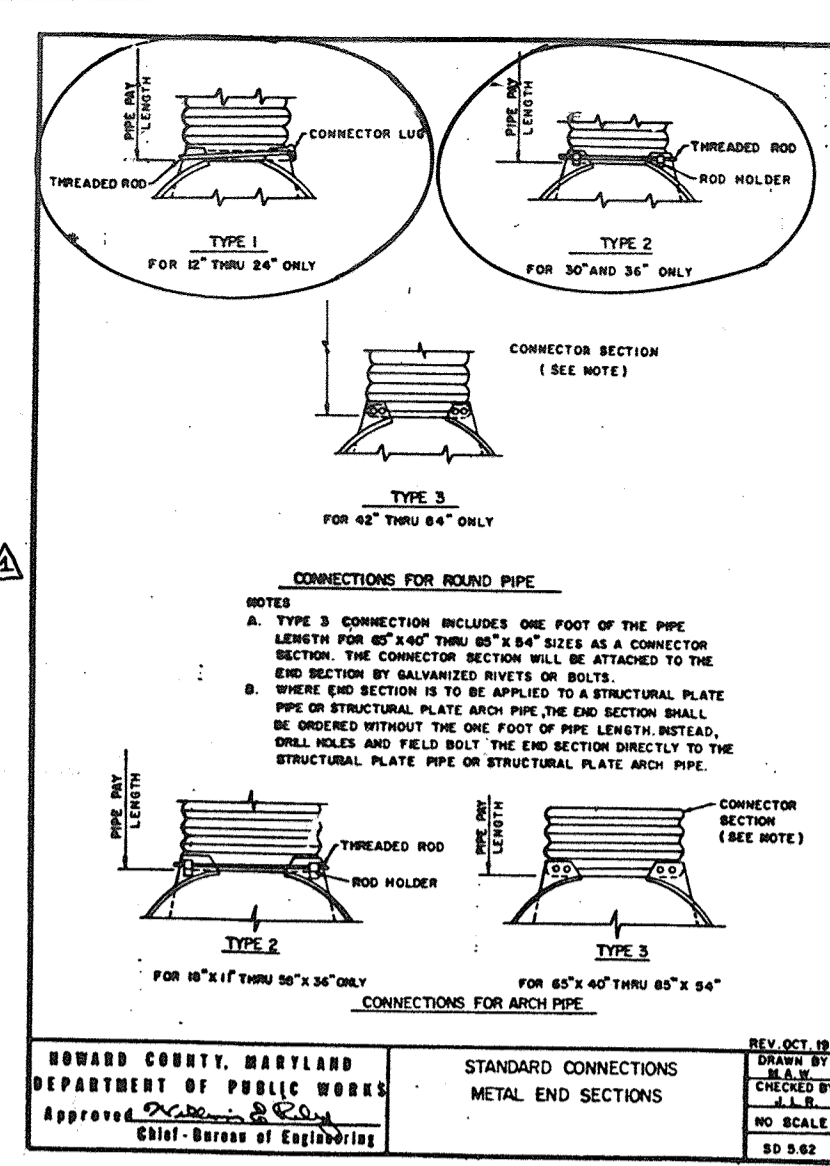
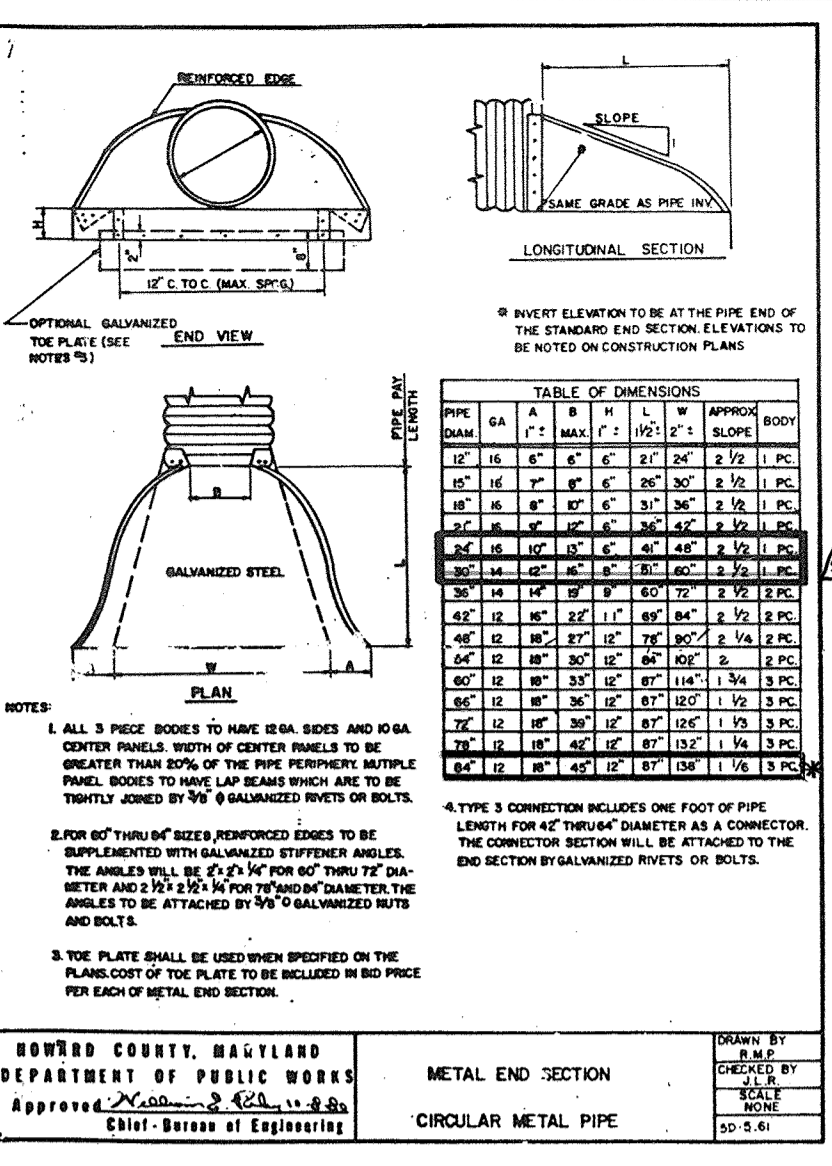
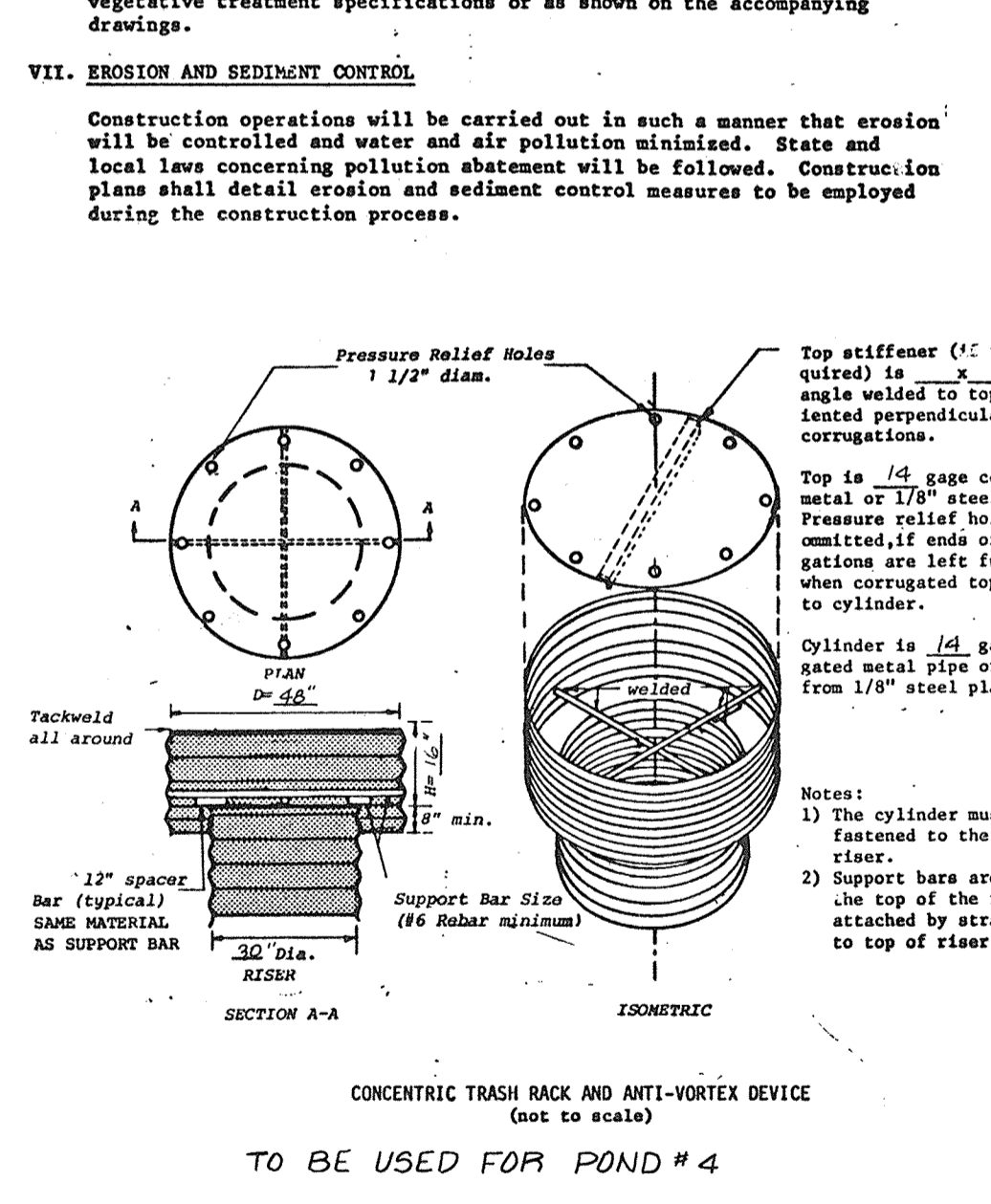
7. **Finishing** - Defective concrete, honeycombed areas, voids left by the removal of the rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.

8. **Protection and Curing** - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.

9. **Placing Temperature** - Concrete may not be placed at temperatures below 32° F with the temperature falling, or 34° with the temperature rising.

VII. EROSION AND SEDIMENT CONTROL

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 9/27/88
 Chief, Land Development Division Date

[Signature] 9/26/88
 Chief, Bureau of Highways Date

[Signature] 9-27-88
 Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 [Signature] 10-3-88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District,
 [Signature] 9/12/88
 Howard Soil Conservation District 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.
 [Signature] 9-12-88
 U.S. Soil Conservation Service Date

12/12/89 REVISED STREAM PROFILE & CUL-DE-SAC CURVE DATA - S.A.P.

