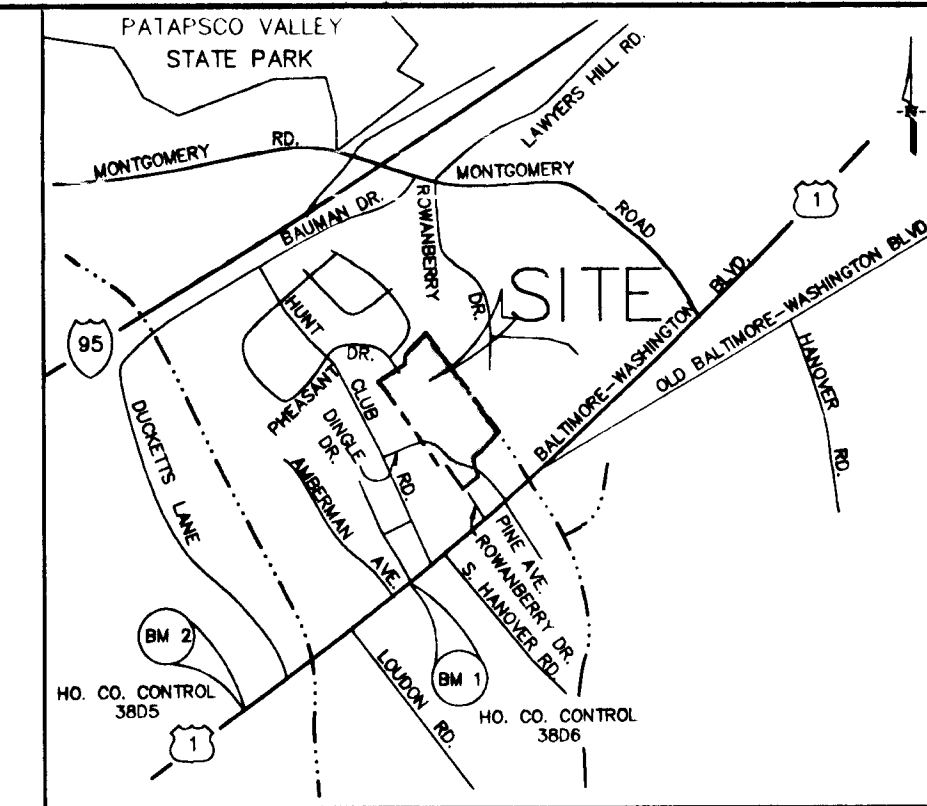


SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	ROWANBERRY DRIVE PLAN AND PROFILE
3	ELDERBERRY COURT PLAN AND PROFILE
4	GRADING AND SEDIMENT CONTROL PLAN
5	STORM DRAIN DRAINAGE AREA MAP
6	STORM DRAIN PROFILES
7	STORMWATER MANAGEMENT PROFILES AND DETAILS
8	SEDIMENT CONTROL NOTES AND DETAILS
9	LANDSCAPE PLAN
10	FOREST CONSERVATION PLAN
11	FOREST CONSERVATION NOTES AND DETAILS
12	OFFSITE REFORESTATION PLAN

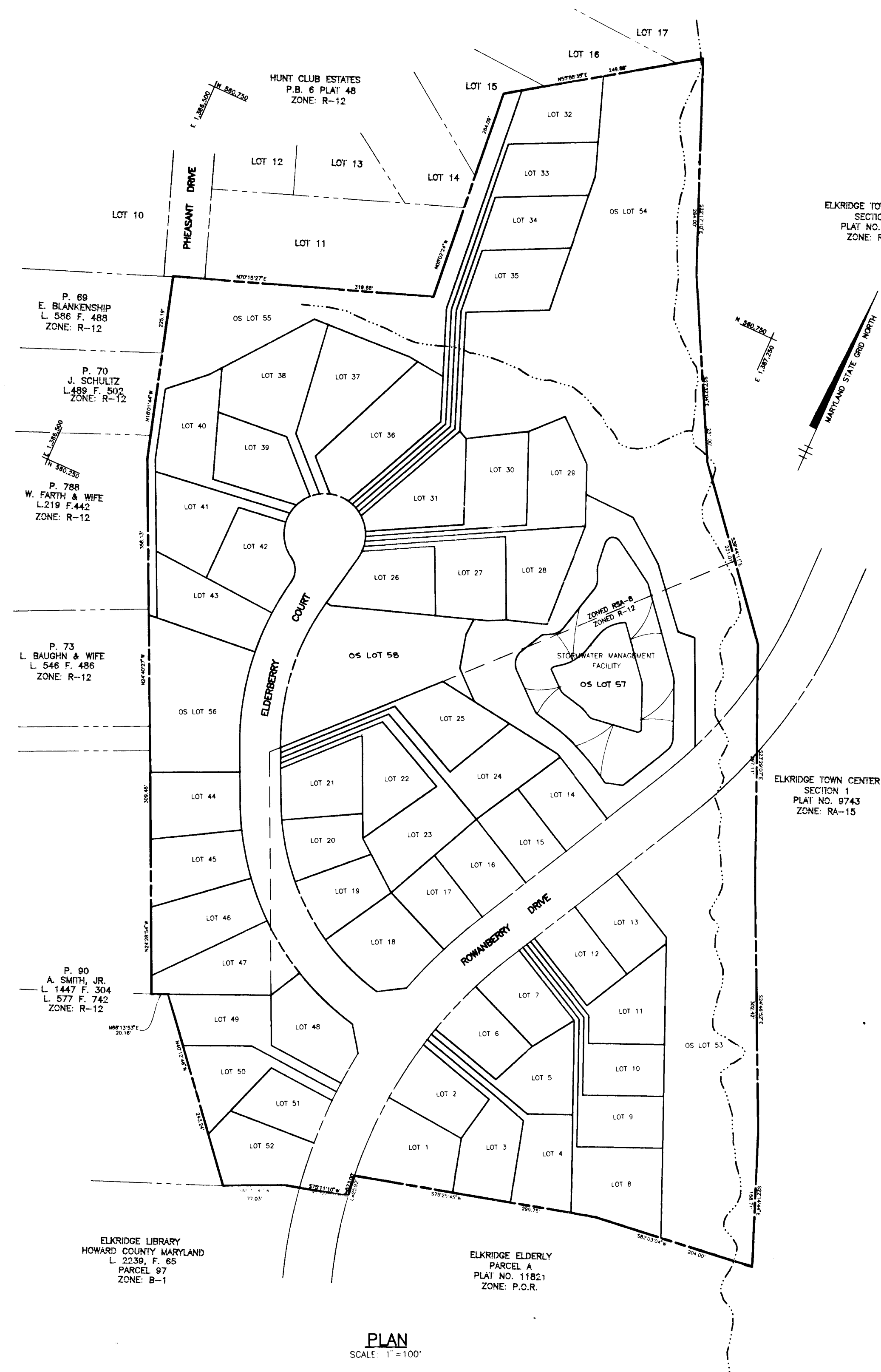
DUBIN PROPERTY ROAD AND STORM DRAIN CONSTRUCTION PLANS

BENCH MARKS
 HORIZONTAL: NAD 83
 BM # 1
 HOWARD COUNTY CONC. MON. 3805
 N. 558,378.59 E. 1,386,524.19
 BM # 2
 HOWARD COUNTY CONC. MON. 3806
 N. 557,155.46 E. 1,384,992.26
 VERTICAL: NAD 27
 HOWARD COUNTY CONC. MON. 2548004
 ELEVATION 131.818



GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST (FIVE) 5 WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- PROJECT BACKGROUND
 LOCATION: TAX MAP 38 - PARCELS 100 & 408 - BLOCKS 7 & 8
 TOTAL TRACT AREA: 220.05 ACRES
 NUMBER OF PROPOSED LOTS: 52 BUILDABLE
 DATE PRELIMINARY PLAN APPROVED: FEBRUARY, 1996
 DDP REFERENCE # S-94-40, P-96-11, WP-96-51, F-92-111
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- TOPOGRAPHY TAKEN FROM FIELD RUN SURVEY PERFORMED BY TSA GROUP, INC., DATED JUNE, 1995. CONTOUR INTERVAL IS 2 FEET.
- HOWARD COUNTY CONTROL: HORIZONTAL DATUMS BASED ON NAD 83. HO. CO. GEODETIC CONTROL STATIONS 3805 AND 3806. VERTICAL DATUMS BASED ON NAD 27. HO. CO. CONTROL STATION 2548004.
- WATER AND SEWER FOR THIS SUBDIVISION IS PUBLIC. DRAINAGE AREA IS PATAPSCO, CONTRACT NO. 14-3538-D.
- STORMWATER MANAGEMENT FOR THIS SUBDIVISION IS PROVIDED BY A RETENTION FACILITY (CLASS "A" STRUCTURE).
- FLOORPLAN SHOWN HEREON IS BASED ON HO. CO. DEEP RUN FLOORPLAN STUDY.
- FOREST CONSERVATION PLAN COMPILED BY M.A. DIRKS & CO., INC., SEPTEMBER, 1995.
- TRAFFIC STUDY COMPILED BY LEE CUNNINGHAM & ASSOCIATES, INC., JULY, 1994.
- NOISE STUDY NOT REQUIRED FOR THIS PROJECT.
- GEOTECHNICAL REPORT COMPILED BY HILLIS-CARNES, INC., OCTOBER, 24, 1995.
- EXISTING UTILITIES WERE LOCATED BY RECORD DRAWINGS AND FIELD RUN SURVEY BY TSA GROUP, INC., DATED JUNE, 1995.
- UNLESS NOTED AS "PRIVATE" ALL EASEMENTS ARE PUBLIC.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- THE STORMWATER FACILITY SHOWN ON THESE PLANS WILL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
- WETLAND DELINEATION PER JURISDICTIONAL DETERMINATION BY THE ARMY CORP OF ENGINEERS ON 6/7/96.
- CONSERVATION AREAS EXCEPT AS SHOWN ON THESE PLANS.
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN WETLANDS, WETLAND BUFFERS, STREAM BUFFERS OR FOREST CONSERVATION AREAS EXCEPT AS SHOWN ON THESE PLANS.
- THIS PROJECT IS SUBJECT TO NONTIDAL WETLANDS/WATERWAYS PERMIT #92-WT-0334 AND WATER QUALITY CERTIFICATION 92-WQ-0356.
- THIS PLAN IS SUBJECT TO WAIVER PETITION WP-96-51 WHICH WAS APPROVED ON JANUARY 16, 1996 WHICH IS A WAIVER TO SECTION 16.1160(C)(1) AND 16.1160(C)(2) TO PERMIT GRADING OR THE REMOVAL OF VEGETATIVE COVER WITHIN 25 FEET OF A WETLAND AND 50 FEET OF AN INTERMITTENT STREAM FOR THE CONSTRUCTION OF A S.W.M. FACILITY AND RESIDENTIAL DEVELOPMENT.
- ALL NEW FOREST PLANTING OBLIGATIONS INCURRED UNDER THE TERMS OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM WILL BE MET BY OFF-SITE PLANTING. SUCH PLANTING 368,082 SF SHALL BE DONE ON THE FOLLOWING PARCEL, TAX MAPS 8 & 14, PARCEL 96. EASEMENTS ESTABLISHING SUCH OFF-SITE FOREST PLANTING AREAS AND ALL NECESSARY RESTRICTIONS SHALL BE RECORDED SIMULTANEOUSLY WITH THE RECORDING OF THE FINAL PLAT.
- NO DISTURBANCE TO THE WETLAND AND STREAM BUFFERS ON THE RESIDENTIAL LOTS IS PERMITTED. SUBDIVISION REGULATION SECTIONS 16.116 (C)(1) AND (2).



CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS AND BUFFERS

- REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OR DEBRIS TO AN UPLAND DISPOSAL AREA, OUTSIDE OF ANY FLOODPLAIN, WATERWAY, WETLAND OR BUFFER.
- IF BACKFILL IS OBTAINED, USE ONLY CLEAN MATERIAL FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DELECERIOUS SUBSTANCE.
- RECTIFY ANY NONTIDAL WETLANDS AND BUFFERS TEMPORARILY IMPACTED BY THE PROPOSED ACTIVITY. ALL STABILIZATION IN THE WETLAND AND BUFFER SHALL BE OF THE FOLLOWING RECOMMENDED SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), OATS (UNOLA SP.), AND/OR RYE (SECALE CEREALE). OTHER NON-PERSISTANT VEGETATION MAY BE ACCEPTABLE BUT MUST BE APPROVED BY THE NON-TIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN THE WETLAND OR BUFFER. ALL TEMPORARY FILLS SHALL BE REMOVED IN THEIR ENTIRETY ON OR BEFORE THE COMPLETION OF CONSTRUCTION.
- TO PROTECT IMPORTANT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM AS FOLLOWS:
 CLASS 1 WATERS: IN-STREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
- NO REMOVAL OF VEGETATION, GRADING, FILLING, DRAINING OR OTHER ALTERATION OF THE NONTIDAL WETLANDS OR BUFFER OUTSIDE THE LIMITS OF DISTURBANCE SHALL OCCUR WITHOUT WRITTEN AUTHORIZATION FROM THE WATER MANAGEMENT ADMINISTRATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>Andrew M. Danek</i> CHIEF, BUREAU OF HIGHWAYS	1-20-97 DATE	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING <i>Richard Blood</i> CHIEF, DIVISION OF LAND DEVELOPMENT	2/18/97 DATE	
<i>Chris Dammer</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	2/12/97 DATE	
NO.	DATE	REVISION

TSA GROUP, INC.
 planning • architecture • engineering • surveying
 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-0105

OWNER: CHARLOTTE DUBIN, MARC L. DUBIN & NANCY D. LEVINE 1802 REISTERSTOWN ROAD PIKESVILLE, MARYLAND 21208	PROJECT: DUBIN PROPERTY LOTS 1 - 58
DEVELOPER: SDC GROUP, INC. POST OFFICE BOX 417 ELICOTT CITY, MARYLAND 21041 (410) 465-4244	LOCATION: TAX MAP 38 BLOCKS 7 & 8 PARCELS 100 & 408 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
Design: DAM	Draft: JCO
TITLE: TITLE SHEET S-94-40 F-92-111 P-96-11 WP-96-51	DATE: JULY 24, 1996 OCTOBER 15, 1996
SCALE: AS SHOWN	PROJECT NO. 0504 DRAWING 1 OF 12

1897

SOIL TYPES AND CHARACTERISTICS

MAP SYMBOL	SOIL NAME	HYDROLOGIC GROUP
LuB	LUKA LOAM, LOCAL ALLUVIUM	C
ScB	SANDY AND CLAYEY LAND	D
ScD	SANDY AND CLAYEY LAND	D
BeC2	BELTSVILLE SILT LOAM	C
BeD2	BELTSVILLE SILT LOAM	C
BeC3	BELTSVILLE SILT LOAM	C
L1	LEONARDTOWN SILT LOAM	D

POND SUMMARY TABLE

DRAINAGE AREA TO POND: 24.2 AC.	2 YR.			10 YR.			100 YR.		
	ALLOWABLE RELEASE RATE	48.53 CFS	110.22 CFS	110.22 CFS	99.02 CFS	152.53 CFS	152.53 CFS	107.71 CFS	107.71 CFS
COMPUTED INFLOW	51.19 CFS	99.02 CFS	152.53 CFS	152.53 CFS	107.71 CFS	107.71 CFS	152.53 CFS	152.53 CFS	107.71 CFS
DISCHARGE FROM FACILITY	26.62 CFS	57.70 CFS	107.71 CFS	107.71 CFS	97.5 CFS	175.4 CFS	175.4 CFS	107.71 CFS	107.71 CFS
COMBINED DISCHARGE AT DESIGN POINT	43.7 CFS	97.5 CFS	175.4 CFS	175.4 CFS	142.38	142.38	142.38	175.4 CFS	175.4 CFS
PROP. WATER SURFACE ELEV.	139.73	141.23	142.38	142.38	142.38	142.38	142.38	142.38	142.38
STORAGE IN FACILITY	0.92 AC.FT.	1.70 AC.FT.	2.40 AC.FT.	2.40 AC.FT.	2.40 AC.FT.	2.40 AC.FT.	2.40 AC.FT.	2.40 AC.FT.	2.40 AC.FT.
HAZARD CLASS 'A'									

OPERATION & MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED SWAMP WET DETENTION POND

