

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET, PLAN & PROFILE MD. RTE # 982
2	TEMORA MANOR LANE - PLAN & PROFILES
3	ROAD GRADING & SEDIMENT CONTROL
4	DETAILS & STORM DRAIN PROFILES
5	STORM WATER MGMT & CONSTRUCTION DETAILS
6	SEDIMENT CONTROL DETAIL
7	DRAINAGE AREA
8	SOILS & TREES

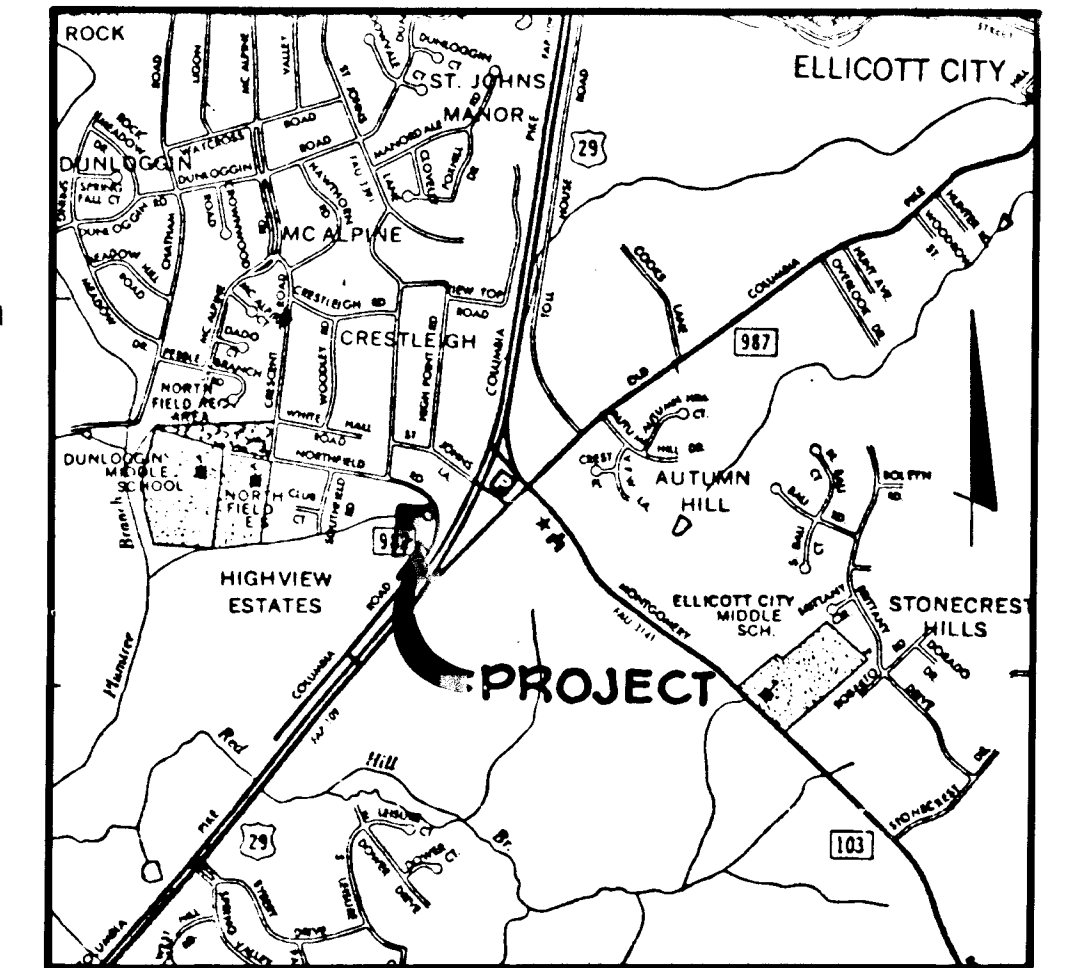
ROADWAYS, STORM DRAINS & STORM WATER MANAGEMENT

TEMORA MANOR

A RESUBDIVISION OF LOT NO. 10

2ND ELECTION DISTRICT

HOWARD COUNTY, MARYLAND



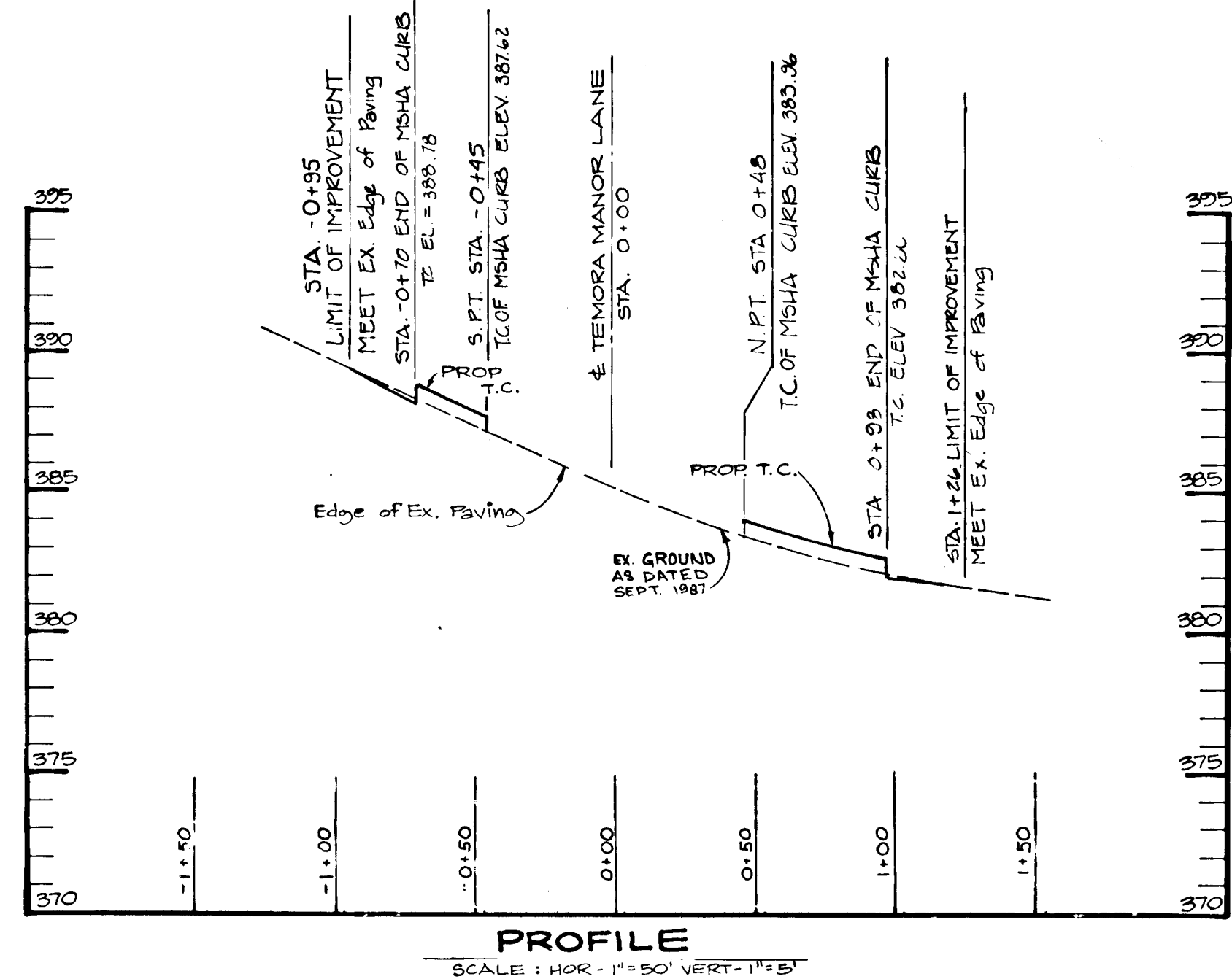
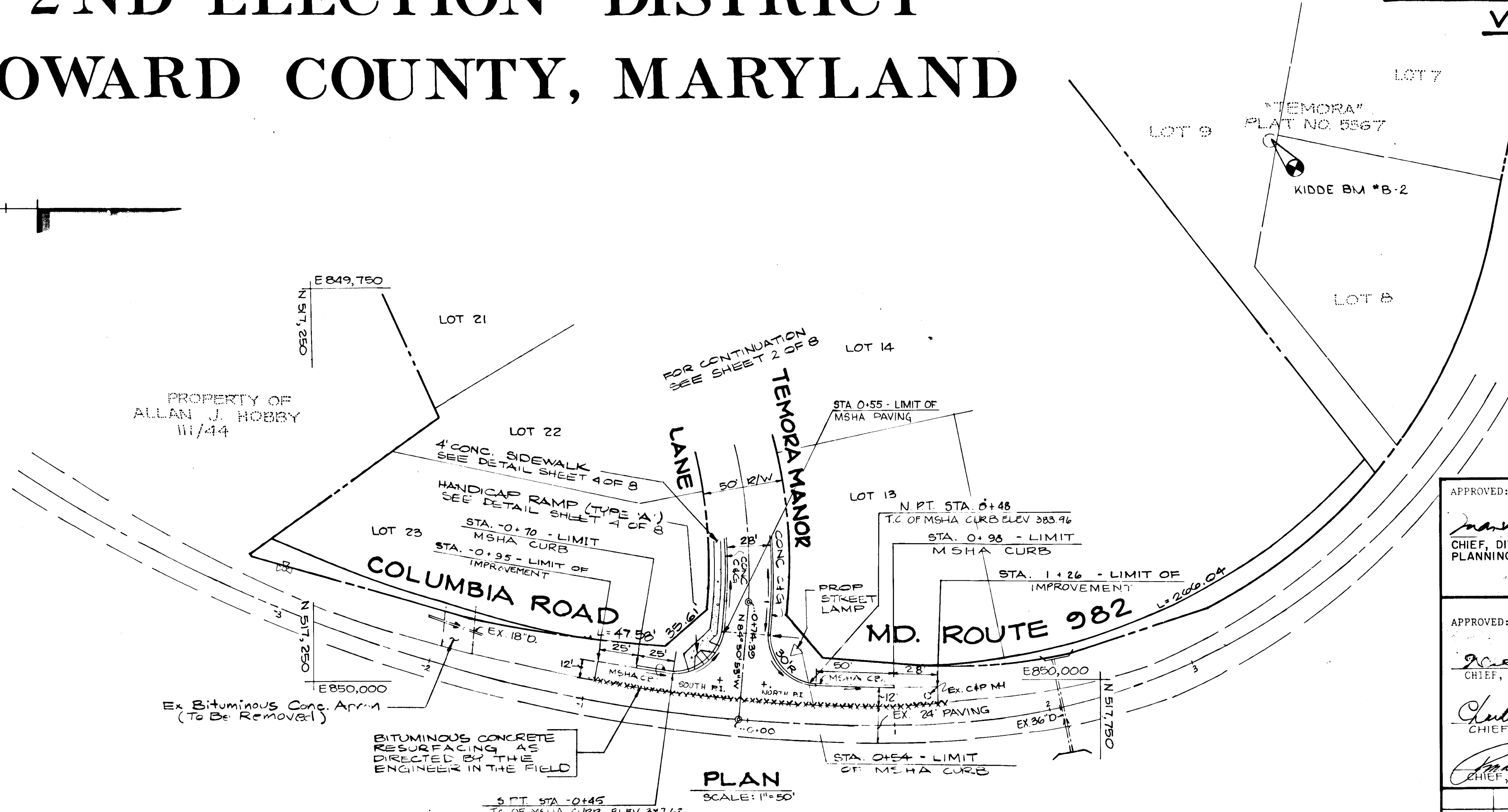
GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, AND THE APPROPRIATE STANDARDS & SPECIFICATIONS OF THE MD. S.H.A.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

MISS UTILITY	1-800-257-7777
BELL TELEPHONE SYSTEM	393-3649
LONG DISTANCE CABLE DIVISION	393-3553 or 3554
BALTIMORE GAS AND ELECTRIC COMPANY	539-8000, ext. 691
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	792-7272
COLONIAL PIPELINE	795-1390
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL STREET CURB RETURNS SHALL HAVE 25.0' RADII UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE "MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION."
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:

ALL 50' RIGHT-OF-WAYS	25 M.P.H.
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- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
- ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS
- SUBJECT PROPERTY ZONED R-20 PER 8-2-85 COMPREHENSIVE ZONING PLAN.
- TOPO TAKEN FROM THE RIEMER GROUP, INC.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- SEE OFFICE OF PLANNING AND ZONING FILE Nos. VP-86-16-A1, 986-06, VP-86-16, 5-86-38, BA 84-3624V & P87-52.
- THE STREET LIGHT SHALL BE A 175 WATT "MODERN" MERCURY VAPOR LAMP POST TOP FIXTURE ON A 14 FOOT GRAY FIBERGLASS POLE SHOWN AS Δ.
- PURPOSE OF RESUBDIVISION IS TO MAXIMIZE THE NUMBER OF LOTS ALLOWABLE UNDER CURRENT ZONING.
- OPEN SPACE:

TOTAL:	0.85 ACRES
WET AREAS (SWM, FP, EASEMENTS):	0.22 ACRES
DRY AREAS (74.1 DRY):	0.63 ACRES



BENCHMARKS:
 KIDDE BM #B-1 ELEV. 366.14
 SAN SEWER MANHOLE-6
 KIDDE BM #B-2 ELEV. 372.07
 SAN SEWER MANHOLE-7

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Franklin J. DeCamp 9-8-88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard E. DeCamp 9-8-88
 CHIEF, BUREAU OF ENGINEERING

Charles Stankovic, Acting for GWN 8/5/88
 CHIEF, BUREAU OF HIGHWAYS
Paul J. DeCamp 8/31/88
 CHIEF, LAND DEVELOPMENT DIVISION

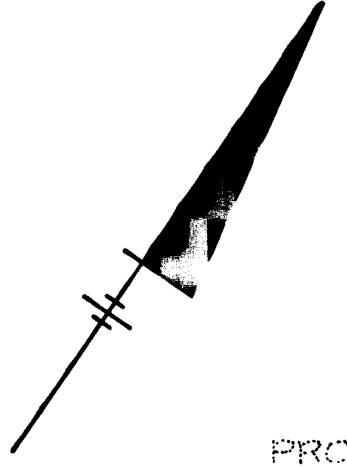
OWNER/DEVELOPER
 TEMORA LIMITED PARTNERSHIP
 9306 HILLTOP COURT
 LAUREL, MARYLAND 20707
 (301) 953-7676

PROJECT
TEMORA MANOR
 A RESUBDIVISION OF LOT # 10
 AREA: TAX MAP NO. 24 PARCEL 300 & 302
 ZONED R-20 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
TITLE SHEET & PLAN & PROFILE OF MD. RTE. 982
KIDDE CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
 (Wash.) (301) 953-1821 / 792-0286 (Balt.)