By the Developer:
 [Signature] 5/19/88
 Signature of Developer Date

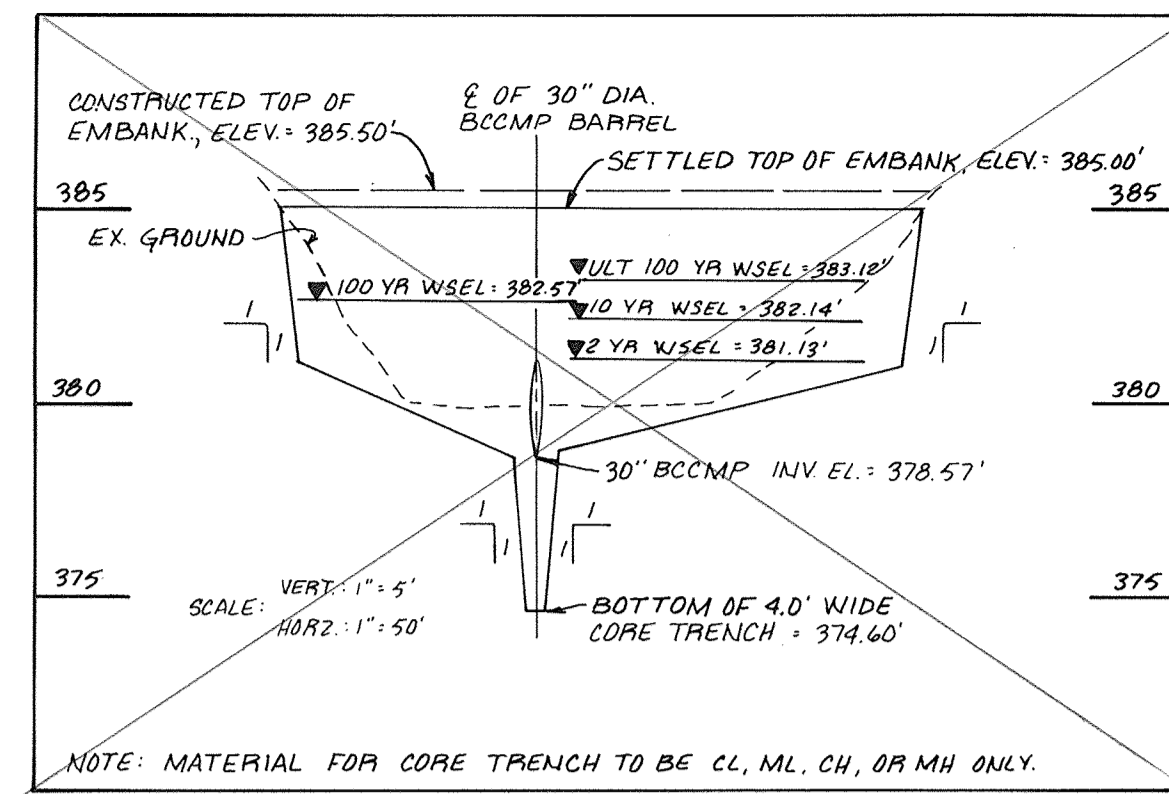
By the Engineer:
 [Signature] 5-19-88
 Signature of Engineer Date

By the Developer:
 "I/we certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of 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. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

DEVELOPER: MACKS & MACKS
 6615 REISTERSTOWN RD
 SUITE 205
 BALTIMORE, MD 21215
 (301) 358-4934

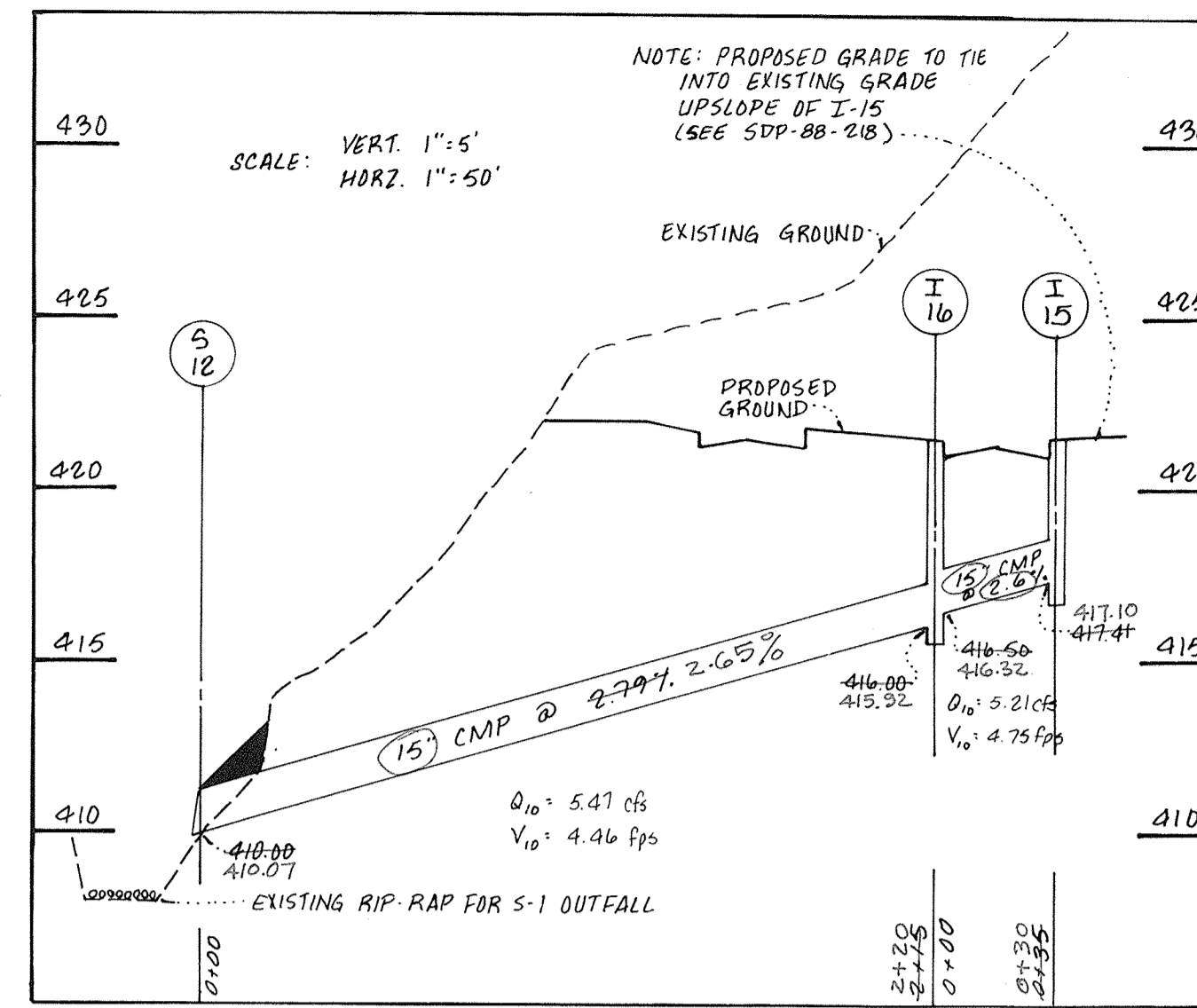
OWNER: NEWMISS LTD. PARTNERSHIP
 6615 REISTERSTOWN RD
 SUITE 201
 BALTIMORE, MD 21215
 (301) 358-4934

STORM WATER MANAGEMENT
 CONSTRUCTION DETAIL SHEET
 VILLAGE OF MONTGOMERY RUN
 SECTION 1, AREA 2
 TAX MAP 31 & 37 PARCEL 108 & 285
 1ST ELECTIC DISTRICT HOWARD COUNTY, MD
 KIDDE CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 SHEET 3 OF 7
 APRIL 1988 AS SHOWN
 AS-BUILT 3-14-94 F-88-258



**SWM DETENTION POND #3
PROFILE ALONG E OF EMBANKMENT**

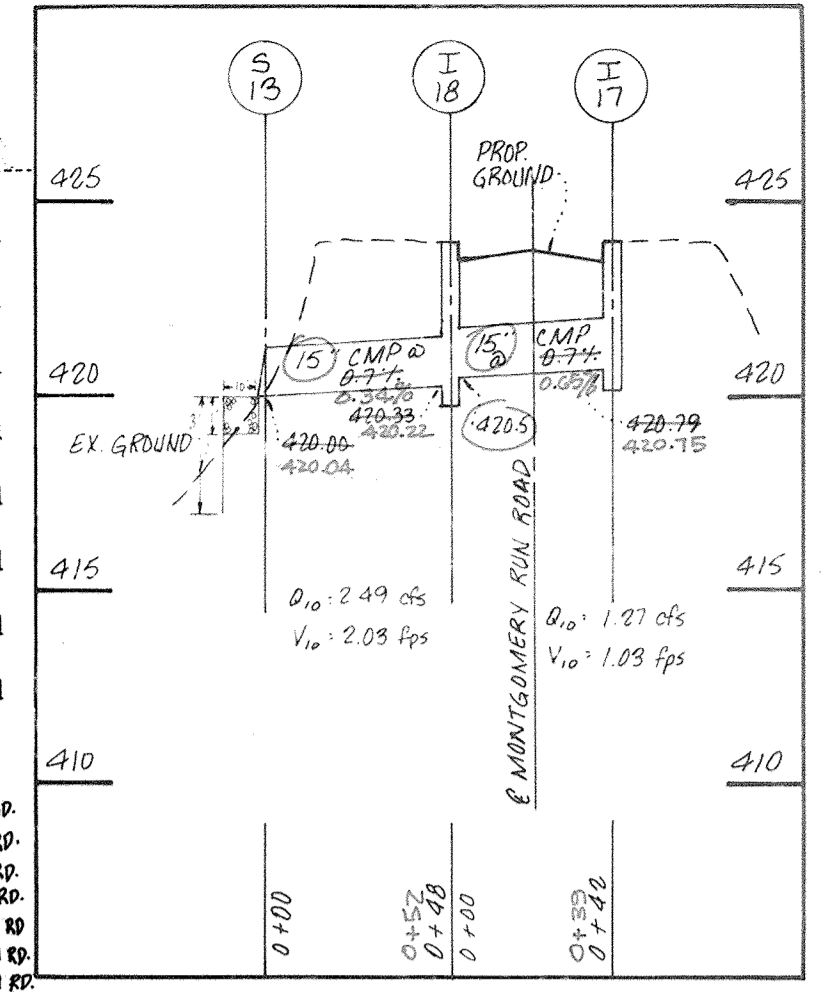
NOTE:
SEE CAPITAL PROJECT D-1159 FOR REVISED
PRINCIPAL SPILLWAY & EMBANKMENT
CENTERLINE PROFILES FOR POND #3.