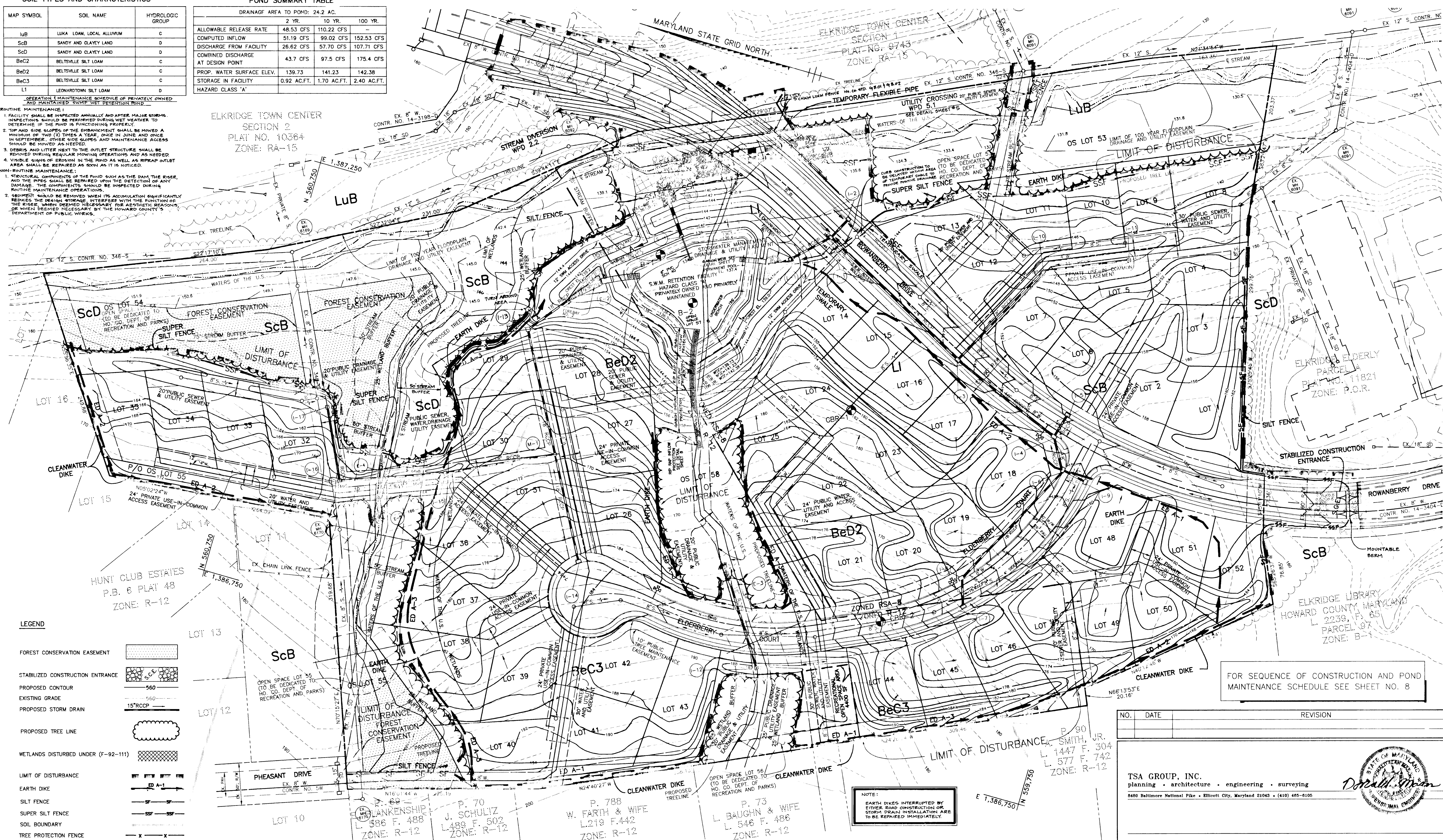
ROUTINE MAINTENANCE:

- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
- TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOVED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOVED AS NEEDED.
- DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MAINTENANCE OPERATIONS AND AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

NON-ROUTINE MAINTENANCE:

- STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISE, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
- SEWERAGE SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE CAPACITY WITH THE FUNCTION OF THE RISES, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

ELKRIDGE TOWN CENTER
SECTION 2
PLAT NO. 10364
ZONE: RA-15



LEGEND

- FOREST CONSERVATION EASEMENT
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED CONTOUR
- EXISTING GRADE
- PROPOSED STORM DRAIN
- PROPOSED TREE LINE
- WETLANDS DISTURBED UNDER (F-92-111)
- LIMIT OF DISTURBANCE
- EARTH DIKE
- SILT FENCE
- SUPER SILT FENCE
- SOIL BOUNDARY
- TREE PROTECTION FENCE

FOR SEQUENCE OF CONSTRUCTION AND POND MAINTENANCE SCHEDULE SEE SHEET NO. 8

NO.	DATE	REVISION

TSA GROUP, INC.
planning • architecture • engineering • surveying
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

Donald M. Mason
Professional Engineer
No. 11111

1847

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.

Cheryl K. Simmons 01-13-97
Natural Resources 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 11/14/97
Howard Soil Conservation District Date

By the Engineer:

"I hereby certify that the facility shown on this plan was constructed as shown on the 'AS-BUILT' plans and meets the approved plans and specifications.

DONALD A. MASON P.E. # 21443 Date
ENGINEER:

Certify means to state or declare a professional opinion based upon on-site inspections and materials tests which are conducted during construction. The on-site inspections and materials tests are those inspections and tests deemed sufficient and appropriate by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the Engineer nor does an Engineer's certification relieve any other party from meeting requirements imposed by contract, employment or other means, including meeting commonly accepted industry practices.

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 the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and 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."

Donald A. Mason 7-26-96 Date
DONALD A. MASON P.E. # 21443 ENGINEER:

James R. Moxley Jr. 7/2/96 Date
JAMES R. MOXLEY JR. DEVELOPER: SDC GROUP, INC.

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/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an 'as-built' plan of the pond within 30 days of completion."

Ronald M. Mason 7-26-96 Date
DONALD A. MASON P.E. # 21443 ENGINEER:

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Donnelly 1-20-97
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Blood 2/18/97
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Cheryl K. Simmons 2/13/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

OWNER:

CHARLOTTE DUBIN, MARC L. DUBIN & NANCY D. LEVINE
1802 REISTERSTOWN ROAD
PIKESVILLE, MARYLAND 21208

DEVELOPER:

SDC GROUP, INC.
POST OFFICE BOX 417
ELLCOTT CITY, MARYLAND 21041
(410) 465-4244

PROJECT: DUBIN PROPERTY
LOTS 1 - 58

LOCATION:
TAX MAP 38 BLOCKS 7 & 8 PARCELS 100 & 408
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE:
GRADING & SEDIMENT CONTROL PLAN

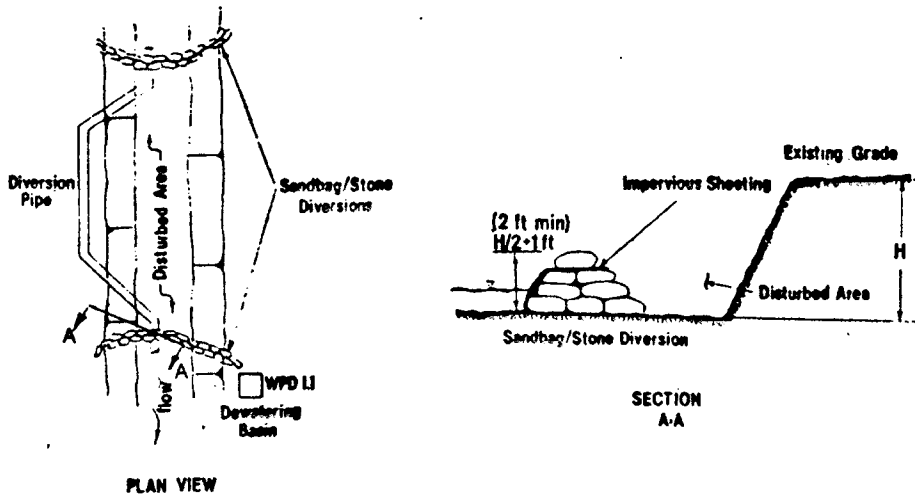
DATE:
JULY 24, 1996
OCTOBER 15, 1996

PROJECT NO. 0504

SCALE: 1" = 50'

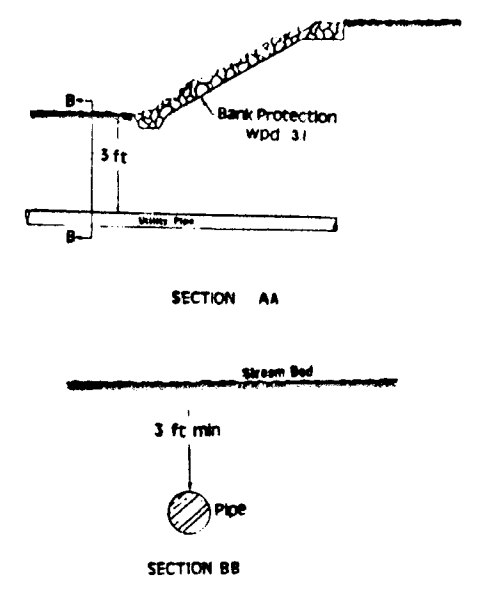
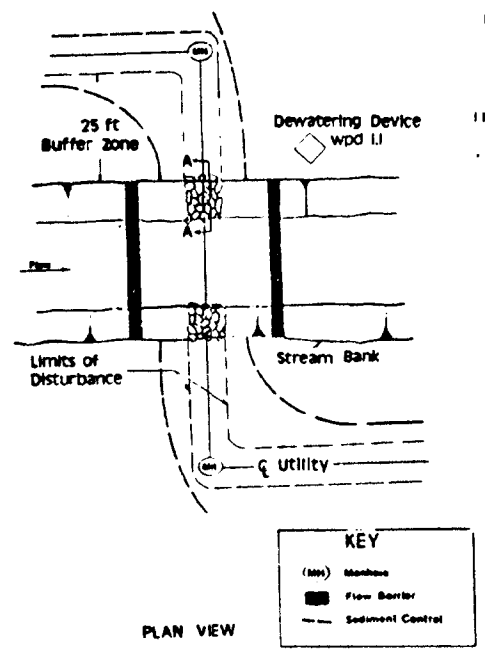
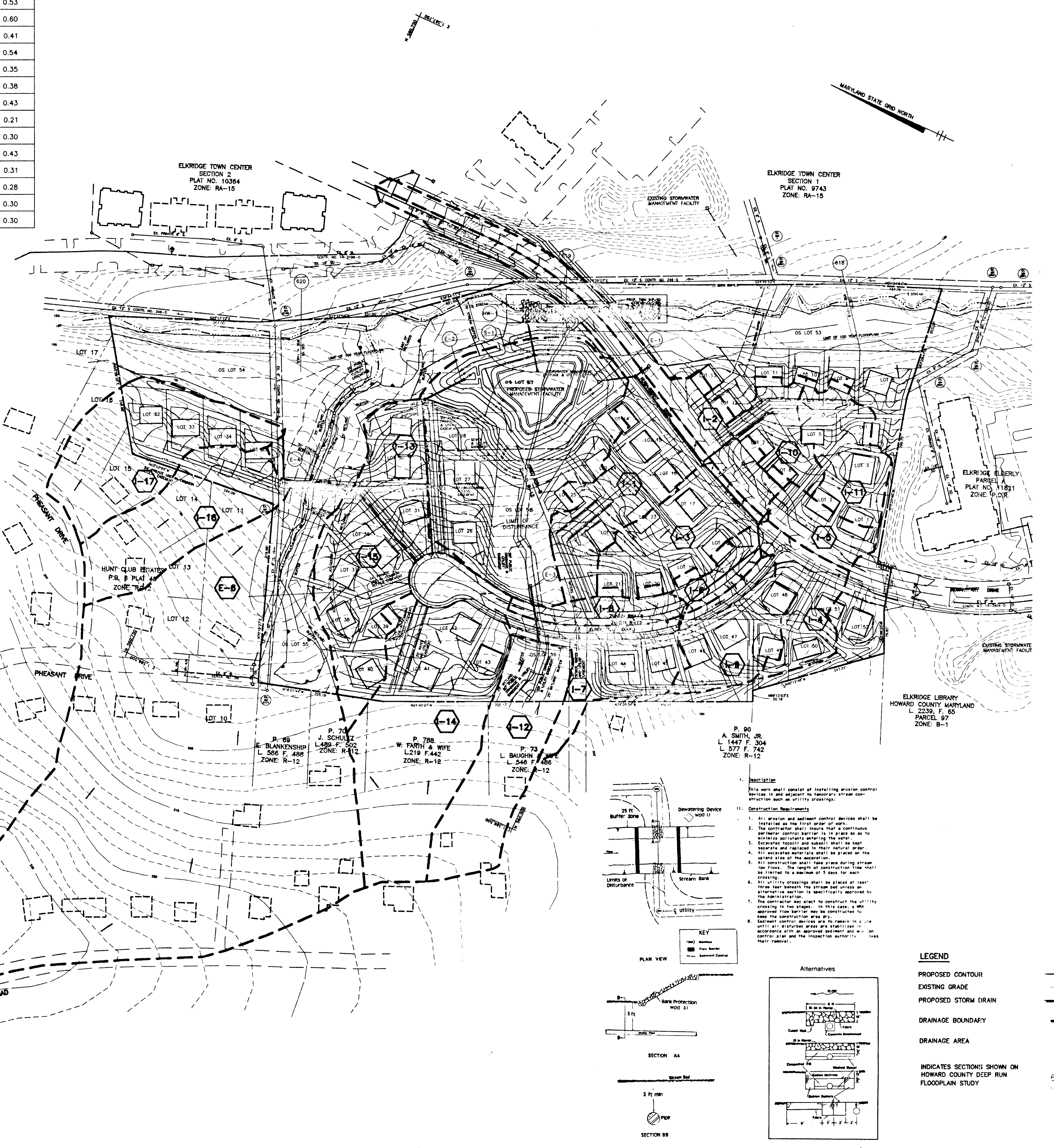
DRAWING 4 OF 12

'C' FACTORS					
INLET NO.	DRAINAGE AREA(AC.)	% IMPERVIOUS	SOIL CLASS	ZONING	C FACTOR
I-1	1.22	43	C,D	RSA-8	0.49
I-2	0.87	57	C,D	RSA-8	0.59
I-3	1.04	22	C,D	R-12	0.35
I-4	0.74	30	D	RSA-8	0.42
I-5	0.38	47	D	RSA-8	0.53
I-6	0.24	58	C,D	RSA-8	0.60
I-7	0.78	33	C	RSA-8	0.41
I-8	0.31	52	C	R-12	0.54
I-9	0.92	21	C,D	R-12	0.35
I-10	0.42	21	D	RSA-8	0.38
I-11	0.68	29	D	RSA-8	0.43
I-12	1.26	3	C,D	R-12	0.21
I-13	0.62	16	C	R-12	0.30
I-14	1.81	5	C,D	R-12	0.43
I-15	0.70	14	C,D	R-12	0.31
I-16	0.69	4	D	R-12	0.28
I-17	1.08	8	D	R-12	0.30
E-5	9.32	13	C,D	R-12	0.30

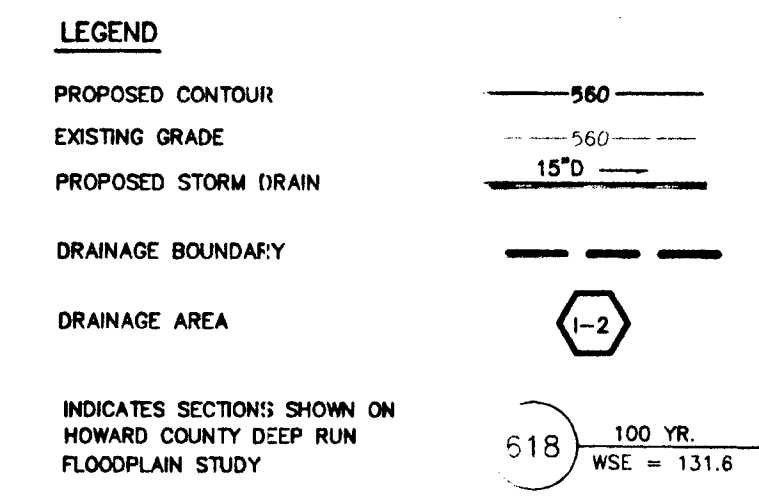


1. Description: This work shall consist of installing a flow diversion structure when construction activities take place within the stream channel such as culvert construction or culvert replacement.
2. Material Specifications:
 - a. Diversion structure shall consist of materials which are resistant to structural rotation, bearing and distortion and are capable enough to prevent leakage of fill material (i.e., sand, fine gravel, etc.).
 - b. Stone: Stone shall be washed and have a minimum diameter of 6 inches.
 - c. Sheeting: Sheeting shall consist of polyethylene or other material which is impervious and resistant to puncture and tearing.
3. Construction Requirements:
 - a. All erosion and sediment control devices shall be installed on the first order of work.
 - b. The height of the sandbag/stone diversion structure shall be one half the distance from the stream bed to the bank plus one foot, as indicated in section A-A.
 - c. The structure shall be placed on a smooth, firm surface.
 - d. All structural materials shall be disposed of in a 500-gallon disposal area outside the 100-year floodplain unless otherwise approved by the permittee.
 - e. All dumping of the construction area shall be placed to a depth of 18 inches.
 - f. Sheeting shall be overlapped a minimum of 18 inches.
 - g. The diversion pipe shall have a minimum diameter of sufficient size to convey the normal stream flow.
 - h. If necessary, all fence or structure shall be installed around the perimeter of the work area.
 - i. Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal.

DIVERSION PIPE
NOT TO SCALE



1. Description: This work shall consist of installing erosion control devices in and adjacent to temporary stream construction and utility crossings.
2. Construction Requirements:
 - a. All erosion and sediment control devices shall be installed on the first order of work.
 - b. The contractor shall insure that a continuous perimeter control barrier is in place to minimize pollutants entering the water.
 - c. Excavated topsoil and subsoil shall be kept separate and replaced in their natural order.
 - d. All excavated materials shall be placed on the up-drain side of the excavation.
 - e. All construction shall take place during stream flow. The height of construction shall be limited to a maximum of 3 feet for each crossing.
 - f. Utility crossings shall be placed at least 10 feet from the stream bed unless an alternative section is specifically approved by the permittee.
 - g. The contractor shall construct the utility crossing in two stages. In this case, a 100% approved flow barrier may be constructed to keep the construction area dry.
 - h. Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal.