DATE	CHECKED BY RA/DW
DESIGNED BY MWK	
DRAWN BY MWK	
PROJECT NO. 1627100	
DATE: DEC 1987	
SCALE: AS SHOWN	
DRAWING NO. 1 OF 8	

965



PROPERTY OF
PATRICK M. SHARKEY
829/141

PROPERTY OF
ALLAN J. HOBBY
111/44

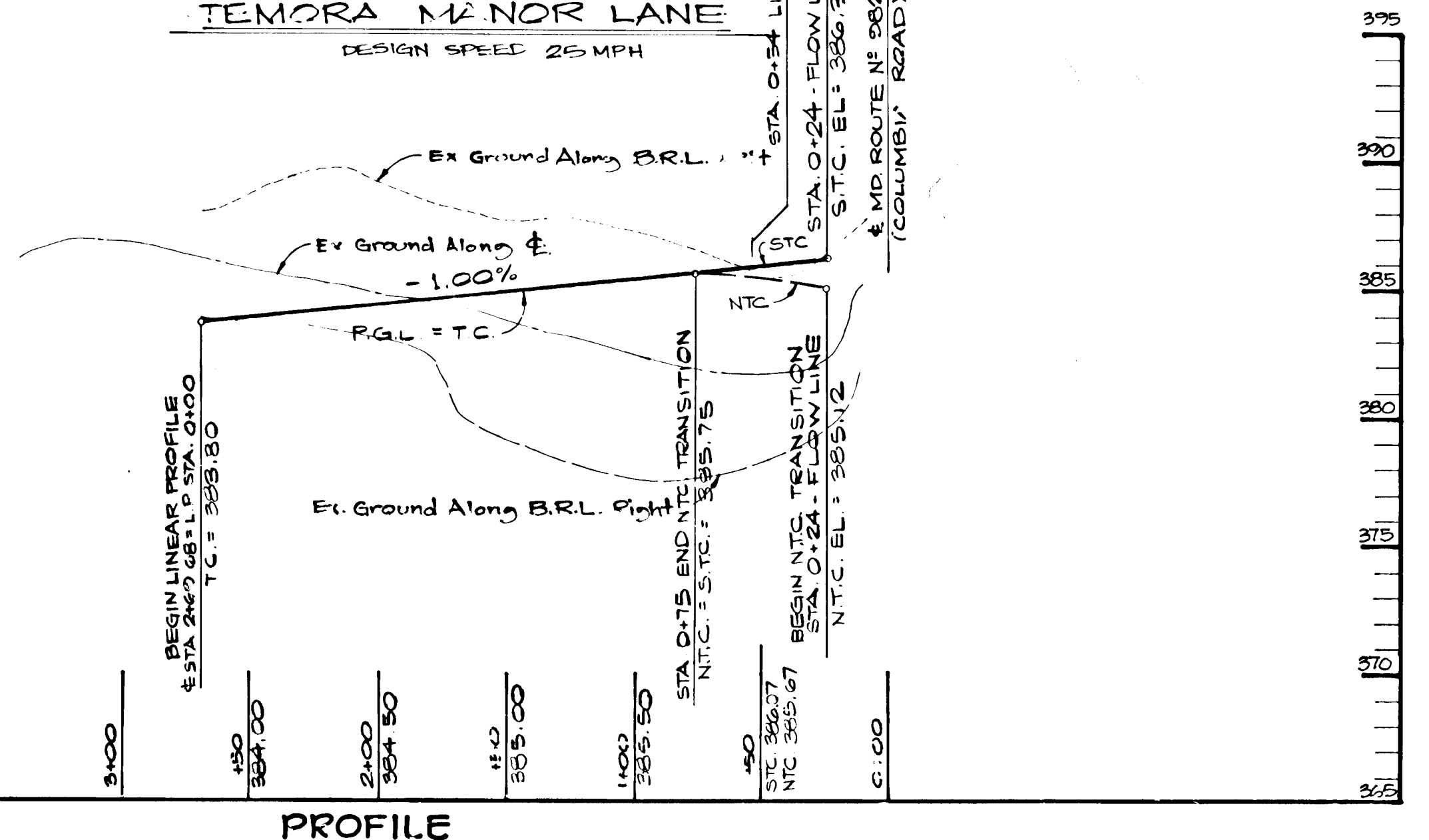
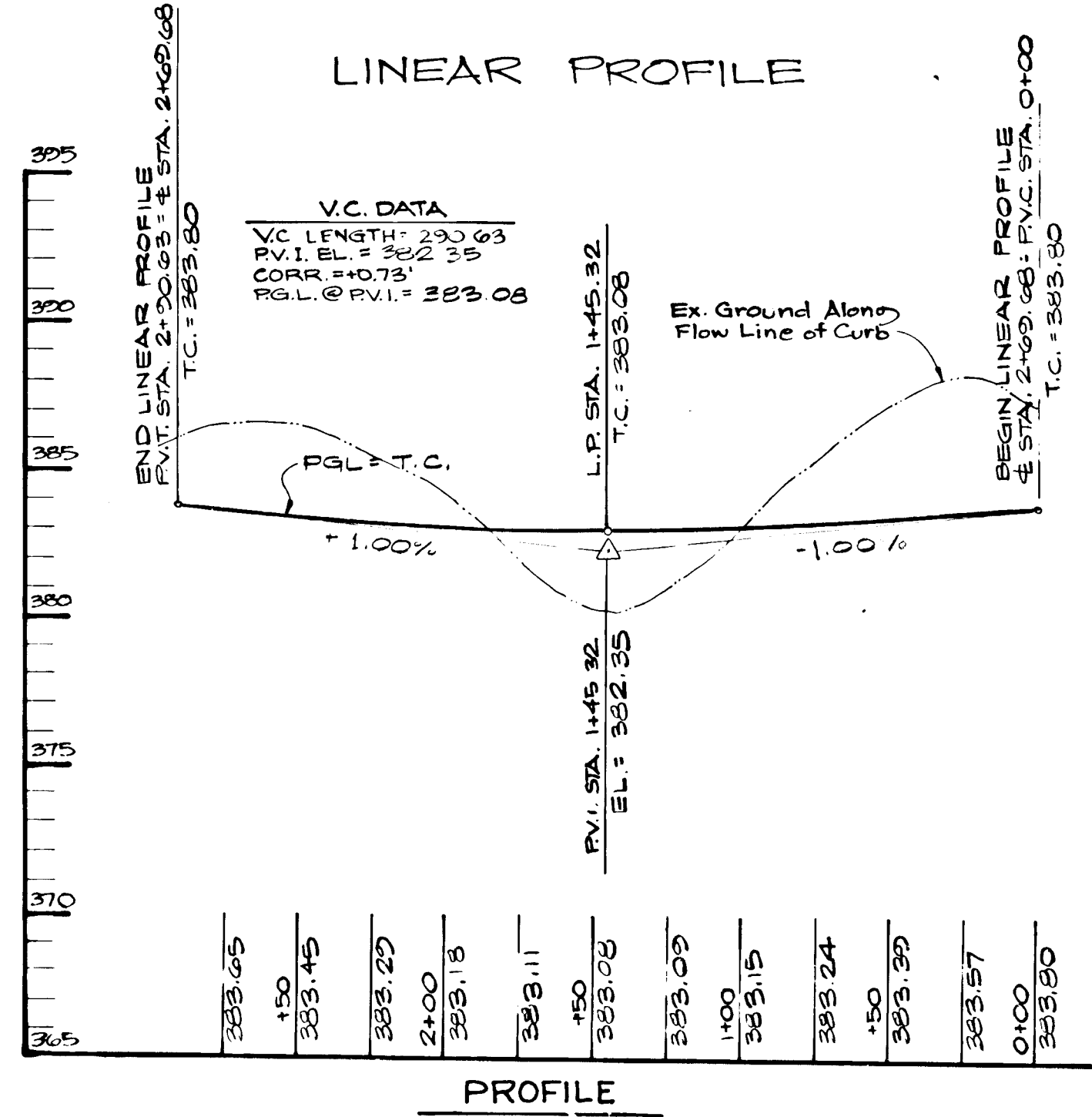
PROPERTY OF
ALAN G. BURNS
1008/441

PLAN
SCALE 1"=50'

TEMORA MANOR LANE
DESIGN SPEED 25 MPH

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

LINEAR PROFILE



FROM E CURVE DATA
STA 0+74.29 TO E STA 2+69.68
Δ: 35° 31' 15"
R: 215.00'
L: 195.29'
T: 100.92'
Dc: 18° 11' 21"
Chd: S 11° 23' 28" W, 192.18'

FROM E CURVE DATA
STA 2+69.68 TO E STA 3+40.24
Δ: 23° 38' 09"
R: 109.62'
L: 64.35'
T: 23.15'
Dc: 92° 45' 03"
Chd: S 76° 26' 53" W, 63.43'

SIGHT DISTANCE / UTILITY EASEMENT
(TO REMAIN CLEAR OF TREES, SHRUBS AND STRUCTURES)

SIGHT DISTANCE / UTILITY EASEMENT
(TO REMAIN CLEAR OF TREES, SHRUBS AND STRUCTURES)

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Janice S. DeAngelis 9-8-88
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT. DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William S. Pong 9-1-88
CHIEF, BUREAU OF ENGINEERING DATE
Charles W. Lamb 8/5/88
CHIEF, BUREAU OF HIGHWAYS DATE
James M. Gorman 8/31/88
CHIEF, LAND DEVELOPMENT DIVISION DATE

DATE NO REVISION

OWNER, DEVELOPER
TEMORA LIMITED PARTNERSHIP
9306 HILLTOP COURT
LAUREL, MARYLAND 20707
(301) 953-7676

PROJECT
TEMORA MANOR
A RESUBDIVISION OF LOT # 10

AREA TAX MAP NO 24 PARCEL 300 & 302
ZONED R-20 2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **ROAD PLAN & PROFILE OF TEMORA MANOR LANE**

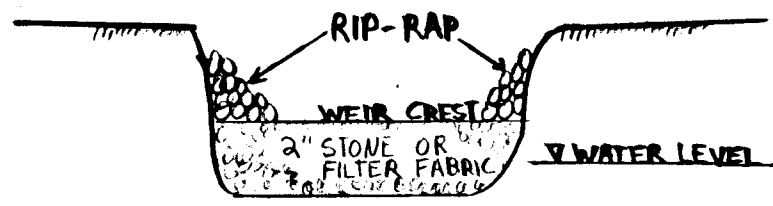
KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET / SUITE 100 / LAUREL MD 20707
(Wash.) (301) 953-1821 / 792-8086 (Balt.)

DATE

CHECKED BY: RA/11W
DESIGNED BY: MWK
DRAWN BY: MWK
PROJECT NO: 1687100
DATE: DEC. 1987
SCALE: AS SHOWN
DRAWING NO. 2 OF 8

965

MARYLAND BLUEPRINT CO. INC.

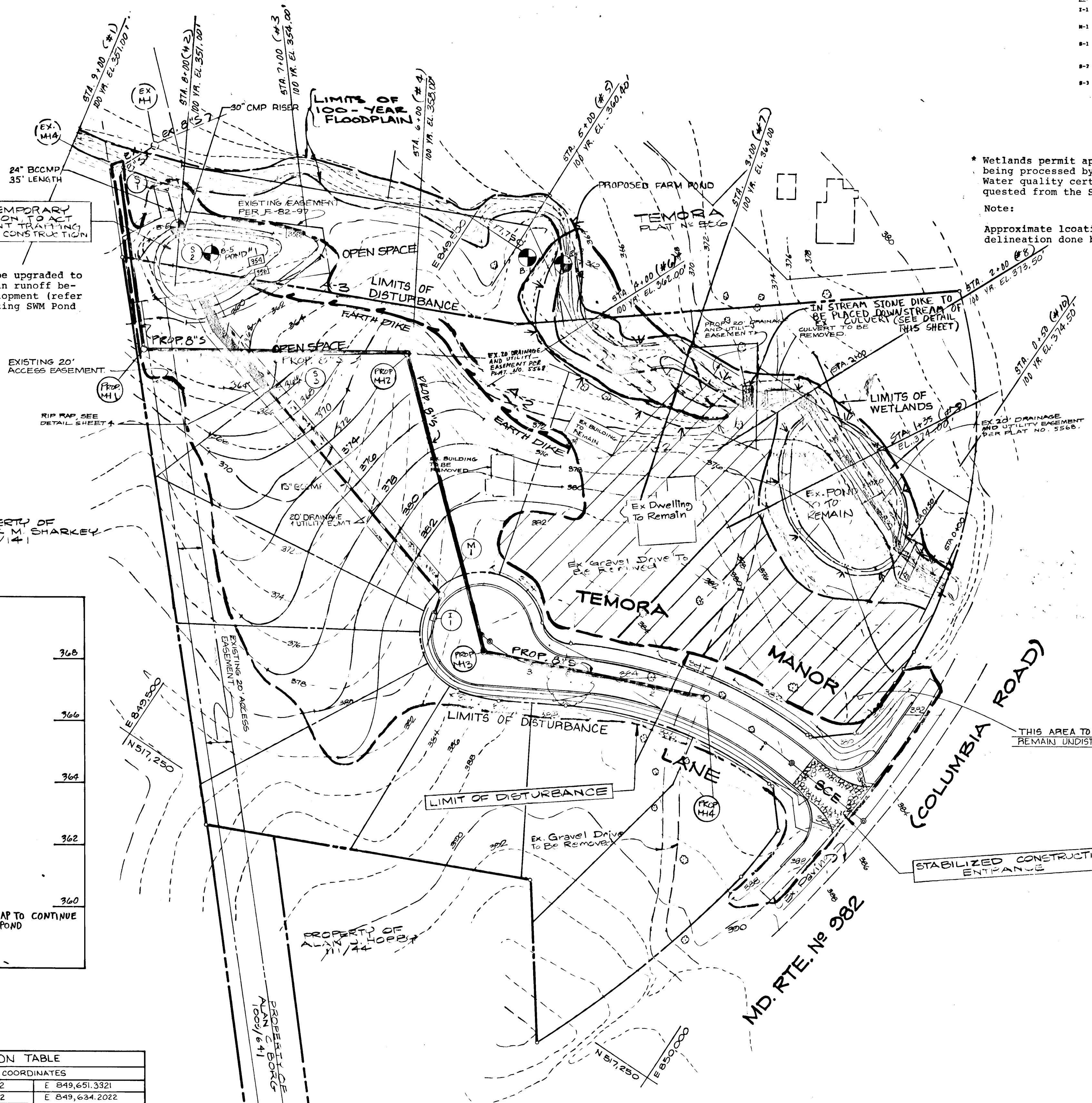


N.T.S.

WATER RESOURCES ADMINISTRATION	IN-STREAM STONE DIKE	WPD 1.2
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1.0' DEEP TEMPORARY OVER-EXCAVATION TO ACT AS A SEDIMENT TRAPPING AREA DURING CONSTRUCTION

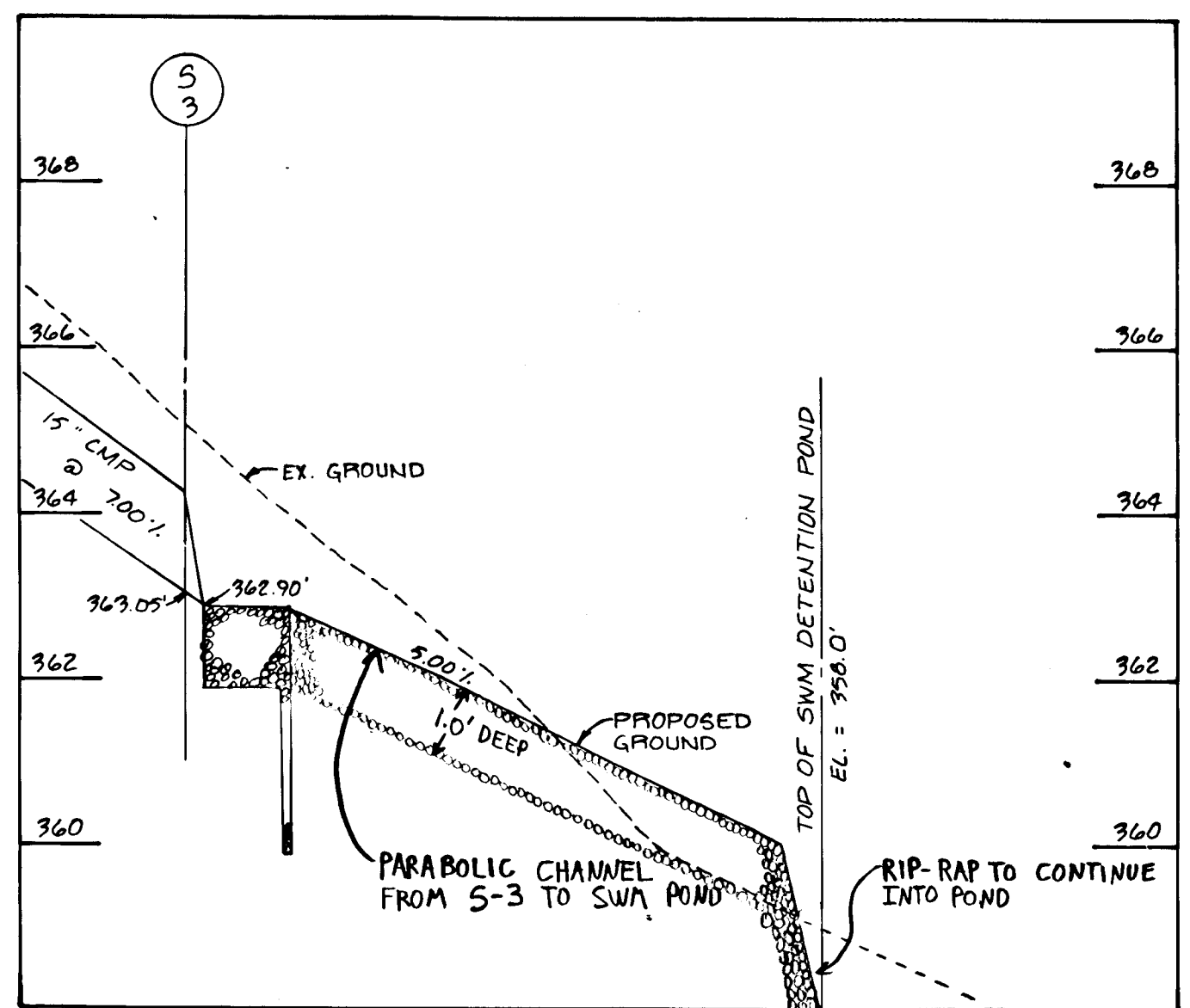
* Existing SWM Pond will be upgraded to utilize the difference in runoff between pre and post-development (refer to F-82-97 for the existing SWM Pond condition)



* Wetlands permit application is currently being processed by the Corps of Engineers. Water quality certification has been requested from the State of Maryland.

