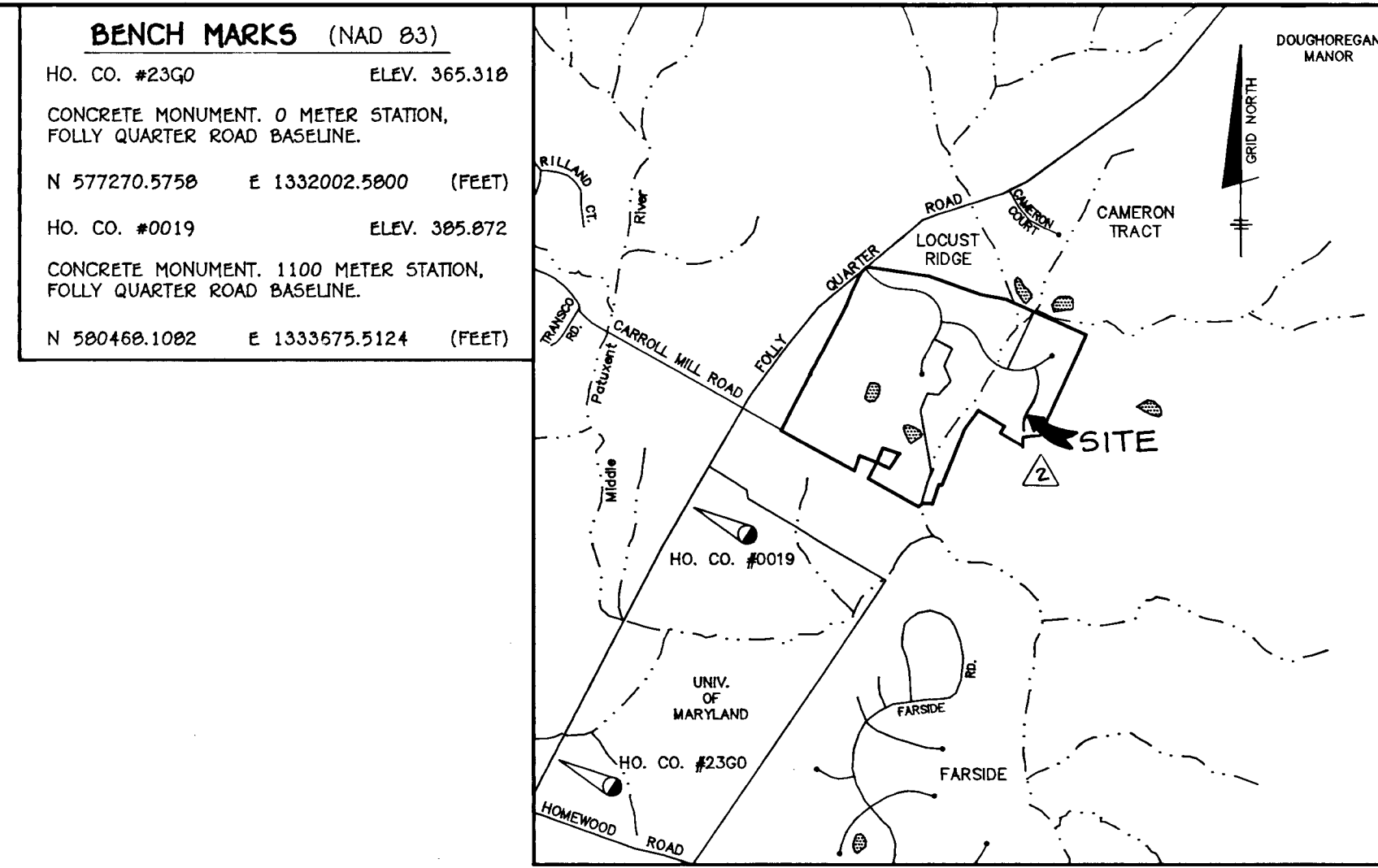


CENTERLINE CONTROL DATA			
ROAD	STATION	NORTH	EAST
RUNNING SPRINGS ROAD	P.C. 7+03.97	582235.5898	1338025.2237
	P.T. 17+70.84	582338.5822	1338173.3703
WHITTAIL LANE	P.C. 0+00	581733.8984	1337957.3404
	P.T. 4+50	581744.7958	1337930.4517
	P.C. 5+50	581661.4725	1337875.1596
	P.T. 6+59.96	581561.8775	1337829.6302
LIMIT OF PAVING			

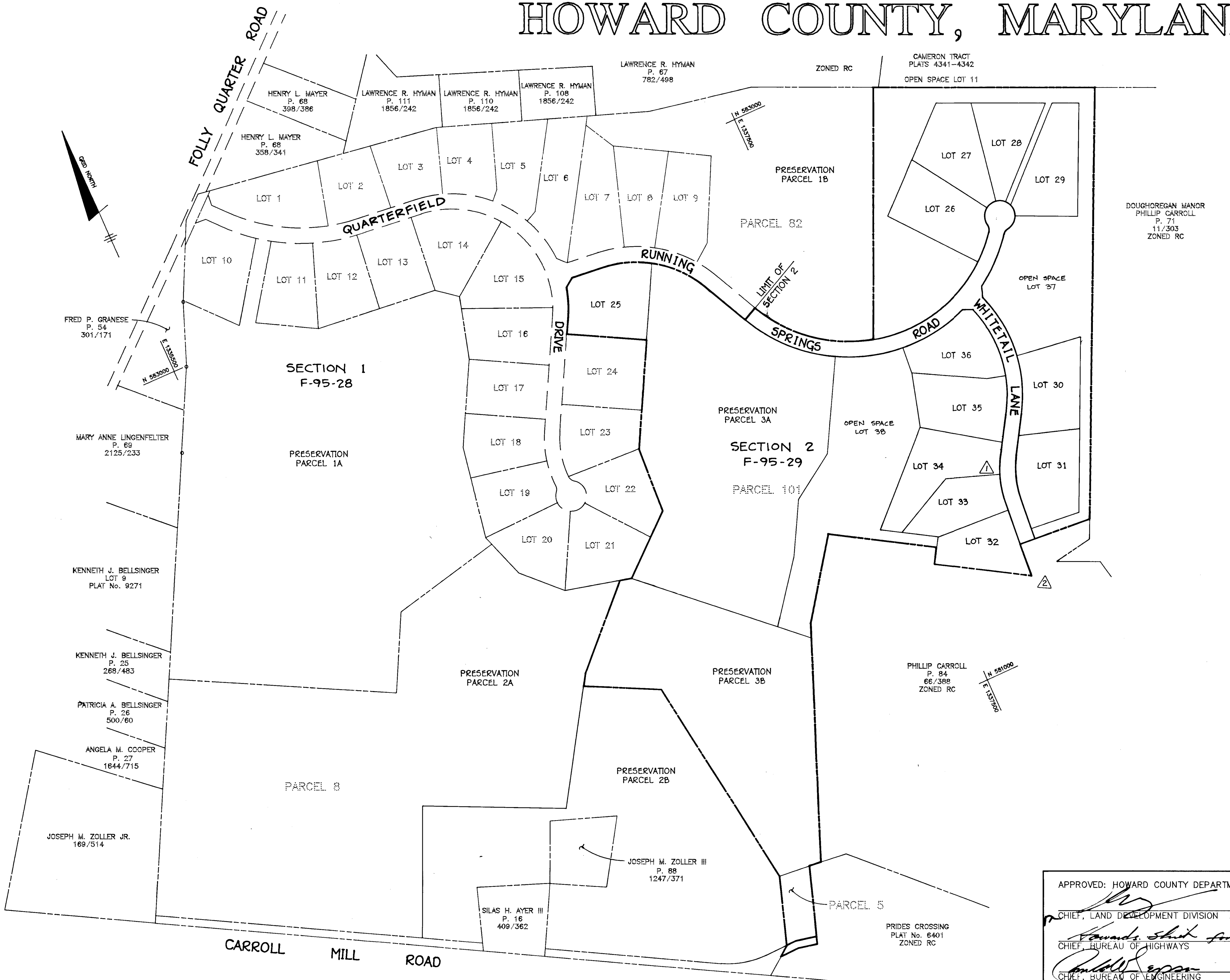
ROADWAYS, STORM DRAINAGE AND STORM WATER MANAGEMENT QUARTERFIELD

SECTION 2 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1"=2000'

- ### 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 24 hours 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 23 - Parcels 5 and 101
Zoning: R-C District Section 2
Total Tract Area: 156.58 Ac.
Section Area: 51.00 Ac.
Number of Proposed Lots: 12 Cluster, 2 Preservation
Date Preliminary Plan Approved: May 11, 1994
DPZ Reference #: P-94-03
 - 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 by TSA Group, Inc. dated 7/94. Contour interval is 2 feet.
 - Howard County monuments 2300 and 0019 used for horizontal datum (NAD 83). Monuments 3138003 and 3138004 used for vertical datum (NAD 23).
 - Street light placement and type of fixture and pole selected shall be in accordance with the Howard County design manual, volume III (1993) and as modified by the guidelines for street lights in residential developments (June 1993), which determine lateral and longitudinal placement.
 - Water and Sewer service for this project shall be private. A well shall be located on each lot in accordance with all Health Dept. standards. Sewer service shall be provided by individual septic fields at a minimum of 10,000 s.f. per lot. A percolation certification plan shall be approved by the Health Department.
 - GEOTECHNICAL EVALUATION FOR THE PROPOSED CULVERT FOOTINGS PROVIDED BY HILLS-CARNES 11/94.
 - Floodplain Study compiled by TSA Group, Inc., 11/93. Approved 5/11/94.
 - Wetlands Delineation compiled by James H. Cook, R.P.F. 3/93. Approved 5/11/94.
 - Traffic Study compiled by Lee Cunningham & Assoc., Inc. 2/93. Approved 7/93.
 - Noise Study not required for this project.
 - Forest Conservation Plan compiled by James H. Cook, R.P.F. 11/93. Approved 7/94. REVISED 12/94.
 - Unless noted as "private", all easements are public.
 - No clearing, grading or construction is permitted within wetlands, stream buffers or forest conservation areas except for the work associated with the Running Springs Road crossing.
 - ALL ROAD FILLS SHALL BE COMPACTED TO 95% AS DETERMINED BY AASHTO T-180.
 - ALL STATE AND FEDERAL PERMITS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF APPLICABLE CONSTRUCTION.
DEPT. OF NATURAL RESOURCES NON-TIDAL WETLANDS PERMIT NUMBER 94-NT-0407.
 - STORMWATER MANAGEMENT REQUIREMENTS ARE SATISFIED WITHIN SECTION 1 (F-95-28). WATER QUALITY FOR THE ROADWAYS IS PROVIDED BY VEGETATED BUFFER.