PROCEDURE SCHEDULE									
NO.	TYPE	LOCATION	IN	INVERT	OUT	TOP ELEVATION	HO. CO. STD.	DETAIL NO.	
I-1	A-5	13.43' LT. CL. STA. 21+73.80 ROWANBERRY DRIVE	15'	139.43	30'	138.1	14.28	SD-4.40 OR SD-4.01	
I-2	A-5	13.43' RT. CL. STA. 21+73.80 ROWANBERRY DRIVE	-	15'	139.7	14.28	SD-4.40 OR SD-4.01		
I-3	A-10	13.43' LT. CL. STA. 19+65.44 ROWANBERRY DRIVE	18'	140.28	24'	140.02	148.26	SD-4.02	
I-4	A-10	13.43' LT. CL. STA. 18+22.73 ROWANBERRY DRIVE	15'	149.70	18'	149.45	154.72	SD-4.41 OR SD-4.02	
I-5	A-5	13.43' RT. CL. STA. 18+17.65 ROWANBERRY DRIVE	-	15'	150.00	154.92	SD-4.40 OR SD-4.01		
I-6	A-5	13.43' RT. CL. STA. 0+43.14 ELDERBERRY COURT	15'	152.70	18'	152.45	156.97	SD-4.40 OR SD-4.01	
I-7	A-10	13.43' LT. CL. STA. 2+42.88 ELDERBERRY COURT	-	15'	165.56	170.82	SD-4.41 OR SD-4.02		
I-8	A-10	13.43' LT. CL. STA. 2+28.00 ELDERBERRY COURT	15'	163.98	18'	163.93	169.63	SD-4.41 OR SD-4.02	
I-9	A-10	13.43' LT. CL. STA. 0+42.77 ELDERBERRY COURT	-	15'	153.00	156.95	SD-4.41 OR SD-4.02		
I-10	'D'	N. 550893.85 E. 1387361.10	15'	141.78	18'	141.53	145.83	SD-4.39 OR SD-4.11	
I-11	'D'	N. 559800.50 E. 1387402.44	-	15'	142.80	145.83	SD-4.39 OR SD-4.11		
I-12	'D'	40.87' LT. CL. STA. 4+84.98 ELDERBERRY COURT	-	15'	179.20	188.00	SD-4.39 OR SD-4.11		
I-13	'D'	N. 560461.54 E. 1387128.79	18'	143.17	18'	143.04	148.60	SD-4.39 OR SD-4.11	
I-14	A-5	LP. STA. 1+87.07 ELDERBERRY COURT	-	15'	172.25	182.72	SD-4.40 OR SD-4.01		
I-15	'D'	N. 560507.57 E. 1386934.32	18'	154.69	18'	154.49	166.00	SD-4.39 OR SD-4.11	
I-16	'D'	N. 560623.70 E. 1386891.73	15'	155.58	18'	155.33	166.50	SD-4.39 OR SD-4.11	
I-17	'D'	N. 560663.23 E. 1386975.17	-	15'	156.08	160.00	SD-4.39 OR SD-4.11		
M-1	MANHOLE	N. 560390.18 E. 1386995.84	15'	156.65	18'	153.55	169.50	G-5.01	
E-1	30" END SECTION	N. 560186.56 E. 1387292.45	-	30'	138.00	-	SD-5.51		
E-2	18" END SECTION	N. 560422.35 E. 1387178.11	-	18'	138.00	-	SD-5.51		
E-3	15" END SECTION	58.31' RT. CL. STA. 5+29.35 ELDERBERRY COURT	-	15'	178.40	-	SD-5.51		
E-4	24" END SECTION	N. 560582.33 E. 1386919.64	-	24'	154.54	-	SD-5.51		
E-5	24" END SECTION	N. 560575.43 E. 1386878.71	24'	160.79	-	-	SD-5.51		
HW-1	60" TYPE A/REARWALL	N. 560316.87 E. 1387351.52	-	42'	133.19	-	SD-5.11		
S-1	-	N. 560317.10 E. 1387284.59	-	-	-	-	-	CONTROL STRUCTURE SEE DETAIL SHEET NO. 8	

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Donohue
 CHIEF, BUREAU OF HIGHWAYS
 1-20-97
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Richard Blom
 CHIEF, DIVISION OF LAND DEVELOPMENT
 2/10/97
 DATE

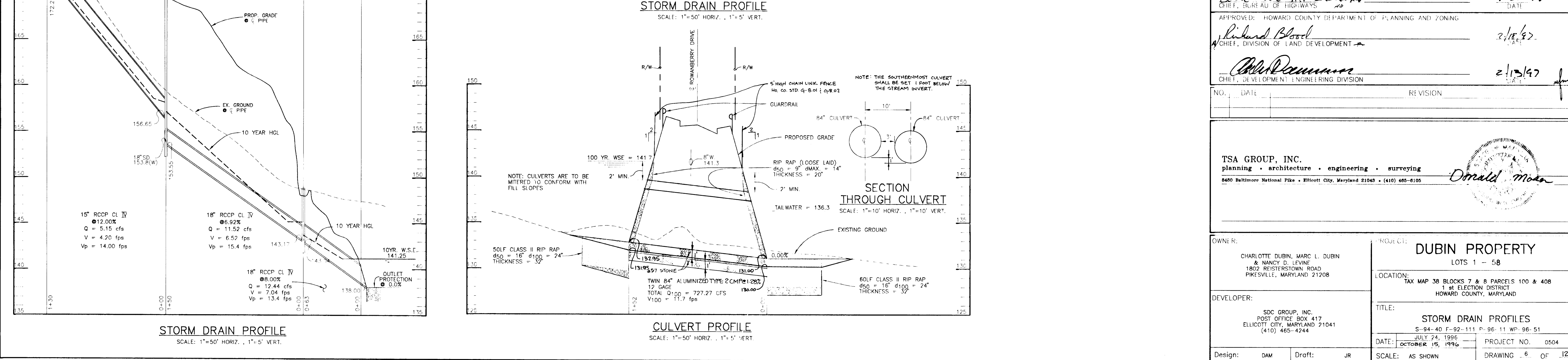
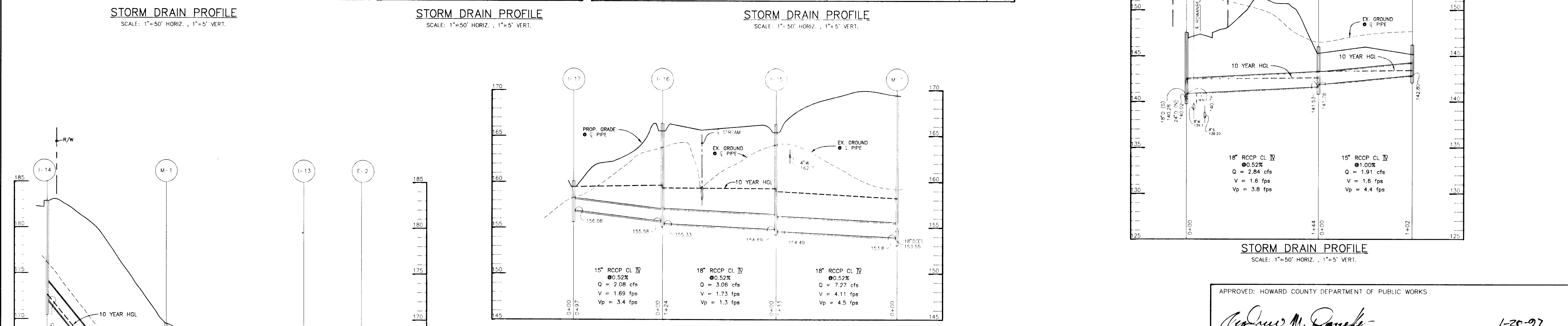
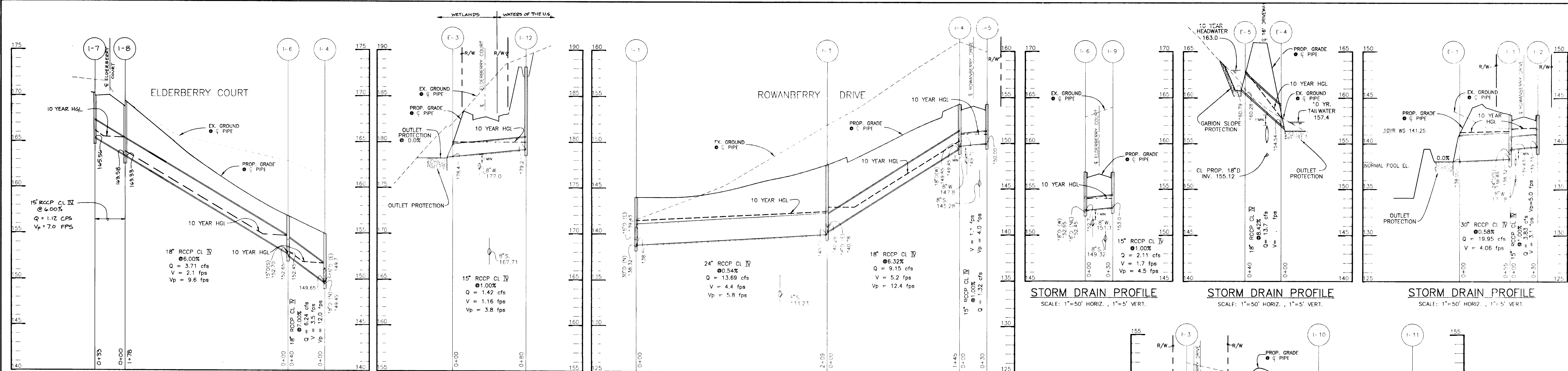
David Baumann
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 2/13/97
 DATE

NO.	DATE	REVISION

TSA GROUP, INC.
 planning • architecture • engineering • survey
 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

OWNER: CHARLOTTE RUBIN, MARC L. RUBIN & NANCY D. LEVINE 1802 WESTERTOWN ROAD PIKEVILLE, MARYLAND 21208	PROJECT: DUBIN PROPERTY LOTS 1 - 56 LOCATION: TAX MAP 38 BLOCKS 7 & 8 PARCELS 100 & 408 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DEVELOPER: SDC GROUP, INC. POST OFFICE BOX 417 ELICOTT CITY, MARYLAND 21041 (410) 465-4244	TITLE: STORM DRAIN DRAINAGE AREA MAP 5-94-40, P-96-111, F-92-111, WP-96-51 DATE: JULY 24, 1996 PROJECT NO. 0504
Design: DAM Draft: JCO	SCALE: 1"=100' DRAWING 5 OF 12

1847
 1847
 1847



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Danoski
 CHIEF, BUREAU OF HIGHWAYS 1-20-97 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Blood
 CHIEF, DIVISION OF LAND DEVELOPMENT 2/18/97 DATE

John P. ...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 2/13/97 DATE

NO. DATE REVISION

TSA GROUP, INC.
 planning • architecture • engineering • surveying
 8400 Baltimore National Pike • Ellicott City, Maryland 21045 • (410) 465-6105

OWNERS:
 CHARLOTTE DUBIN, MARC L. DUBIN & NANCY D. LEVINE
 1802 REISTERSTOWN ROAD
 PIKESVILLE, MARYLAND 21208

PROJECT:
 DUBIN PROPERTY
 LOTS 1 - 58

LOCATION:
 TAX MAP 38 BLOCKS 7 & 8 PARCELS 100 & 408
 1st ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

DEVELOPER:
 SDG GROUP, INC.
 POST OFFICE BOX 417
 ELICOTT CITY, MARYLAND 21041
 (410) 465-4244

TITLE:
 STORM DRAIN PROFILES
 S-94-40 F-92-111 P-96-11 WP-96-51

DATE: JULY 24, 1996 PROJECT NO. 0504
 OCTOBER 15, 1996

Design: DAM Draft: JR SCALE: AS SHOWN DRAWING 6 OF 12

1847

POND CONSTRUCTION SPECIFICATIONS

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 reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

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.

Earth Fill
Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The backfill shall be compacted by the equipment used for excavation, with the borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into 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 sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as specified necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material 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 four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill
Backfill adjacent to pipes or structures 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 manually directed compaction equipment. The material needs to fill completely all spaces 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 concrete structure or pipe. The backfill shall be a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits
All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for 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 or an approved equal may be used: Nexon, Plast-i-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminum Coated Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

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. 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 between 4 and 9.

2. Coupling bands, anti-seep collars, end 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.

3. 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. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be rolled on adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 48" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 48" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and nuts. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24". Helically corrugated pipe shall have either continuously welded seams or have lock seams.

4. 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.

5. Backfilling shall conform to "Structure Backfill."

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

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:
1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361. An approved equivalent is AWWA Specification C-302.

2. Bedding - All reinforced concrete pipe conduits 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 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

3. 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 for 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. The first joint must be located within 2 feet from the riser.

4. Backfilling shall conform to "Structure Backfill."

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

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:
1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.

2. Joints and connections to anti-seep collars shall be completely 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. Backfilling shall conform to "Structure Backfill."

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

Concrete
Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No. 3.

Rock Riprap
All rock shall be dense, sound, and free from cracks, seams, and other defects conducive to accelerated weathering. The rock fragments shall be angular to subrounded in shape. The least dimension of an individual rock fragment shall be not less than one third the greatest dimension of the fragment.

The rock shall have the following properties:
1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.
2. Absorption not more than three percent.
3. Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specific gravity and absorption shall be determined according to ASTM C-88. The test for soundness shall be performed according to ASTM C-88.

The riprap shall be placed to the required thickness in one operation. The riprap shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

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 areas to be occupied by the permanent works. The contractor shall also 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 whatever 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. Stream diversions shall be maintained 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 filled shall be maintained below the bottom of the excavation at such locations which may require draining the water to pumps from which the water shall be pumped.

Stabilization
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

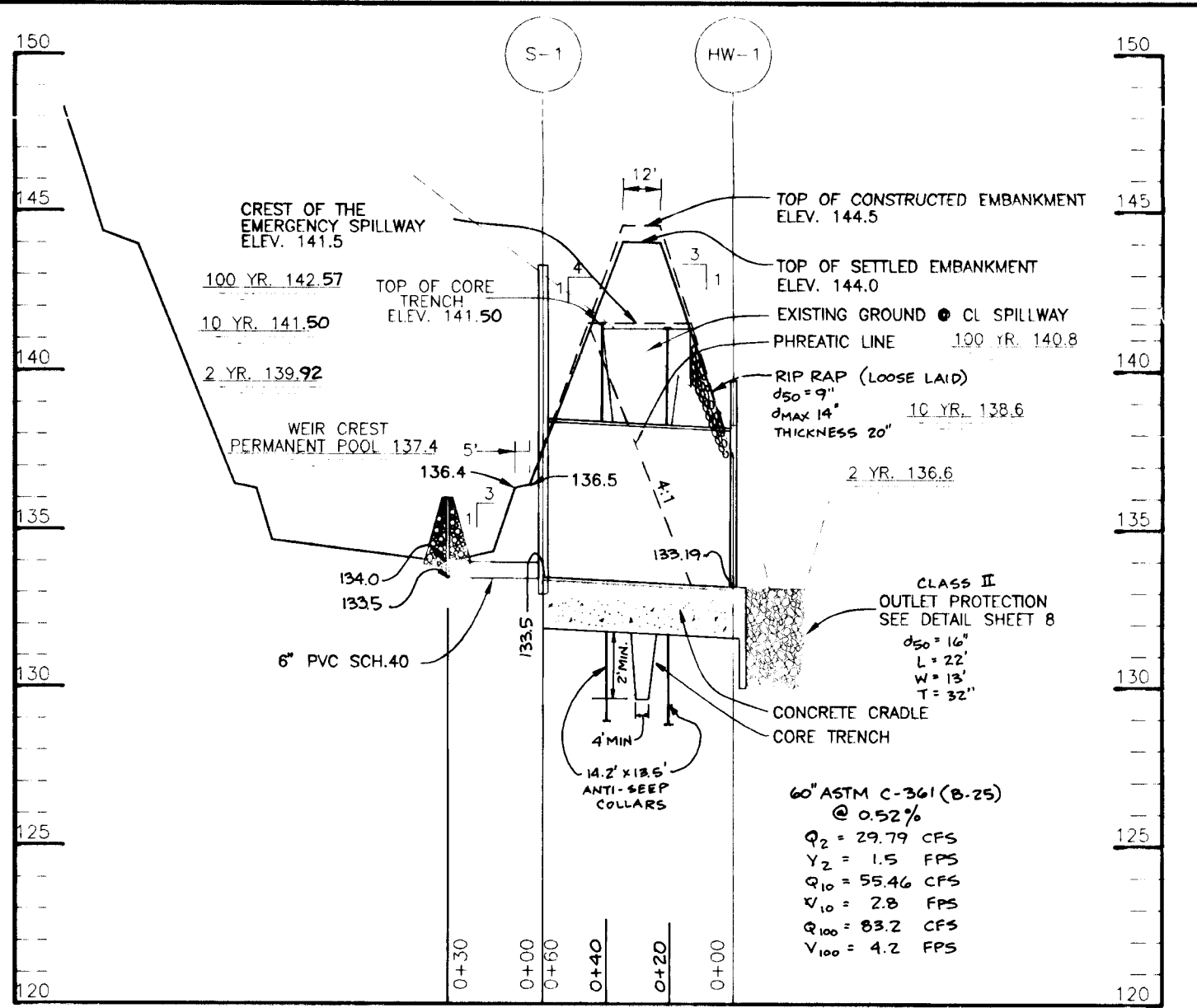
Erosion and Sediment Control
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures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