Note:
Approximate location of wetland delineation done by KCI.

- SEQUENCE OF CONSTRUCTION
- 1) OBTAIN GRADING PERMIT. 1 DAY
 - 2) INSTALL S.C.R., SILT FENCE, AND BARRIERS. 2 DAYS
 - 3) MODIFY THE EXISTING SWM POND:
 - A) REMOVE THE EXISTING STRUCTURE.
 - B) CONSTRUCT NEW STRUCTURE PER DETAIL SHEET.
 - C) GRADE POND AS PER GRADING PLAN.
 - D) INSTALL NEW STRUCTURES. INSTALL THE DENATURING DEVICE TO LOW FLOW ORIFICE.
 - E) CONSTRUCT WEAPENMENT TO ELV. 355.0.
 - F) INSTALL METAL END SECTION AT BARREL OUTLET.
 - G) INSTALL GRASS AT POND OUTLET.
 - H) STABILIZE THE EXPOSED AREA WITH LEPTOCYDUS 31 TALL PESTICE.
 - 4) GRADE TEMPORARY ACCESS ROAD TO STREAM. 1 DAY
 - 5) GRADE PER TEMPORA MANOR LANE. 5 DAYS
 - 6) INSTALL THE STORM DRAIN SYSTEM AND IMMEDIATELY BLOCK THE INLET. 3 DAYS
 - 7) INSTALL ROAD CURB AND GUTTER. 4 DAYS
 - 8) GRADE THE SITE AS PER GRADING PLAN. STABILIZE ANY AREAS NOT TO BE PAVED. 10 DAYS
 - 9) INSTALL CURB AND GUTTER. 2 DAYS
 - 10) INSTALL PAVING FOR ROAD IMPROVEMENTS ON COLUMBIA RD. 3 DAYS
 - 11) WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES AND IMMEDIATELY STABILIZE ANY EXPOSED AREAS. 4 DAYS
 - 12) REMOVE THE DENATURING DEVICE FROM THE MODIFIED SWM POND AND UNBLOCK RISER TOP. 1 DAY
 - 13) ONGOING MAINTENANCE.



PROFILE ALONG E OF SWALE RECEIVING FLOW FROM S-3

STRUCTURE	COORDINATES	
I-1	N 517,463.2792	E 849,651.3321
M-1	N 517,477.6542	E 849,634.2022
S-1	N 517,631.9707	E 849,280.6806
S-2	N 517,605.8018	E 849,313.0100
S-3	N 517,494.1273	E 849,419.4640

AREA DISTURBED BY ROAD CONSTRUCTION = 100,000 sq ft = 2.3 AC ±

No.	TYPE	Inv. In	Inv. Out	Top Elev.	Remarks
I-1	Auto Inlet	---	---	Top of curb 360.25	See No. Co. Std. Detail 80-4.02
M-1	No. Co. Std. Manhole	378.4	378.03	383.5	See No. Co. Std. Detail 86-5.41
S-1	No. Co. Std. Metal End Section	---	---	---	See No. Co. Std. Detail 86-5.41
S-2	30 inch riser	356.4	---	---	See SWM Details Sheet 5 of 8
S-3	No. Co. Std. Metal End Section	---	---	---	See No. Co. Std. Detail 86-5.41

ENGINEERS 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. Patmore 12/28/87
JOHN E.C. PATMORE Date
Registered Professional Engineer # 85 8

ENGINEERS CERTIFICATE
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

John E. Patmore 12/28/87
JOHN E.C. PATMORE Date
Registered Professional Engineer # 8978

REVIEWED FOR HOWARD SOIL CONSERVATION AND MEETS TECHNICAL REQUIREMENTS.

James M. Helm 8/1/88
J.S. SOIL CONSERVATION SERVICE DATE

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

Robert W. Ziehm 8/1/88
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Janice J. Langell 9-8-88
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William S. Ray 9-1-88
CHIEF, BUREAU OF ENGINEERING DATE

Charles A. Suter 8/5/88
CHIEF, BUREAU OF HIGHWAYS DATE

Donald J. Ferrin 8/31/88
CHIEF, LAND DEVELOPMENT DIVISION DATE

DATE	NO.	REVISION
2/6/90	1	REVISED FLOODPLAIN, ADDED NEWSEWAGE ALG.

OWNER/DEVELOPER
TEMORA LIMITED PARTNERSHIP
9306 HILLTOP COURT
LAUREL, MARYLAND 20707
(301) 953-7676

PROJECT:
TEMORA MANOR
A RESUBDIVISION OF LOT NO 10

AREA:
TAX MAP NO 24 PARCEL 800 & 802
ZONED R-20 2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE:
ROAD GRADING & SEDIMENT CONTROL

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

LEGEND:
--- V V --- LIMITS OF WETLANDS
--- --- 100 YR. FLOODPLAIN LIMITS

OWNER'S/DEVELOPER'S CERTIFICATION
"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."

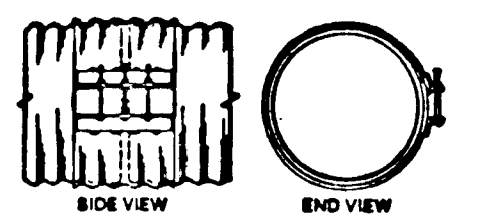
Signature *David R. Finck* Date 12/21/87
Name DAVID R. FINCK Title
Firm UNDER GENERAL CONTRACT, INC. Complete Address 32375 COURT AVE ELLENDALE CITY, MD 20724

CHECKED: RWL/DW
DESIGN: MWK
DRAWN: MWK
PROJECT NO: 1687100
DATE: DEC. 1987
SCALE: 1" = 50'
DRAWING NO 3 OF 8

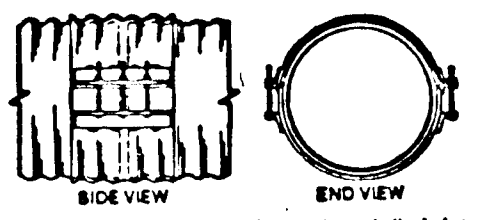
965

TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE

(All connector bands require neoprene gaskets)

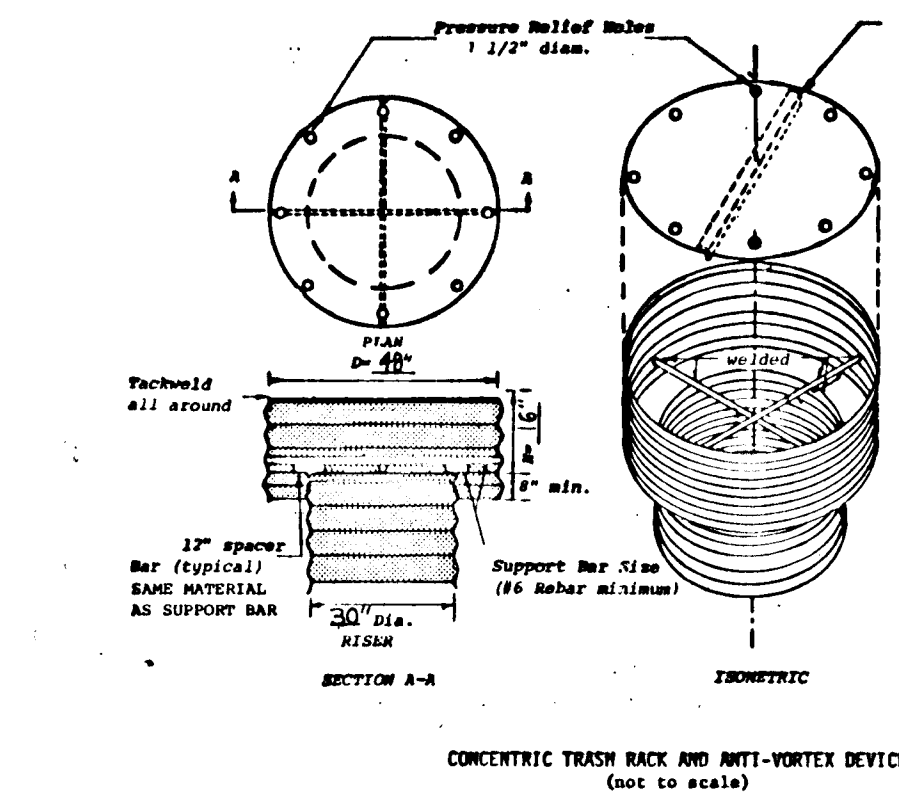
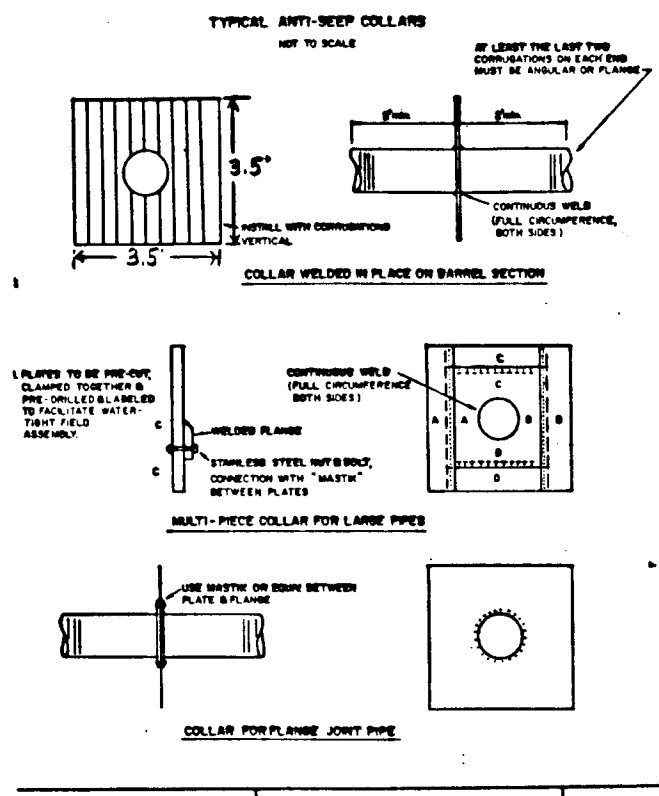


One piece lap-type coupling for annular or helical pipe - 12" and 24" diam.



Two piece lap-type coupling for annular or helical pipe - 12" and 24" diam.

STANDARD LAP-TYPE COUPLING BANDS FOR ANNULAR C.S.P. OR HELICAL C.S.P.



CONSTRUCTION SPECIFICATIONS

I. SITE PREPARATION
Area under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. To facilitate clean out and restoration, it is recommended that the permanent pool area be cleared of all brush and trees.

II. EARTH FILL
Material
The fill material shall be taken from approved designated borrow area or areas. It shall be free from 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 at least 10 percent above the design elevation (including freeboard) unless otherwise shown on the plans.

Placement
Areas on which fill is to be placed shall be scarified 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.

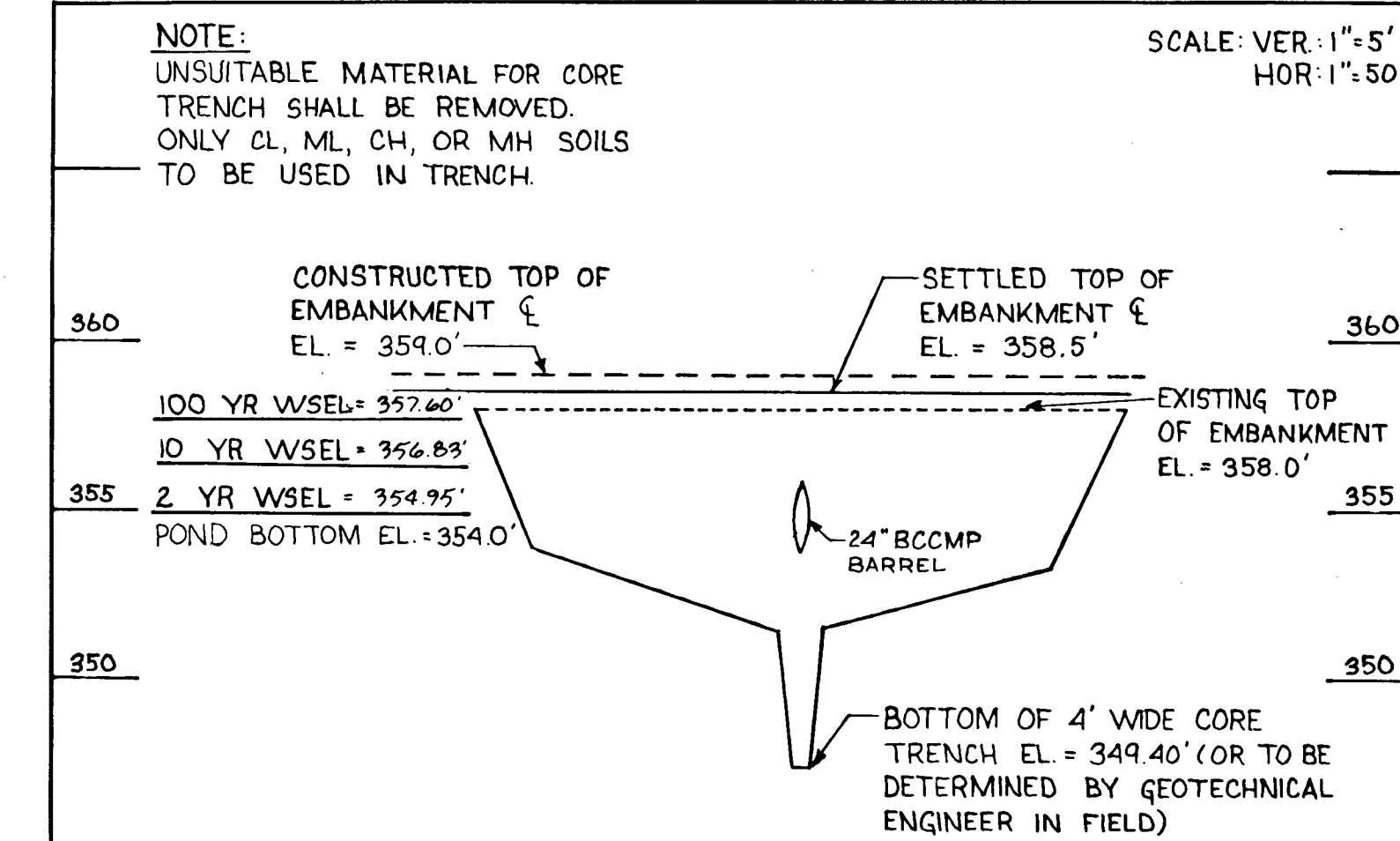
Compaction
The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture so that it can be formed into a ball without crumbling. If water can be squeezed out of the ball, it is too wet to compact properly.