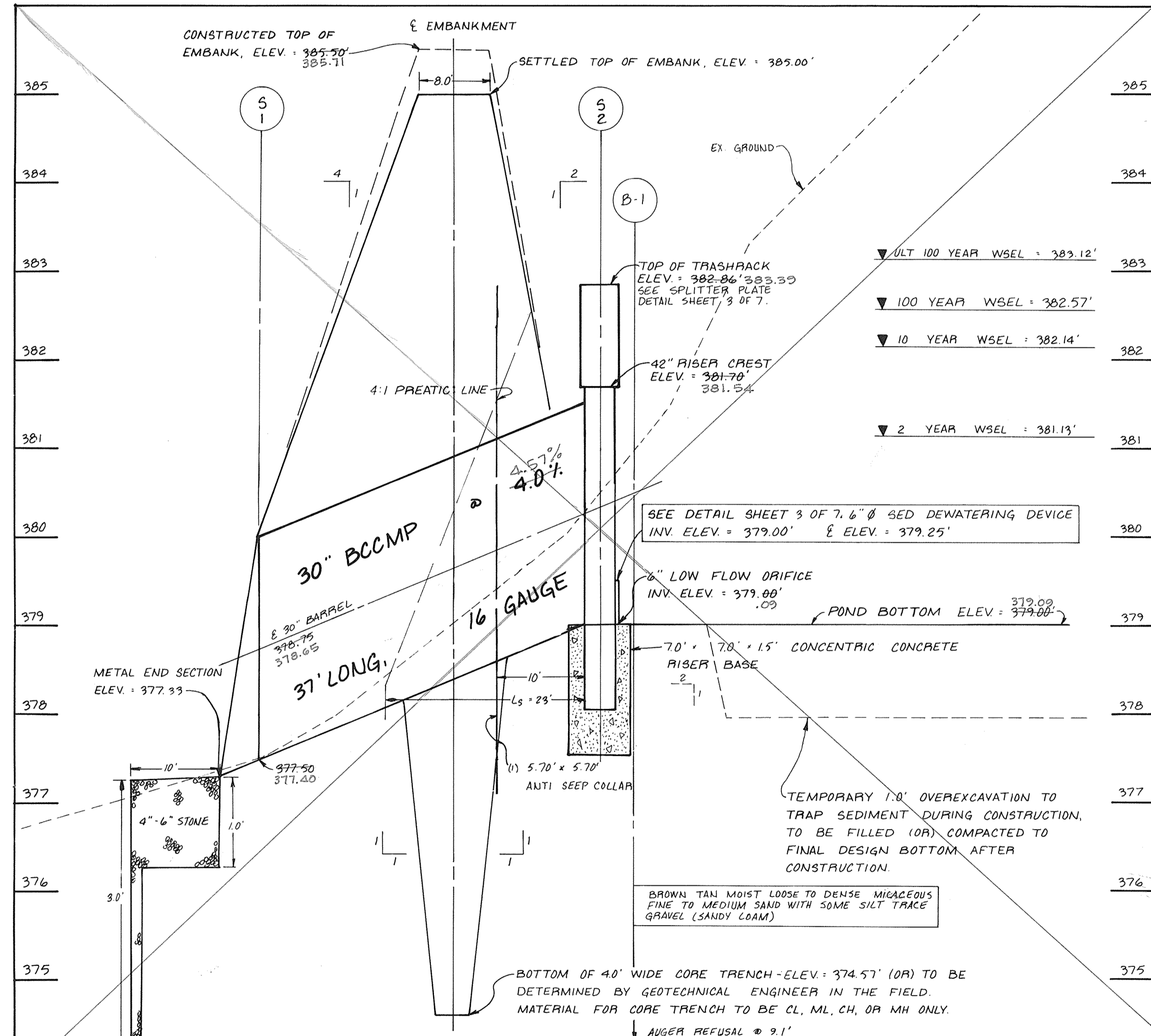
**SWM DETENTION POND #4
PROFILE ALONG E OF EMBANKMENT**

NOTE: MATERIAL FOR CORE TRENCH TO BE CL, ML, CH, OR MH ONLY.

NO.	TYPE	INV. IN.	INV. OUT.	TOP ELEV.	REMARKS
I-15	A-5	---	417.41	421.50	HO. CO. STD
I-16	A-5	416.50	416.00	421.50	DETAIL SD. 4.01
I-17	A-5	---	428.79	424.00	HO. CO. STD
I-18	A-5	428.50	428.33	424.00	DETAIL SD. 4.01
S-12	METAL	---	418.00	411.25	HO. CO. STD
S-13	METAL	---	428.00	421.25	HO. CO. STD
S-14	METAL	---	418.00	411.25	HO. CO. STD
S-15	METAL	413.00	415.40	421.25	HO. CO. STD
M-1	BARREL	416.14	422.50	422.50	DETAIL G. 5.11

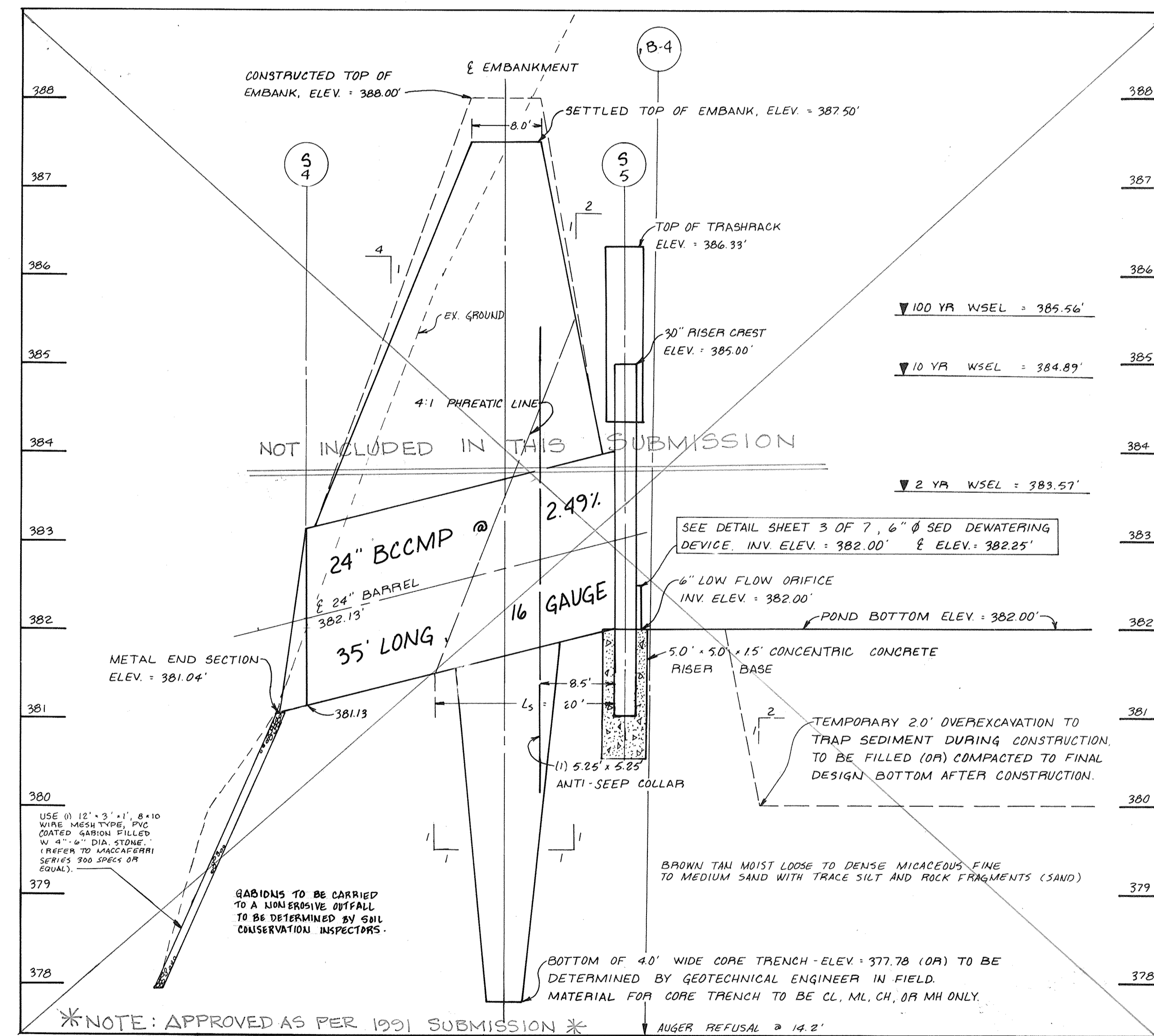


PROFILE FROM I-17 TO S-13



**SWM DETENTION POND #3 - PROFILE ALONG
PRINCIPLE SPILLWAY HAZARD CLASS A**

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



**SWM DETENTION POND #4 - PROFILE ALONG PRINCIPLE SPILLWAY
HAZARD CLASS A**

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
James W. Westwood 9/26/88
 Chief, Land Development Division Date
William E. Ryan 9-27-88
 Chief, Bureau of Engineering Date
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Janice S. D'Amico 10-3-88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