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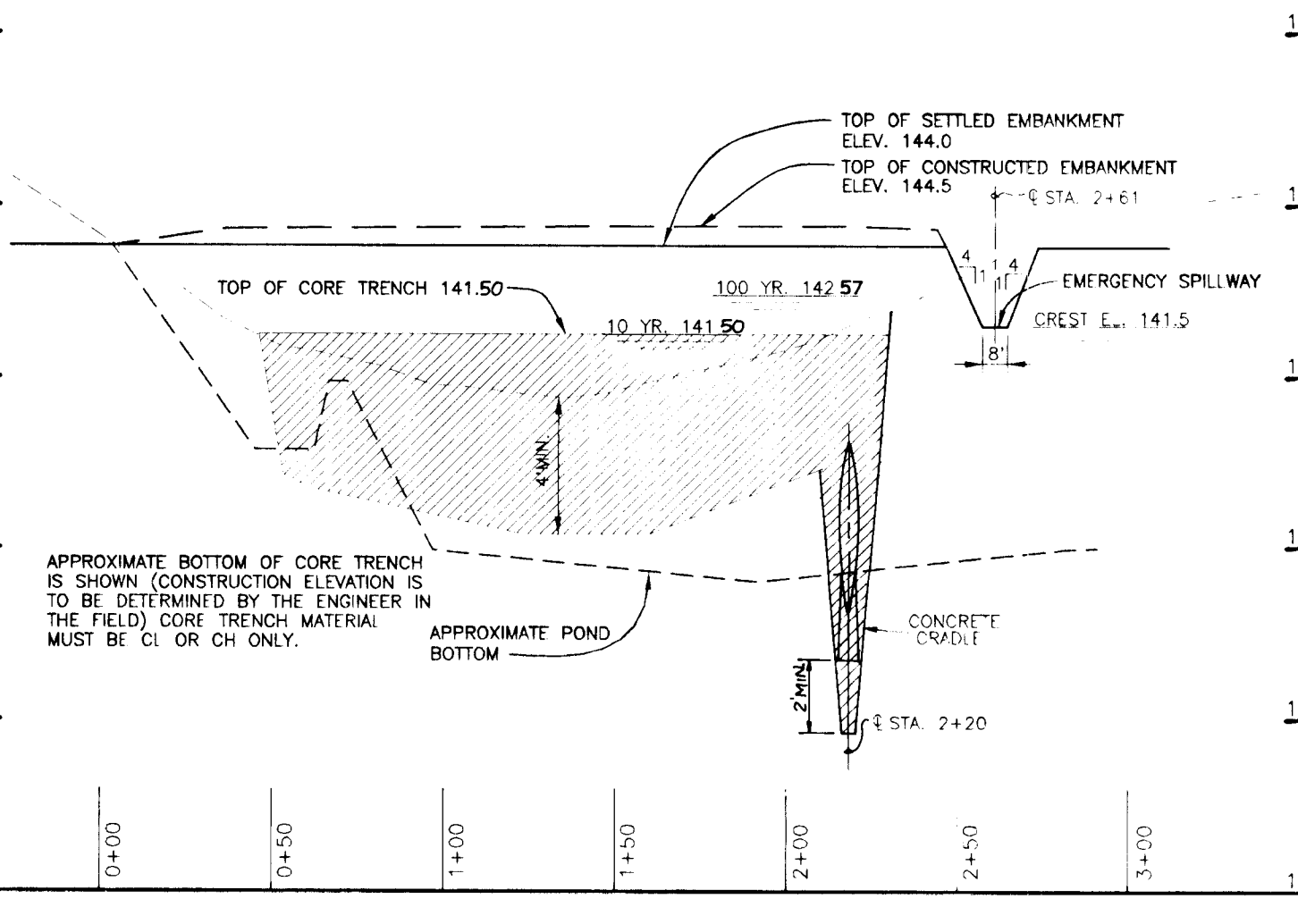
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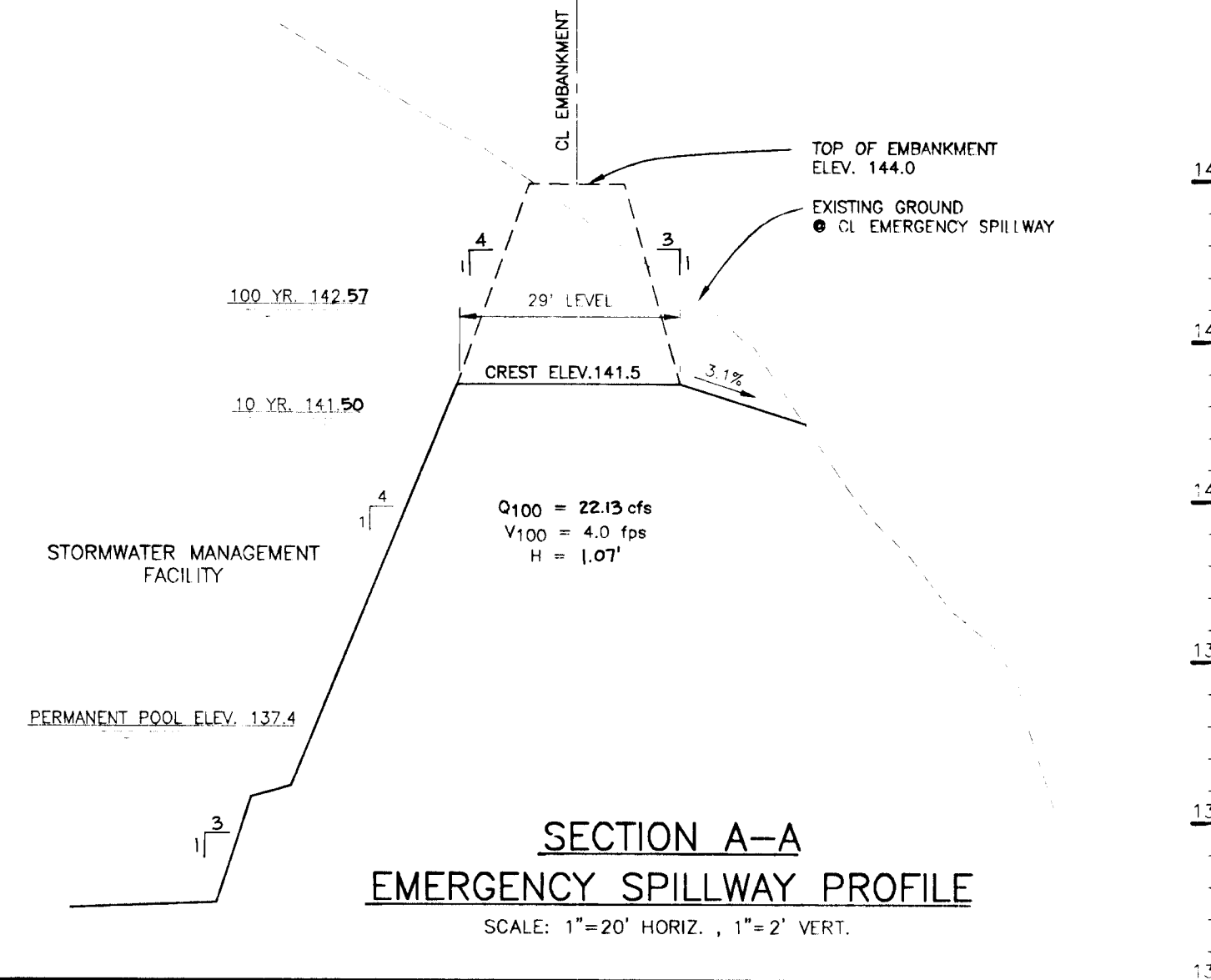
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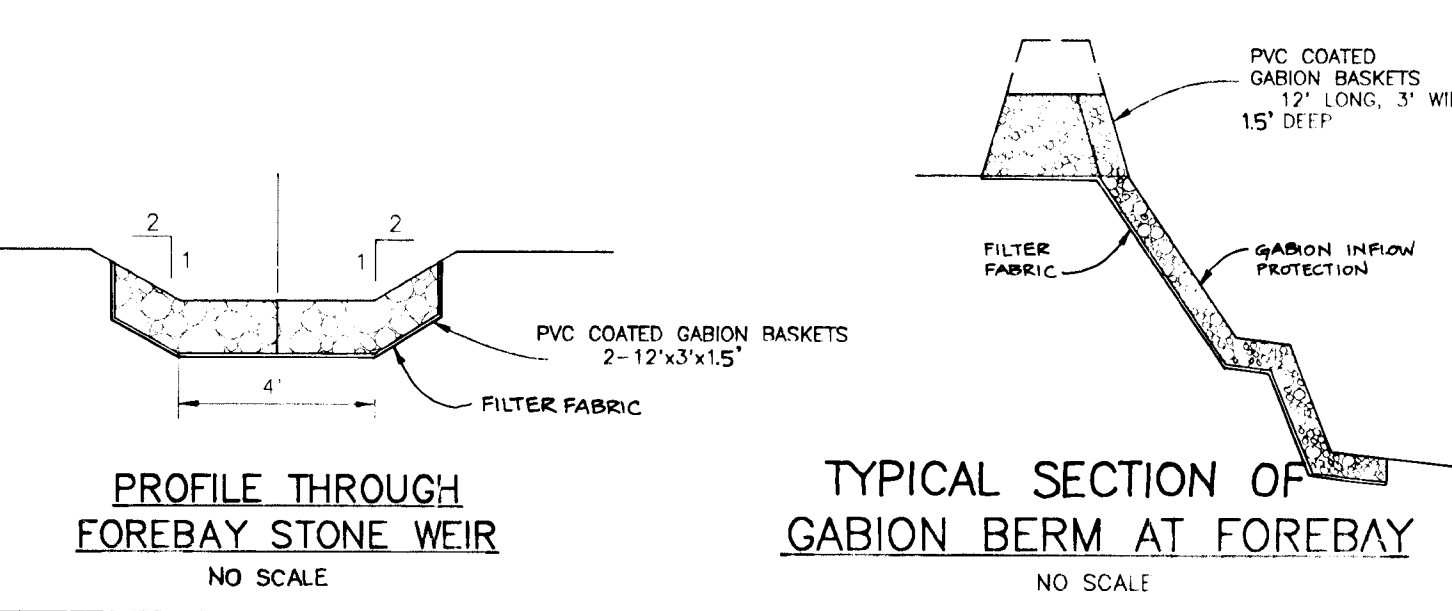
SECTION THRU PRINCIPAL SPILLWAY
SCALE: 1"=50' HORIZ., 1"=5' VERT.



PROFILE ALONG Q OF EMBANKMENT
SCALE: 1"=50' HORIZ., 1"=5' VERT.

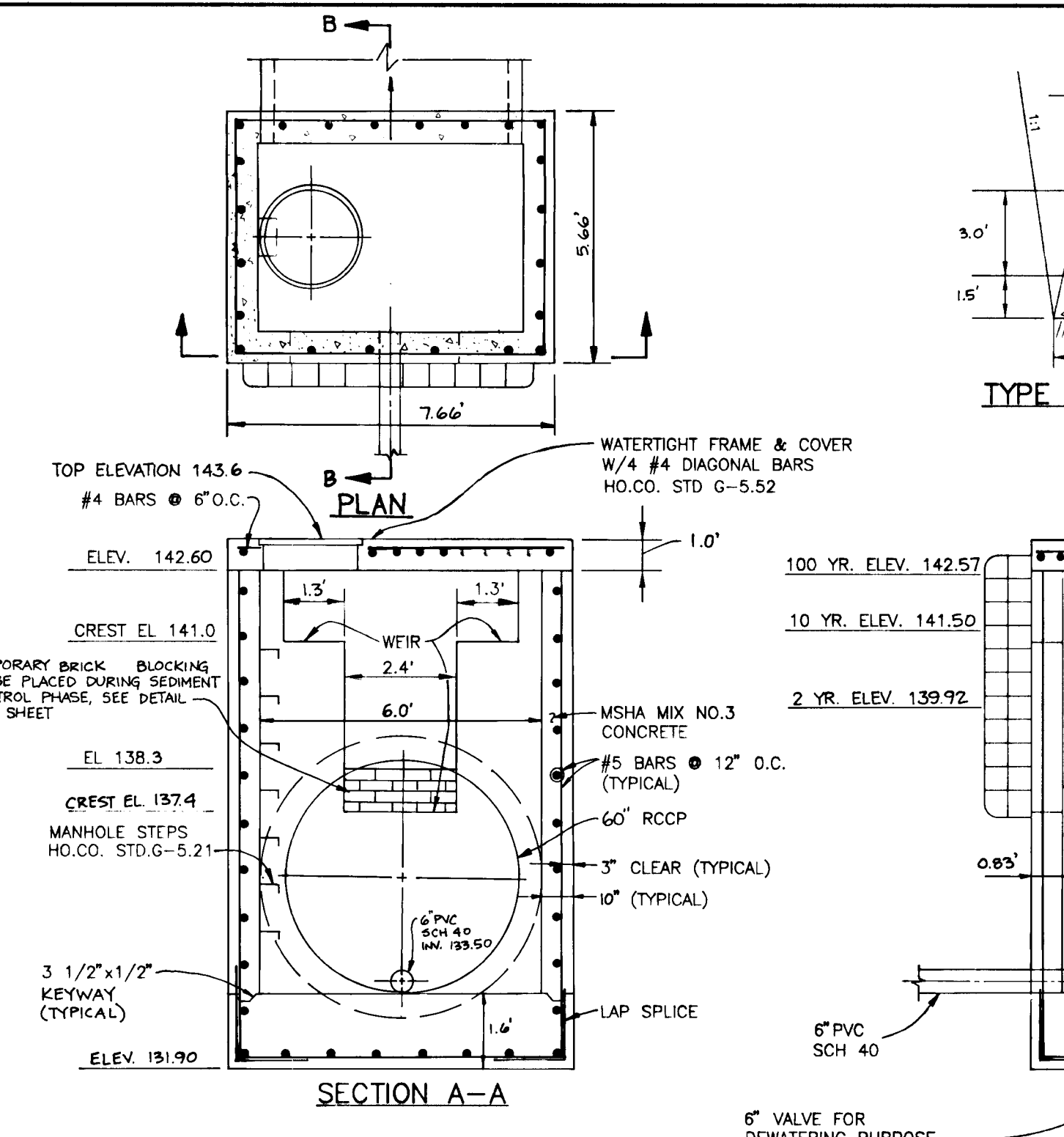


SECTION A-A EMERGENCY SPILLWAY PROFILE
SCALE: 1"=20' HORIZ., 1"=2' VERT.

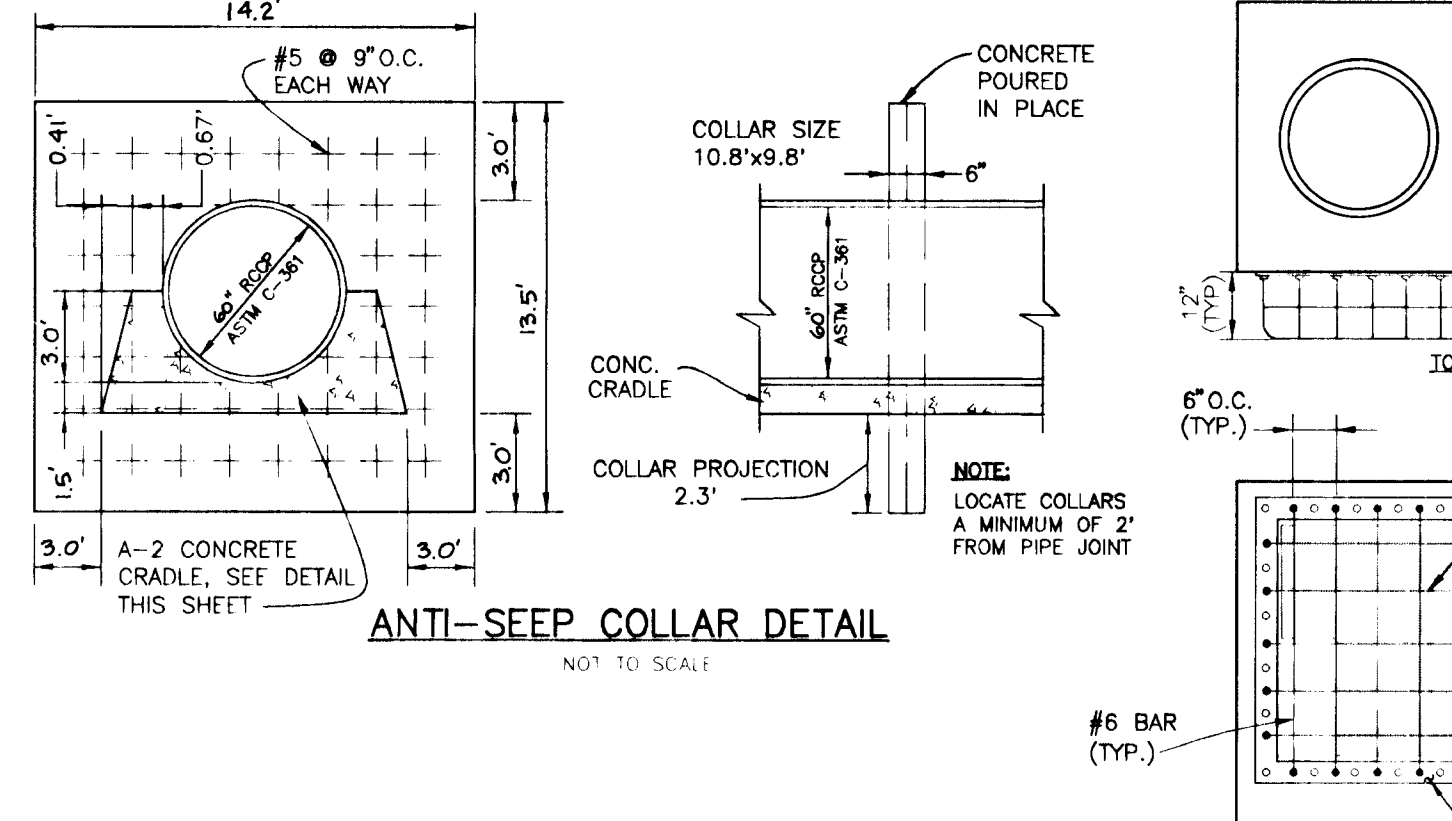


PROFILE THROUGH FOREBAY STONE WEIR
NO SCALE

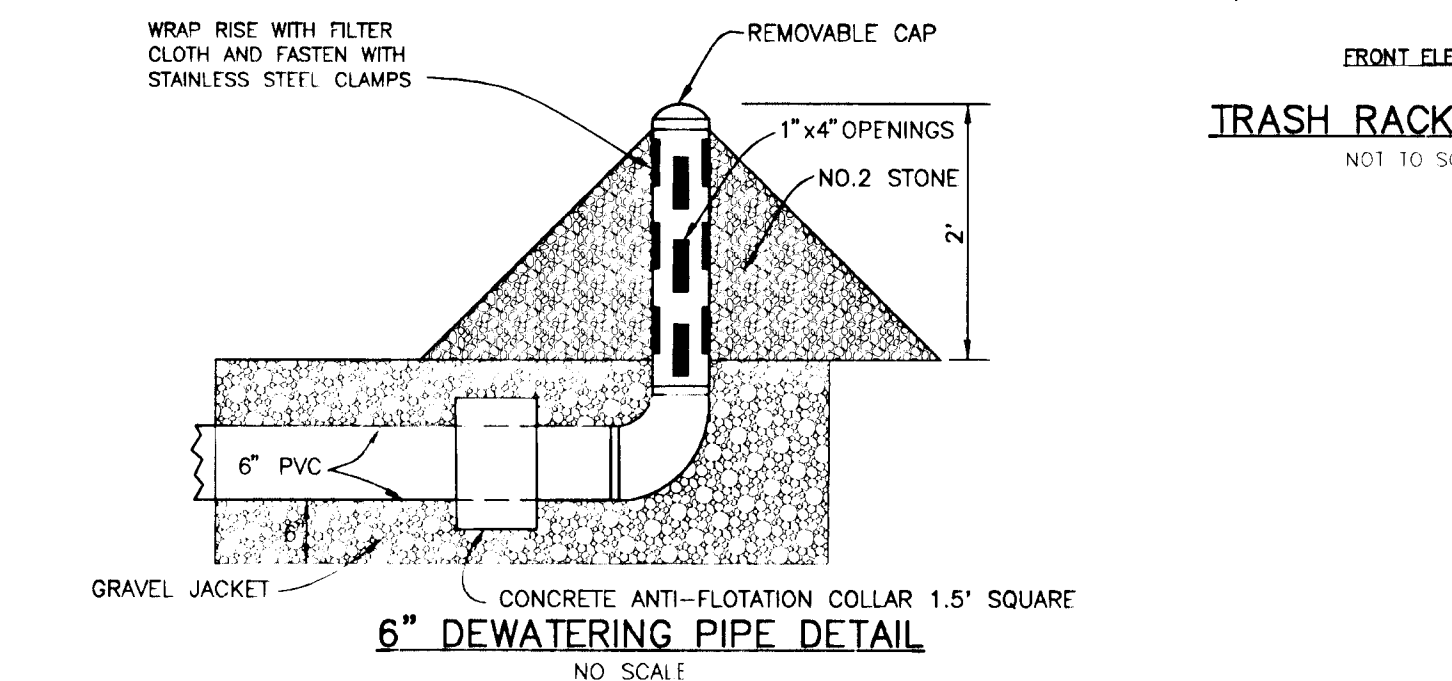
TYPICAL SECTION OF GABION BERM AT FOREBAY
NO SCALE