Core 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 four feet. The depth shall be at least 102 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 core trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability. (Refer to note on profile through embankment, this sheet)

III. CONCRETE
Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications for Materials, Highways, Bridges, and Incidental Structures, Article 20.07 (Portland Cement Concrete Mixtures), Class A-1, or P-1.

IV. STABILIZATION
All borrow areas 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 Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas immediately after finish grading.

C. Acceptable Construction Criteria
The following items should be considered in reviewing as-built plans to determine if it is acceptable:
1. The pipe and riser diameter, materials, and elevations must be correct.
2. The number, size and location of the anti-seep collars must be correct.
3. The top of fill elevation must be no less than the design elevation plus the allowance for settlement.
4. The top width and side slopes must be equal to or flatter than the design.
5. There must be the proper relation between the elevations of the principal spillway crest, the emergency spillway crest, and the design elevations.
6. The structure must have an acceptable outlet as provided in the plans.



PROFILE E OF EMBANKMENT POND #1
RECORD OF SOIL EXPLORATION

KIDDE CONSULTANTS, INC.
Project Name: Temora Manor
Location: Existing Pond - Embankment
Boring No: B-6
Date: 12-18-87

SAMPLER
Hammer Wt: 140 Lbs.
Hammer Drop: 30 in.
Date Started: 12-18-87
Date Completed: 12-18-87

ELEV.	SOIL DESCRIPTION	DEPTH (ft)	SAMPLE NO.	TYPE	REMARKS
359.0	Surface	0.0	1	DS	6" topsoil
358.5	Brown gray moist medium dense to very dense silty sand with mica and rock fragments possible decomposed rock (SM)	4-12	2	DS	no water encountered
357.5		8-9	3	DS	bag sample from 0.0 to 5.0'
356.5		12	4	DS	
355.5		17.5	5	DS	hole backfilled
354.0	bottom of test hole at 17.5'	17.5			

RECORD OF SOIL EXPLORATION

KIDDE CONSULTANTS, INC.
Project Name: Temora Manor
Location: Pond Center
Boring No: B-5
Date: 12-16-87

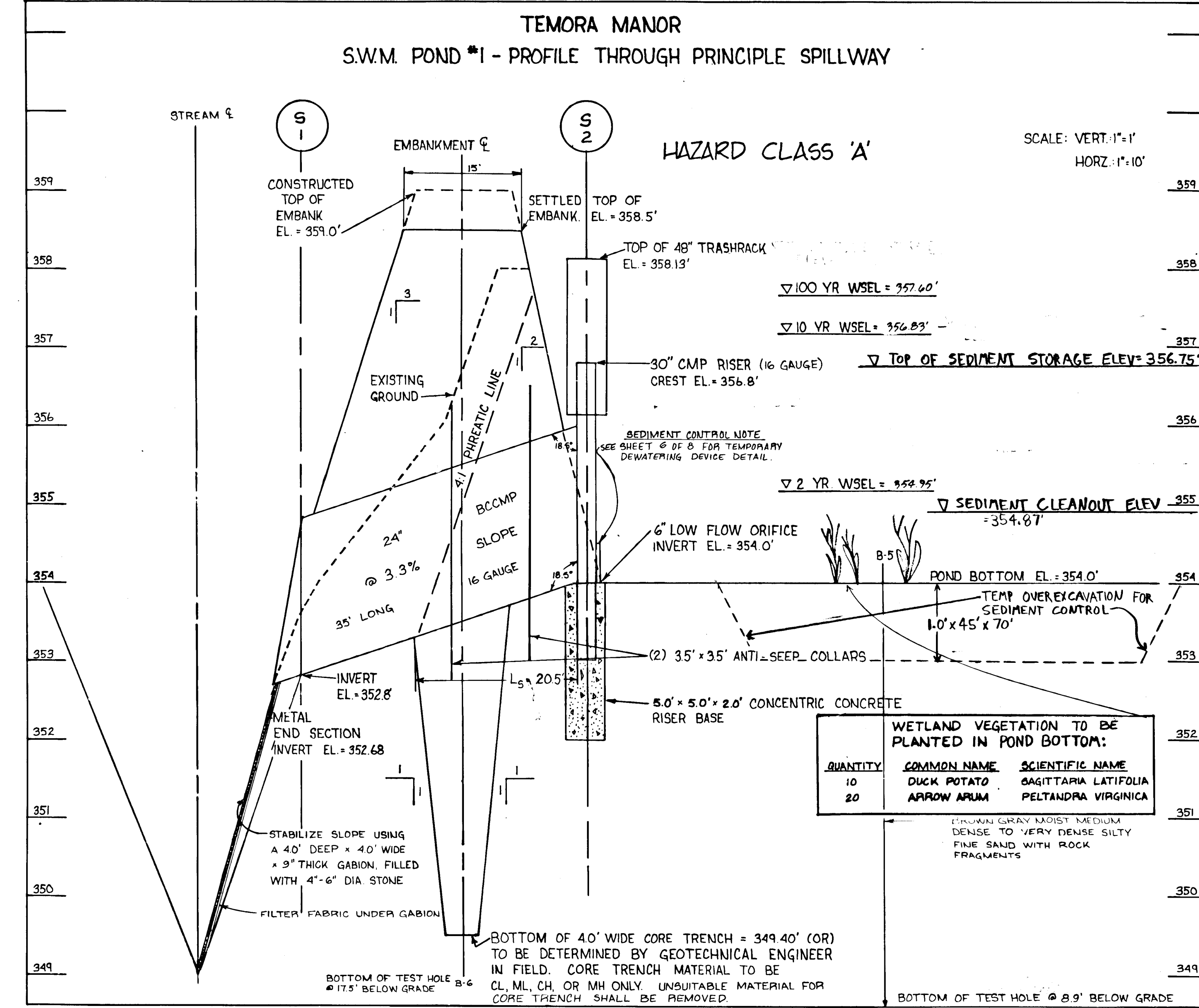
SAMPLER
Hammer Wt: 140 Lbs.
Hammer Drop: 30 in.
Date Started: 12-16-87
Date Completed: 12-16-87

ENGINEERS CERTIFICATE

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that I must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

John E.C. Patmore
Registered Professional Engineer # 8978
Date: 12/28/87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Chief, Division of Community Planning and Land Development
Date: 1/5/88



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Date: 8/31/88

OWNER / DEVELOPER
TEMORA LIMITED PARTNERSHIP
9306 HILLTOP COURT
LAUREL, MARYLAND
(301) 953-7676

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."
Date: 1-26-88
Signature of Developer: [Signature]

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION & 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.C. Patmore
12/28/87
ENGINEER SIGNATURE DATE

REVIEWED FOR HOWARD SOIL CONSERVATION AND MEETS TECHNICAL REQUIREMENTS.