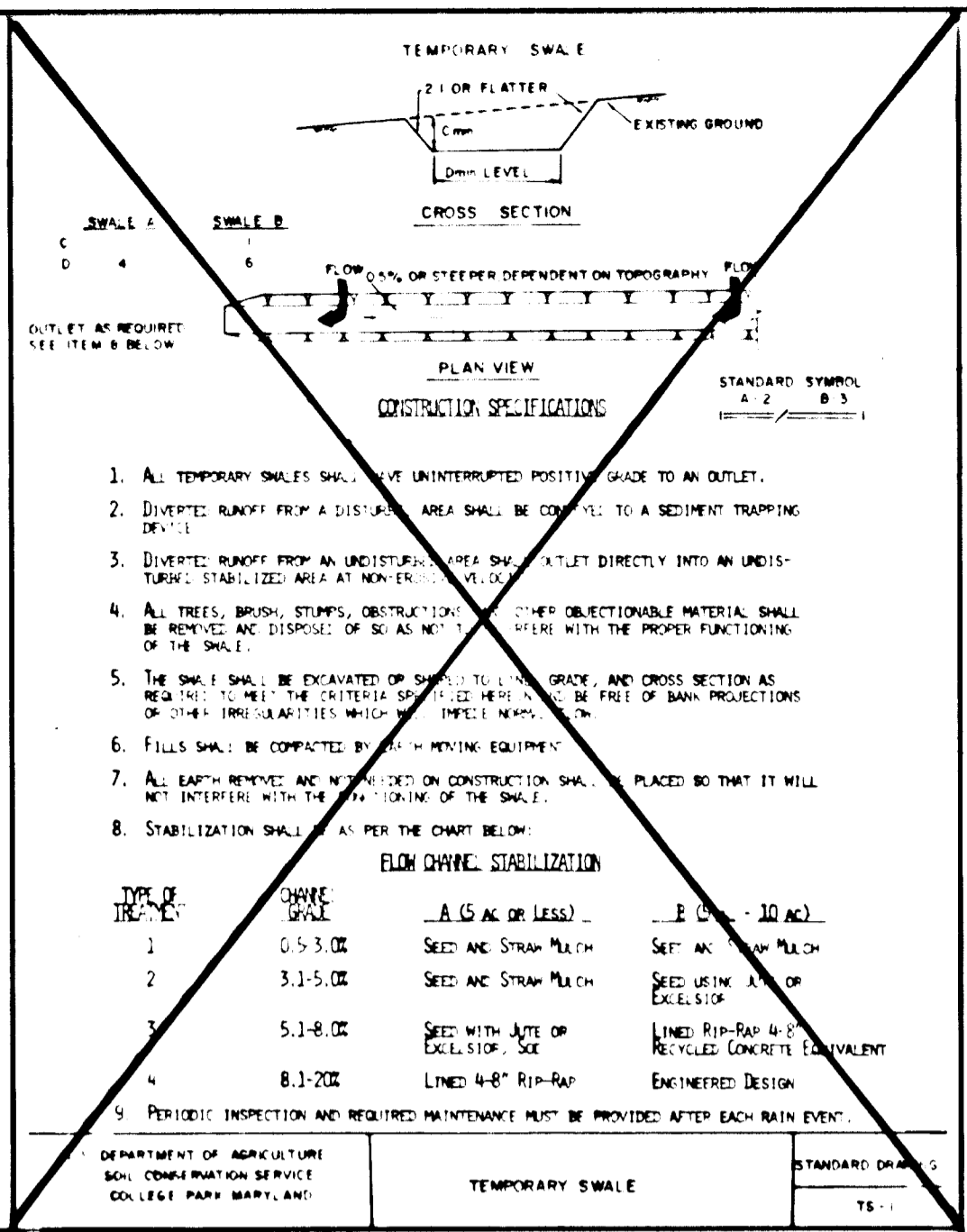
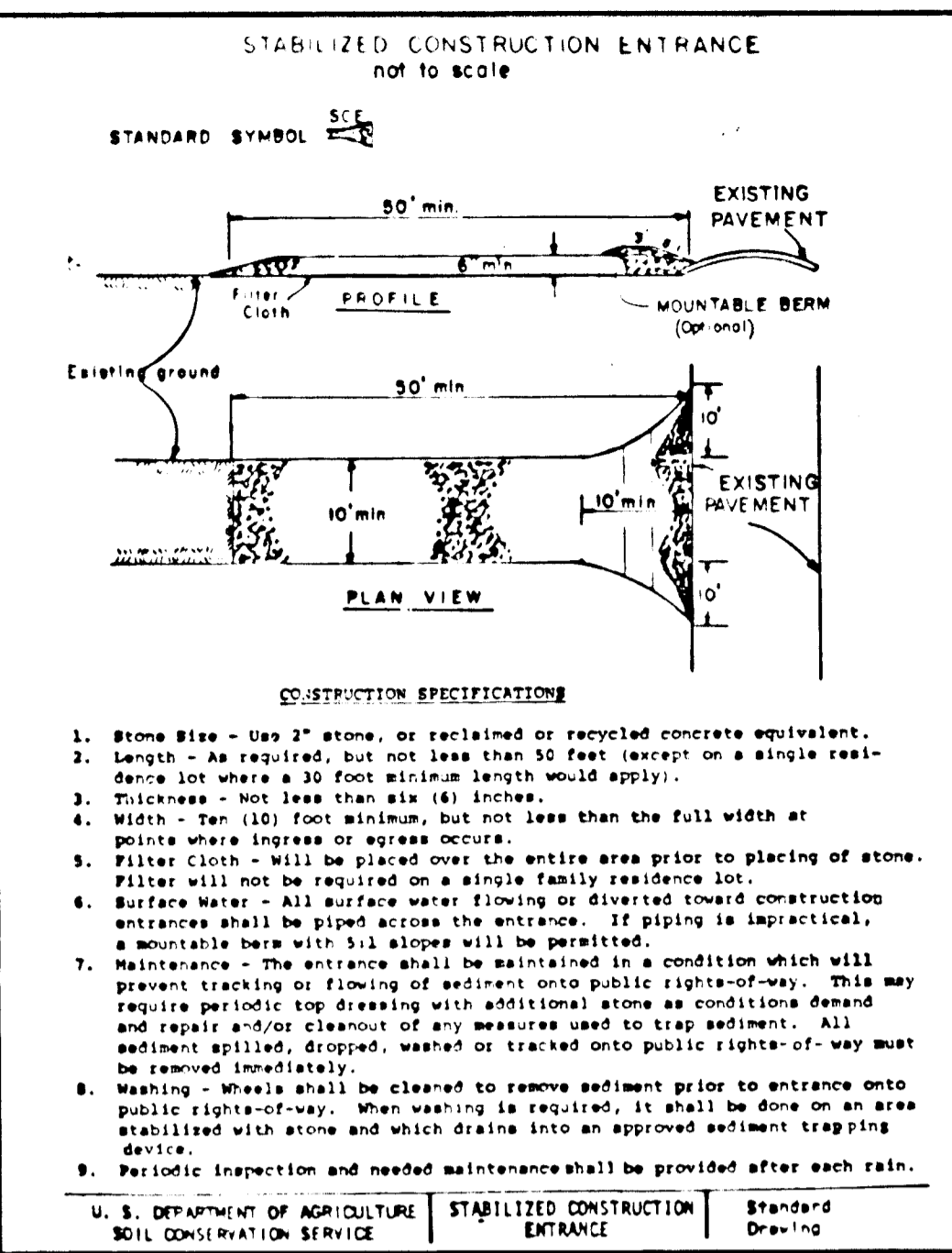
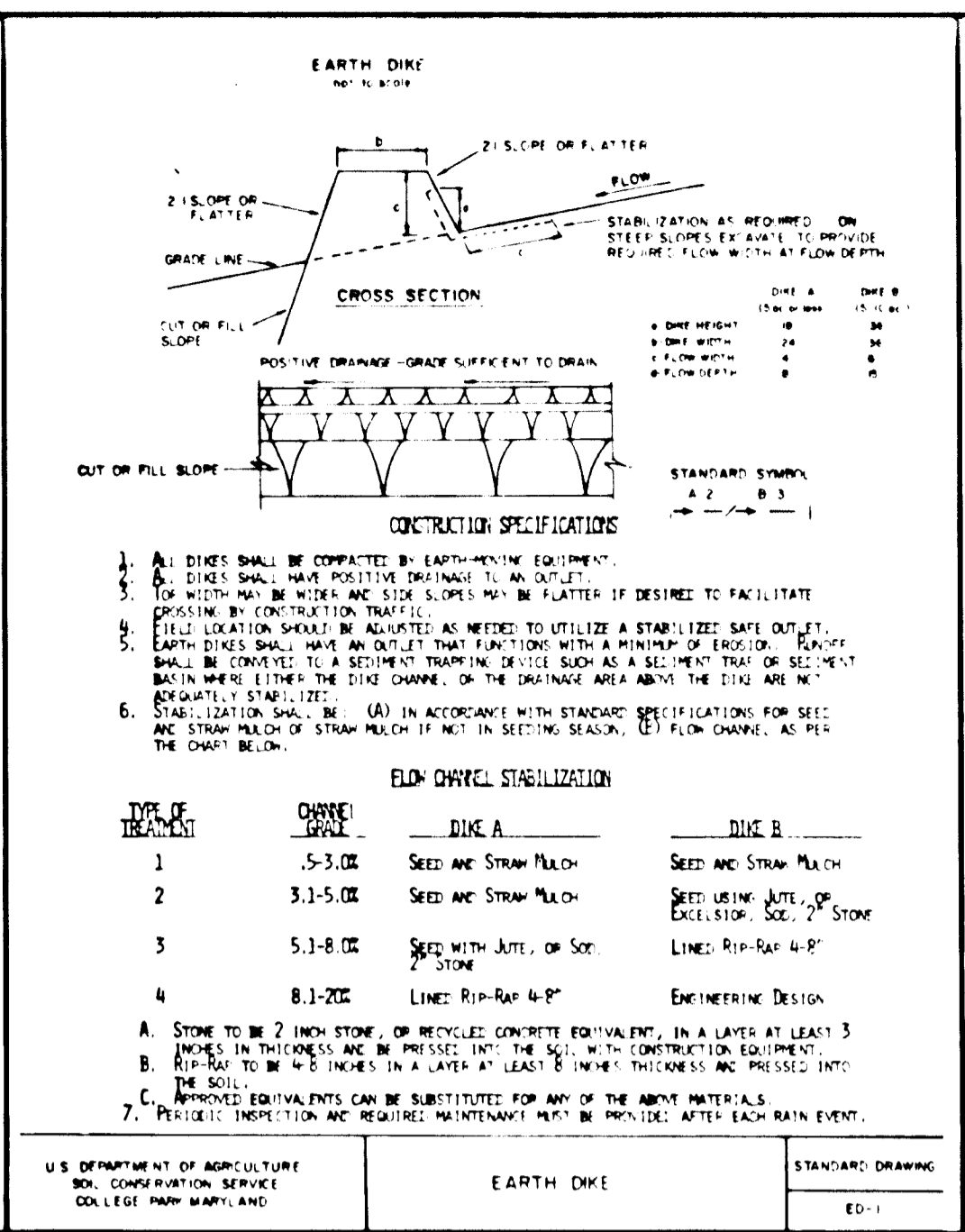
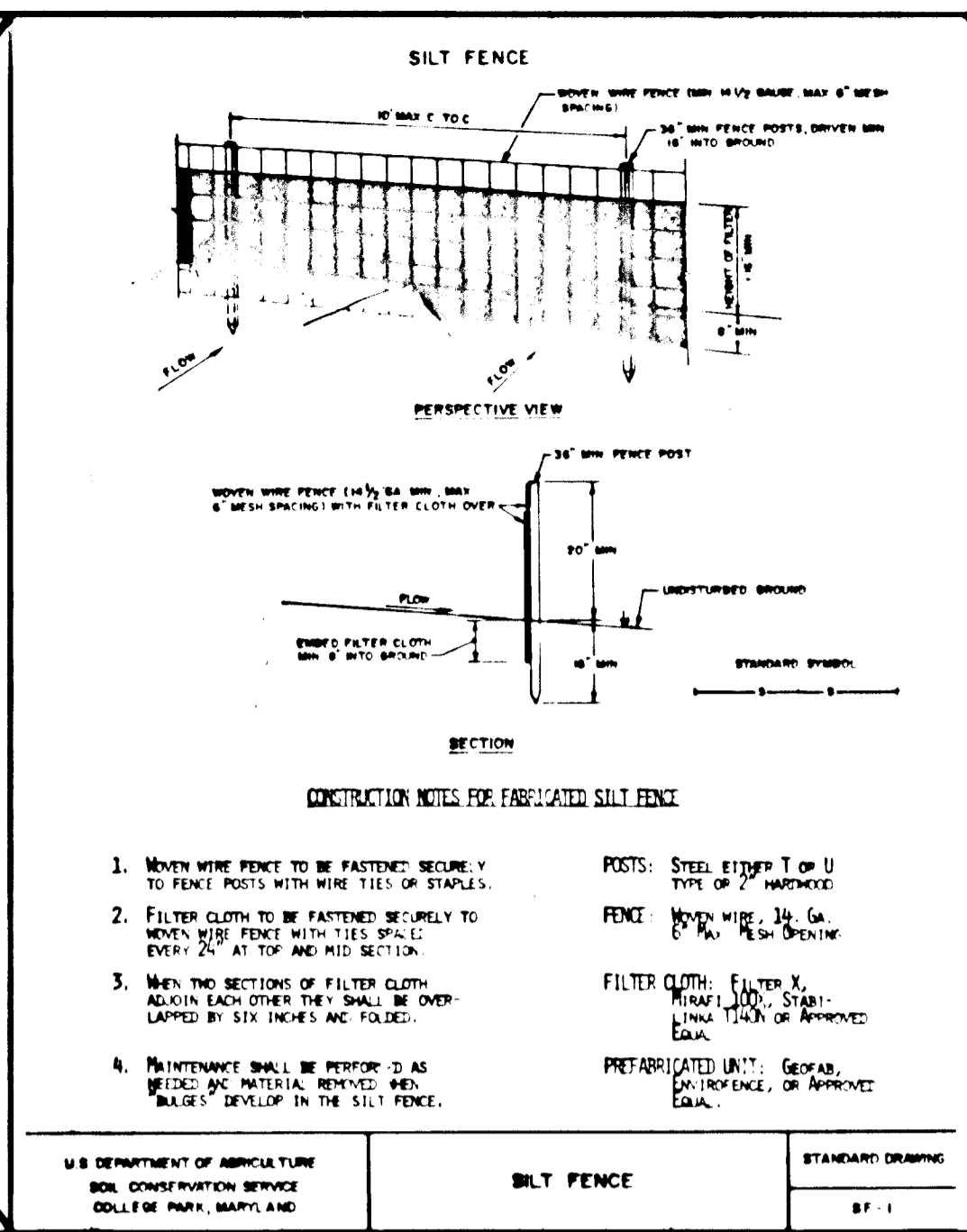
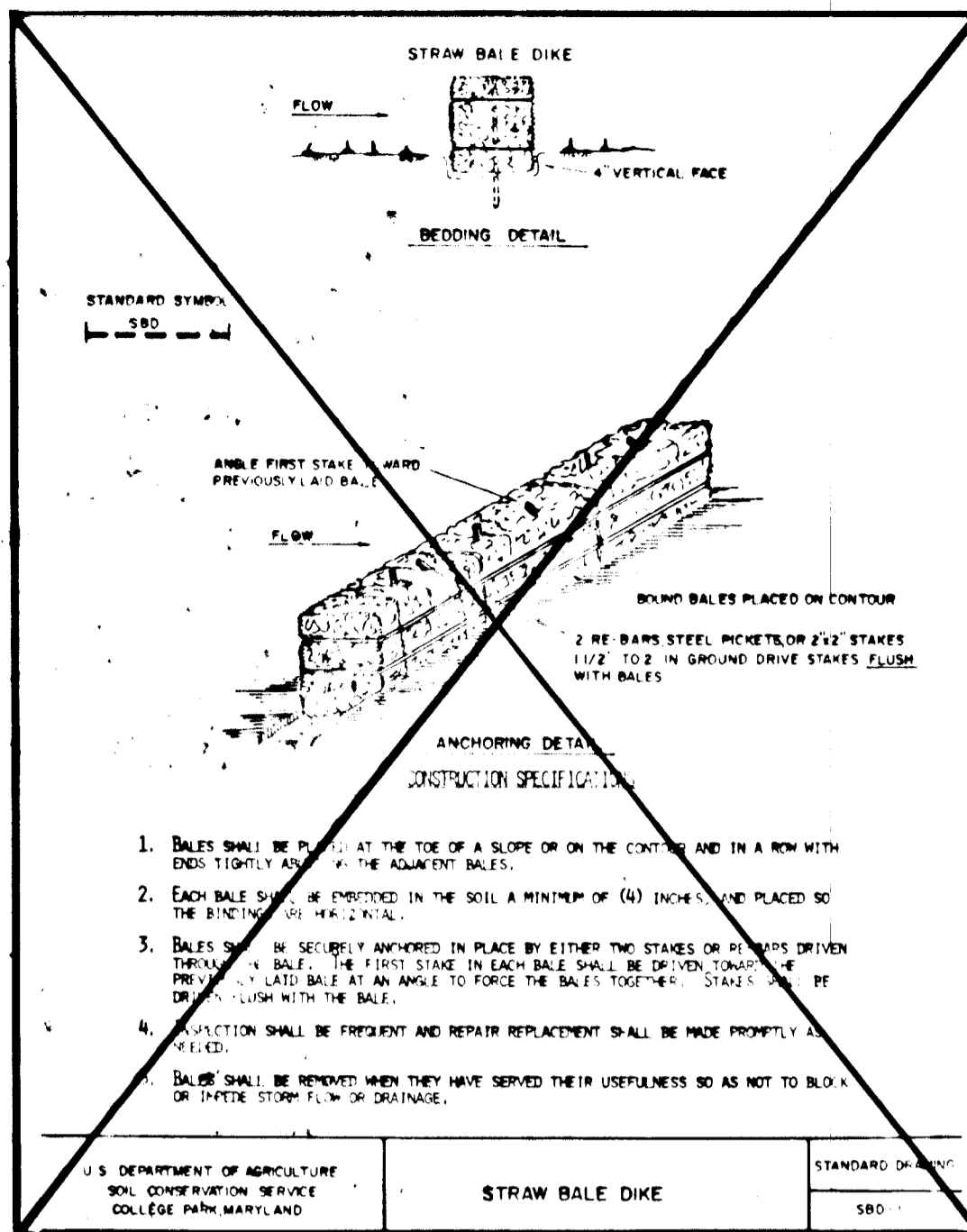
These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
Robert W. Zelman 9/12/88
 Howard Soil Conservation District Date
 These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
James W. Westwood 9/12/88
 Soil Conservation Service 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."
John Retaindo 5-19-88
 Signature of Engineer Date