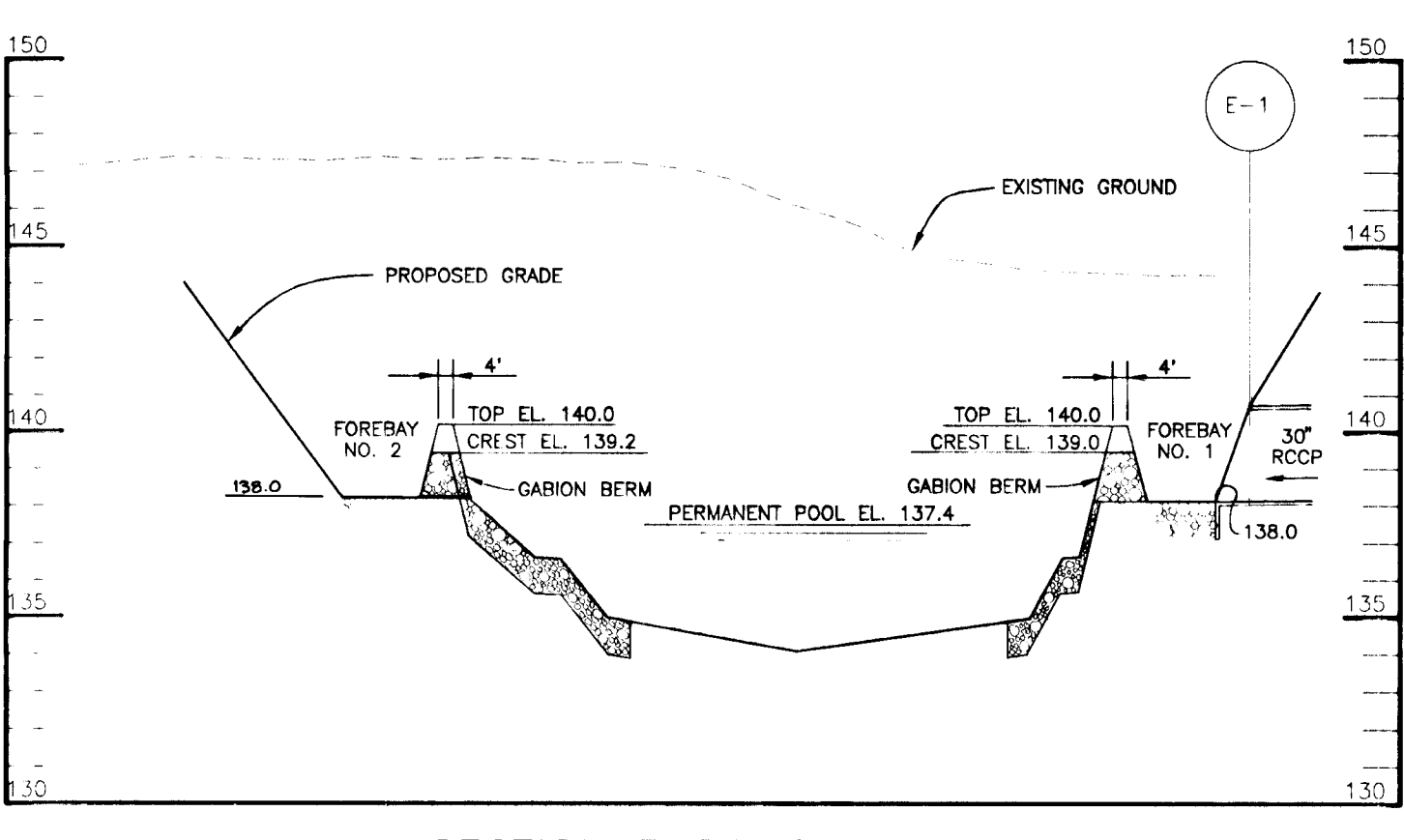
CONTROL STRUCTURE DETAIL
1" = 3"



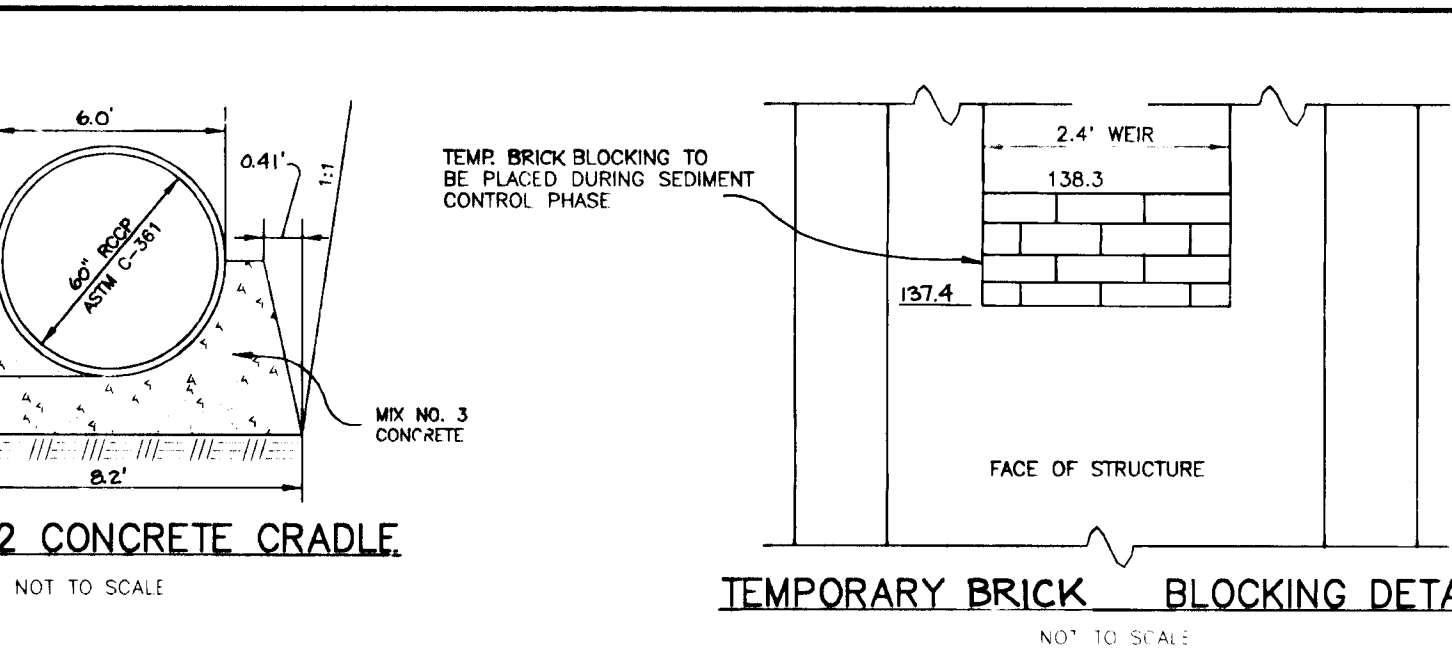
ANTI-SEEP COLLAR DETAIL
NOT TO SCALE



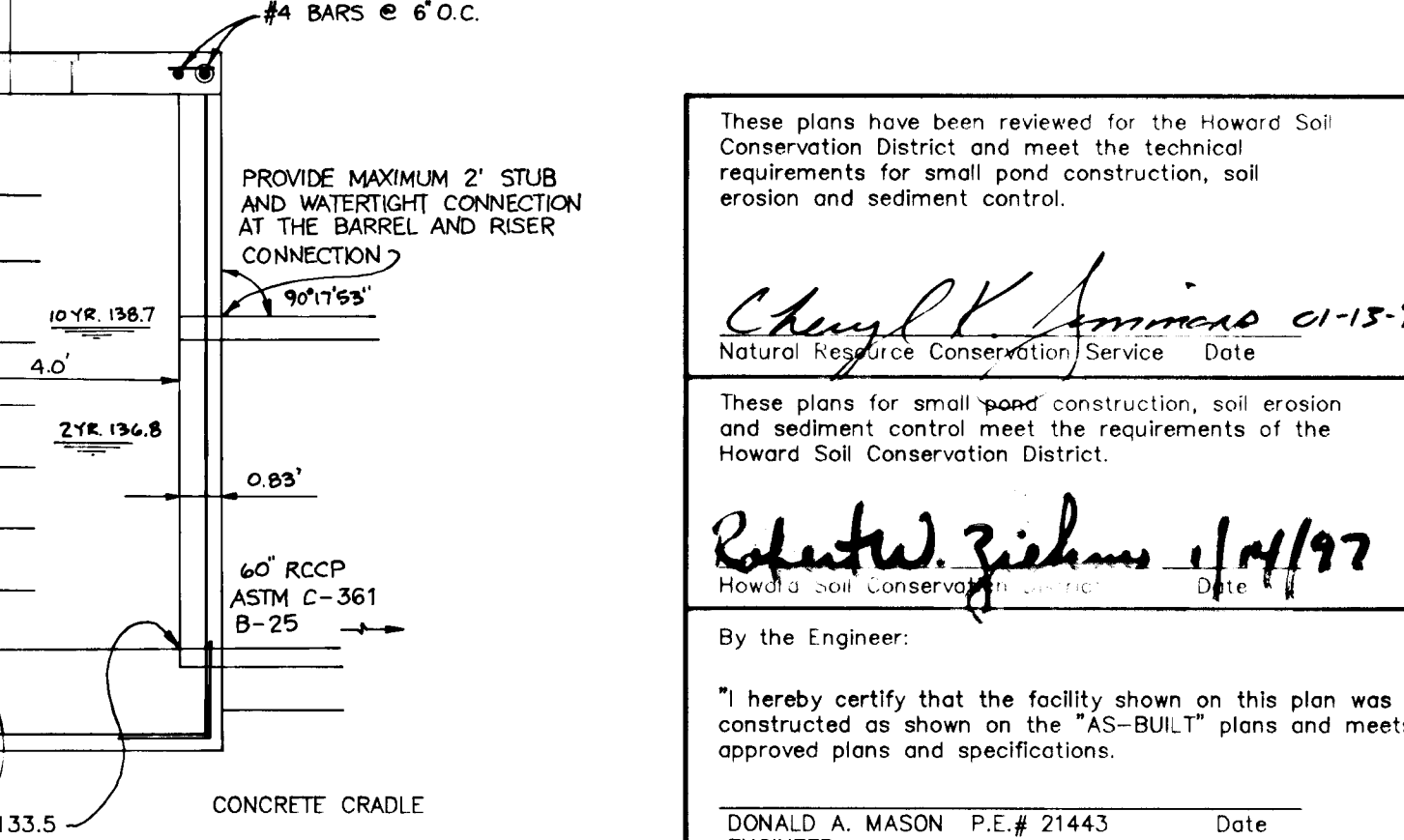
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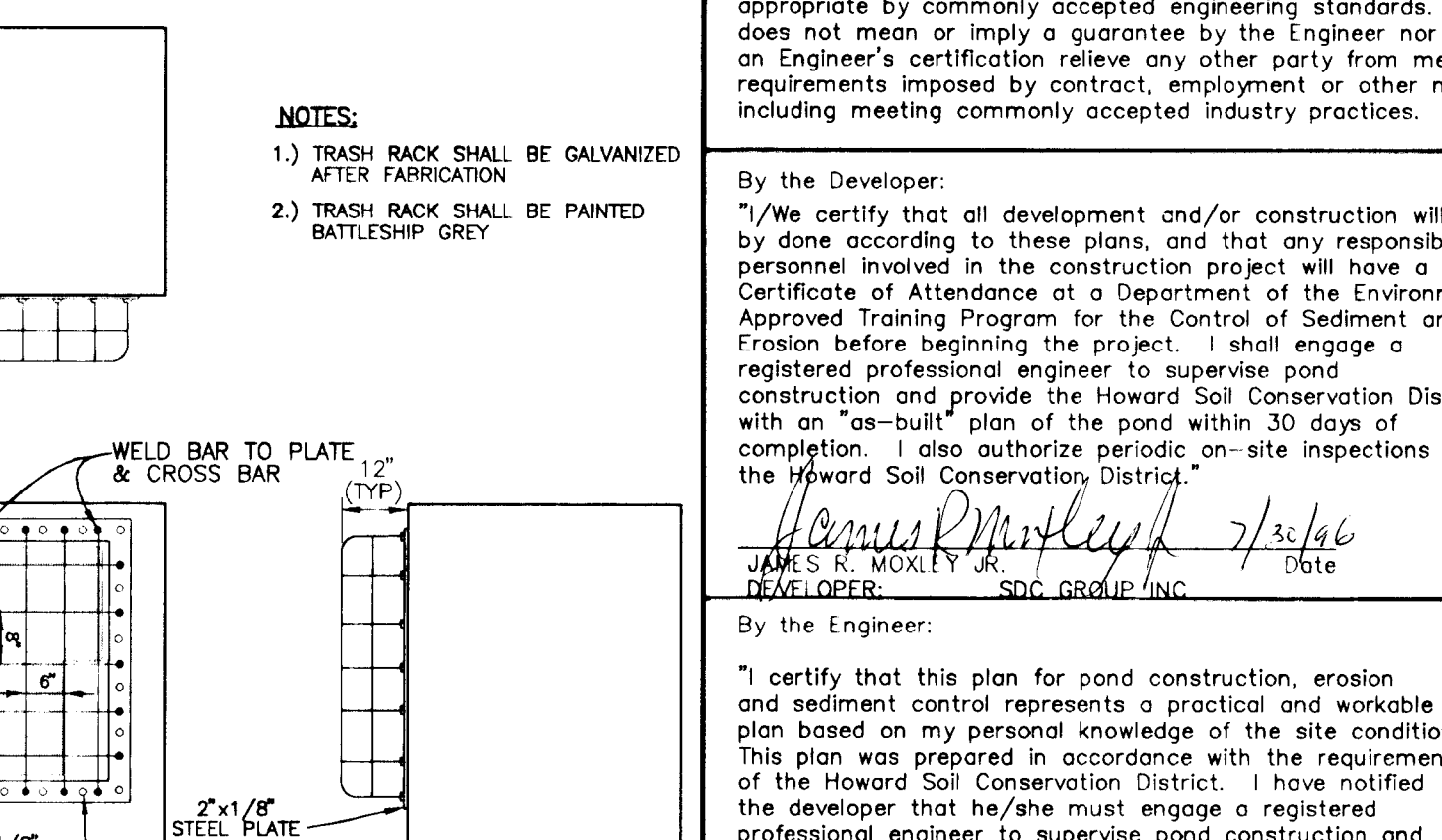
SECTION THROUGH FOREBAYS
SCALE: 1"=50' HORIZ., 1"=5' VERT.



TEMPORARY BRICK BLOCKING DETAIL
NOT TO SCALE



SECTION B-B



TRASH RACK DETAIL
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	<i>Richard M. Doncker</i>	1-20-97
CHIEF, BUREAU OF HIGHWAYS		DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	<i>Richard Blood</i>	2/10/97
CHIEF, DIVISION OF LAND DEVELOPMENT		DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	<i>Donald Mean</i>	2/10/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION		DATE
NO.	DATE	REVISION

TSA GROUP, INC.
planning • architecture • engineering • surveying
5480 Baltimore National Pike • Ellicott City, Maryland 21045 • (410) 465-8105

Donald Mean
Professional Engineer
No. 11111

OWNER:	CHARLOTTE DUBIN, MARC L. DUBIN & NANCY D. LEVINE 1802 REISTERSTOWN ROAD PIKESVILLE, MARYLAND 21208
DEVELOPER:	SDC GROUP, INC. POST OFFICE BOX 417 ELICOTT CITY, MARYLAND 21041 (410) 465-4244
PROJECT:	DUBIN PROPERTY LOTS 1 - 58
LOCATION:	TAX MAP 38 BLOCKS 7 & 8 PARCELS 100 & 408 14th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE:	STORMWATER MANAGEMENT NOTES & DETAILS
DATE:	JULY 24, 1996 OCTOBER 15, 1996
PROJECT NO.:	0504
SCALE:	AS SHOWN
DRAWING NO.:	7 OF 12

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.