[Signature]
DATE: 8/1/88

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

[Signature]
DATE: 8/1/88

ADDRESS CHART

BLDG. ADDRESS

REVISION CHART

DATE REVISION

DESIGNED
SH

DRAWN
SK

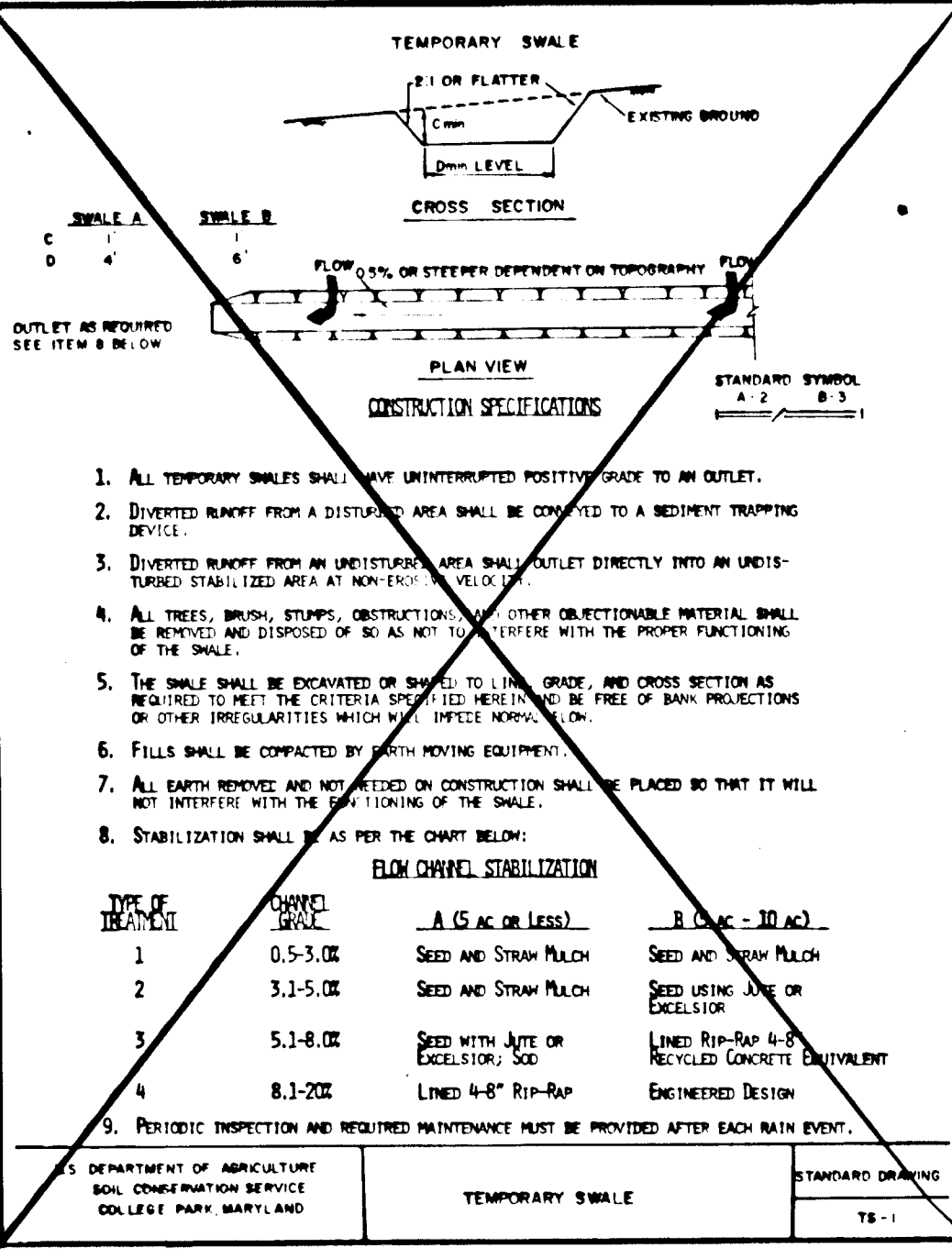
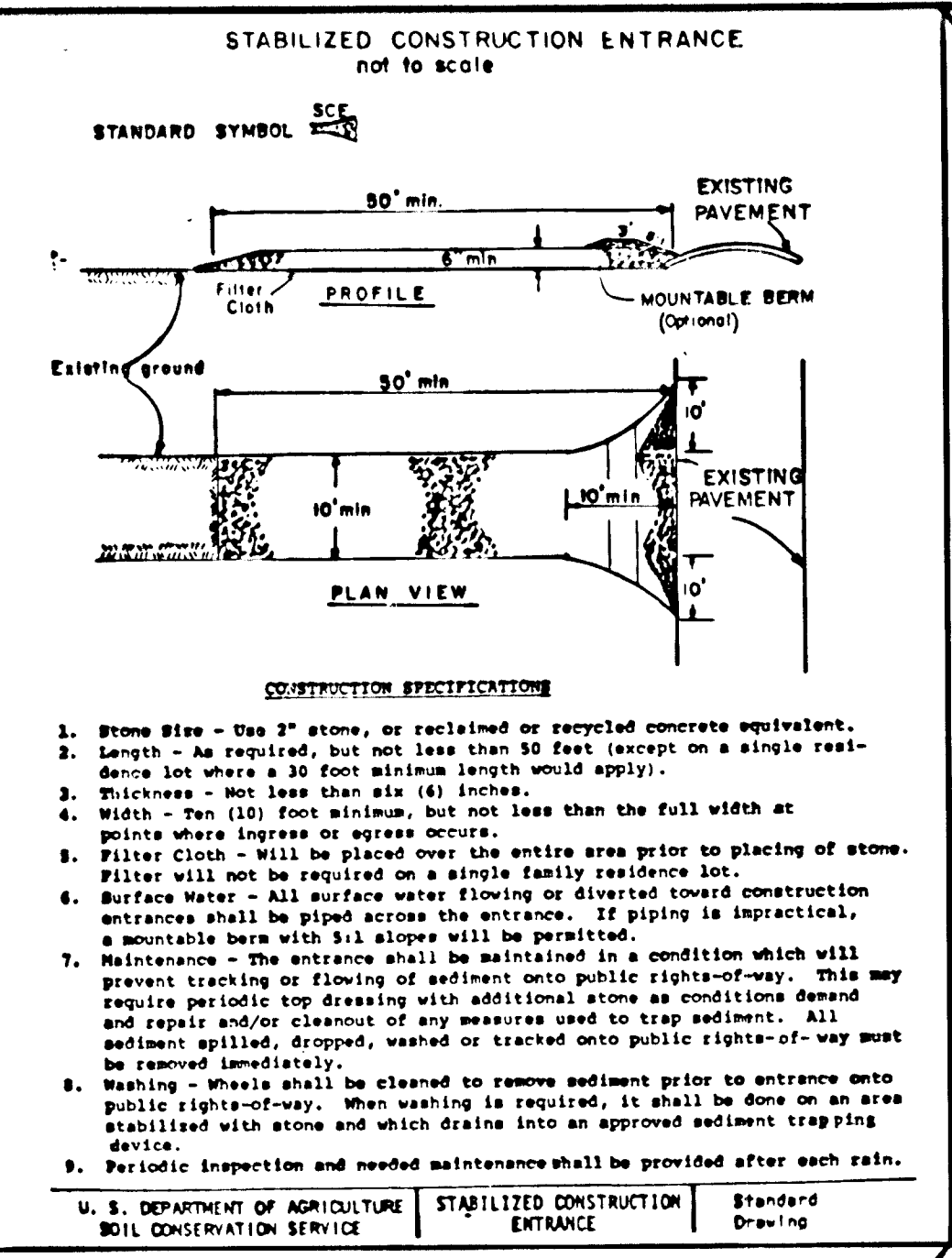
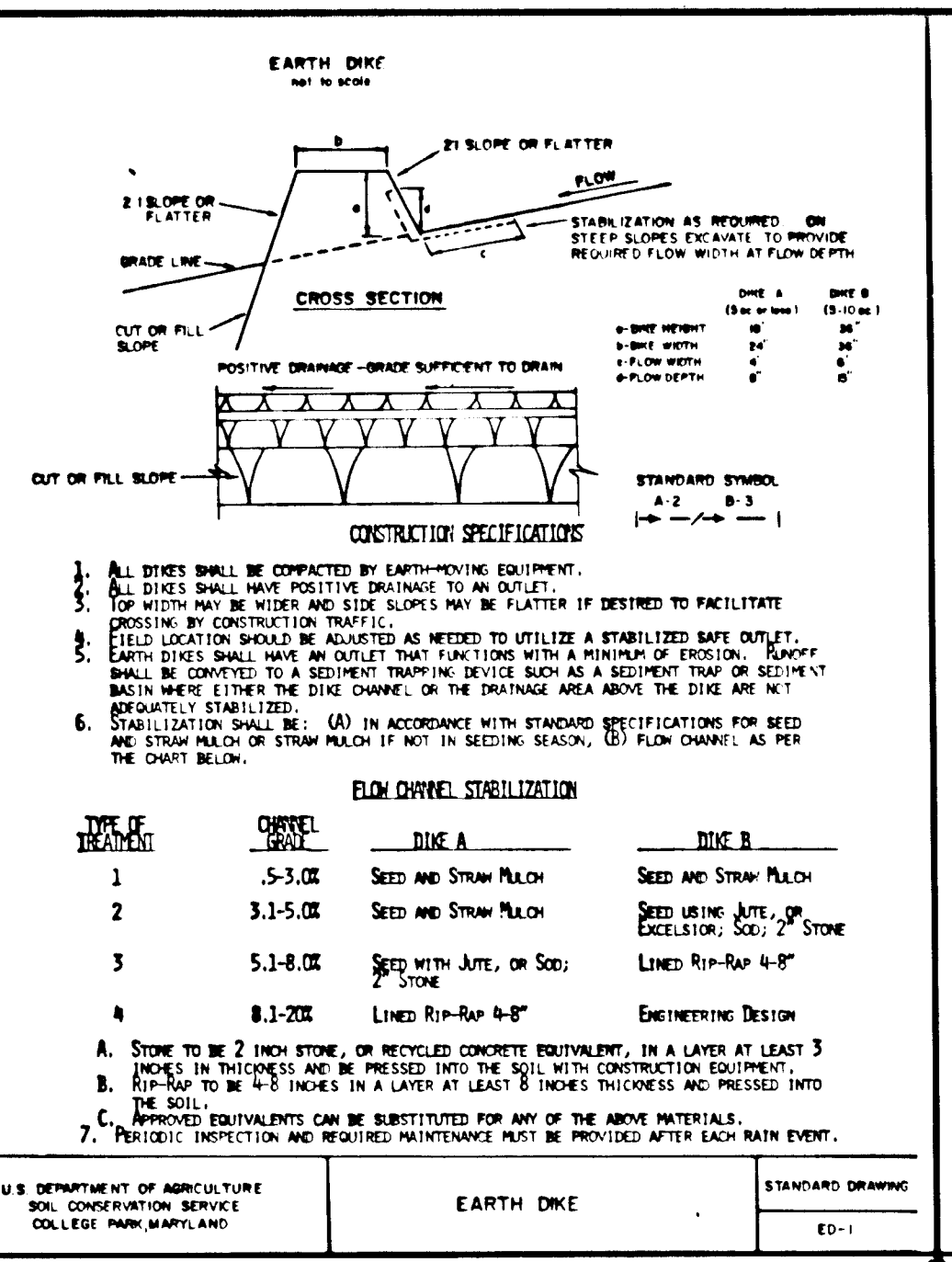
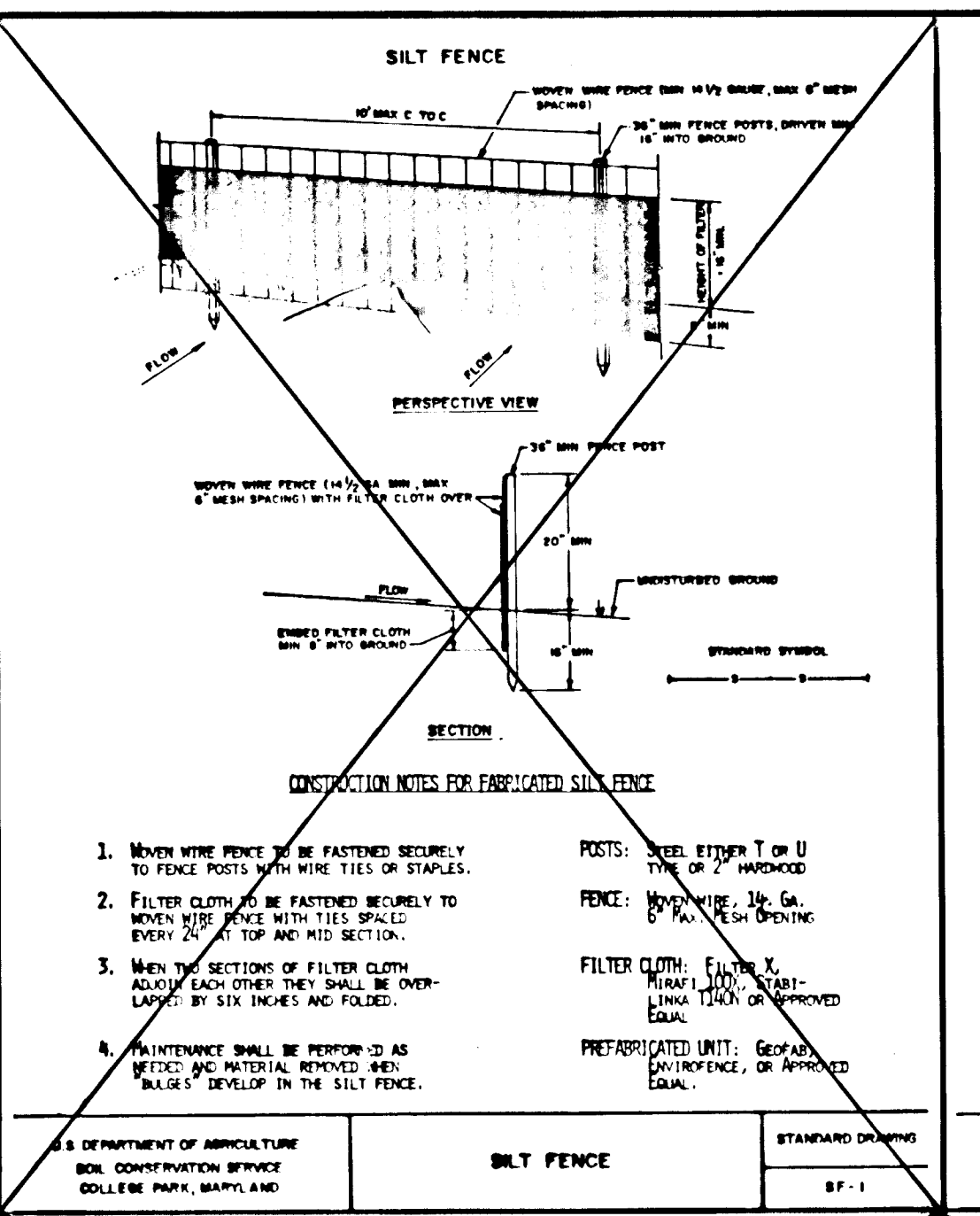
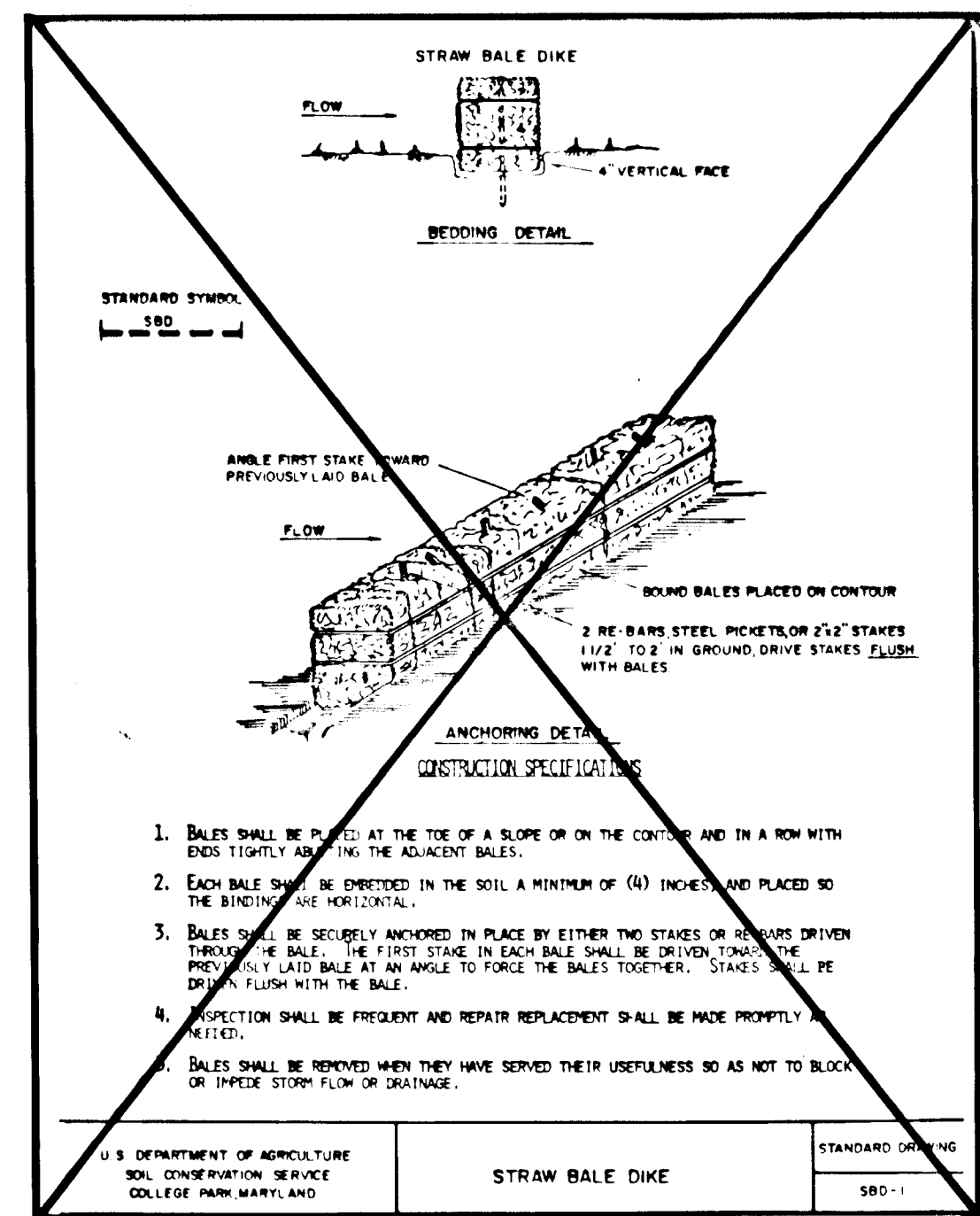
CHECKED
RA/DW

DATE
DEC. 1987

SCALE AS SHOWN
DWG. NO. 5 OF 8
JOB NO. 1687100
FILE NO.

TEMPORA MANOR STORM WATER MANAGEMENT & CONSTRUCTION DETAILS

TAX MAP 24 PARCELS 300, 302
2ND ELECTION DISTRICT
HOWARD COUNTY, MD.



PERMANENT SEEDING NOTES

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

Seeded 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 sq ft) and 500 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).
- 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. 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 (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 seed. 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 seedling. 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.

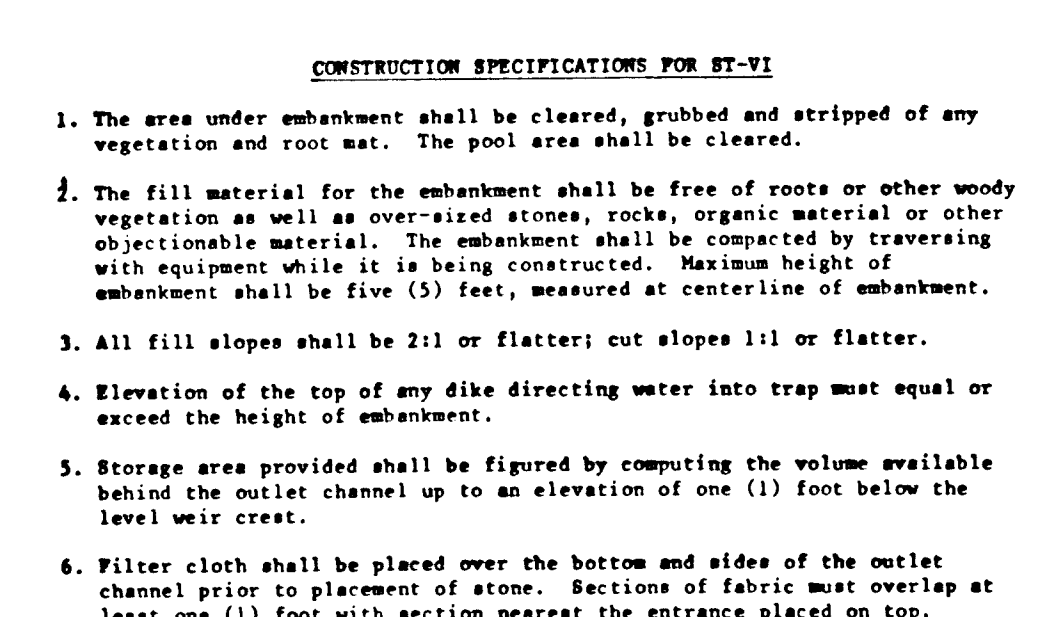
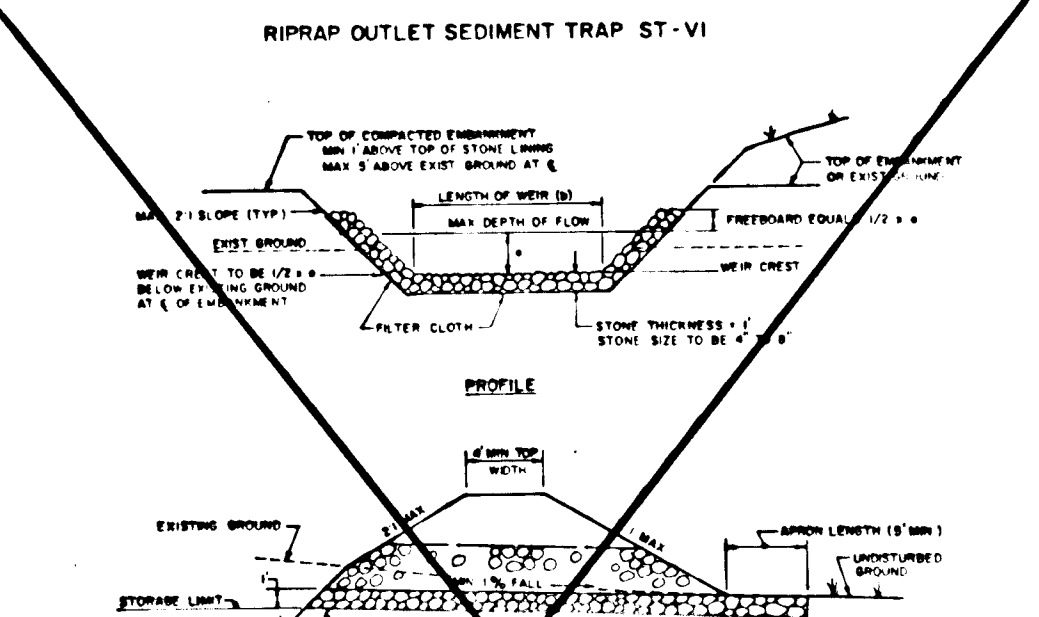
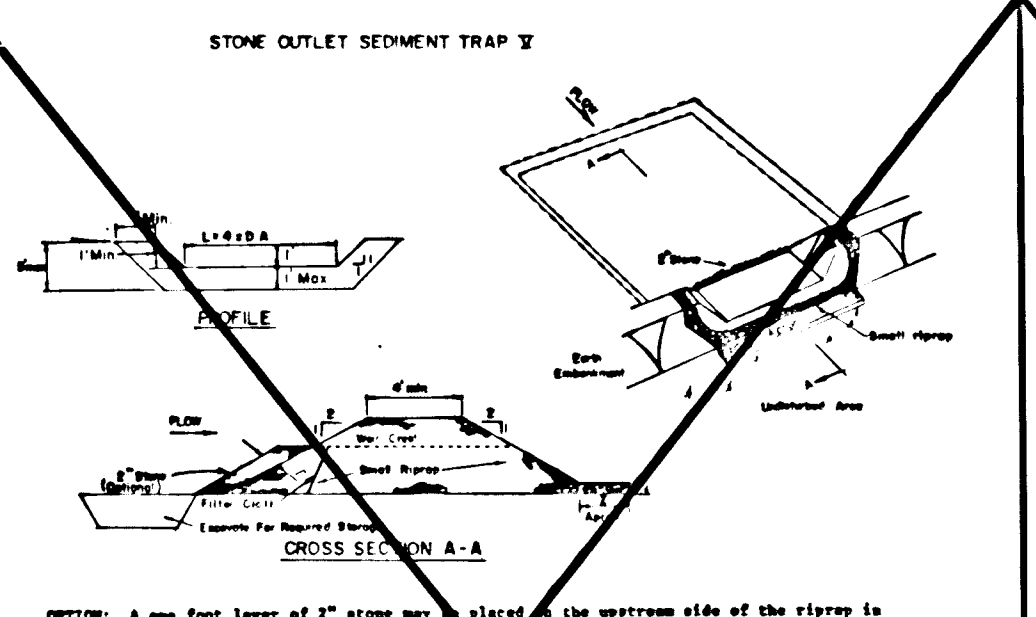
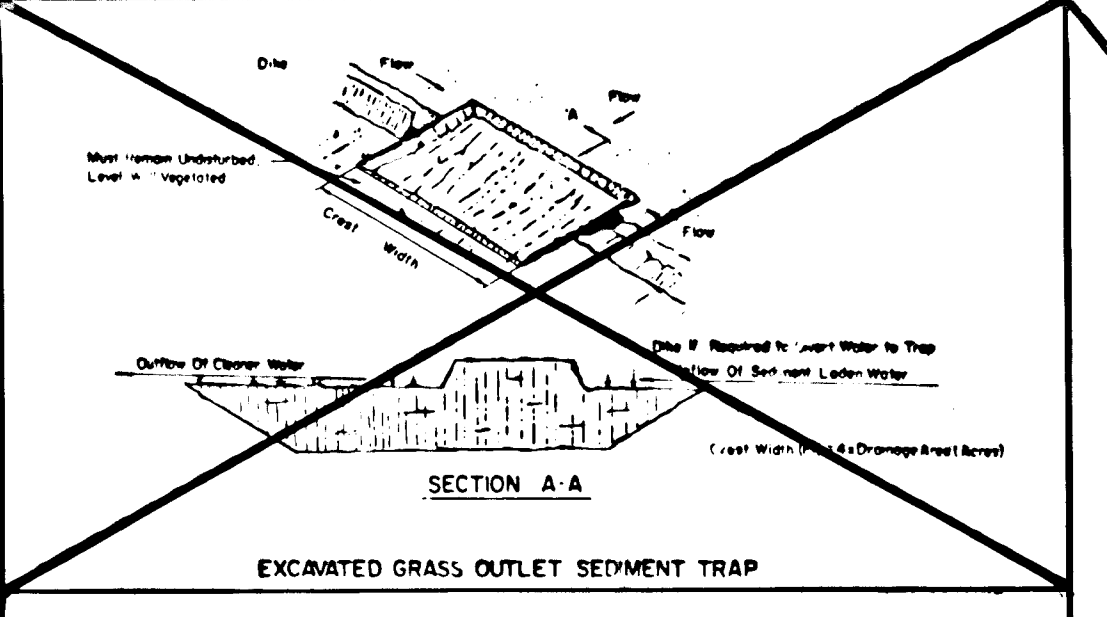
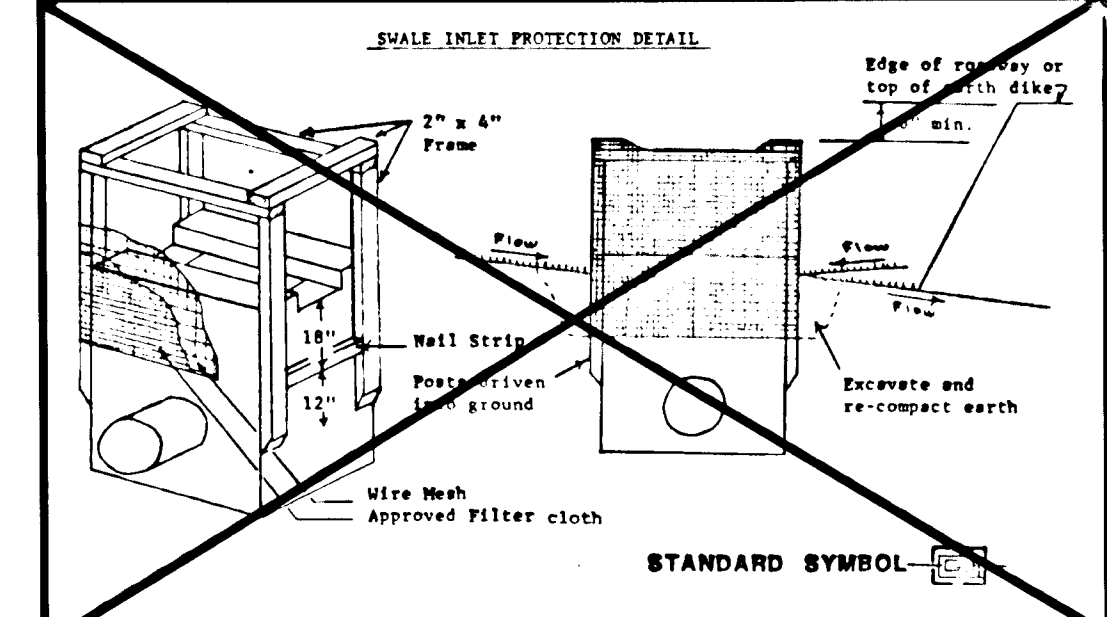
Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