SHEET INDEX	
No.	DESCRIPTION
1	TITLE SHEET
2	ROAD PLAN
3	ROAD PLAN
4	ROAD PROFILES
5	ROAD PROFILES, DRAIN PROFILES & DETAILS
6	DRAINAGE AREA MAP
7	STORM DRAIN PROFILES AND DETAILS
8	GRADING PLAN
9	GRADING PLAN
10	SEDIMENT CONTROL PLAN
11	SEDIMENT CONTROL PLAN
12	SEDIMENT CONTROL NOTES AND DETAILS
13	LANDSCAPE PLAN

NO.	DATE	REVISION
10-5-95		REVISE WHITTAIL LANE, LOTS 31-35, MODIFY GRADING
4-2-96		EXTEND WHITTAIL LANE, MODIFY LOTS 31-34, REVISE WETLAND MITIGATION PER F-95-28
8-5-96		REVISE WHITTAIL LANE GRADING

TSA GROUP, INC.
planning • architecture • engineering
8400 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-0105

OWNER: JOSEPH M. ZOLLER III 11696 CARROLL MILL ROAD ELLCOTT CITY, MARYLAND 21043	PROJECT: QUARTERFIELD SECTION 2 LOTS 25-38, PARCELS 3A AND 3B
DEVELOPER/OWNER: SDC GROUP, INC. P.O. BOX 417 ELLCOTT CITY, MARYLAND 21041 (410) 465-4244	LOCATION: TAX MAP 23 - PARCELS 5, 8, 82, 101 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE: TITLE SHEET 5-93-17 P-94-03 F-95-28	DATE: SEPTEMBER 14, 1994 MARCH 20, 1995
DES: JME/DRK	DRN: DRK/OBT
SCALE: AS SHOWN	DRAWING 1 OF 13

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

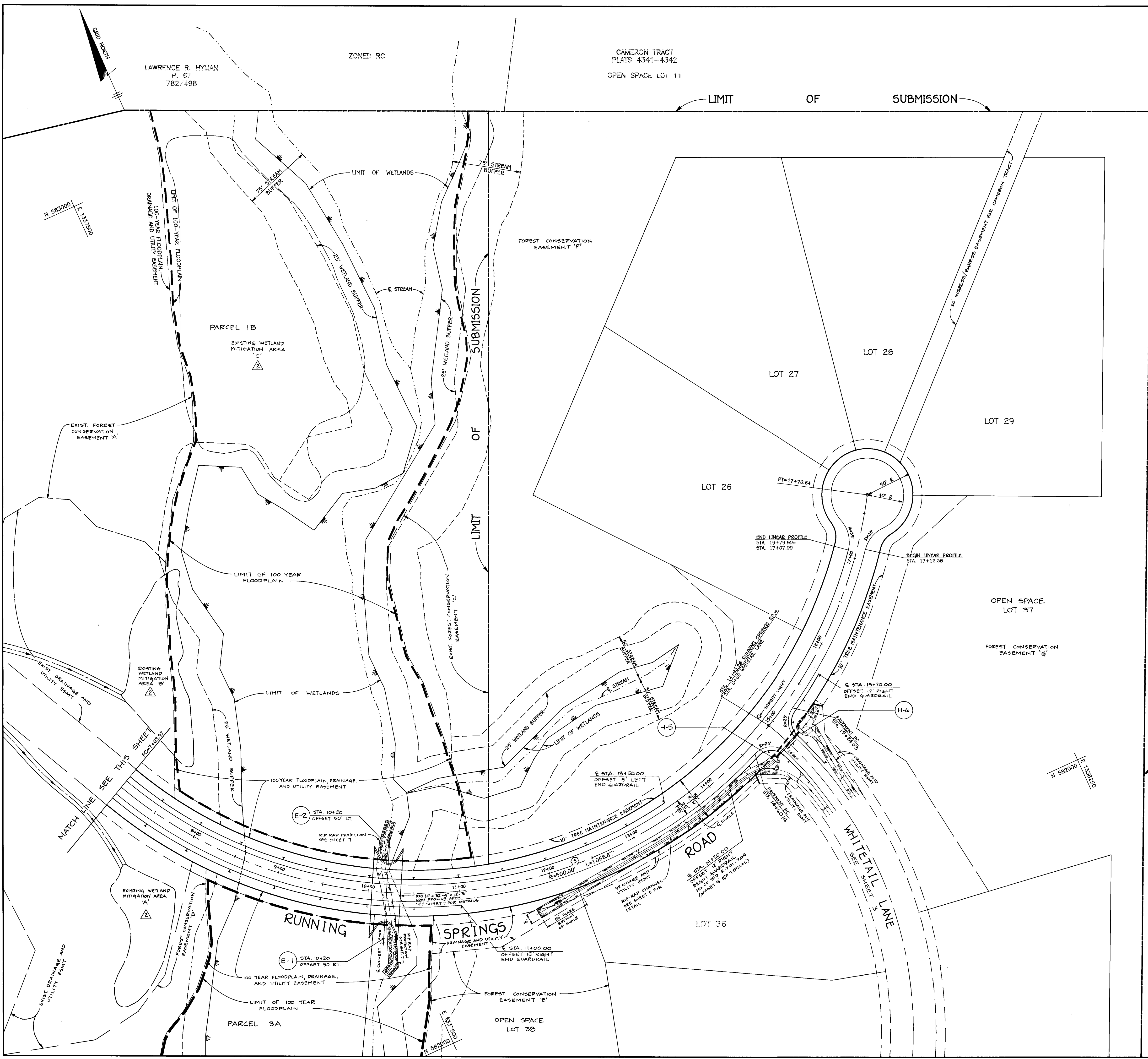
 CHIEF, LAND DEVELOPMENT DIVISION M.K.
 DATE: 6/30/95

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

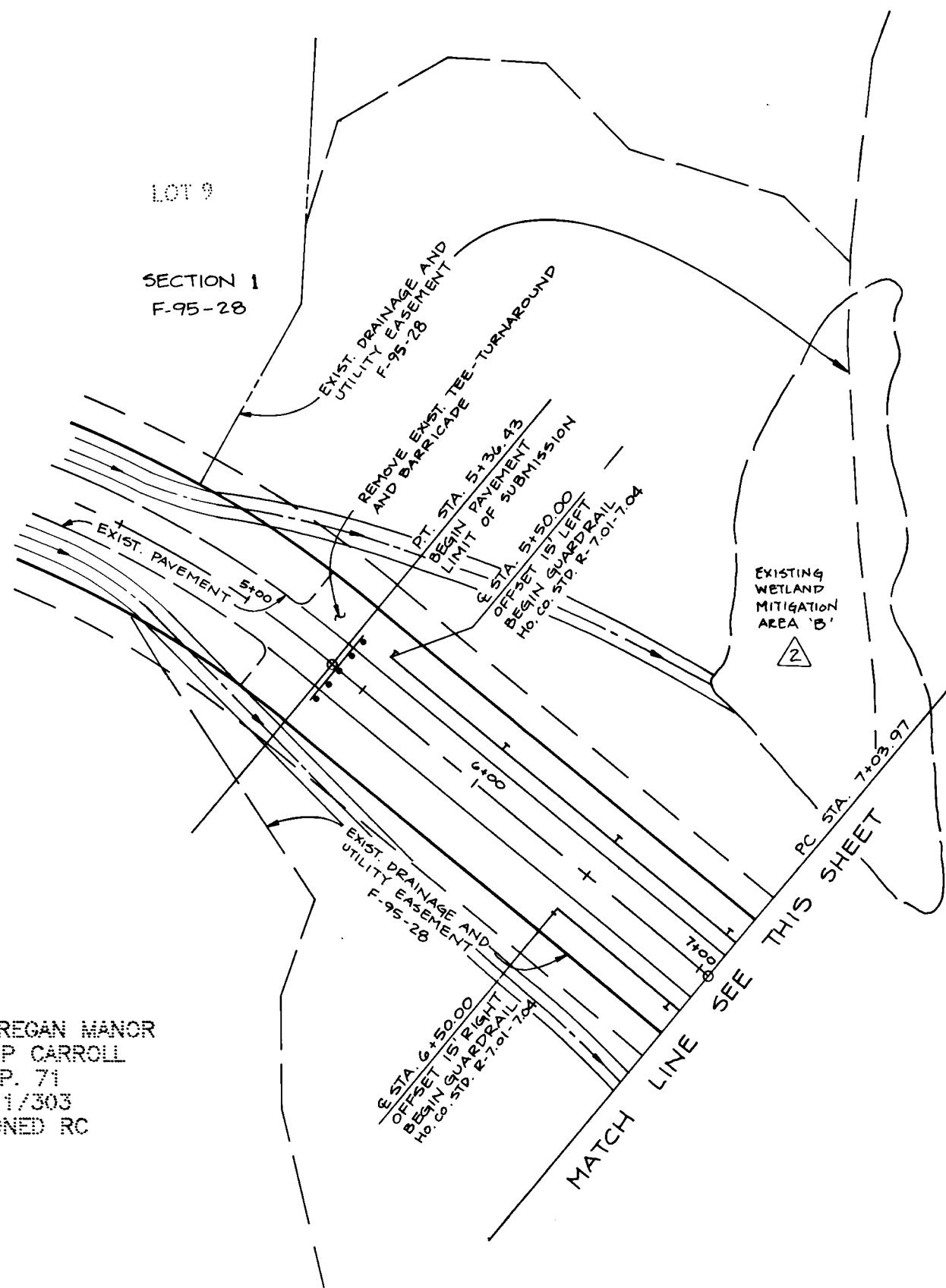
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
 DATE: 7/5/95

PLAN
SCALE: 1" = 200'

1738



STREET LIGHT LEGEND			
ROAD	Q STATION	OFFSET	TYPE
RUNNING SPRINGS ROAD	14+93	15' LEFT	100 WATT HP SODIUM VAPOR TRIPPOLE POST TOP FIXTURE MOUNTED ON 14" BLACK FRIBERGLASS EMBEDDED POLE