Cheryl K. Amadio 01-15-97
Natural Resource Conservation Service Date

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

Robert Zichner 1/14/97
Howard Soil Conservation District Date

By the Engineer:
I hereby certify that the facility shown on this plan was constructed as shown on the "AS-BUILT" plans and meets the approved plans and specifications.

DONALD A. MASON, P.E. # 21443 Date
ENGINEER:

Certify means to state or declare a professional opinion based upon onsite inspections and materials tests which are conducted during construction. The onsite inspections and materials tests are those inspections and tests deemed sufficient and appropriate by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the Engineer nor does an Engineer's certification relieve any other party from meeting requirements imposed by contract, employment or other means, including meeting commonly accepted industry practices.

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 the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and 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 R. Wootley 7/31/96
JAMES R. WOOLEY, SDC GROUP, INC. Date
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/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

Donald Mean 7-24-96
DONALD A. MASON, P.E. # 21443 Date
ENGINEER:

1847

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOI (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 PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:**
 TOTAL AREA OF SITE: 20.07 ACRES
 AREA DISTURBED: 15.8 ACRES
 AREA TO BE ROOFED OR PAVED: 1.6 ACRES
 AREA TO BE VEGETATIVELY STABILIZED: 13.8 ACRES
 TOTAL CUT: 50,536 CU YDS
 TOTAL FILL: 47,792 CU YDS
 OFFSITE WASTE DISPOSAL: 8,754 CU YDS
DISPOSAL AREA TO BE DETERMINED BY CONTRACTOR
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 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.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

TEMPORARY SEEDBED PREPARATION

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED 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, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNULAR RYE (3.2 LBS/1000 SQ FT) FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH 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 SOU.

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 (6 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDBED PREPARATION

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ON OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF 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 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOU. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.
- 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.

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 (6 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

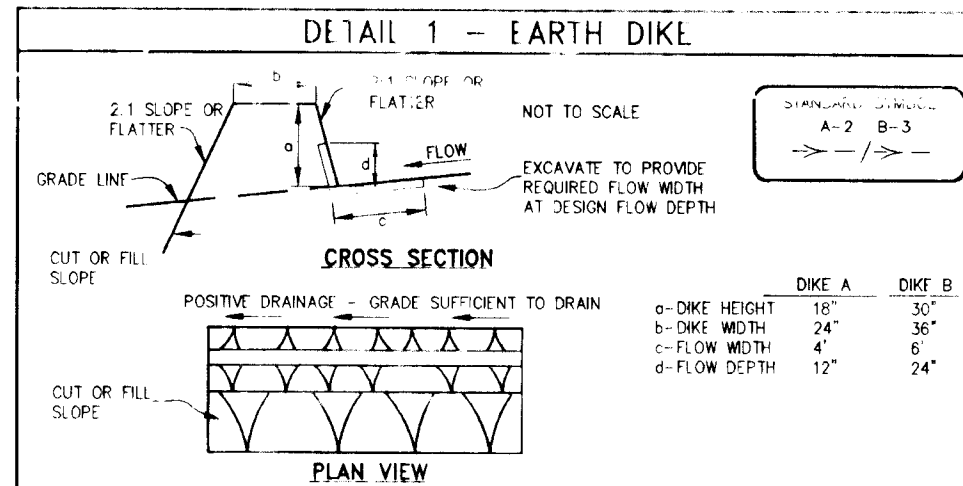
MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

SEQUENCE OF CONSTRUCTION

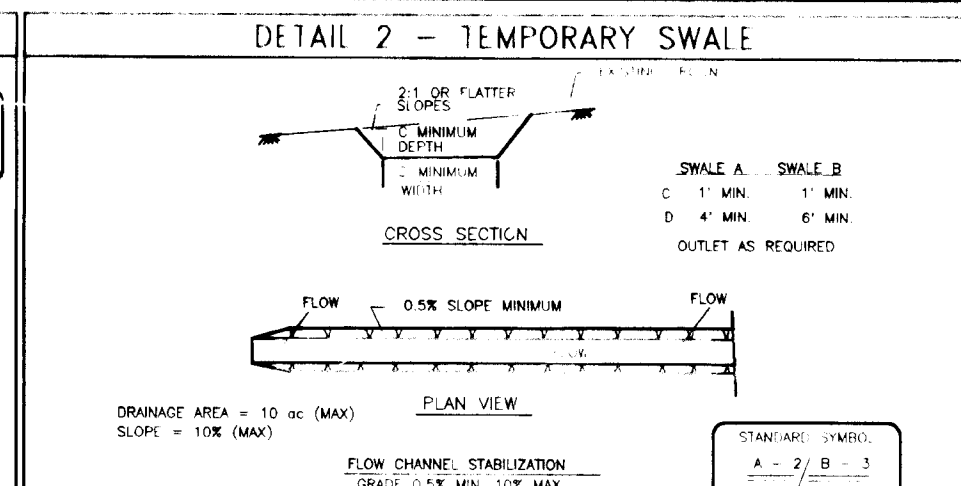
- DAY 1 - OBTAIN A GRADING PERMIT.
- DAY 2-4 - INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SILT FENCE.
- DAY 5-10 - CLEAR AND GRAB FOR THE INSTALLATION OF THE SEDIMENT BASIN/STORMWATER MANAGEMENT FACILITY.
- DAY 11-20 - INSTALL SEDIMENT BASIN/STORMWATER MANAGEMENT FACILITY. INSTALLING TEMPORARY BLOCKING OF THE CONTROL STRUCTURE WEIR. EVALUATE ON WEIRING PERMITS SHALL NOT BE INSTALLED UNTIL CONCRETE BASIN TO FINAL S.W.M. AND INSTALL REMAINING CONTROL DEVICES. CLEAR AND GRAB THE REMAINING DISTURBED AREAS.
- DAY 21-25 - INSTALL STREAM DIVERSION UTILIZING WATER RESOURCES ADMIN. DETAIL WPD 2.2.
- DAY 26-34 - INSTALL 6" TWIN CONCRETE UNDER ROWWAY/DRIVE AND BACKFILL OVER THE CONCRETE.
- DAY 35-36 - REMOVE TEMPORARY STREAM DIVERSION AND BEING ROWWAY/DRIVE DRIVE TO SURGRADE.
- DAY 37-41 - STABILIZE THE REMAINING SITE AREA AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES.
- DAY 42-48 - INSTALL STORM DRAINS WATER AND SEWER.
- DAY 49-80 - INSTALL CURBS AND GUTTERS, PAVES AND SIDEWALKS. UPON APPROVAL OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING DISTURBED AREAS. REMOVE TEMPORARY BLOCKING OF WEIR STRUCTURE AND INSTALL REMAINING SEDIMENT BASIN TO FINAL STORMWATER MANAGEMENT ELEVATIONS, REMOVE TEMPORARY BLOCKING OF WEIR STRUCTURE AND INSTALL REMAINING SEDIMENT BASIN TO FINAL ELEVATIONS.

NOTE: ACTIVITIES IN THE FLOODPLAIN, WATERWAYS, NON-TIDAL WETLANDS OR BUFFERS SHALL BE IN ACCORDANCE WITH THE REGULATIONS AND MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS AND BUFFERS, VERSION OF SHEET NO. 1.

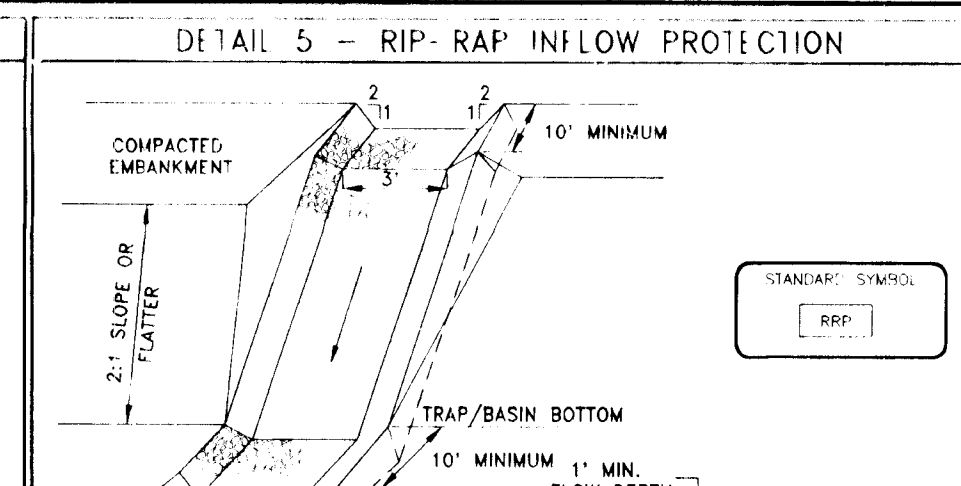
INSPECTION OF THE POND SHOW HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USIA, SOCS STANDARDS AND SPECIFICATIONS FOR PONDS (M-378), POND OWNERS) AND ANY HIRING, SUFFICIENT OR ASSONS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY REPORT TO THE DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.



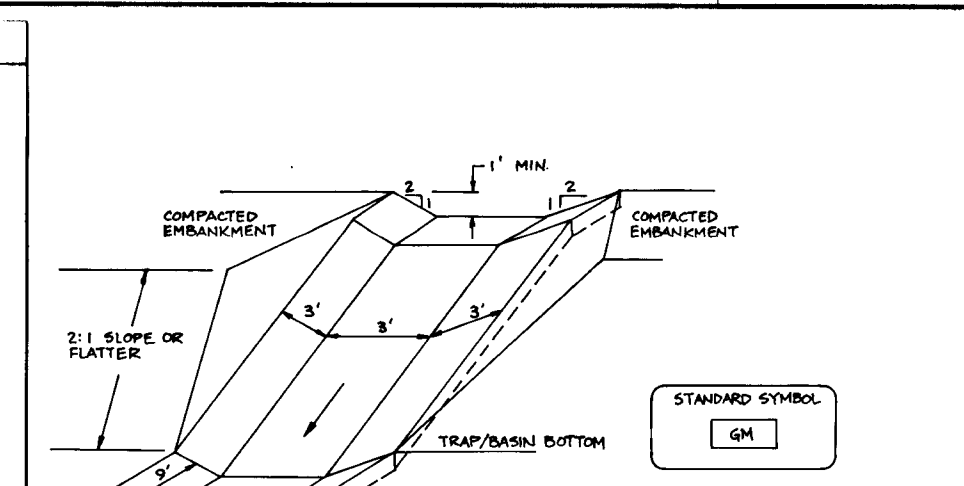
- CONSTRUCTION SPECIFICATIONS**
- Seed and cover with straw mulch.
 - Seed and cover with Erosion Control Matting or lime with soil. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed area of a non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
 - The dike shall be excavated or shaped to line, grade and cross sections as required to meet the criteria specified herein and be free of bank protrusions or other irregularities which will impede normal flow.
 - Fill shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
 - Inspection and maintenance must be provided periodically and after each rain event.



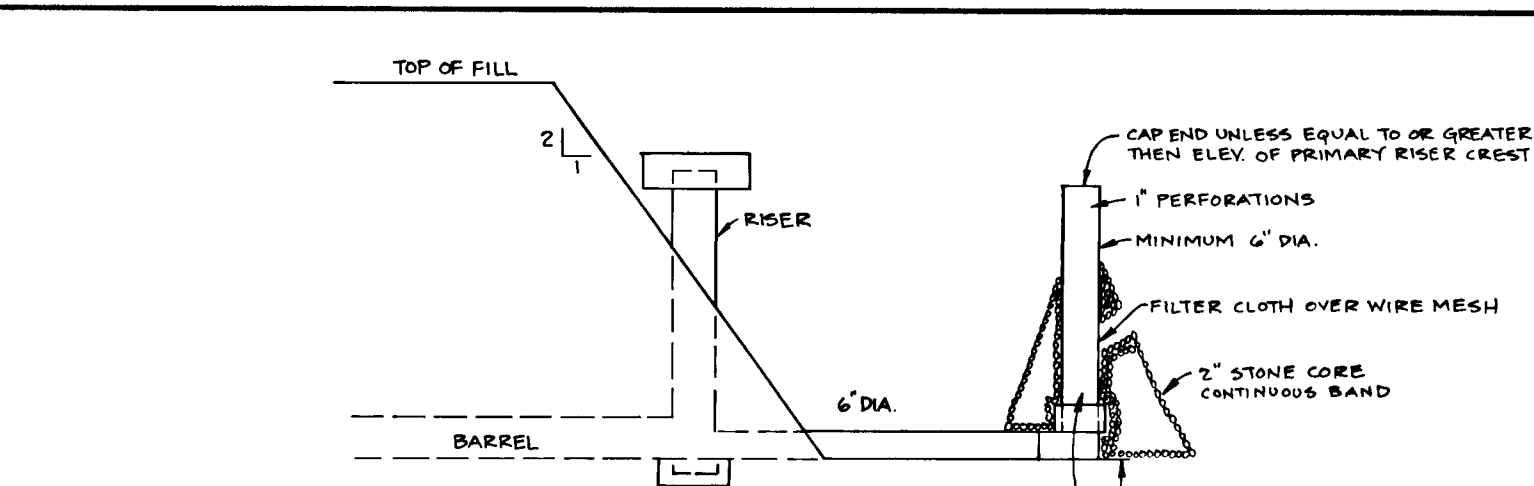
- CONSTRUCTION SPECIFICATIONS**
- All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed area of a non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
 - The swale shall be excavated or shaped to line, grade and cross sections as required to meet the criteria specified herein and be free of bank protrusions or other irregularities which will impede normal flow.
 - Fill, if necessary, shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the swale.
 - Inspection and maintenance must be provided periodically and after each rain event.



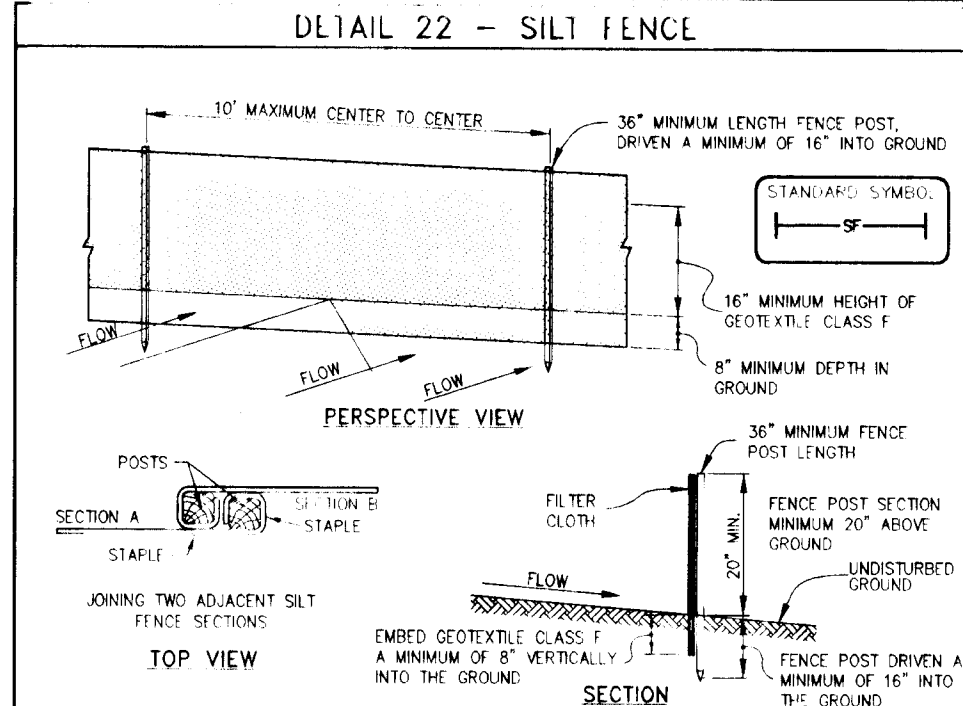
- CONSTRUCTION SPECIFICATIONS**
- All lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3' minimum bottom width. The channel shall be lined with 4" to 12" (50-100 lbs) to a depth of 18".
 - Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
 - Entrance and exit sections shall be installed as shown on the detail section.
 - Rip-Rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
 - Gabion Inflow Protection may be used in lieu of Rip-Rap Inflow Protection.
 - Rip-Rap should blend into existing ground.
 - Rip-Rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.