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 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 sod.

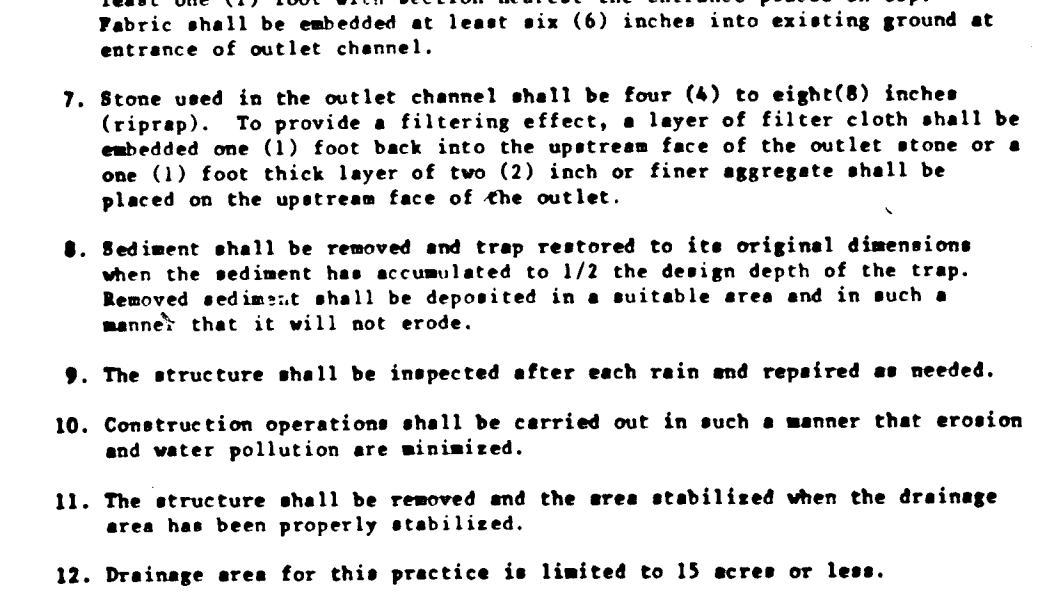
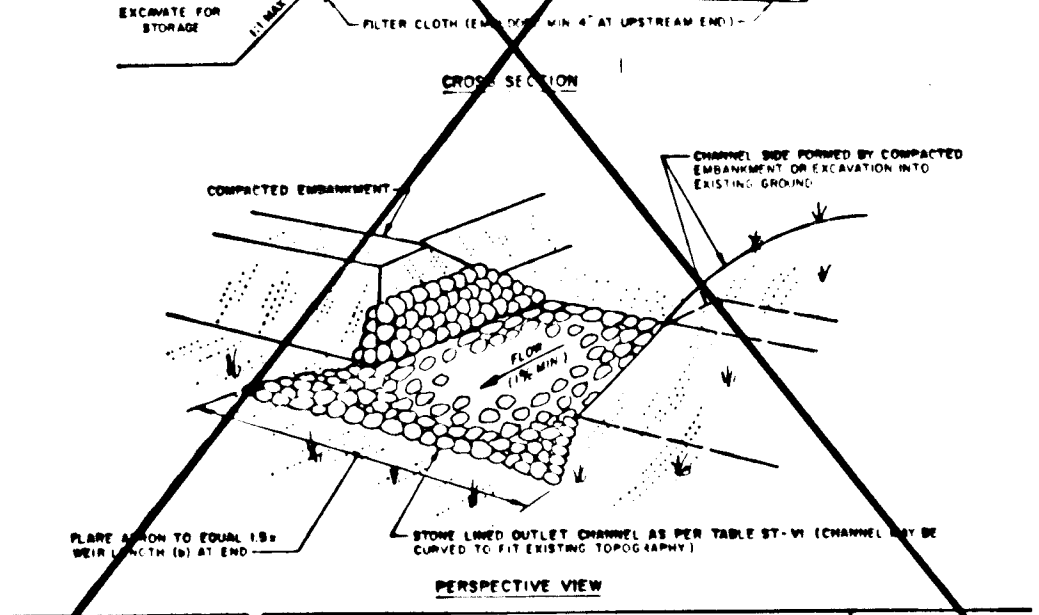
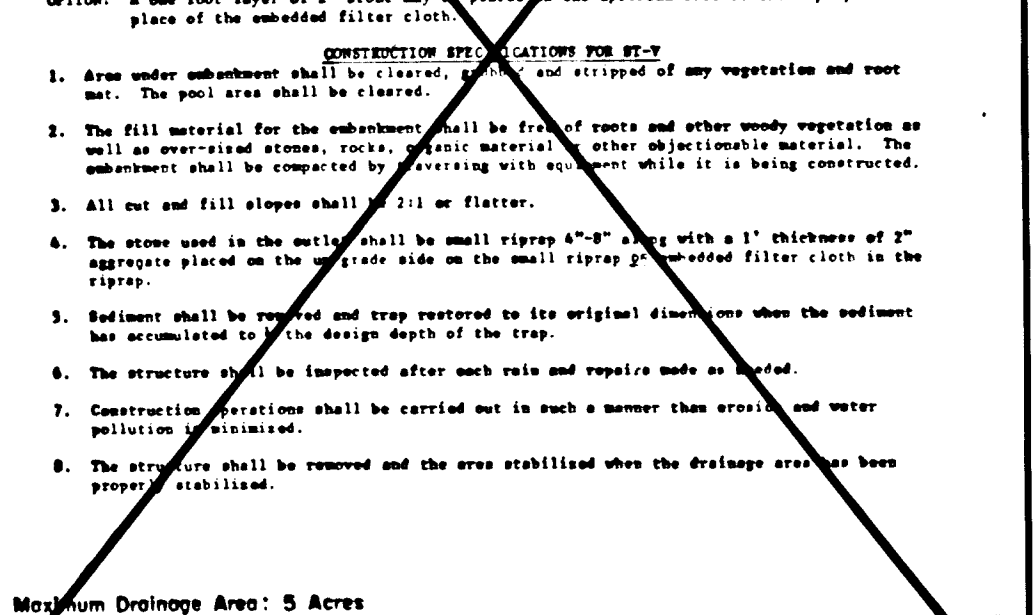
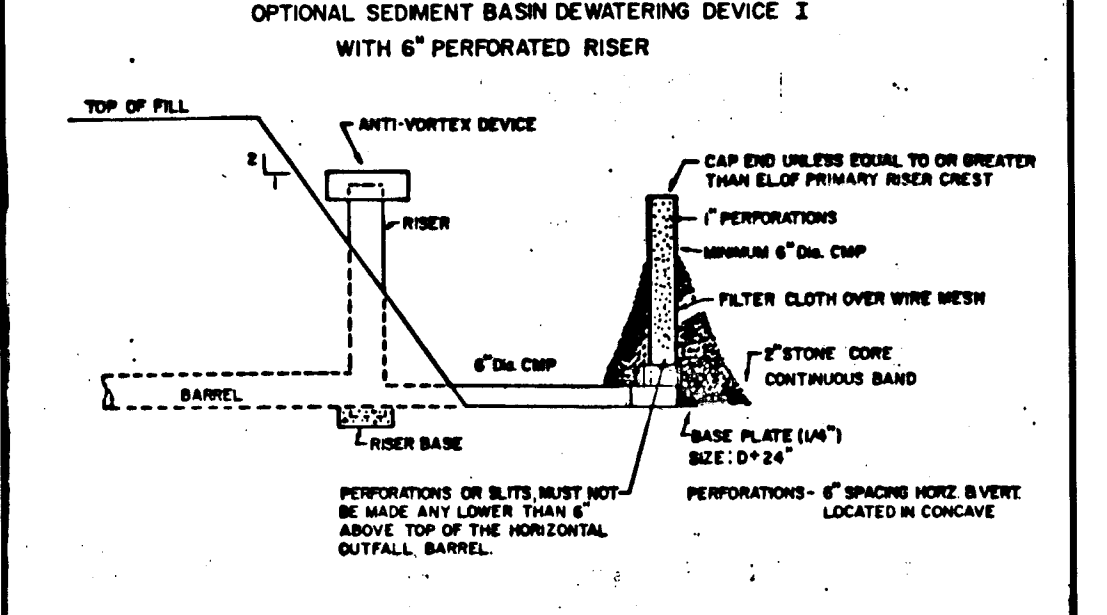
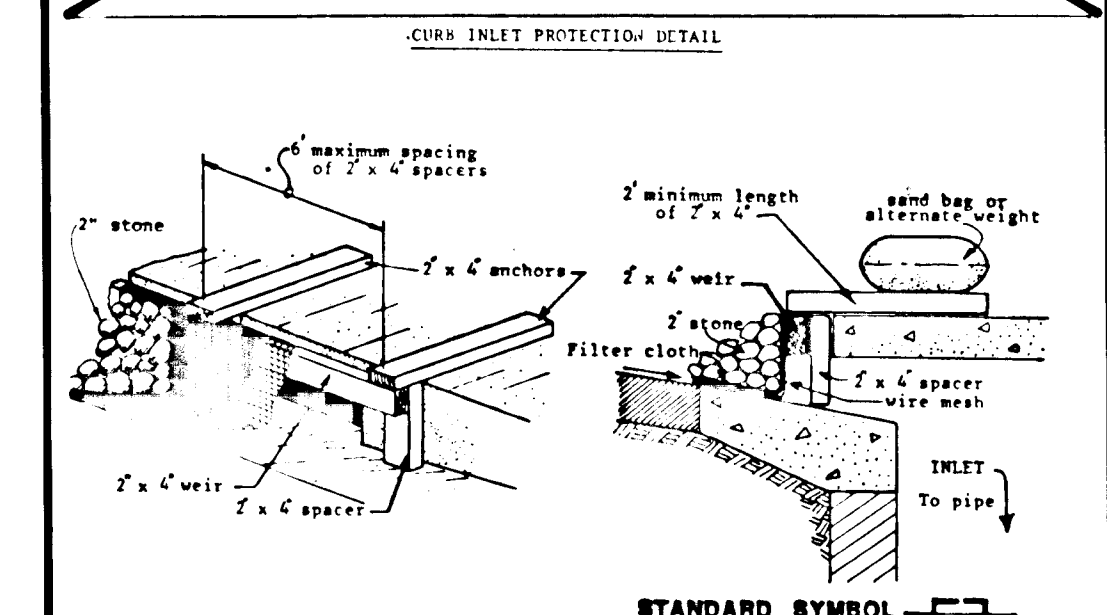
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft or higher, use 348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

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



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 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.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and (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: 7.0 Acres
Area Disturbed: 2.7 Acres
Area to be roofed or paved: .30 Acres
Area to be vegetatively stabilized: 2.47 Acres
Total Cut: 1.5 Cu. yds.
Total Fill: 2.22 Cu. yds.
Offsite waste/borrow area location: TO BE DETERMINED
- 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.