By the Developer:
 "I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of 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. I also authorize periodic on-site inspections by the Howard Soil Conservation District."
James W. Westwood 5/19/88
 Signature of Developer Date

REGISTERED PROFESSIONAL ENGINEER No. 10242
ENGINEERS CERTIFICATE
 I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE AS-BUILT SHOWN HEREON IS ACCURATE AND COMPLETE AND THAT THE POND AS CONSTRUCTED MEETS THE REQUIREMENTS OF THE STANDARDS & SPECIFICATIONS FOR PONDS.
Bill W. Holly 7/19/94
 REGISTERED PROFESSIONAL ENGINEER No. 10242 DATE
 DEVELOPER: MACKS & MACKS 6615 REISTERSTOWN RD SUITE 205 BALTIMORE, MD 21215 (301) 358-4934
 OWNER: NEWMISS LTD. PARTNERSHIP 6615 REISTERSTOWN RD SUITE 201 BALTIMORE, MD 21215 (301) 358-4934

VILLAGE OF MONTGOMERY RUN
 SECTION 1, AREA 2
 TAX MAP 31 & 37 PARCEL 108 & 285
 1ST ELECTION DISTRICT HOWARD COUNTY, MD
 KIDDE CONSULTANTS, INC. ENGINEERS • PLANNERS • SURVEYORS
 1100 WEST STREET SUITE 100 LAUREL, MD 20627
 (301) 301-9533 FAX: 792-8086 (B&T)
 SHEET 4 OF 7
 APRIL 1988 AS SHOWN



PERMANENT SEEDING NOTES

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

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

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

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Narrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
- 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. Narrow or disc into upper three inches of soil.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (14 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 seed. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching - Apply 14 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