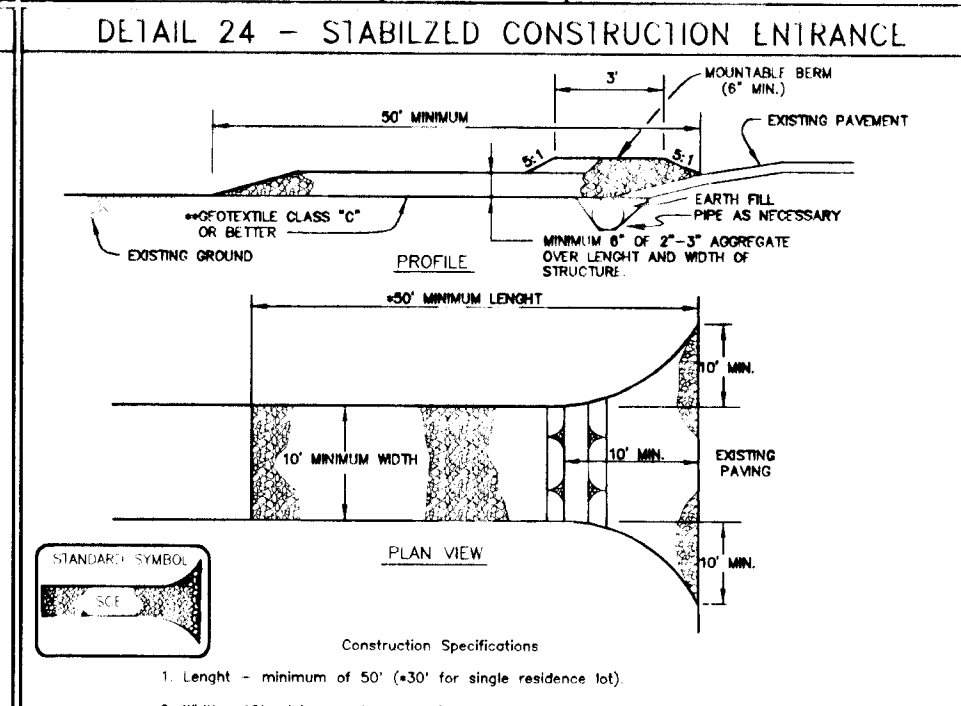
- CONSTRUCTION SPECIFICATIONS**
- GABION INFLOW PROTECTION SHALL BE CONSTRUCTED OF 6" x 6" x 9" GABION BASKETS SURROUNDING A TRAPEZOIDAL CROSS SECTION 1' DEEP WITH 2:1 SIDE SLOPES AND A 3' BOTTOM WIDTH.
 - GEOTEXTILE CLASS C SHALL BE INSTALLED UNDER ALL GABION BASKETS.
 - THE STONE USED TO FILL THE GABION BASKETS SHALL BE "A-1".
 - GABIONS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
 - GABION INFLOW PROTECTION SHALL BE USED WHERE CONCENTRATED FLOW IS PRESENT ON SLOPES STEEPER THAN 4:1.



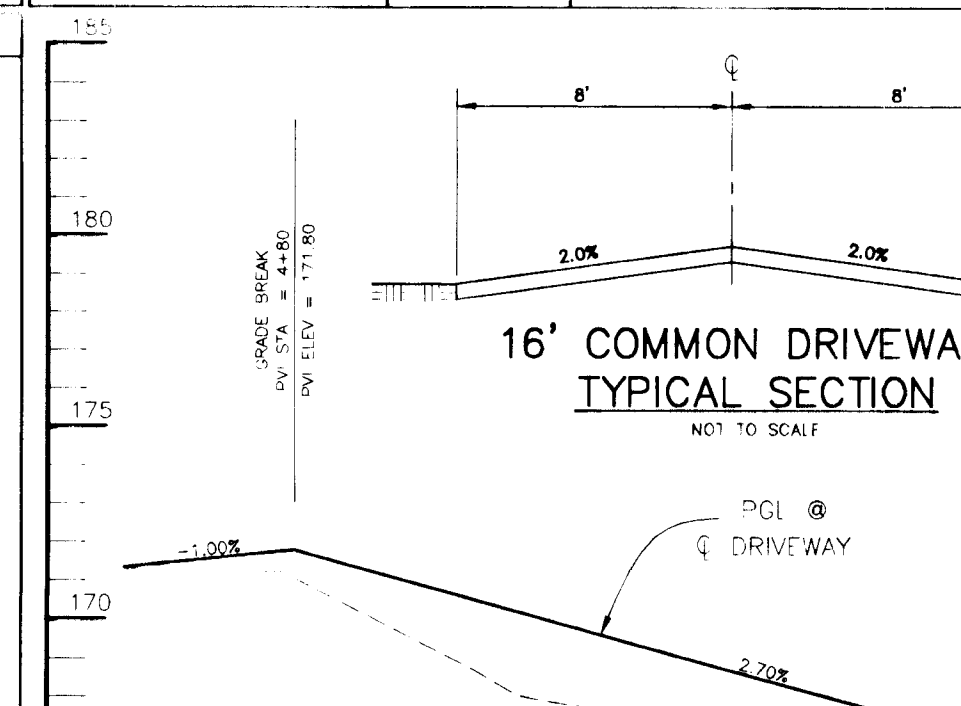
- CONSTRUCTION SPECIFICATIONS**
- PERFORATIONS OR SLITS MUST NOT BE MADE ANY LOWER THAN 6" ABOVE TOP OF THE HORIZONTAL OFFFALL BARREL.
 - PERFORATIONS 6" SPACING HORIZ. AND VERT. LOCATED IN CONCRETE.



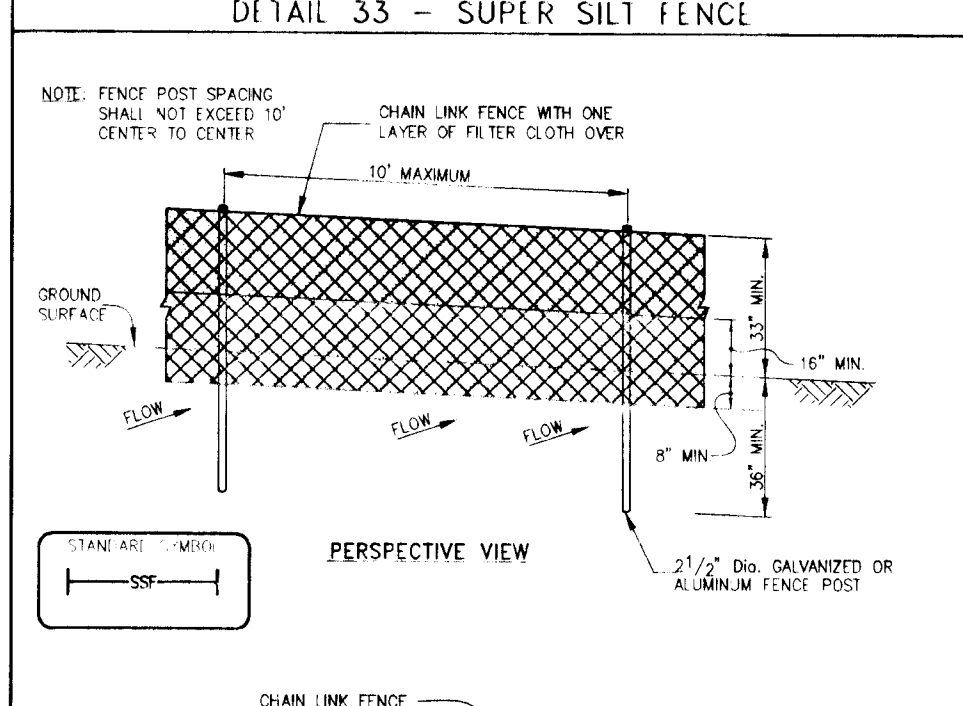
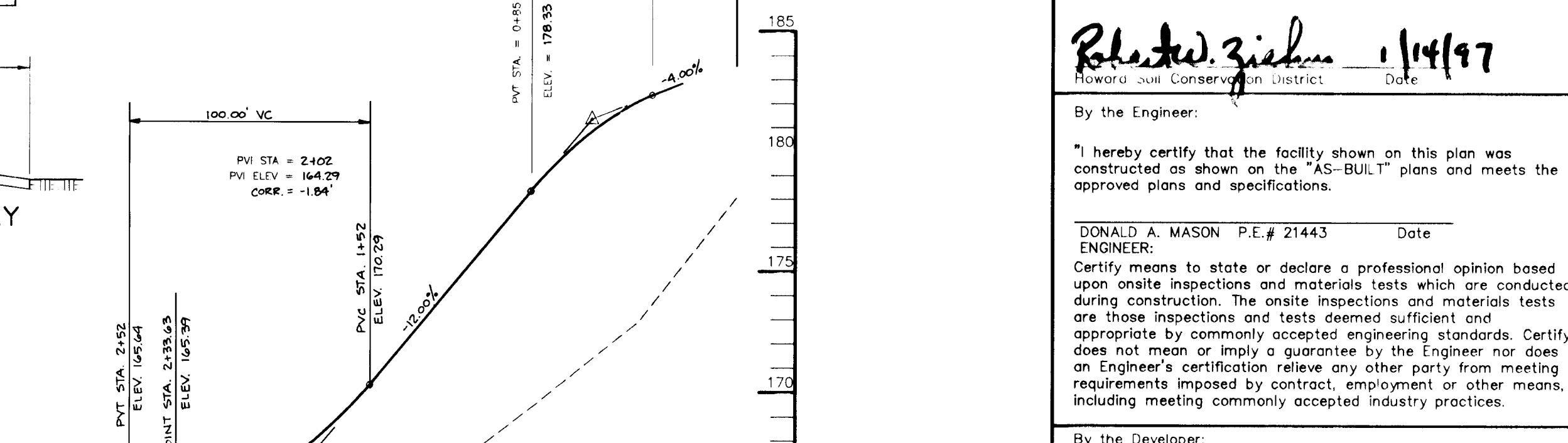
- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of equal quality hardwood. Steel posts will be standard 1" or 1 1/2" section weighing not less than 1.00 pound per linear foot.
 - Geotextile shall be fastened securely to each fence post with wire ties or staples of top and mid-section and shall meet the following requirements for Geotextile Class F:



- CONSTRUCTION SPECIFICATIONS**
- Length - minimum of 50' (30' for single residence lot).
 - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 - Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. A plan approval authority may not require single family residence to use geotextile.
 - Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equipment shall be placed approx. 2" deep over the length and width of the entrance.
 - Surface Water - all surface water flowing to or diverted toward construction entrance shall be directed through the entrance, maintaining positive drainage. This includes through the stabilized construction entrance shall be protected with a mulched berm with 5' top and a minimum of 6" of stone over the post. Post top to be steel according to the drainage. When the SCS is located at a high spot and has no drainage to convey a pipe will be necessary. Pipe shall be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
 - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the side height of the stabilized construction entrance.



- NOTE: COMMON DRIVEWAYS TO BE PART OF THE SITE DEVELOPMENT PLANS BY THE BUILDER.**



- CONSTRUCTION SPECIFICATIONS**
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties, the lower tension wire, braced and fruss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 8" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt buildup removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

- CONSTRUCTION SPECIFICATIONS**
- Length - minimum of 50' (30' for single residence lot).
 - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 - Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. A plan approval authority may not require single family residence to use geotextile.
 - Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equipment shall be placed approx. 2" deep over the length and width of the entrance.
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 - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the side height of the stabilized construction entrance.

SUPER SILT FENCE DESIGN CRITERIA

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

CBR-1

DEPTH (FT.)	SOIL DESCRIPTION	BORING & SAMPLING NOTES
0.0	SURFACE	
0.0	ORANGE MOST FINE SANDY SILT (M)	2" TOPSOIL 3" ROOTMAT
1.5	GRAY, ORANGE MOST SALTY GRAVEL WITH SOME CLAY (SG)	NO GROUNDWATER ENCOUNTERED WHILE EXCAVATING
5.0	BOTTOM OF HOLE 5.0'	BACKFILLED AT COMPLETION

CBR-2

DEPTH (FT.)	SOIL DESCRIPTION	BORING & SAMPLING NOTES
0.0	SURFACE	
0.0	ORANGE MOST MOIST CLAYEY SILT (M)	2" TOPSOIL
5.0	BOTTOM OF HOLE 5.0'	NO GROUNDWATER ENCOUNTERED WHILE EXCAVATING
5.0	BOTTOM OF HOLE 5.0'	BACKFILLED AT COMPLETION

B-3

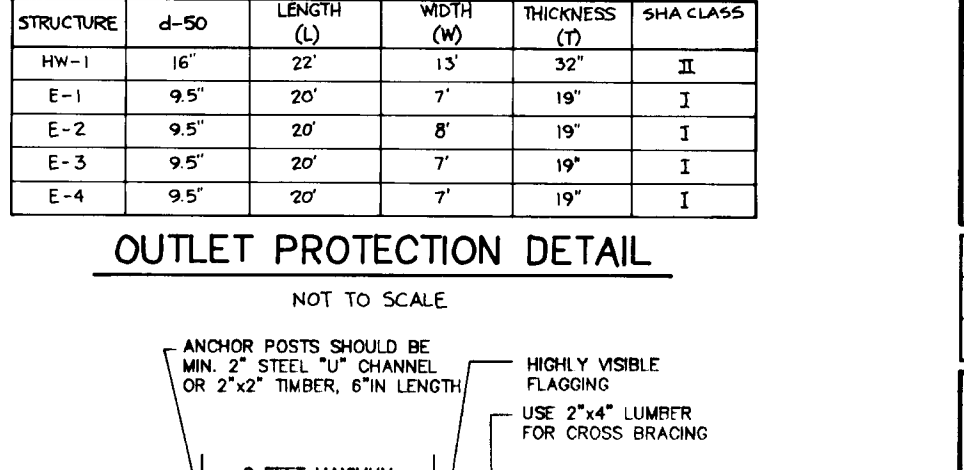
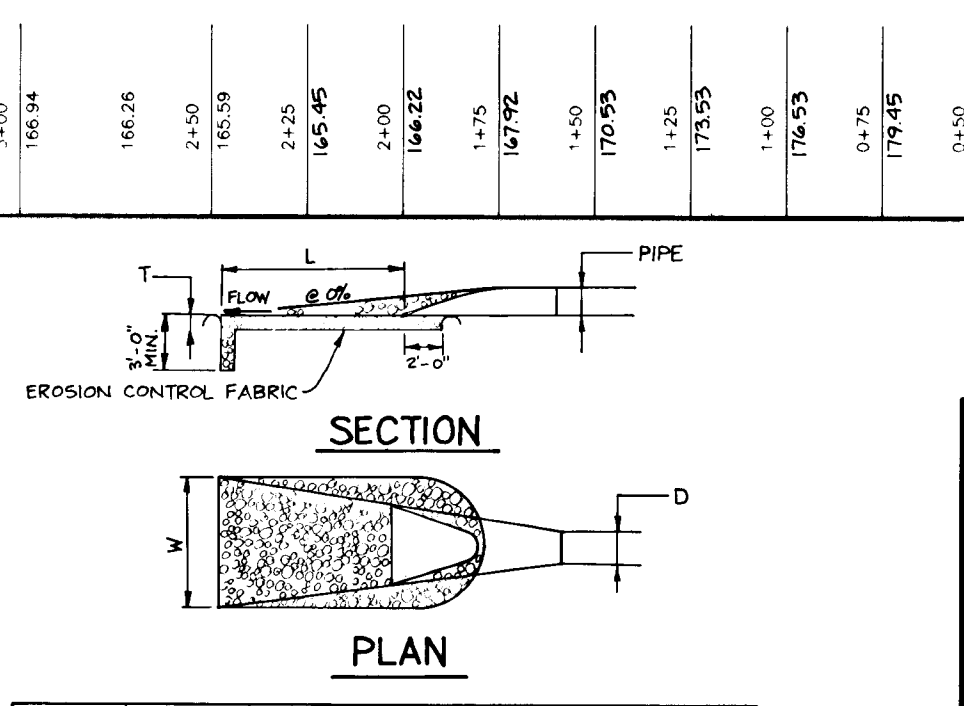
DEPTH (FT.)	SOIL DESCRIPTION	BORING & SAMPLING NOTES
0.0	SURFACE	
0.0	BROWN MOST SILT, SOME FINE SAND (M)	2" TOPSOIL
2.0	TAN, GRAY MOST SANDY SILT WITH GRAVEL (M)	NO GROUNDWATER ENCOUNTERED WHILE EXCAVATING
4.0	GRAY, LIGHT GREEN MOST MICACEOUS SILTY FINE TO MEDIUM SAND (M)	NO GROUNDWATER ENCOUNTERED WHILE EXCAVATING
12.5	GRAY, RED MOST MICACEOUS SILTY SAND, TRACE DECOMPOSING ROCK FRAGMENT (M)	NO GROUNDWATER ENCOUNTERED WHILE EXCAVATING
14.0	BOTTOM OF HOLE AT 14'	BACKFILLED AT COMPLETION

SOIL BORING LOGS

DEPTH (FT.)	SOIL DESCRIPTION	BORING & SAMPLING NOTES
0.0	SURFACE	
0.0	GRAY, TAN MOST FINE SANDY SILT, TRACE CLAY (M)	2" TOPSOIL 3" ROOTMAT
2.5	GRAY, TAN MOST MICACEOUS FINE SANDY SILT (M) TRACE GRAVEL	NO GROUNDWATER ENCOUNTERED WHILE EXCAVATING
5.5	BROWN, GRAY MOST MICACEOUS SILT SAND (M)	12" COBBLE AT 3.5'
8.0	BROWN, LIGHT GREEN, ORANGE MOST SILTY SAND AND DECOMPOSED ROCK (M)	INFILTRATION TEST AT 8.0'
12.0	BOTTOM OF HOLE AT 12'	INFILTRATION RATE: 0.063 in/hr

SOIL BORING LOGS

DEPTH (FT.)	SOIL DESCRIPTION	BORING & SAMPLING NOTES
0.0	SURFACE	
0.0	BROWN MOST SILT, SOME FINE SAND, TRACE CLAY AND GRAVEL (M)	2" TOPSOIL
2.0	TAN, GRAY MOST SANDY SILT WITH GRAVEL (M)	NO GROUNDWATER ENCOUNTERED WHILE EXCAVATING
4.0	GRAY, LIGHT GREEN MOST MICACEOUS SILTY FINE TO MEDIUM SAND (M)	NO GROUNDWATER ENCOUNTERED WHILE EXCAVATING
13.0	BOTTOM OF HOLE AT 13'	INFILTRATION RATE: 0.000 in/hr