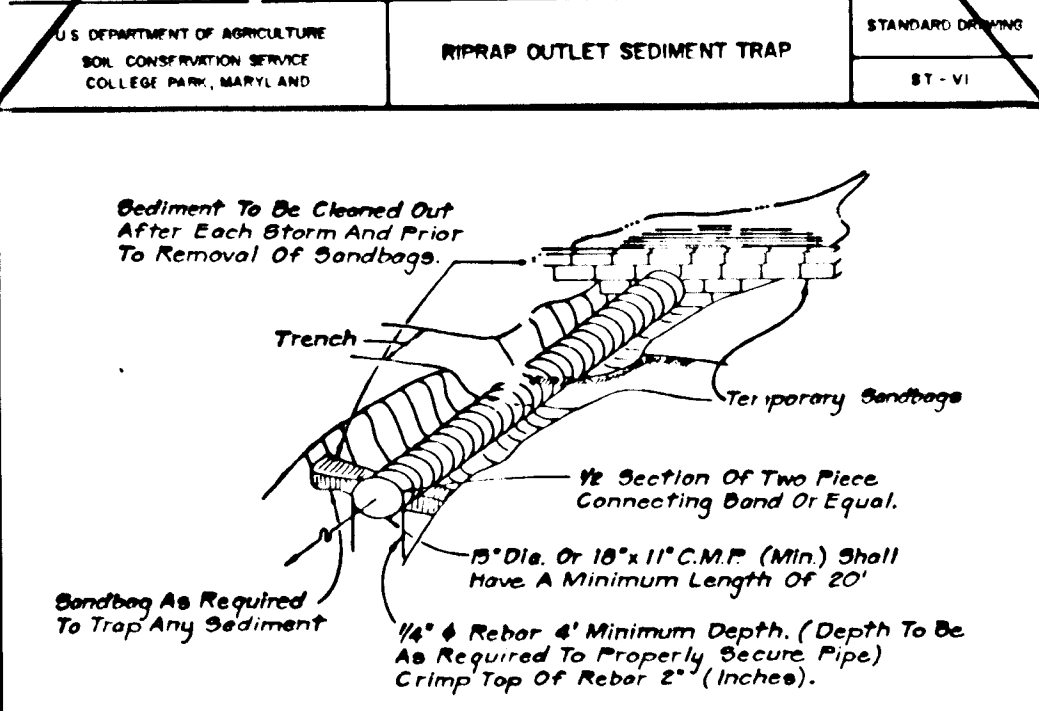
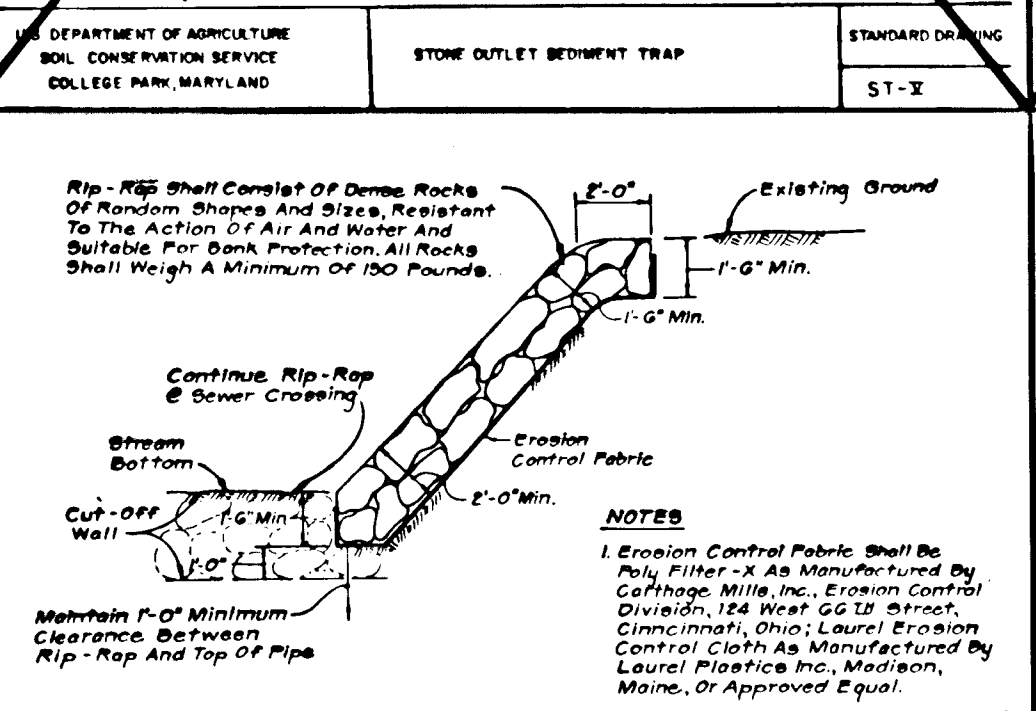
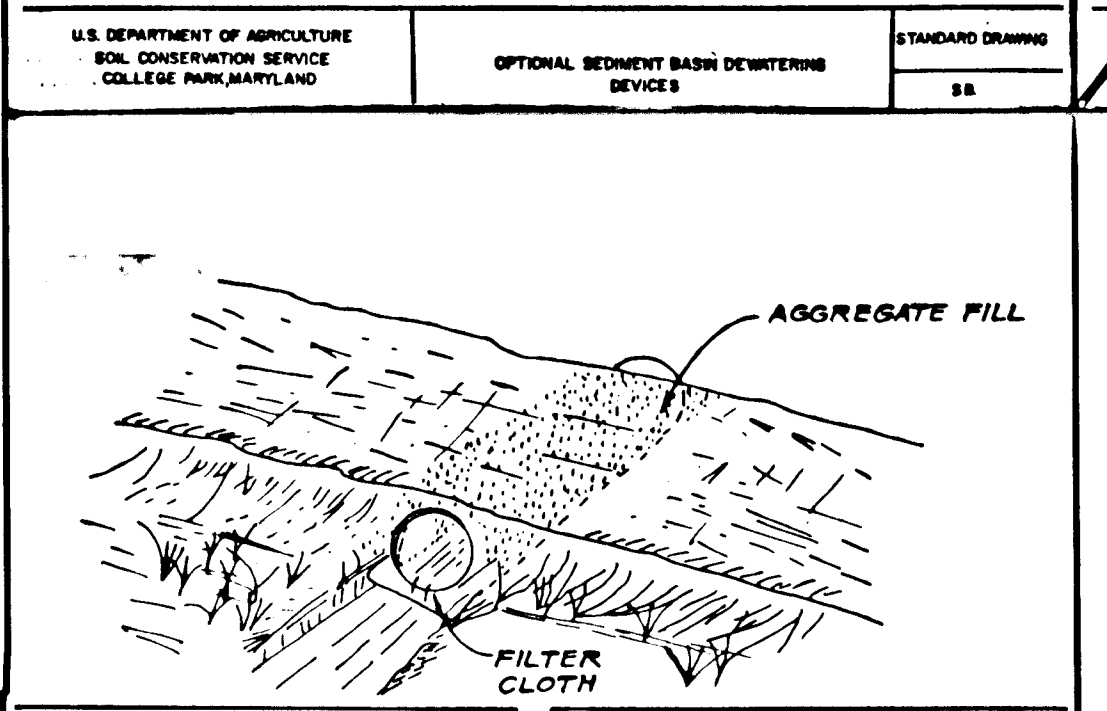
Construction Specifications

Materials

- Wooden frame is to be constructed of 2"x4" construction grade lumber.
- Plywood is to be a minimum thickness of 1/4" construction grade lumber.

Installation

- Cut plywood to extend a minimum of 6" past throat along curb.
- Attach to anchors in a secure manner which will insure a water tight fit against throat.
- Brace securely using sandbag or alternate weight. If not watertight, use approved filter cloth under plywood and attach securely.



Riprap Outlet Sediment Trap

ST-VI (for Stone Lined Channel)

Contributing Drainage Area (Acres)	Depth of Channel (Feet)	Length of Weir (Feet)
1	1.5	4.0
2	1.7	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

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

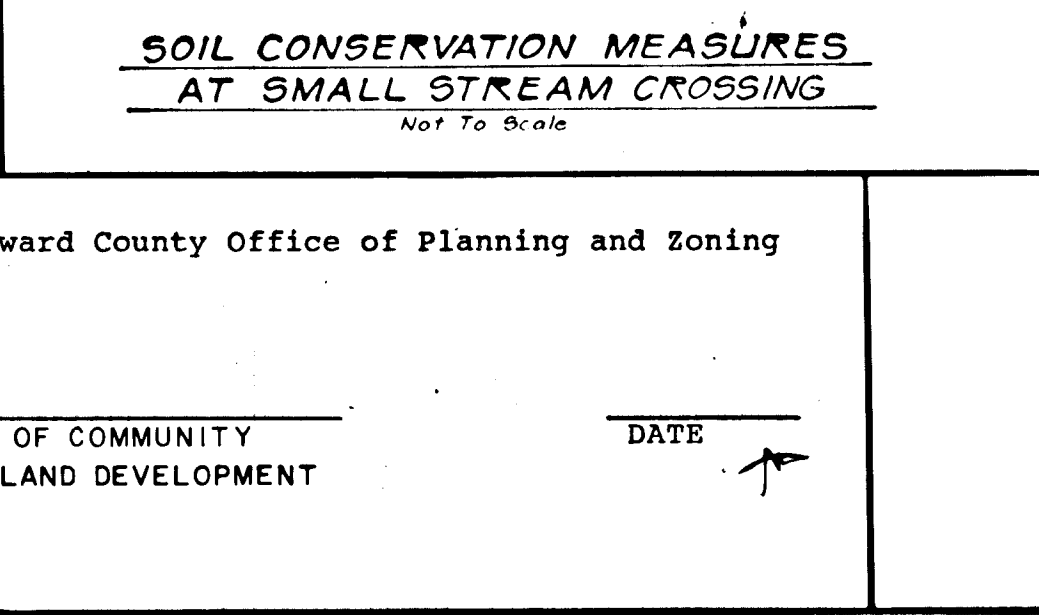
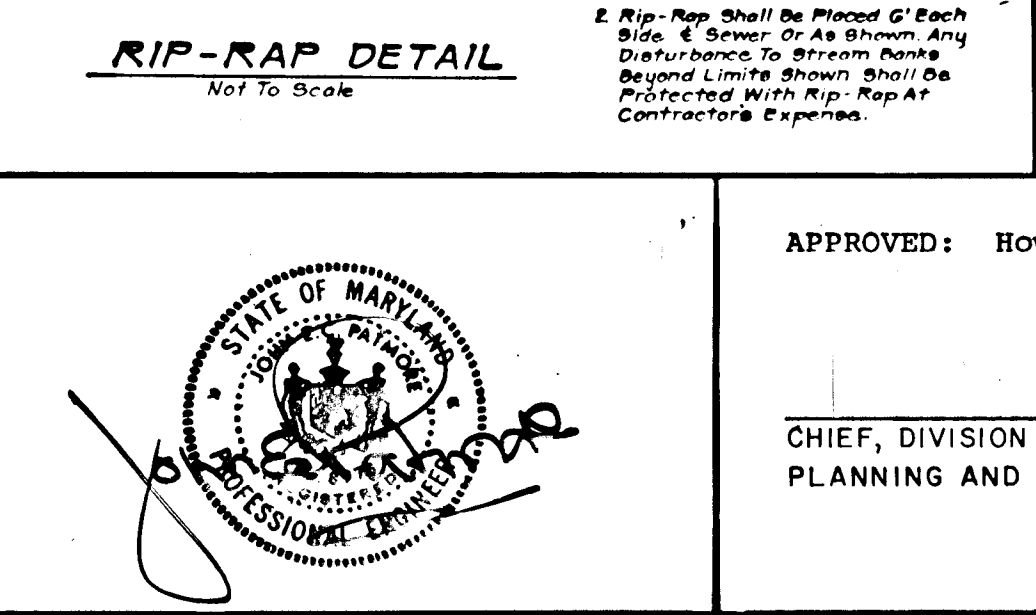
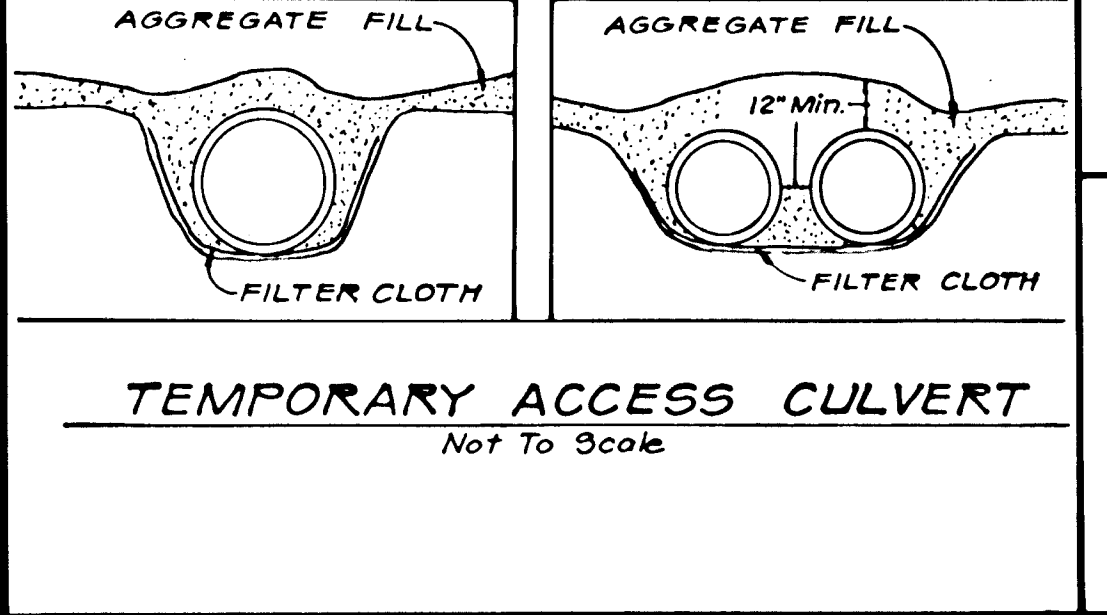
James M. Helm 8/1/88
DATE

U.S. SOIL CONSERVATION SERVICE

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

Robert Ziehn 8/1/88
DATE

Approved: Howard S.C.D.



APPROVED: Howard County Office of Planning and Zoning

OWNER / DEVELOPER

TEMORA LIMITED PARTNERSHIP
9306 HILLTOP COURT
LAUREL, MARYLAND 20707
(301) 953-7676

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 314 OF 8

SEDIMENT CONTROL DETAIL SHEET

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Small O'Leary 8/31/88
Chief, Land Development Division

Charles Swartz 8/1/88
Chief, Bureau of Highways

Robert Ziehn 8/1/88
Chief, Bureau of Engineering

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 inspection by the Howard Soil Conservation District."