DOUGHOREGAN MANOR
 PHILLIP CARROLL
 P. 71
 11/30/3
 ZONED RC

NOTE: SEE SHEET 1 FOR CENTERLINE CONTROL DATA

CENTERLINE CURVE DATA						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
5	500.00'	1066.67'	906.34'	875.60'	S 87°03'40" E	122°13'55"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, LAND DEVELOPMENT DIVISION M.K. *[Signature]* 6/15/95 DATE
 CHIEF, BUREAU OF HIGHWAYS *[Signature]* 6-27-95 DATE
 CHIEF, BUREAU OF ENGINEERING *[Signature]* 6/30/95 DATE

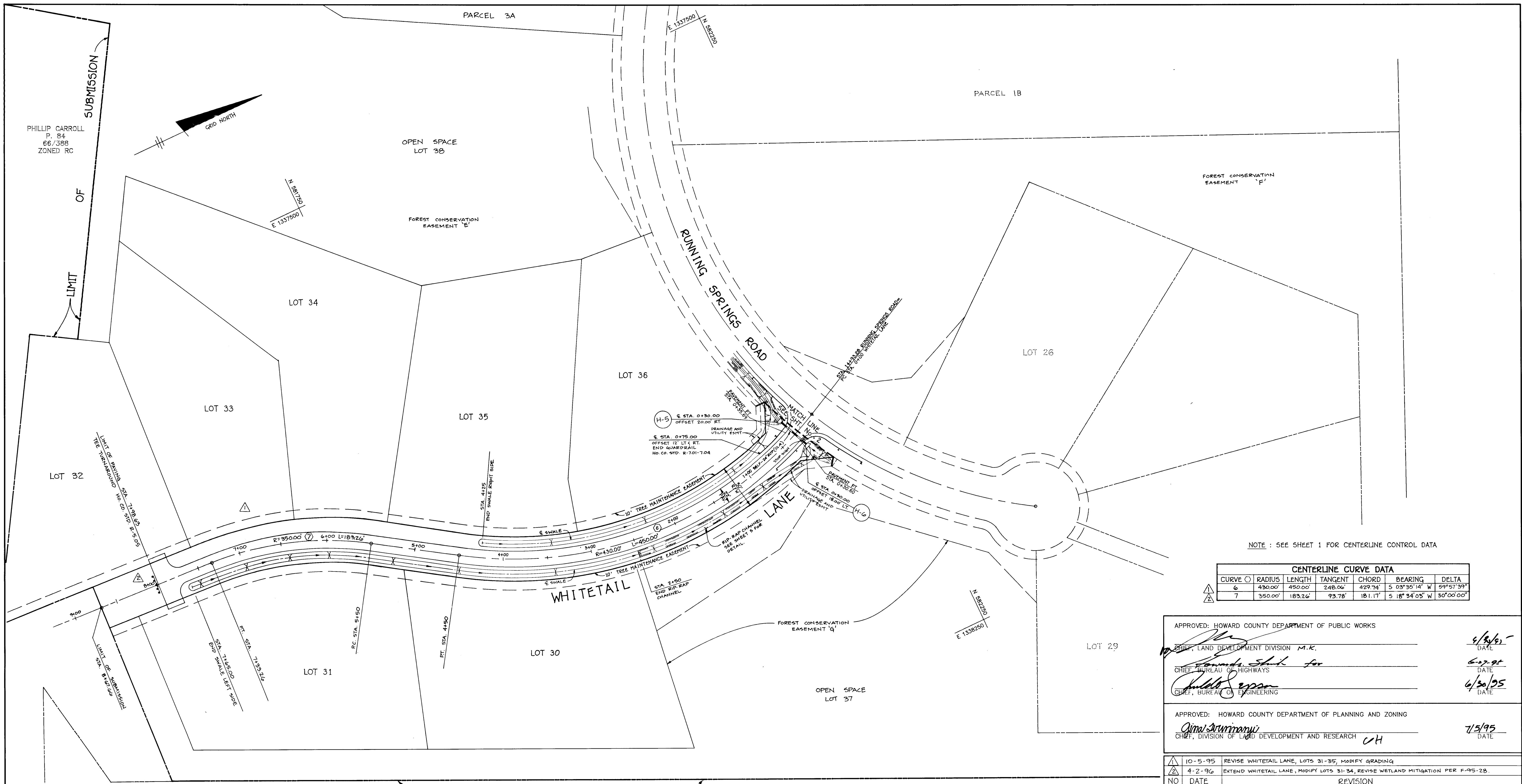
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH *[Signature]* 7/5/95 DATE

NO	DATE	REVISION
1	4-2-96	EXTEND WHITETAIL LANE, MODIFY LOTS 31-34, REVISE WETLAND MITIGATION PER F-95-28.

TSA GROUP, INC.
 planning • architecture • engineering
 8400 Baltimore National Pike • Ellicott City, Maryland 21045 • (410) 465-8105

OWNER: JOSEPH M. ZOLLER III 11696 CARROLL MILL ROAD ELLICOTT CITY, MARYLAND 21043	PROJECT: QUARTERFIELD SECTION 2 LOTS 25-30, PARCELS 2A AND 2B
DEVELOPER/OWNER: SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 (410) 465-4244	LOCATION: TAX MAP 23 - PARCELS 5, 8, 82, 101 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DES: JME/DRK DRN: DRK/DBT	TITLE: ROAD PLAN 5-93-17 P-94-03 F-95-28 DATE: SEPTEMBER 14, 1994 MARCH 20, 1995 PROJECT NO. 0523
SCALE: 1" = 50'	DRAWING 2 OF 13

1738



NOTE: SEE SHEET 1 FOR CENTERLINE CONTROL DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
6	430.00'	450.00'	248.06'	429.74'	S 03°35'14" W	69°57'39"
7	350.00'	183.26'	93.78'	181.17'	S 18°34'03" W	30°00'00"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 _____ DATE: 6/30/95
 CHIEF, LAND DEVELOPMENT DIVISION M.K.
 _____ DATE: 6-27-95
 CHIEF, BUREAU OF HIGHWAYS
 _____ DATE: 6/30/95
 CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 _____ DATE: 7/5/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH CH