By the Engineer:
 I hereby certify that the facility shown on this plan was constructed as shown on the "AS-BUILT" plans and meets the approved plans and specifications.
 DONALD A. MASON P.E.# 21443 Date
 ENGINEER:
 Certify means to state or declare a professional opinion based upon onsite inspections and materials tested which are conducted during construction. The onsite inspections and materials tests are those inspections and tests deemed sufficient and appropriate by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the Engineer nor does an Engineer's certification relieve any other party from meeting requirements imposed by contract, employment or other means, including meeting commonly accepted industry practices.
 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 the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and 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.
 DONALD A. MASON P.E.# 21443 Date
 DEVELOPER: SDC GROUP, INC.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 APPROVED: DONALD A. MASON P.E.# 21443
 Chief, Development Engineering Division

NO. DATE REVISION

TSA GROUP, INC.
 planning • architecture • engineering • surveying
 6400 Baltimore National Pike • Elliott City, Maryland 21043 • (410) 465-8106
 OWNER: CHARLOTTE DUBIN, MARC L. DUBIN & NANCY D. LEVINE
 1802 RISTERSTOWN ROAD
 Pikesville, Maryland 21208
 PROJECT: DUBIN PROPERTY
 LOTS 1 - 58
 LOCATION: TAX MAP 38 BLOCKS 7 & 8 PARCELS 100 & 408
 1st ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 TITLE: SEDIMENT CONTROL NOTES AND DETAILS
 DATE: July 24, 1996 PROJECT NO. 0504
 October 15, 1996
 Design: DAM Draft: JR SCALE: AS SHOWN DRAWING 8 OF 12

Design: DAM Draft: JR SCALE: AS SHOWN DRAWING 8 OF 12

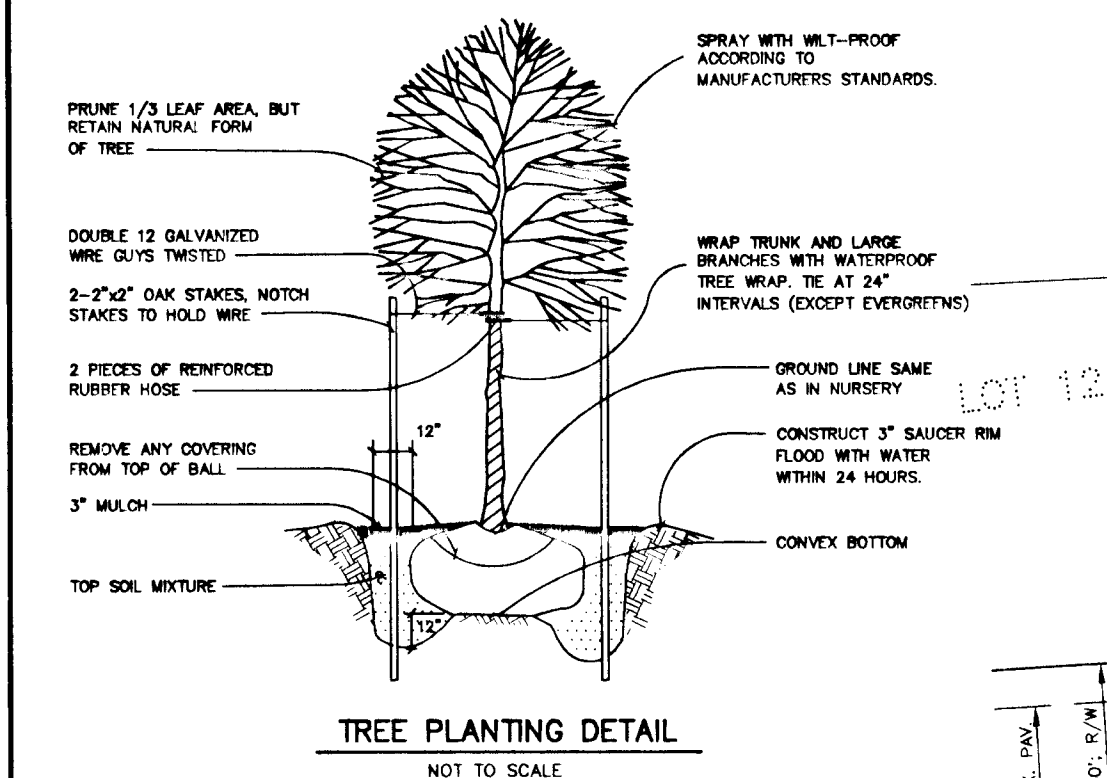
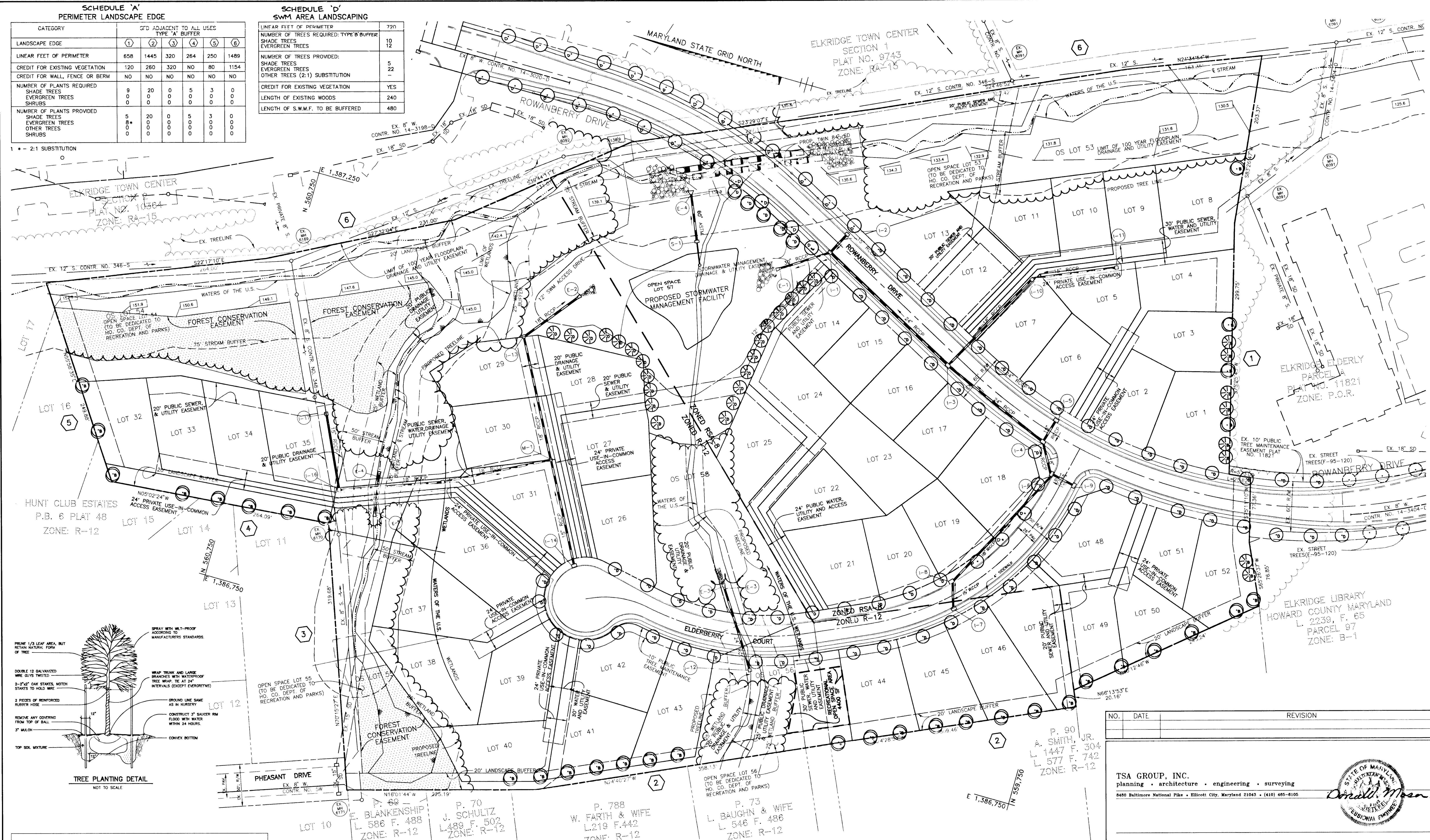
SCHEDULE 'A'
PERIMETER LANDSCAPE EDGE

CATEGORY	GFD ADJACENT TO ALL USES TYPE 'A' BUFFER					
	(1)	(2)	(3)	(4)	(5)	(6)
LANDSCAPE EDGE						
LINEAR FEET OF PERIMETER	658	1445	320	264	250	1489
CREDIT FOR EXISTING VEGETATION	120	260	320	NO	80	1154
CREDIT FOR WALL, FENCE OR BERM	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED						
SHADE TREES	9	20	0	5	3	0
EVERGREEN TREES	0	0	0	0	0	0
SHRUBS	0	0	0	0	0	0
NUMBER OF PLANTS PROVIDED						
SHADE TREES	5	20	0	5	3	0
EVERGREEN TREES	8	0	0	0	0	0
SHRUBS	0	0	0	0	0	0

SCHEDULE 'D'
SWM AREA LANDSCAPING

LINEAR FEET OF PERIMETER	720
NUMBER OF TREES REQUIRED: TYPE 'B' BUFFER	10
SHADE TREES	10
EVERGREEN TREES	10
NUMBER OF TREES PROVIDED:	
SHADE TREES	5
EVERGREEN TREES	22
OTHER TREES (2:1) SUBSTITUTION	
CREDIT FOR EXISTING VEGETATION	YES
LENGTH OF EXISTING WOODS	240
LENGTH OF S.W.M.F. TO BE BUFFERED	480

1 * - 2:1 SUBSTITUTION



PLANTING LIST

SYMBOL	QUANTITY	NAME	REMARKS
(Symbol)	23	ACER RUBRUM (RED MAPLE)(DEVELOPER)	2 1/2" MIN. CAL. B & B-FULL HEAD
(Symbol)	5	ACER SACCHARUM (SUGAR MAPLE)(DEVELOPER)	2 1/2" MIN. CAL. B & B-FULL HEAD
(Symbol)	33	ACER SACCHARUM (SUGAR MAPLE)(BUILDER)	2 1/2" MIN. CAL. B & B-FULL HEAD
(Symbol)	22	PINUS STROBUS (EASTERN WHITE PINE)(DEVELOPER)	5'-8" HT. UNSHEARED
(Symbol)	8	PINUS STROBUS (EASTERN WHITE PINE)(BUILDER)	5'-8" HT. UNSHEARED

- NOTES:**
- TREES MUST BE PLANTED A MINIMUM OF 4 FEET FROM THE CURB OR SIDEWALK AND MUST BE A MINIMUM OF 5 FEET FROM ANY STORM DRAIN.
 - A MINIMUM DISTANCE OF 20 FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND ANY STREET LIGHTS.
 - TREE MUST BE PLANTED A MINIMUM OF 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.
 - PERIMETER LANDSCAPING SHALL BE INSTALLED BY THE BUILDER, AS INDICATED IN THE PLANTING LIST, AND SHALL BE SHOWN ON A FUTURE SITE DEVELOPMENT PLAN FOR THIS PROJECT, AS INDICATED ON THE APPROVED PRELIMINARY PLAN DATED: FEBRUARY 23, 1996.
 - THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
 - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$5,900.00.
 - SEE PLANTING LIST - THIS SHEET.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard Blood
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 1-20-97

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Richard Blood
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 2/15/97

William Dammann
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 2/13/97

NO. DATE REVISION

TSA GROUP, INC.
 planning • architecture • engineering • surveying
 8680 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6106

Donald Mean
 PROFESSIONAL ENGINEER

OWNER: CHARLOTTE DUBIN, MARC L. DUBIN & NANCY D. LEVINE
 1802 REISTERSTOWN ROAD
 PIKESVILLE, MARYLAND 21208

DEVELOPER: SDC GROUP, INC.
 POST OFFICE BOX 417
 ELICOTT CITY, MARYLAND 21041
 (410) 465-4244

PROJECT: DUBIN PROPERTY
 LOTS 1 - 58

LOCATION: TAX MAP 38 BLOCKS 7 & 8 PARCELS 100 & 408
 1st ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: LANDSCAPE PLAN
 S-94-40, F-92-111, P-96-11, WP-96-51

DATE: JULY 24, 1996
 OCTOBER 15, 1996

PROJECT NO. 0504

SCALE: 1" = 50'

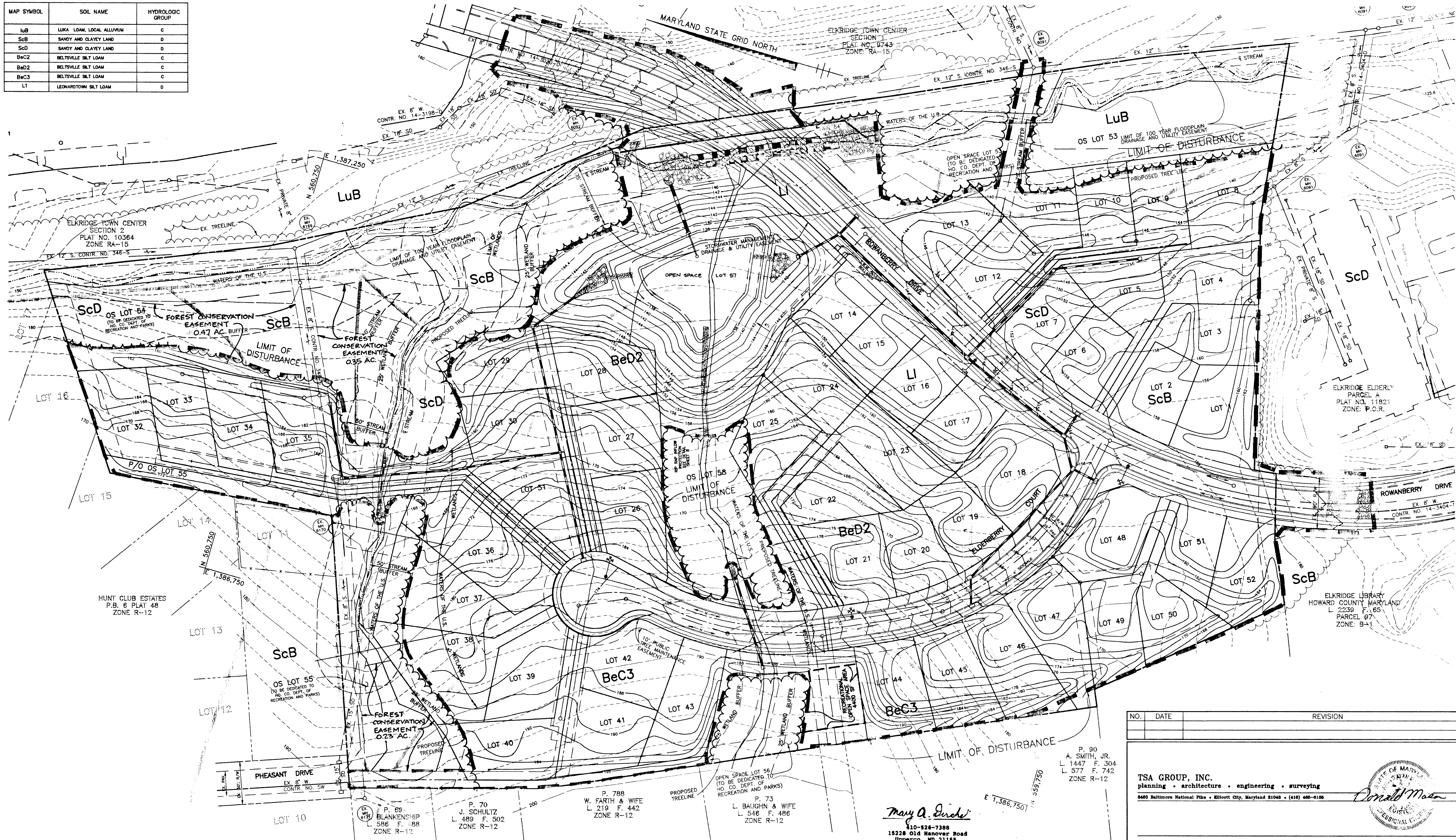
DRAWING 9 OF 12

Design: DAM Draft: JCO

1489
 1847

SOIL TYPES AND CHARACTERISTICS

MAP SYMBOL	SOIL NAME	HYDROLOGIC GROUP
luB	LUKA LOAM, LOCAL ALLUVIUM	C
ScB	SANDY AND CLAYEY LAND	D
ScD	SANDY AND CLAYEY LAND	D
BeC2	BELTSVILLE SILT LOAM	C
BeD2	BELTSVILLE SILT LOAM	C
BeC3	BELTSVILLE SILT LOAM	C
L1	LEONARDTOWN SILT LOAM	D



1847

NO.	DATE	REVISION

TSA GROUP, INC.
 planning • architecture • engineering • surveying
 6480 Baltimore National Pike • Ellicott City, Maryland 21048 • (410) 400-0100

Donald M. ...
 REGISTERED PROFESSIONAL ENGINEER

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. ...
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 1/20/97

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Richard Blood
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 2/18/97

John ...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 2/13/97

OWNER:
 CHARLOTTE DUBIN, MARC L. DUBIN & NANCY D. LEVINE
 1802 REISTERSTOWN ROAD
 PIKESVILLE, MARYLAND 21208

DEVELOPER:
 SDC GROUP, INC.
 P.O. BOX 417
 ELICOTT CITY, MARYLAND 21041
 (410) 465-4244

PROJECT: **DUBIN PROPERTY**
 LOTS 1 - 58

LOCATION:
 TAX MAP 38 BLOCKS 7 & 8 PARCELS 100 & 408
 1st ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE:
FOREST CONSERVATION PLAN
 5-94-40, F-92-111, P-96-11, WP-96-51

DATE:
 JULY 24, 1996
 OCTOBER 15, 1996

PROJECT NO. 0504

DESIGN: DAM DRAFT: JCO/OBT

SCALE: 1" = 50'
 DRAWING 10 OF 12

Plotted Oct. 14, 1996
 Acad Dwg: 7014310