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

TEMPORARY SEEDING NOTES

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

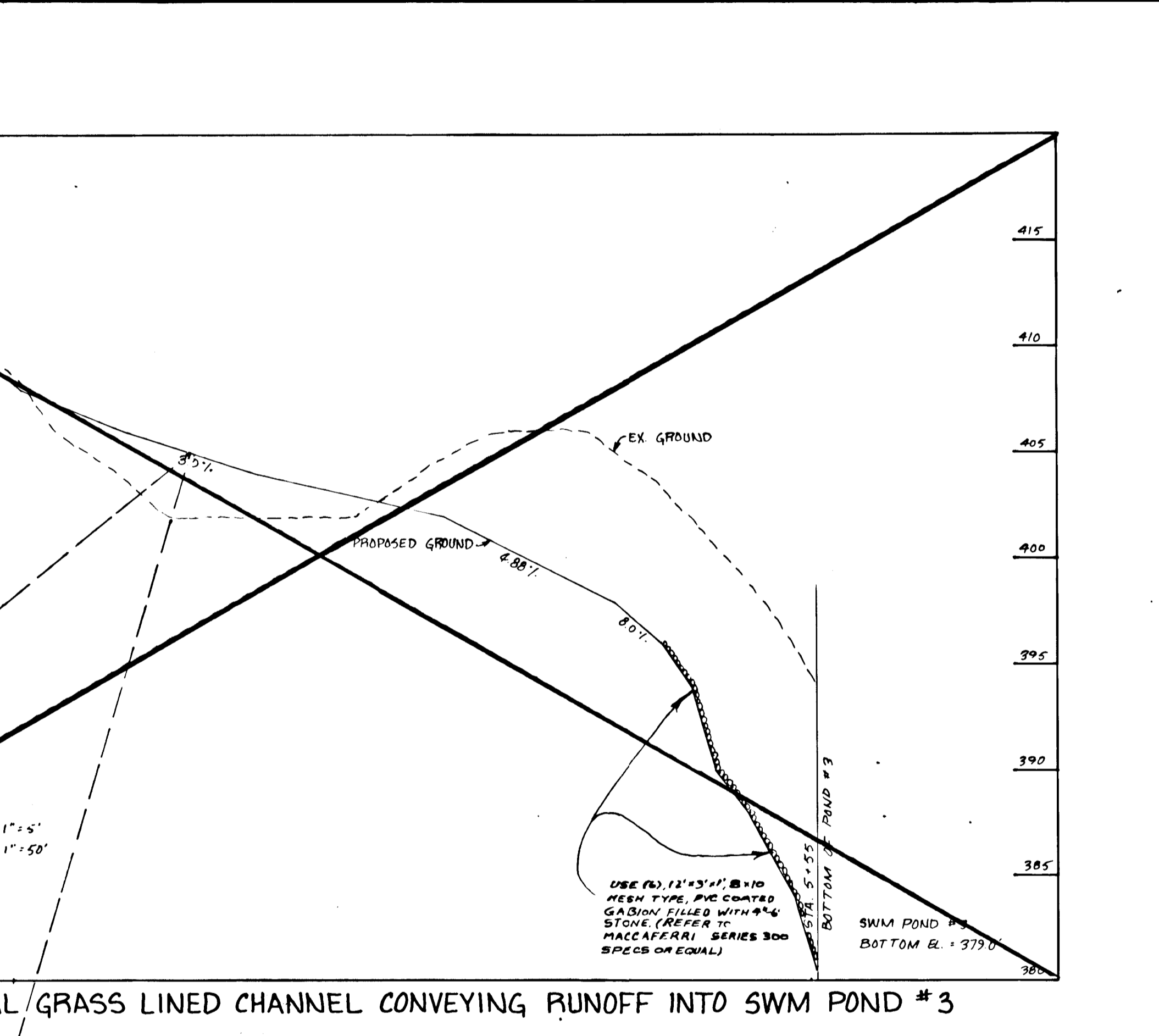
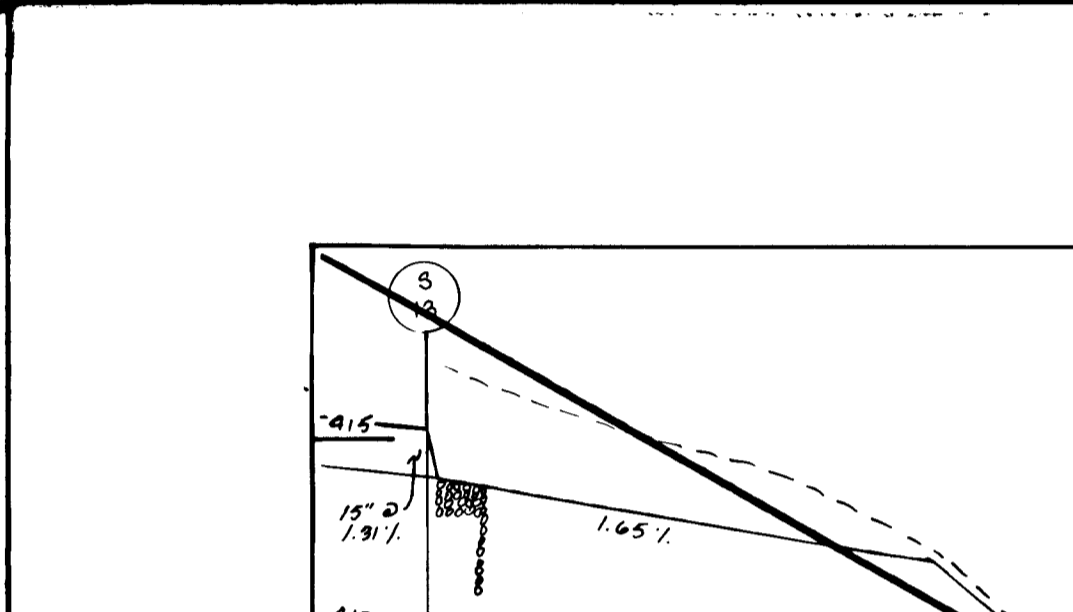
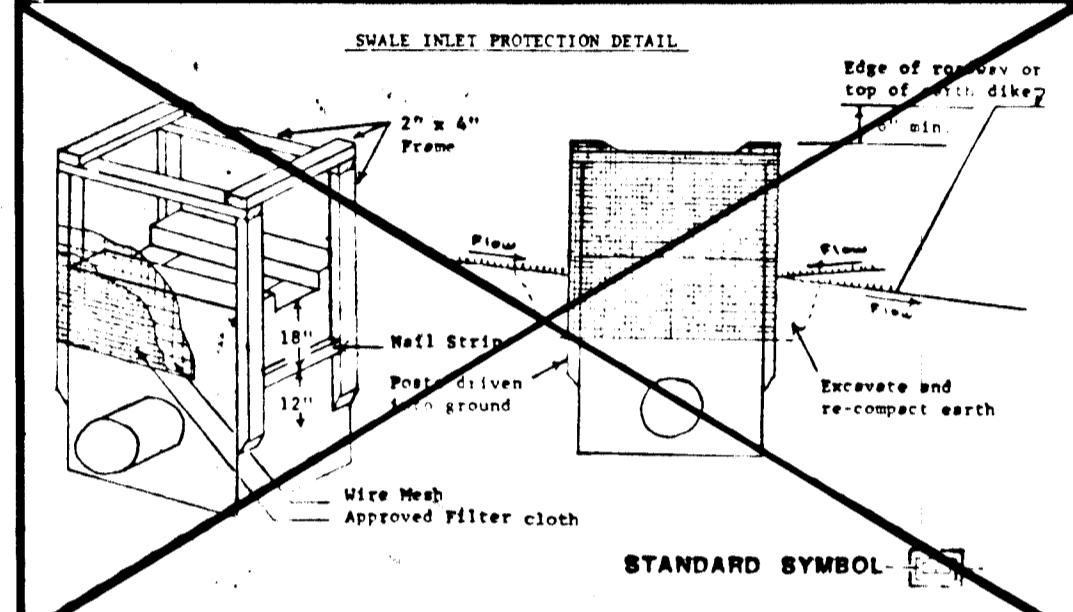
Seeding Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

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

Seeding - For periods March 1 thru April 30 and from August 1 thru November 15, seed with 24 bushel per acre of annual ryegrass (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 seed.

Mulching: Apply 14 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 SPECIFICATIONS FOR ST-VI

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

Riprap Outlet Sediment Trap
ST-VI (for Stone Lined Channel)

Contributing Drainage Area (Acres)	Depth of Channel (Feet)	Length of Weir (b) (Feet)
1	1.5	4.0
2	1.5	5.0
3	1.5	6.0
4	1.5	10.0
5	1.5	12.0
6	1.5	14.0
7	1.5	16.0
8	2.0	10.0
9	2.0	10.0
10	2.0	12.0
11	2.0	14.0
12	2.0	14.0
13	2.0	16.0
14	2.0	16.0
15	2.0	18.0

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redisturbance, 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.
- 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.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and (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.
- 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.
- Site Analysis:
Total Area of Site 45.10 Acres
Area Disturbed 30.02 Acres
Area to be roofed or paved 9.67 Acres
Area to be vegetatively stabilized 20.35 Acres
Total Cost 104,525.00
Total Fill 20,552 Cu. Yds.
Off-site waste/borrow area location 0.000 (STORED ON SITE)
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County DPM sediment control inspector.

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.

NOTE: FOR SEQUENCE OF CONSTRUCTIONS, SEE SHEET 3 OF 7

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

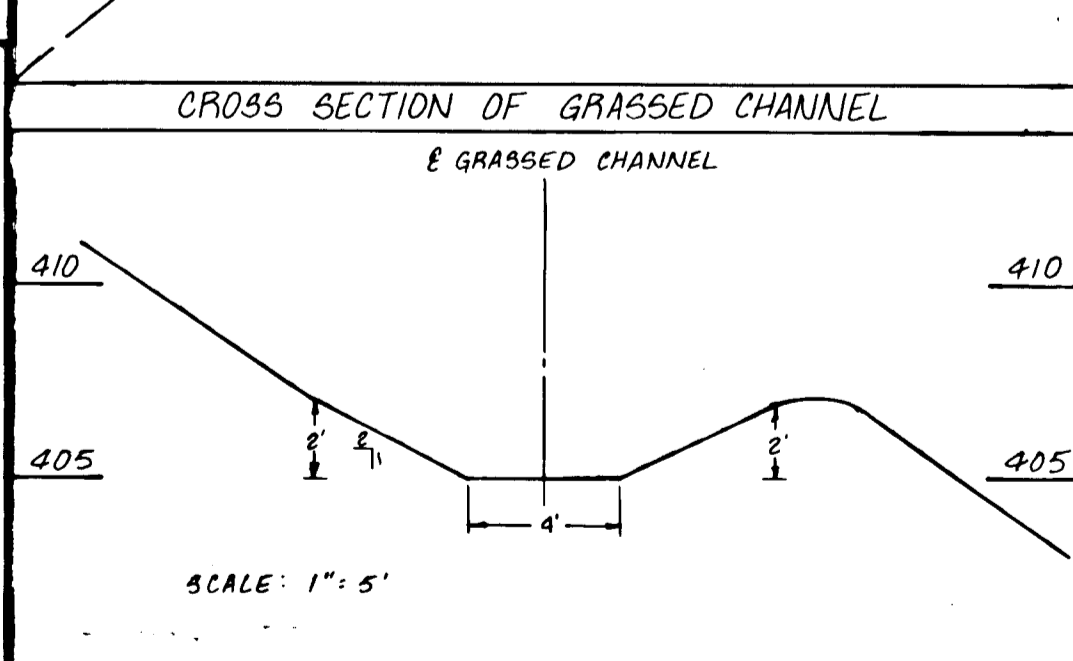
James M. Vela 9-12-88
DATE

U.S. SOIL CONSERVATION SERVICE

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

Robert W. Zielinski 9/12/88
DATE

Approved: Howard S.C.D.



OWNER:
NEWMISS LTD. PARTNERSHIP
6615 REISTERSTOWN ROAD
SUITE 201 BALTIMORE, MARYLAND 21215

DEVELOPER:
MACKS & MACKS, INC.
6615 REISTERSTOWN ROAD
BALTIMORE, MARYLAND 21215

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Donald J. Seaman 9/21/88
Chief, Land Development Division Date

David W. Howard 9/26/88
Chief, Bureau of Highways Date

Richard E. Ray 9-27-88
Chief, Bureau of Engineering Date

STATE OF MARYLAND
Professional Engineer
John E. Balmate
Professional Engineer

SEDIMENT CONTROL DETAIL SHEET

VILLAGE OF MONTGOMERY RUN
SECTION 1, AREA 2
TAX MAP 31 & 37 PARCELS 108 & 285
1ST ELECTION DISTRICT HOWARD COUNTY, MD

DATE: 12/12/89
CROSSED OUT PROFILE

5 APRIL 1988
7 SCALE AS SHOWN
1684136

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Dash J. J. Vaughn 11-3-88
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

OWNER'S / DEVELOPER'S CERTIFICATION

"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. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

John E. Balmate 5-19-88
Vice President
Newmiss Ltd. Partnership
6615 Reisterstown Rd
Baltimore, Md 21215

ENGINEER'S CERTIFICATE

"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."