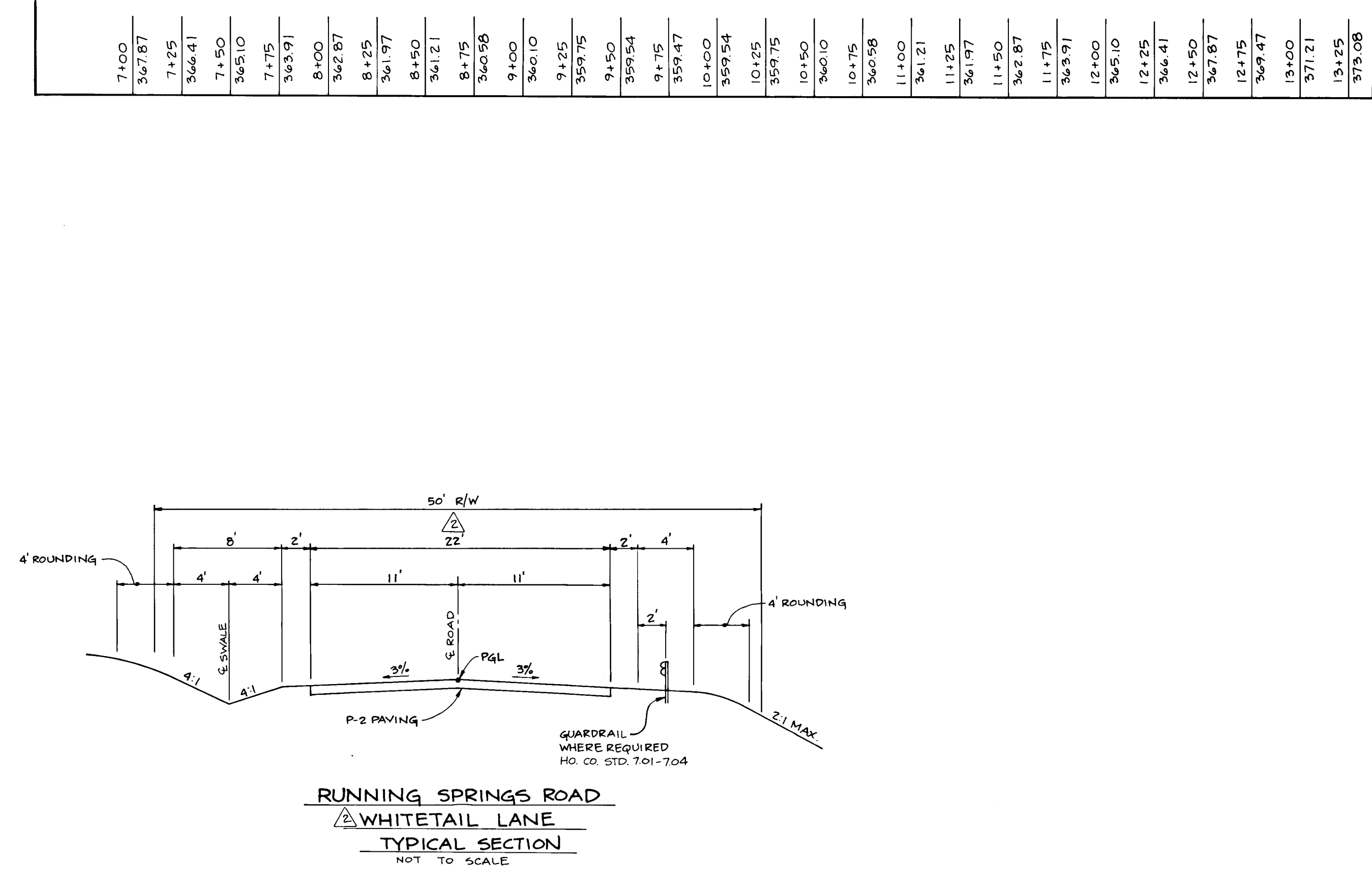
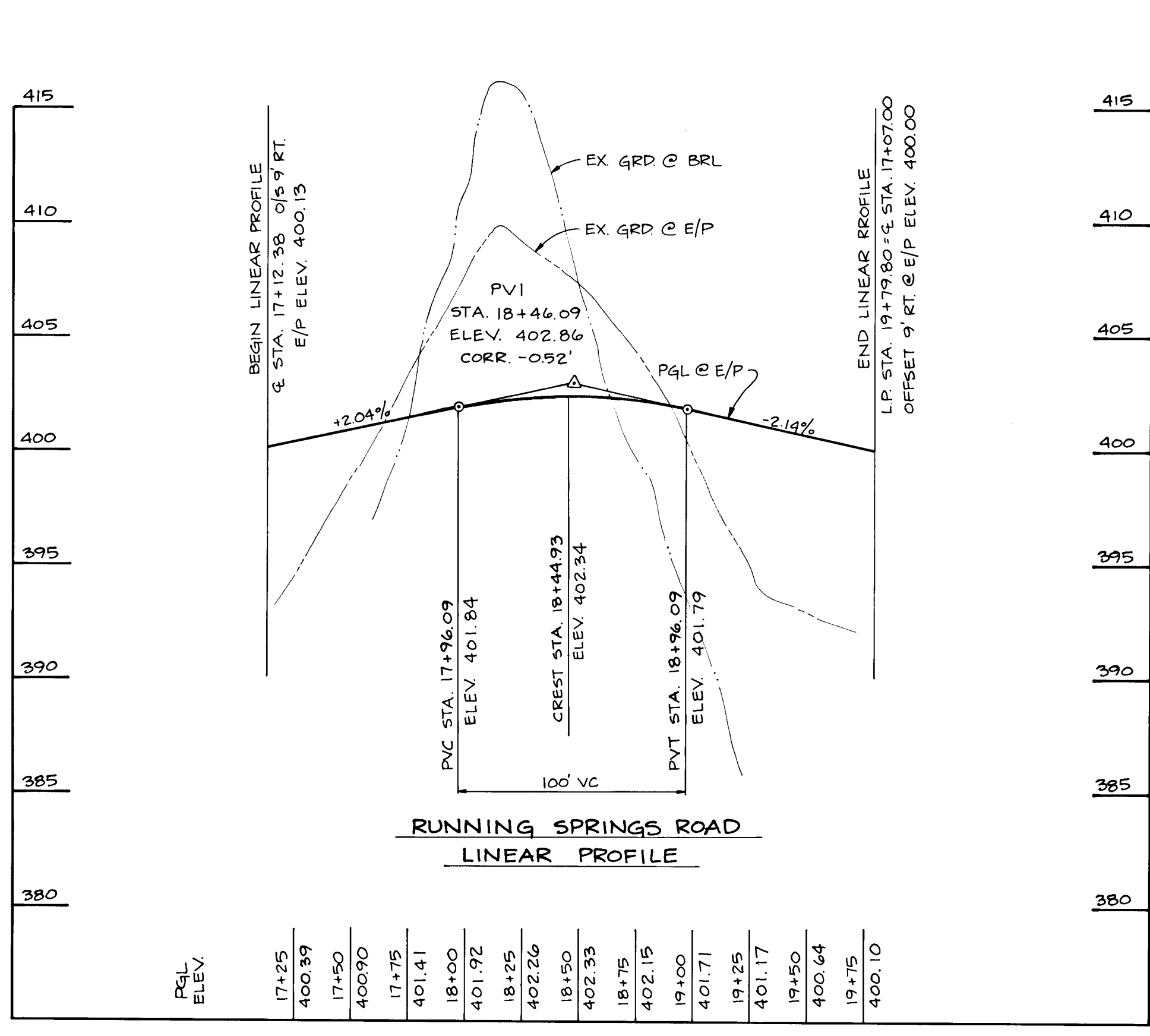
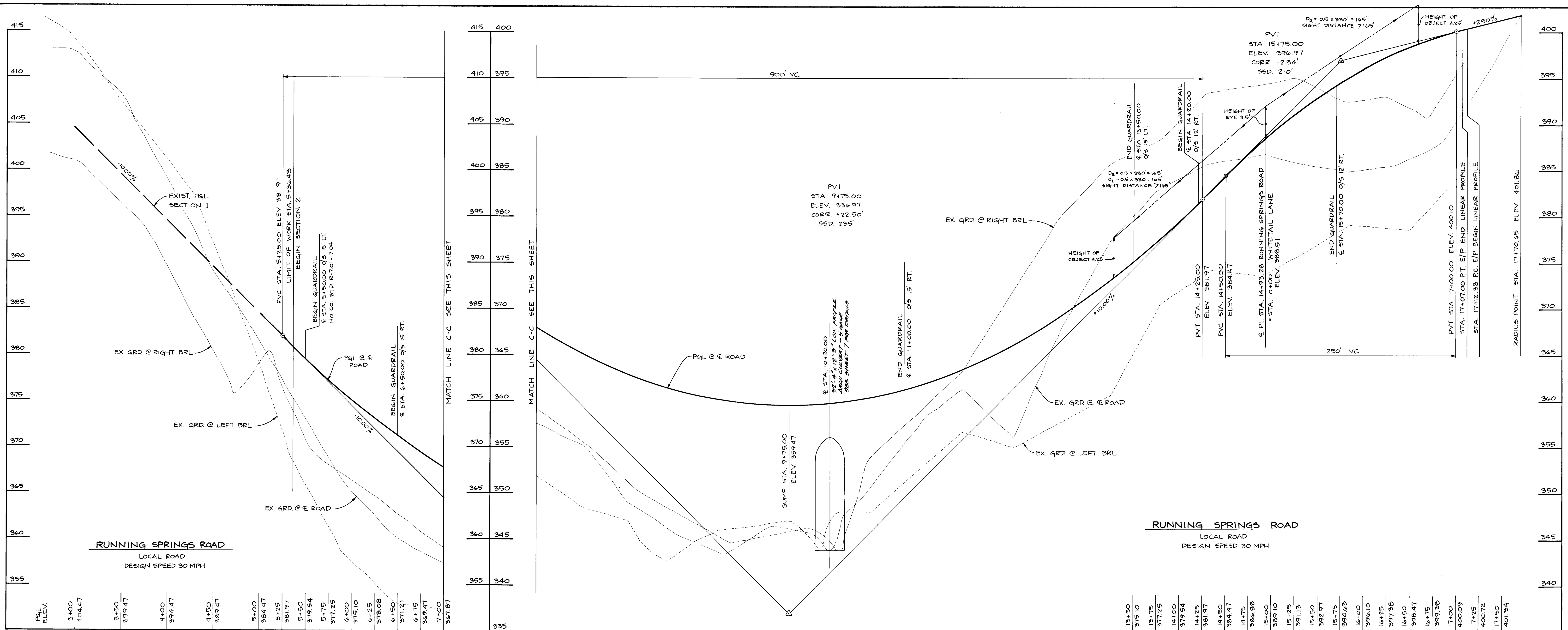
NO	DATE	REVISION
10-5-95		REVISE WHITETAIL LANE, LOTS 31-35, MODIFY GRADING
4-2-96		EXTEND WHITETAIL LANE, MODIFY LOTS 31-34, REVISE WETLAND MITIGATION PER F-95-28

TSA GROUP, INC.
 planning • architecture • engineering
 8400 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-8105

OWNER: JOSEPH M. ZOLLER III 11696 CARROLL MILL ROAD ELLCOTT CITY, MARYLAND 21043	PROJECT: QUARTERFIELD SECTION 2 LOTS 25-30, PARCELS 3A AND 3B
DEVELOPER/OWNER: SDC GROUP, INC. P.O. BOX 417 ELLCOTT CITY, MARYLAND 21041 (410) 465-4244	LOCATION: TAX MAP 23 - PARCELS 5, 8, 02, 101 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE: ROAD PLAN 5-93-17 P-94-03 F-95-28	DATE: SEPTEMBER 14, 1994 MARCH 20, 1995
DES: JME/DRK	DRN: DRK/DBT
SCALE: 1" = 50'	PROJECT NO. 0523 DRAWING 3 OF 13

DOUGHOREGAN MANOR
 PHILLIP CARROLL
 P. 71
 11/303
 ZONED RC

1738



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, LAND DEVELOPMENT DIVISION M.K. DATE 6/30/95
 CHIEF, BUREAU OF HIGHWAYS DATE 6-22-95
 CHIEF, BUREAU OF ENGINEERING DATE 6/30/95