Signature: *David R. Linn* Date: 12/21/87
Name: DAVID R. LINN Title: SEC. PRES. Phone No. 461-2227
Firm: Linn Construction, Inc. Complete Address: 8370 CONYER AVE. ELKTON CITY, MD. 21843

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. G. Patmore 12/21/87
JOHN E. G. PATMORE
Registered Professional Engineer # 8978

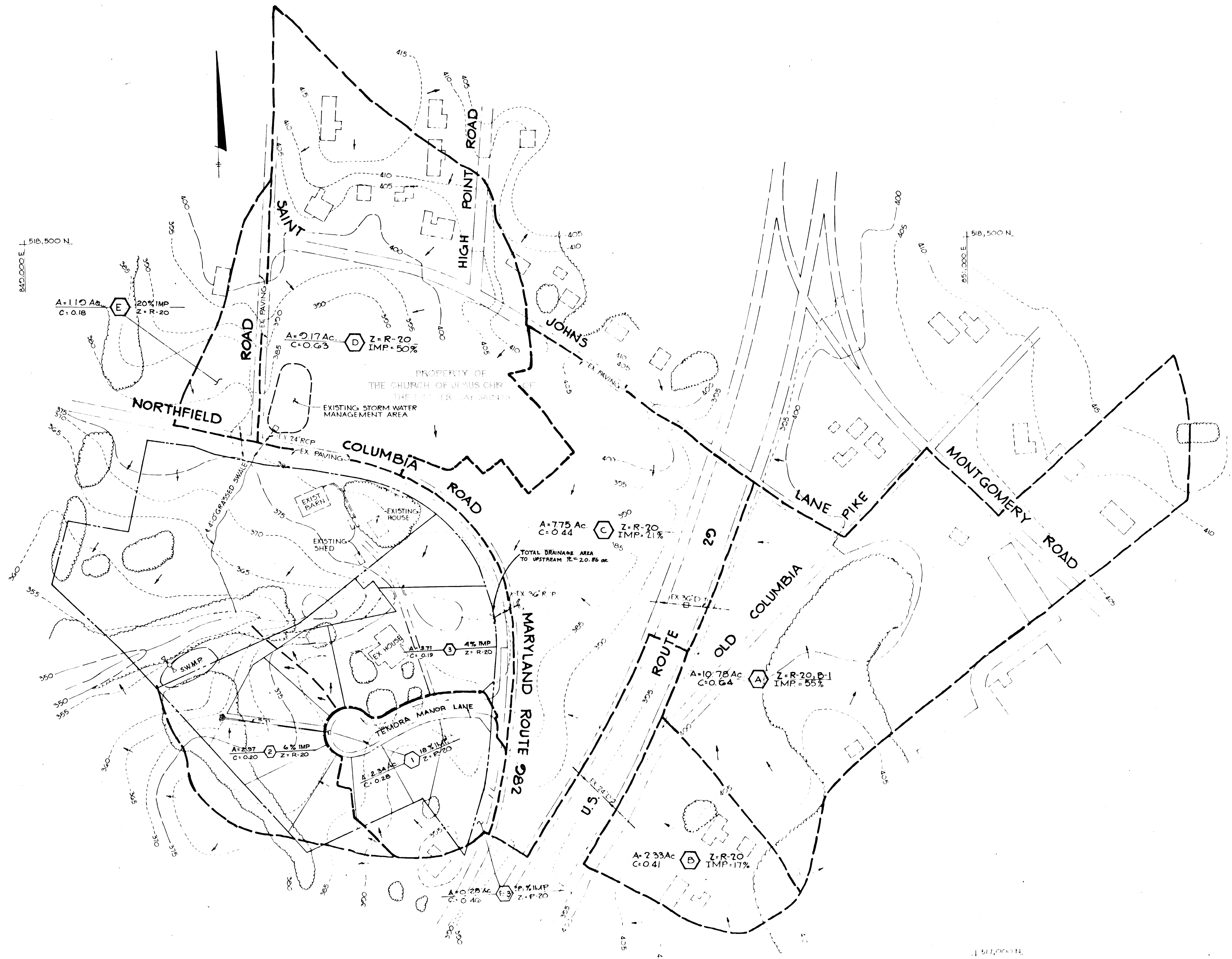
KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS

1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
(Wash.) (301) 953-1821 / 792-8086 (Balt.)

TEMORA MANOR
A RESUBDIVISION OF LOT 10
TAX MAP NO. 24 PARCEL 300 & 302
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

Drafting	DATE	REVISIONS	SHEET	DATE	JOB NUMBER
Check			6		1687100
Design			8		
Check					

596



PLAN

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Paul J. Seppan 8/31/88
 Chief, Land Development Division Date
Charles W. ... 7/1/88
 Chief, Bureau of Highways Date
William B. ... 9-1-88
 Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Debra S. ... 9-1-88
 Chief, Division of Community Planning and Land Development Date

DATE	NO	REVISION

OWNER, DEVELOPER
 TEMORA LIMITED PARTNERSHIP
 7306 HILLTOP COURT
 LAUREL, MARYLAND 20707
 (301) 953-7676

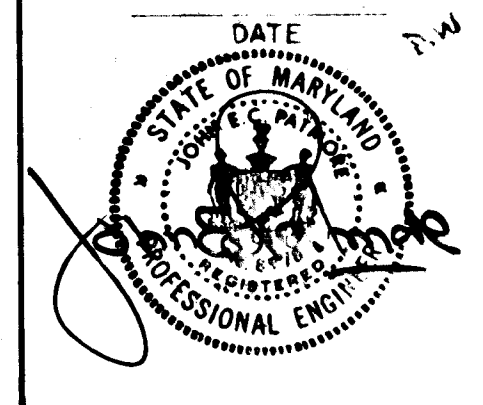
PROJECT
TEMORA MANOR
 A RESUBDIVISION OF LOT # 10

AREA TAX MAP NO 24 PARCEL 500 & 302
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

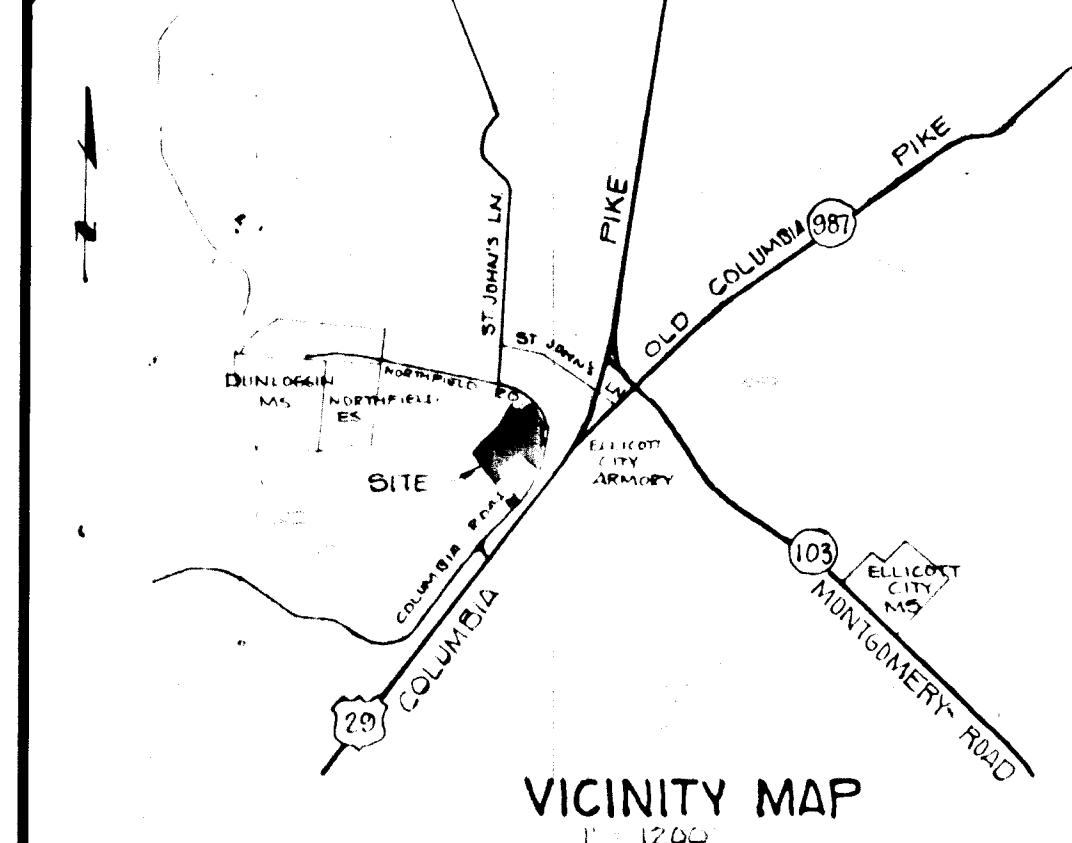
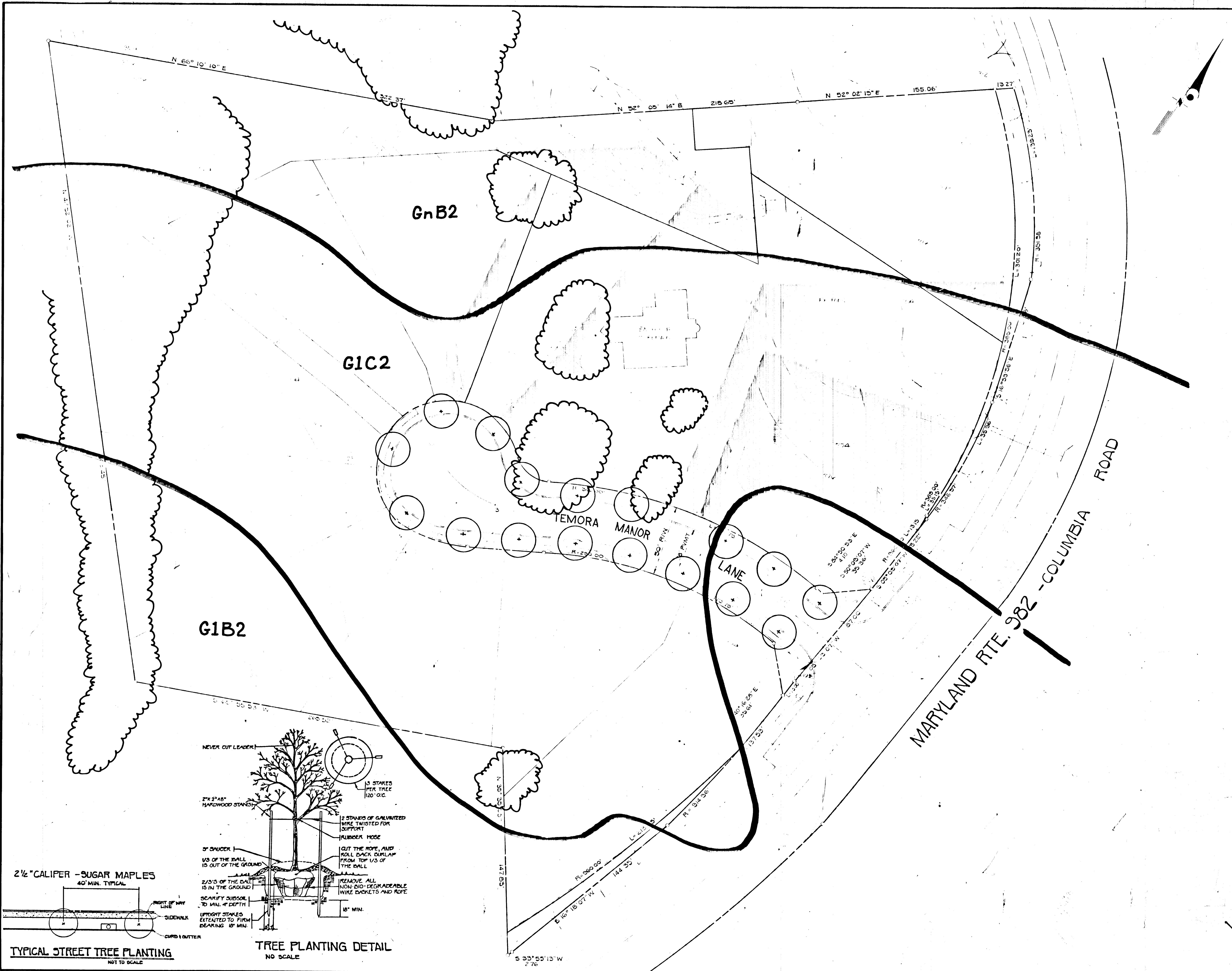
TITLE
 DRAINAGE AREA MAP

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

CHECKED BY: RA/DW
 DESIGNED BY:
 DRAWN BY:
 PROJECT NO: 1687100
 DATE: DEC. 1987
 SCALE: 1" = 100'
 DRAWING NO. 7 OF 8



965



SOILS LEGEND

Soil Type	Hydrologic Type	Description
*GnB2	C	Glenville Silt Loam, 3 to 8 percent slopes, moderately eroded
G1C2	B	Glenelig Loam, 8 to 15 percent slopes, moderately eroded
G1B2	B	Glenelig Loam, 3 to 8 percent slopes, moderately eroded

*Hydic Soil Type

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Janice V. McCaughey 7-8-88
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE *JMO*

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Charles J. ... 8/31/88
 Chief, Land Development Division Date

Charles ... 8/1/88
 Chief, Bureau of Highways Date

... 9-1-88
 Chief, Bureau of Engineering Date

OWNER / DEVELOPER

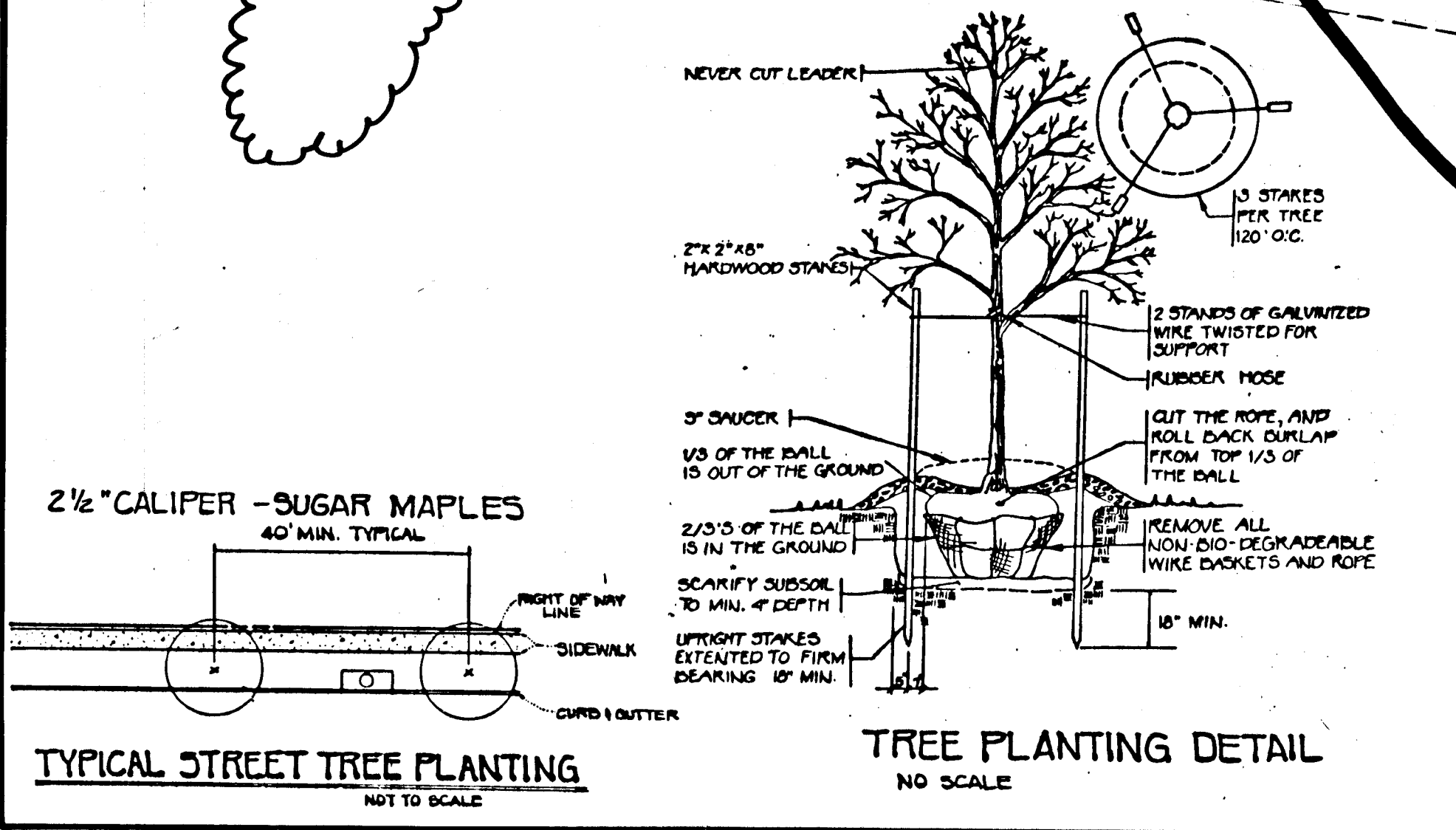
TEMORA LIMITED PARTNERSHIP
 9306 HILLTOP COURT
 LAUREL, MARYLAND 20707
 (301) 953-7676

SOILS & TREES MAP
 HOWARD COUNTY SOIL SURVEY - SHEET 20

TEMORA MANOR
 A RESUBDIVISION OF LOT 10
 TAX MAP NO. 24 PARCEL 300 & 302
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

KIDDE CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 100 WEST STREET / SUITE 100 / LAUREL MD 20717
 (Wash.) (301) 953-1821 / 792-8086 (Balt.)

DATE: *8/31/88* SCALE: 1" = 30'
 KCI # 1687100 PWS. NO. 8 OF 8



465