John E. Balmate 5-19-88
Registered Professional Engineer #898

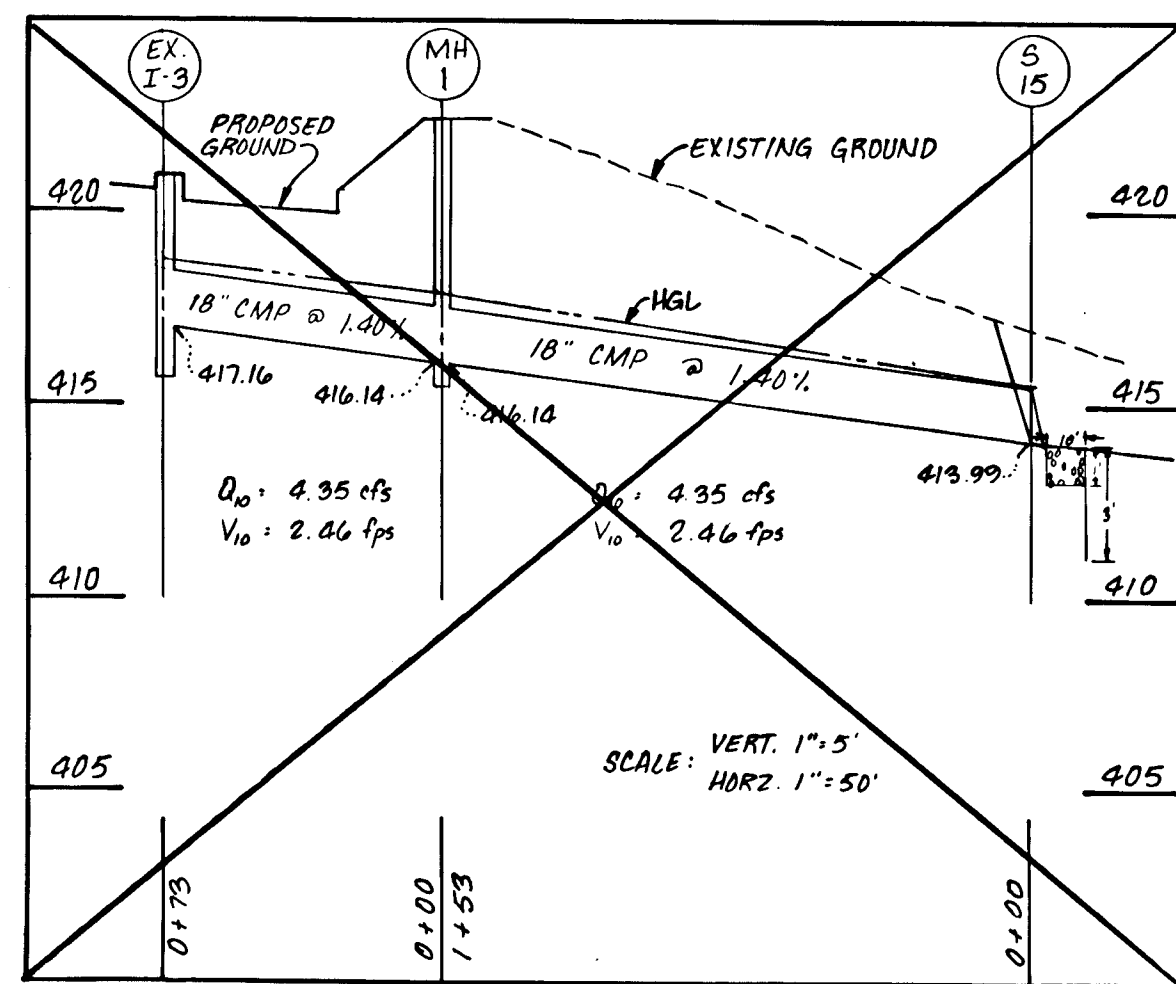
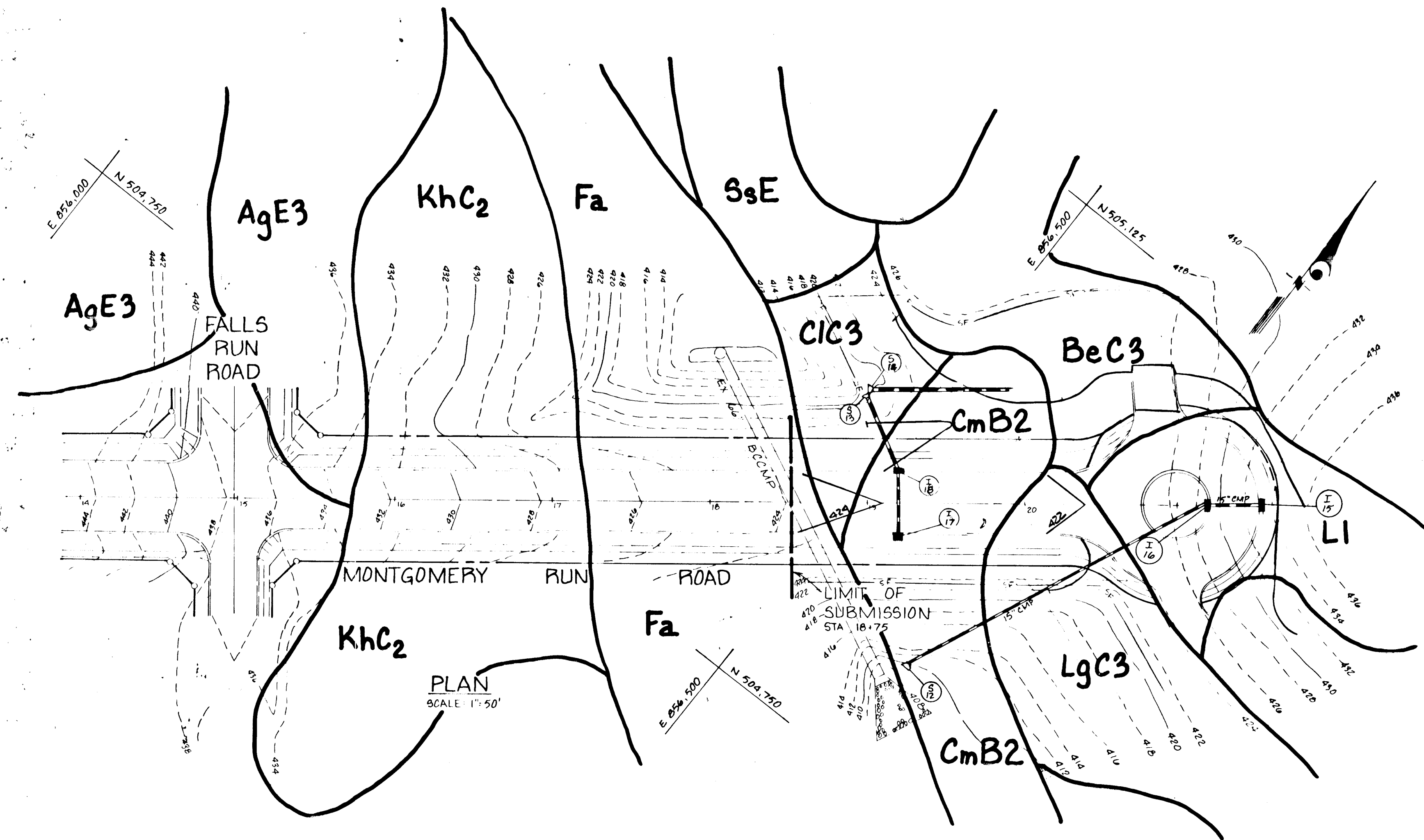
KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
(Wash.) (301) 953-1821 / 792-8086 (Balt.)

1262

DATE: 12/12/89
CROSSED OUT PROFILE

5 APRIL 1988
7 SCALE AS SHOWN
1684136

F-88-258



PROFILE FROM EX I-3 TO S-15
(PUBLIC STORM DRAIN AT THE END OF FALLS RUN CUL-DE-SAC)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Paul J. Jopson 9/27/88
DATE

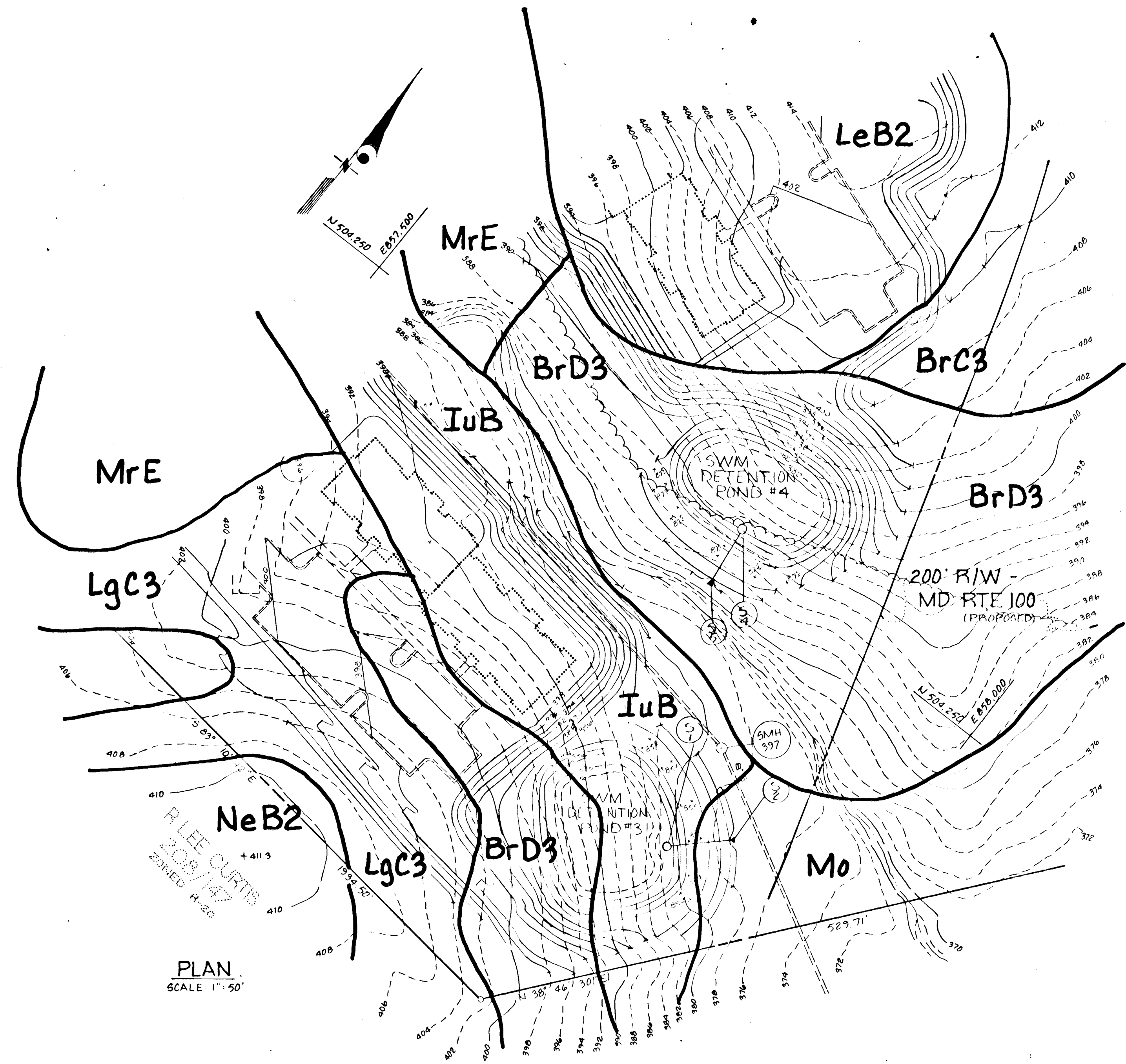
Gronville W. Weiland 9/26/88
DATE

William E. Reay 9-27-88
DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Frank S. Mays 1-2-89
DATE