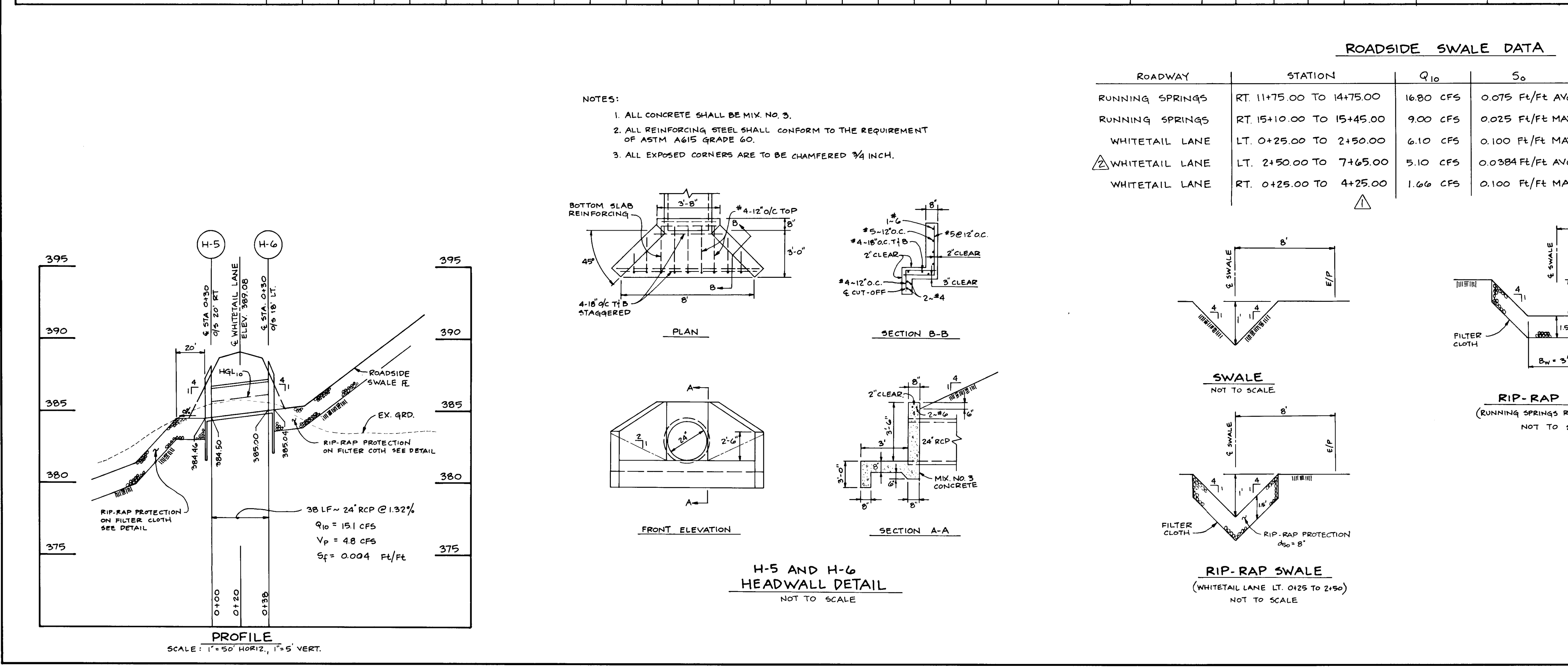
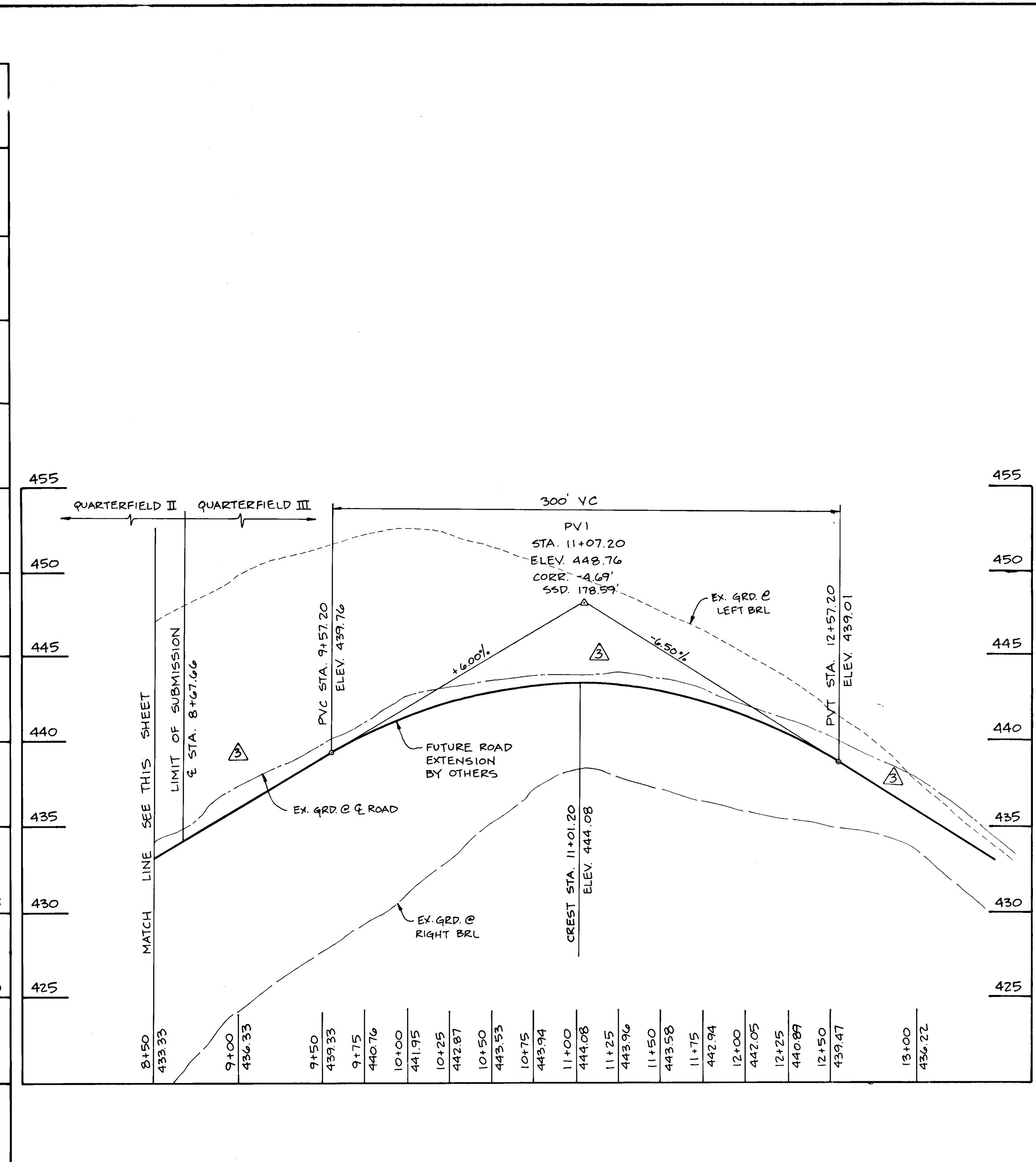
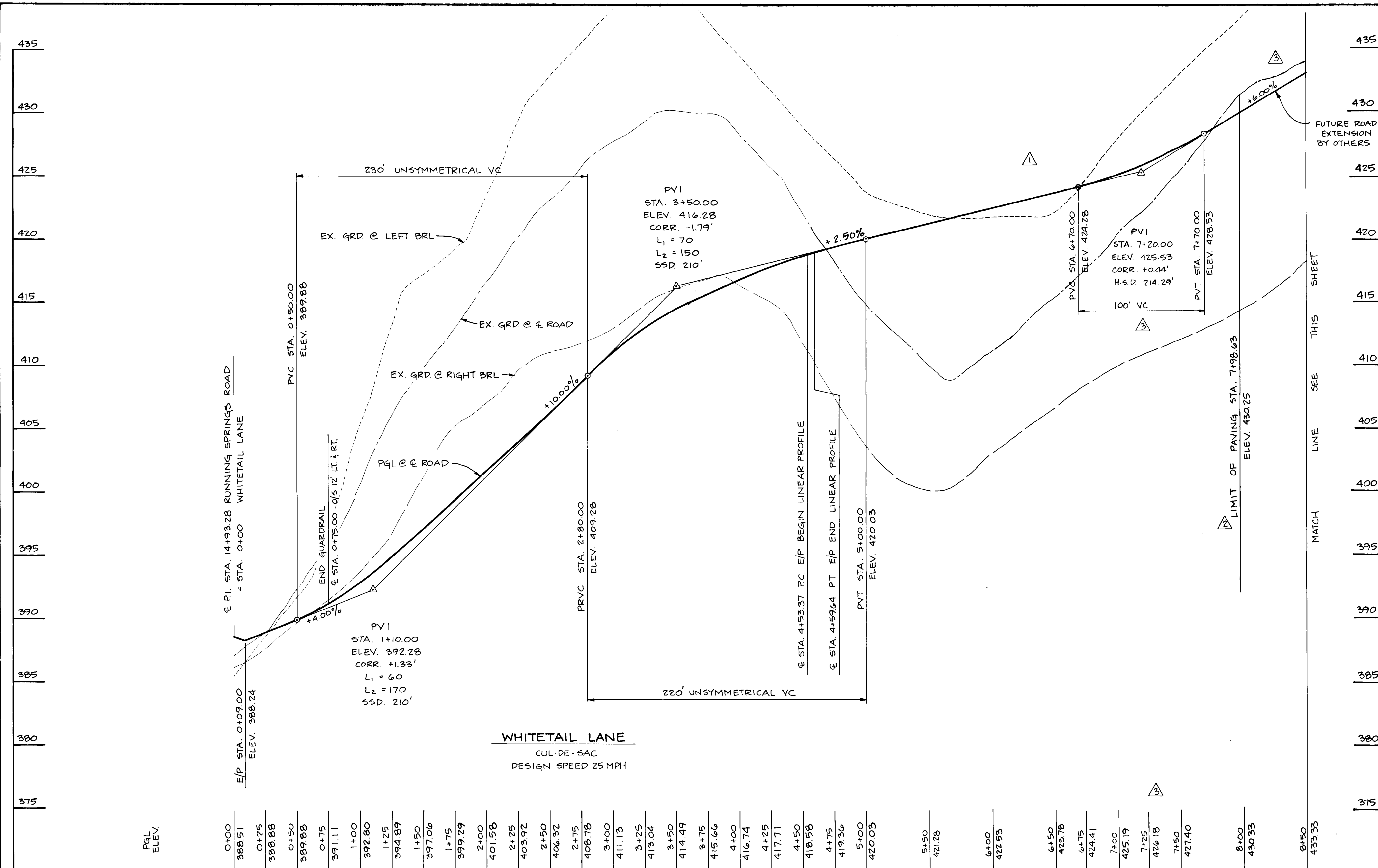
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH COH DATE 7/3/95

NO	DATE	REVISION
4-2-96		EXTEND WHITETAIL LANE, MODIFY LOTS 31-34, REVISE WETLAND MITIGATION PER F-95-28

TSA GROUP, INC.
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OWNER:	PROJECT:
JOSEPH M. ZOLLER III 11696 CARROLL MILL ROAD ELICOTT CITY, MARYLAND 21043	QUARTERFIELD SECTION 2 LOTS 25-38 PARCELS 9A AND 9B
DEVELOPER/OWNER:	LOCATION:
SDC GROUP, INC. P.O. BOX 417 ELICOTT CITY, MARYLAND 21041 (410) 465-4244	TAX MAP 23 - PARCELS 5, 8, 82, 101 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE:	DATE:
ROAD PROFILES	SEPTEMBER 14, 1994 MARCH 20, 1995
DES: JME	DRN: DRK/DBT
SCALE: 1" = 50' HORIZ. 1" = 5' VERT.	PROJECT NO. 0523 DRAWING 4 OF 13

173B



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, LAND DEVELOPMENT DIVISION M.K.
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH COH

10-5-95 REVISE WHITETAIL LANE, LOTS 31-35, MODIFY GRADING
 4-2-96 EXTEND WHITETAIL LANE, MODIFY LOTS 31-34, REVISE WETLAND MITIGATION PER F-95-28
 8-5-96 REVISE WHITETAIL LANE PROFILE FROM STA. 6+70 TO END

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 planning • architecture • engineering
 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6100

OWNER:	PROJECT:
JOSEPH M. ZOLLER III 11696 CARROLL MILL ROAD ELLICOTT CITY, MARYLAND 21043	QUARTERFIELD SECTION 2 LOTS 25-30, PARCELS 3A AND 3B
DEVELOPER/OWNER:	LOCATION:
SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 (410) 465-4244	TAX MAP 23 - PARCELS 5, 8, 82, 101 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE:	TITLE:
SEPTEMBER 14, 1994 MARCH 20, 1995	ROAD PROFILES DRAIN PROFILES AND DETAILS
DES: JME	PROJECT NO. 0523
DRN: DRK/DBT	SCALE: 1" = 50' HORIZ. 1" = 5' VERT.
	DRAWING 5 OF 13

173B



173B

STORM DRAINAGE DATA						
PT	AREA	C	Tc	Q10	Q10	REMARKS
6A	4.34 AC.	0.22	11 MIN.	6.4 M/HR	611 CFS	ROADSIDE SWALE
6B	6.38 AC.	0.22	11 MIN.	6.4 M/HR	898 CFS	ROADSIDE SWALE
H-6	10.72 AC.	0.22	11 MIN.	6.4 M/HR	1509 CFS	CULVERT
7A	0.50 AC.	0.39	5 MIN.	8.5 M/HR	166 CFS	ROADSIDE SWALE
7B	12.32 AC.	0.22	12 MIN.	6.2 M/HR	1680 CFS	ROADSIDE SWALE
6C	3.60 AC.	0.22	11 MIN.	6.4 M/HR	510 CFS	ROADSIDE SWALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, STORM DEVELOPMENT DIVISION M.K.
 DATE: 6/30/95
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, PLANNING AND ZONING DIVISION
 DATE: 7/5/95

NO	DATE	REVISION
1	10-5-95	REVISE WHITETAIL LANE, LOTS 31-35, MODIFY GRADING
2	4-2-96	EXTEND WHITETAIL LANE, MODIFY LOTS 31-34, REVISE WETLAND MITIGATION PER F-95-28

TSA GROUP, INC.
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 8400 Baltimore National Pike • Elliott City, Maryland 21043 • (410) 465-8105

OWNER: JOSEPH M. ZOLLER III
 11696 CARROLL MILL ROAD
 ELLICOTT CITY, MARYLAND 21043

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

PROJECT: QUARTERFIELD
 SECTION 2
 LOTS 25-38, PARCELS 2A AND 2B

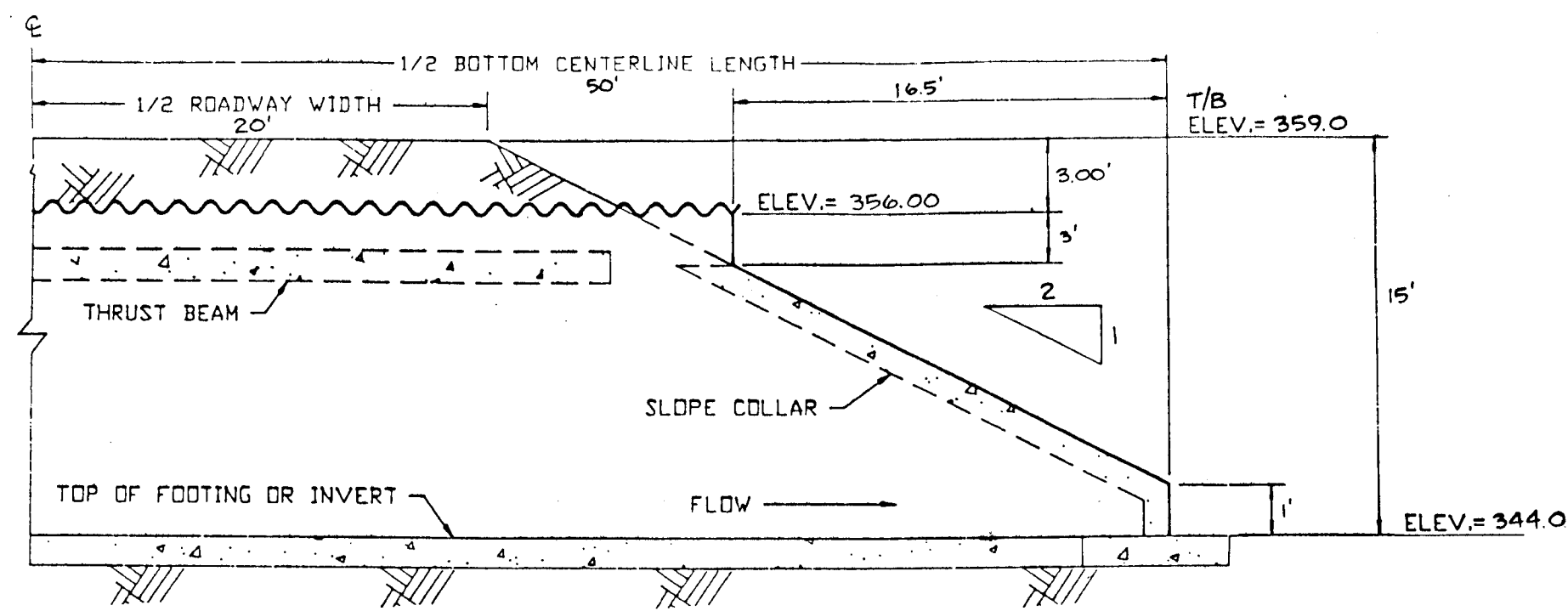
LOCATION: TAX MAP 23 - PARCELS 5, 8, 82, 101
 3rd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: DRAINAGE AREA MAP
 5-93-17 P-91-03 F-95-28

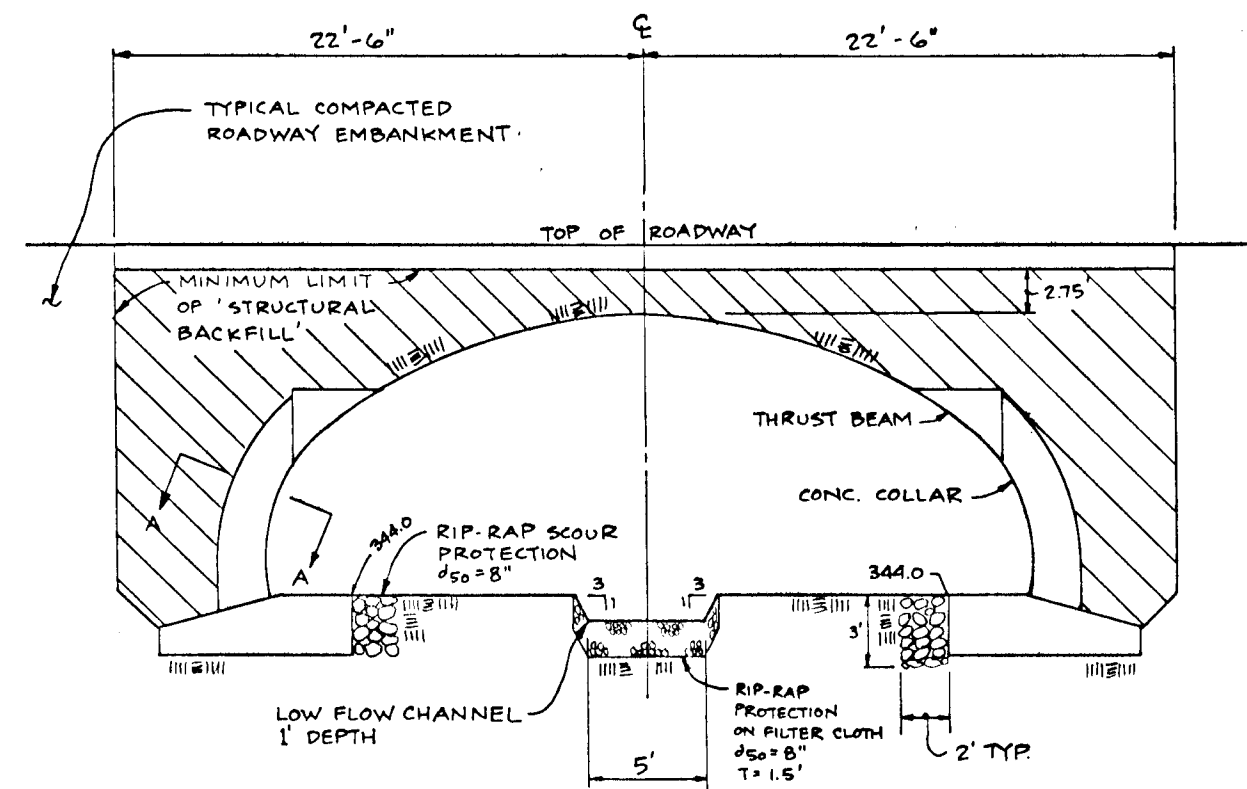
DATE: SEPTEMBER 14, 1994
 MARCH 20, 1995

PROJECT NO. 05-53
 DRAWING 6 OF 13

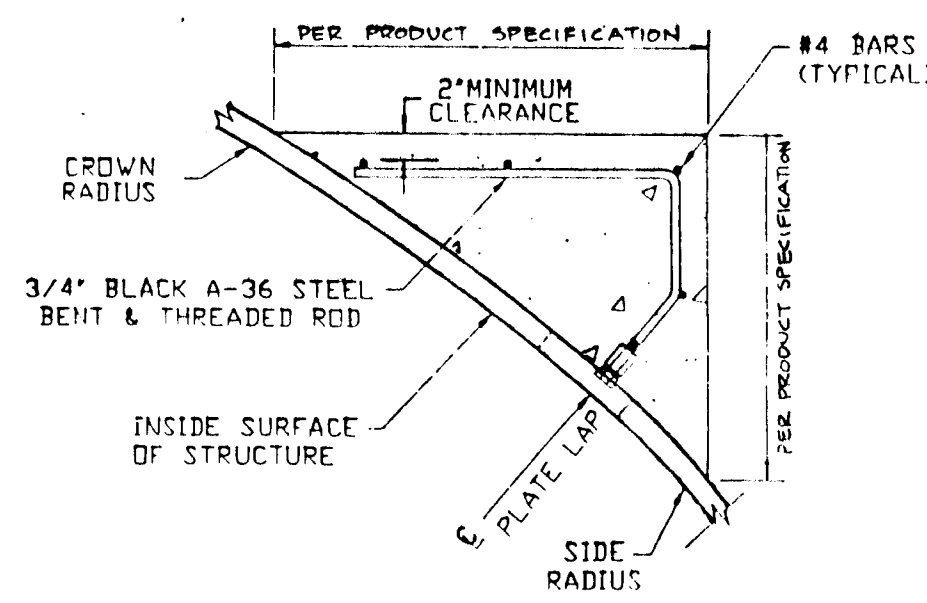
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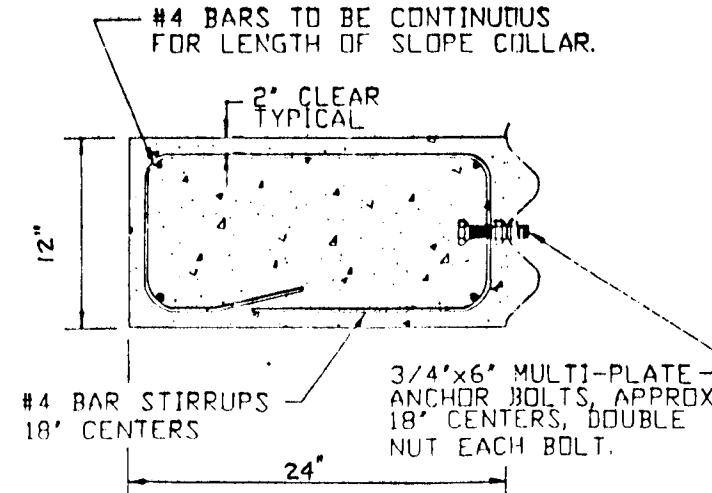
LONGITUDINAL SECTION THROUGH OF STRUCTURE (ARCH SHOWN)
NOT TO SCALE