12/12/89 CROSSED OUT PROFILE



PLAN SCALE 1"=50'

SOILS MAP

VILLAGE OF MONTGOMERY RUN

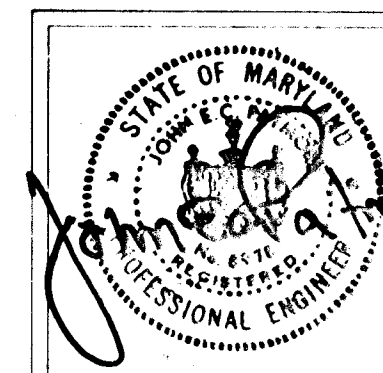
SECTION 1, AREA 2
TAX MAP 31 & 37 PARCEL 108 & 285
1ST ELECTION DISTRICT HOWARD COUNTY, MD

DEVELOPER :

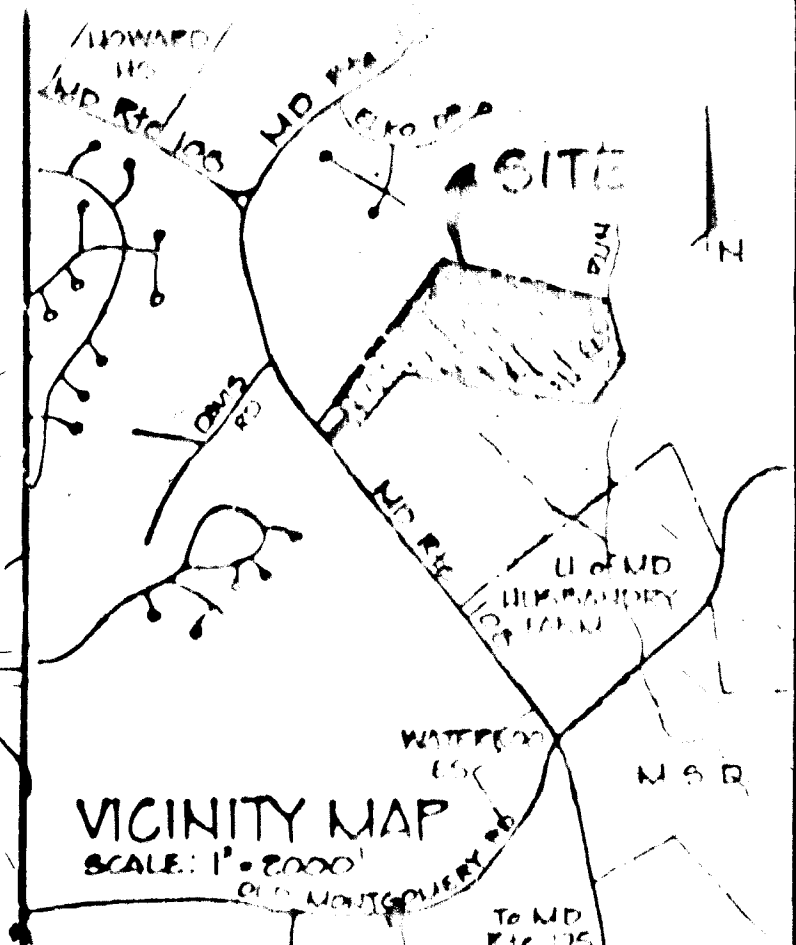
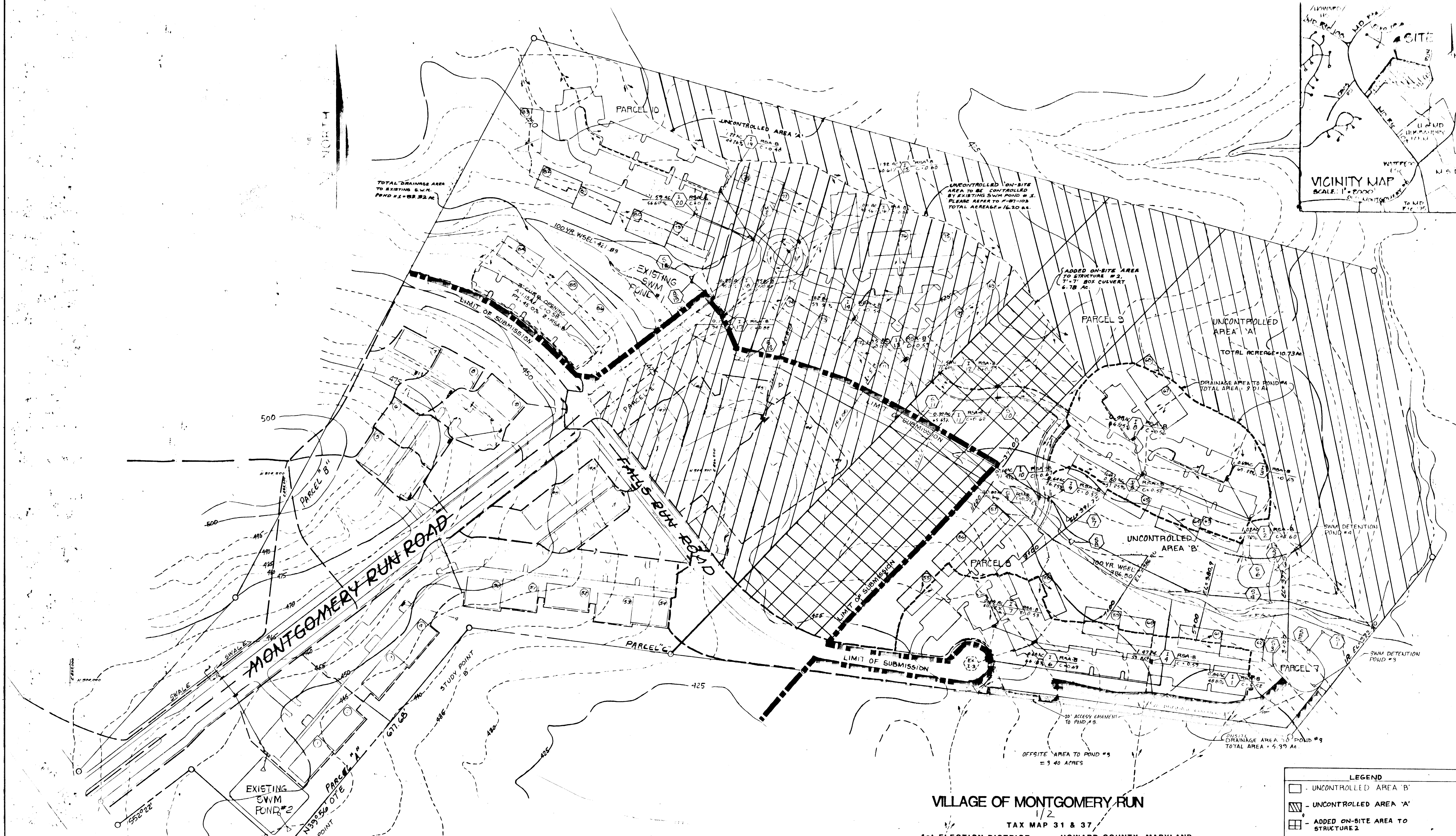
MACKS & MACKS
6615 REISTERSTOWN RD
SUITE 205
BALTIMORE, MD 21215
(301) 358-4934

OWNER :

NEWMISS LTD. PARTNERSHIP
6615 REISTERSTOWN RD
SUITE 201
BALTIMORE, MD 21215
(301) 358-4934



KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
110 WEST GLEBE RD. BALTIMORE, MD 21202
SHEET 6 OF 7
DATE: APRIL 1988 SCALE: AS SHOWN



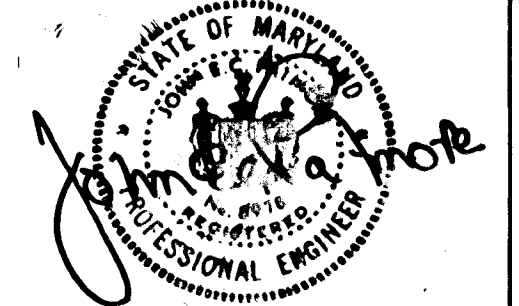
VILLAGE OF MONTGOMERY RUN
 1/2
 TAX MAP 31 & 37
 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

LEGEND

- UNCONTROLLED AREA 'B'
- UNCONTROLLED AREA 'A'
- ADDED ON-SITE AREA TO STRUCTURE 2
- AREA CONTROLLED BY POND #1

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
James W. Egan 9/27/88
 Chief, Land Development Division Date
Drayville W. Welstead 9/27/88
 Chief, Bureau of Highways Date
Richard S. P. ... 9-27-88
 Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Joseph V. ... 11-2-88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



OWNER
 HENNING LTD. PARTNERSHIP
 6615 Reisterstown Road
 Suite 201 Balt. Md. 21215
 301-358-4934

DEVELOPER
 MACKS & MACKS INC.
 6615 REISTERSTOWN RD.
 BALTIMORE, MD 21215

KIDDE CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 1100 VENT STREET, BALTIMORE, MD 21202
 301-551-1100

SURVEYED BY	DATE	REVISION	BY
KCI			
COMPUTED BY			
KCI			
DRAWN BY			
JAL			

ON SITE DRAINAGE AREA MAP

JOB NO. 1684136
 SCALE 1" = 100'
 DATE: APRIL 1988
 SHEET 7 OF 7