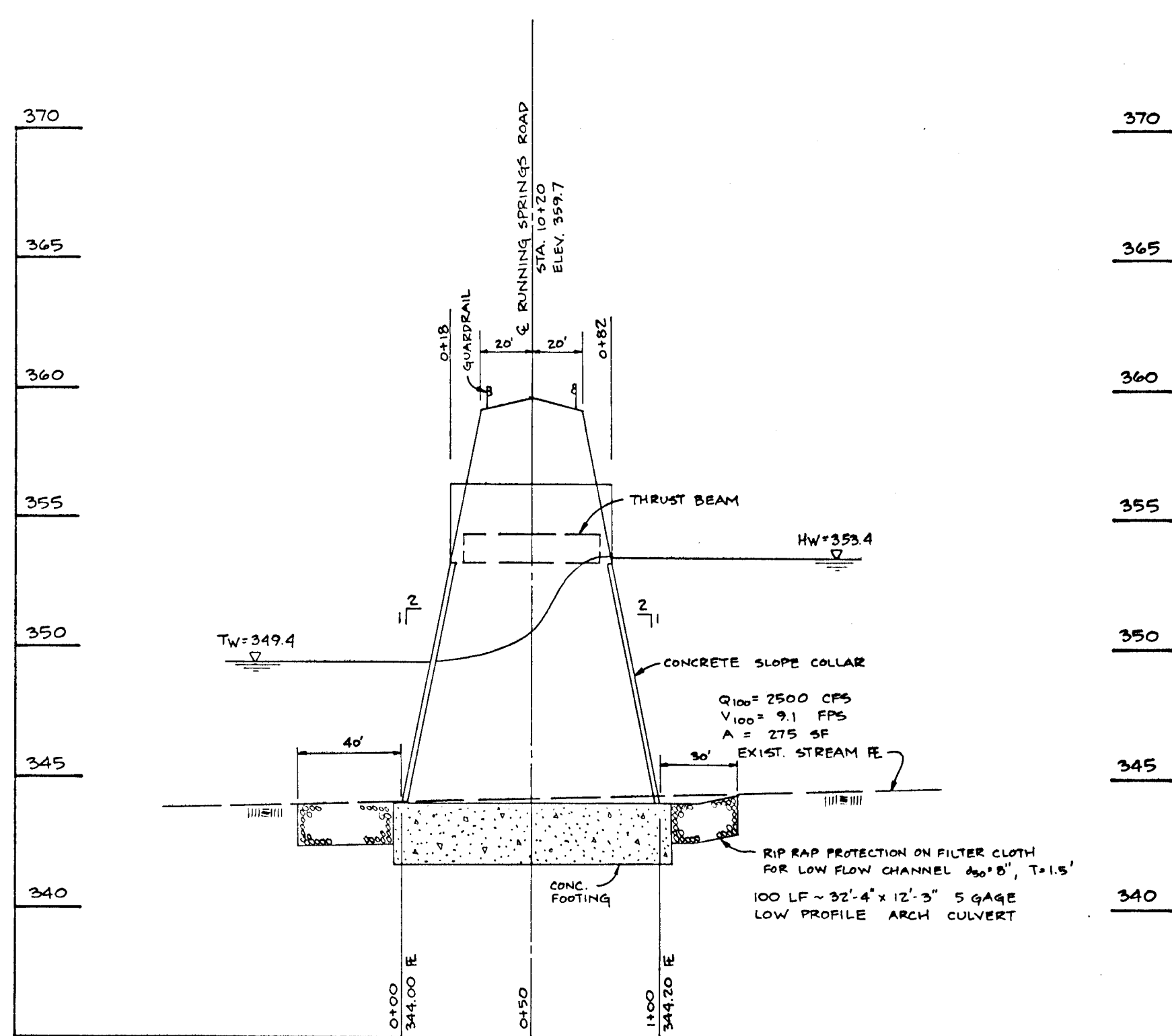
CROSS SECTION
SCALE: 1/8" = 1'-0"



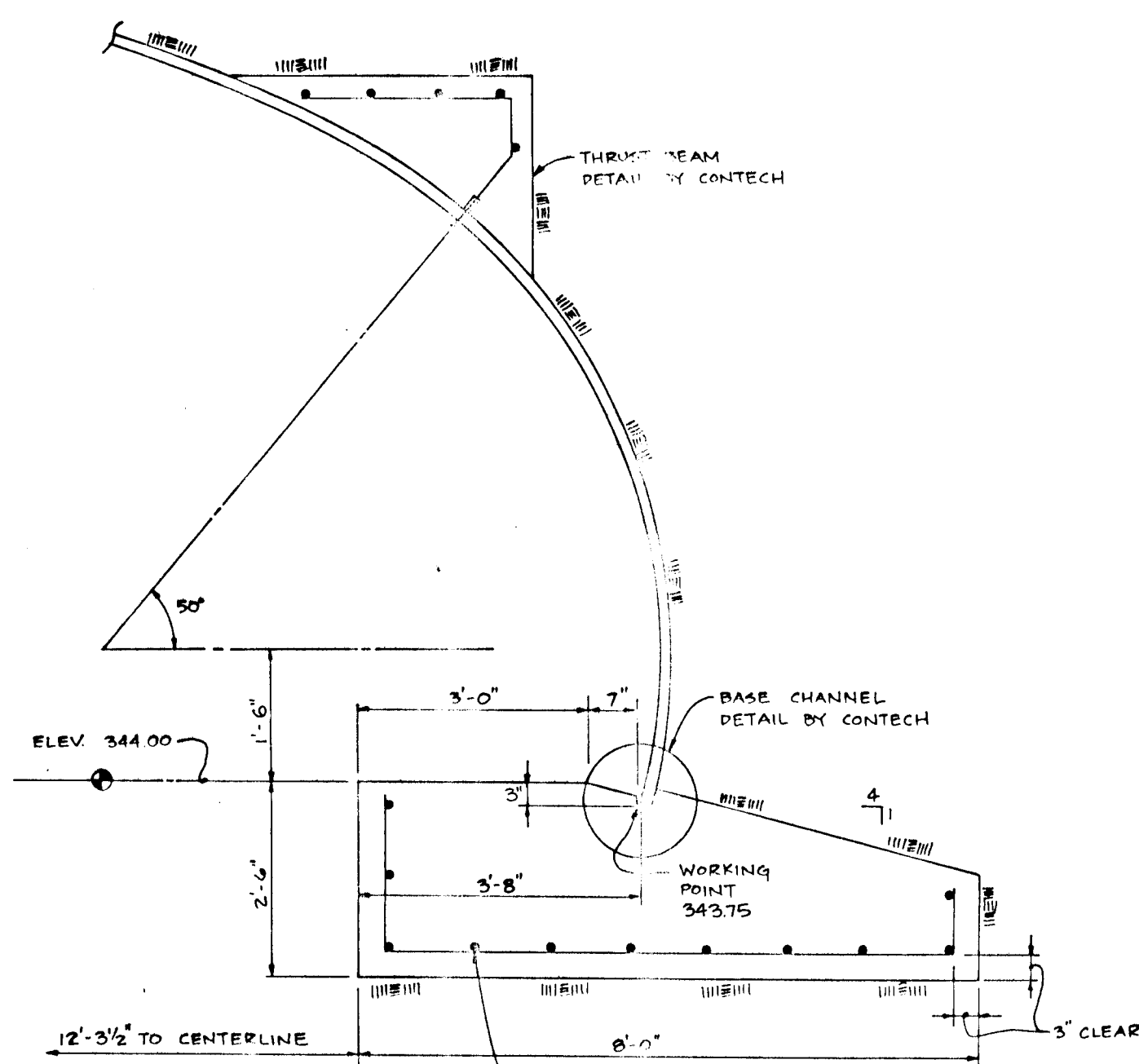
THRUST BEAM DETAIL
NOT TO SCALE



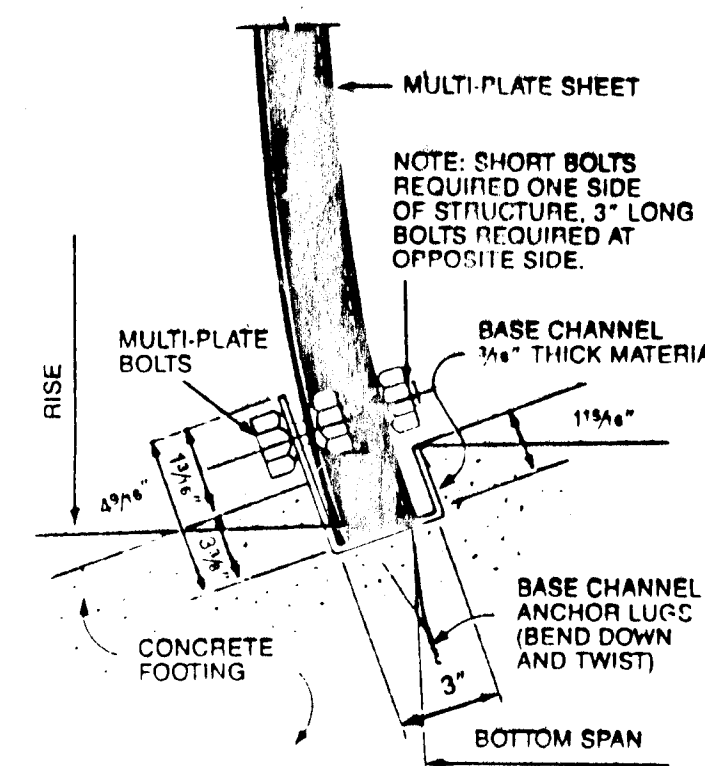
SECTION A-A
TYPICAL SLOPE COLLAR
NOT TO SCALE



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



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



BASE CHANNEL DETAIL
NOT TO SCALE

NOTE: LOW PROFILE ARCH CULVERT PRODUCT SPECIFICATIONS BASED ON CONTECH CONSTRUCTION PRODUCTS, INC. STRUCTURE NO. 11A-90. CONTRACTOR TO COORDINATE DIMENSIONS WITH MANUFACTURER.

STRUCTURAL NOTES

- CONCRETE:
- ALL CONCRETE SHALL DEVELOP COMPRESSIVE STRENGTH OF 3,500 PSI IN 28 DAYS. SLOPE COLLAR CONCRETE SHALL HAVE 5% AIR ENTRAINMENT.
 - CONCRETE WORK SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, A.C.I. 318, BY THE AMERICAN CONCRETE INSTITUTE, LATEST EDITION.
 - REINFORCING STEEL SHALL BE ASTM A 615 GRADE 60 FOR FOOTINGS AND GRADE 40 FOR THRUST BEAM AND SLOPE COLLAR.
 - PROVIDE SPACERS, CHAIRS AND TIES AS REQUIRED TO SUPPORT REINFORCING IN POSITION.
 - CONTINUOUS REINFORCING SHALL BE LAPPED A MINIMUM OF 36 BAR DIAMETERS AT SPICES.
 - PROVIDE 3/4" CHAMFER AT EXPOSED EDGES.
- FOUNDATIONS AND EARTH WORK:
- FOOTINGS ARE DESIGNED FOR AN ALLOWABLE NET BEARING CAPACITY OF 3000 PSF.
 - BOTTOM OF FOOTINGS SHALL BE 2'-6" MINIMUM BELOW FINISH GRADE.
 - THE CONTRACTOR SHALL RETAIN THE SERVICES OF A GEOTECHNICAL ENGINEER TO MONITOR FILL OPERATION AND TO INSPECT AND CERTIFY THE BEARING CAPACITY OF THE SOIL PRIOR TO POURING FOOTINGS.
 - STRUCTURAL BACKFILL SHALL BE AASHTO M-145 GROUP CLASSIFICATION A-1. BACKFILL SHALL BE PLACED ACCORDING TO CONTECH RECOMMENDATIONS, ATTACHED.

STRUCTURAL BACKFILL

A granular type of material shall be used around and over the structure. This select structural backfill material shall conform to one of the following classifications of soil from AASHTO Specification M-145, as modified in the following table for A-1, A-2.4 or A-2.5. Maximum particle size shall not exceed 3 inches. For the A-2 materials, moisture content must be between -3% to +2% optimum as defined by AASHTO T-180. All soil classifications are limited in height of cover and structure shape applications as indicated in the structure suitability section below.

STRUCTURE SUITABILITY

- A-1-a material is recommended for all long span shapes, sizes and fill heights.
- A-1-b material is recommended for use with high profile arch and pear shape structures to a 12' maximum fill height.
- A-1-b material is recommended for use with elliptical and low profile arch structures to a 20' maximum fill height.
- A-2.4 and A-2.5 materials are restricted to maximum heights of cover of 12'. These materials are not allowed for use with pear, arch and high profile arches with more than 30 pi in the side arc.

Other backfill materials which provide equivalent structural properties, long term, in the environmental conditions expected (saturation, freeze-thaw, etc.) may be used. Such materials shall be approved only after thorough investigation and testing by a Soil Engineer familiar with the requirements for structural backfill of long span structures.

AASHTO M-145 - TABLE 2 (MODIFIED)

GROUP CLASSIFICATION	A-1		A-2 (Modified)	
	A-1-a	A-1-b	A-2.4	A-2.5
SIEVE ANALYSIS, PERCENT PASSING:				
NO. 10 (2.00 mm)	50 MAX.	---	---	---
NO. 40 (0.425 mm)	30 MAX.	50 MAX.	---	---
NO. 100 (0.150 mm)	18 MAX.	25 MAX.	50 MAX.	50 MAX.
NO. 200 (0.075 mm)	8 MAX.	10 MAX.	25 MAX.	25 MAX.
CHARACTERISTICS OF FRACTION PASSING NO. 40 (0.425 mm)				
Liquid Limit	---	---	20 MAX.	41 MAX.
Plasticity Index	---	---	10 MAX.	10 MAX.
USUAL TYPES OF SIGNIFICANT CONSTITUENT MATERIALS	STONE FRAGMENTS GRAVEL AND SAND		SILTY OR CLAYEY GRAVEL AND SAND	

SPECIFICATION LONG SPAN STEEL PLATE STRUCTURES

GENERAL DESCRIPTION

The long span structural steel plate structure, conforming to the dimensions shown on the plans and specifications, shall be installed at the location designated. The design and installation shall conform to AASHTO Standard Specifications for Highway Bridges, Division I, "Self-Compacted Metal Structure Interaction Systems", Section 12.7, "Long Span Structural Plate Structures", and Division II, Section 28, "Metal Culverts" and Division II, Section 8, "Concrete Structures".

MATERIALS

The galvanized structural steel plate shall have 8" x 2" corrugations and shall be of the 42" as shown on the plans. The plates shall be manufactured in conformance with AASHTO Specification M 187. Bolts and nuts shall meet the provisions of ASTM A 449 and ASTM A 853, Grade C, respectively, and shall be galvanized in accordance with the requirements of ASTM A 153, Class C. The steel anchor bolts shall conform to ASTM A-307, Grade A.

LONGITUDINAL STRUCTURAL STIFFENERS (THRUST BEAMS)

Longitudinal stiffeners shall be located at the critical buckling area outside the longitudinal bolt beam which connects the structure's top and side arcs. The thrust beams shall consist of reinforced concrete conforming to Division II, Section 8, Class B of the AASHTO Standard Specifications for Highway Bridges having a minimum compressive strength of 2400 psi. Reinforcing steel shall conform to ASTM A 615, Grade 40, having a minimum yield strength of 40,000 psi. Thrust beams shall be formed and poured conforming to the plan dimensions when the backfill reaches the bottom elevation of the thrust beams.

DESIGN

The long span structure shall be designed in accordance with the latest AASHTO design criteria and shall be required to incorporate the use of continuous longitudinal structural stiffeners (concrete thrust beams). The seller of the material shall be a qualified manufacturer of structural steel plate and long span structures with a minimum of 50 successful installations. The foundation, structural backfill and end treatment shall be as required herein and detailed on the plans.

ADDITIONAL REQUIREMENTS

- Materials must be dense graded (open graded or gap graded materials are not allowed).
- Fine beach sands, windblown sands, stream deposited sands exhibiting fins, rounded particles and typically classified by AASHTO M-145 as A-3 materials are not allowed.
- On site mixing or blending to achieve specified gradation is not allowed.

BACKFILL ENVELOPE LIMITS

The backfill envelope limits are as detailed on the plans.

BACKFILL PLACEMENT

Approved backfill material shall be placed in horizontal, uniform layers not exceeding 8" in thickness, before compaction, and shall be brought up uniformly on both sides of the structure. Each layer of backfill shall be compacted to a relative density of not less than 90%, modified proctor per AASHTO Test Method No. T-180. Field density tests of compacted backfill will be made at regular intervals during backfill. Compaction equipment or methods that produce horizontal or vertical earth pressure which cause excessive distortion or damage to structures shall not be used.

Before backfilling, the erected structure shall be within 2% of the design shape.

STRUCTURE ERECTION

The structure shall be erected in strict accordance with the manufacturer's instructions and to the design shape shown on the plans. Plates shall be assembled according to plate assembly drawings supplied by the manufacturer.

INSPECTION

The manufacturer shall provide an Inspector who is a qualified representative from a professional soils firm. The inspector shall take initial measurements of the erected structure before backfilling, monitor all backfill materials and the placement and compaction thereof. The inspector shall monitor the structure's shape throughout the backfilling operation. The engineer shall provide field density tests of the compacted backfill as directed by the inspector. The inspector shall have full authority to stop backfill work if necessary. Upon completion of the long span installation, the manufacturer shall provide certification of proper installation.

PRECONSTRUCTION CONFERENCE

Prior to construction, a meeting will be held to review the construction procedures. A qualified representative of the manufacturer of the structure will be present to discuss methods and responsibility for shape monitoring and control, backfill material selection, testing and placement, and compaction methods and testing. A representative of the Engineer, Prime Contractor, and any involved Sub-Contractors must be present.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION M.K. 6/28/95
DATE

CHIEF, BUREAU OF HIGHWAYS 6-27-95
DATE

CHIEF, BUREAU OF ENGINEERING 6/30/95
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH COH 7/5/95
DATE

NO.	DATE	REVISION

TSA GROUP, INC.
planning • architecture • engineering
8400 Baltimore National Pike • Ellicott City, Maryland 21045 • (410) 465-8106

OWNER: JOSEPH M. ZOLLER III
11696 CARROLL MILL ROAD
ELLCOTT CITY, MARYLAND 21043

DEVELOPER/OWNER: SOC GROUP, INC.
P.O. BOX 417
ELLCOTT CITY, MARYLAND 21041
(410) 465-4244

PROJECT: QUARTERFIELD SECTION 2
LOTS 25-38, PARCELS 3A AND 3B

LOCATION: TAX MAP 23 - PARCELS 5, 8, 82, 101
3rd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN PROFILES AND DETAILS
5-93-17 P-94-03 F-95-28

DATE: SEPTEMBER 14, 1994
MARCH 20, 1995

PROJECT NO. 0523

DES: JMR. DRN: DRK/DAT

SCALE: AS SHOWN

DRAWING 7 OF 12



LAWRENCE R. HYMAN
P. 67
782/488

CAMERON TRACT
PLATS 4341-4342
OPEN SPACE LOT 11

DOUGHOREGAN MANOR
PHILLIP CARROLL
P. 71
11/303
ZONED RC

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>James R. Moxley Jr.</i>	9-13-94
DEVELOPER - JAMES R. MOXLEY JR. PRESIDENT - SDC GROUP, INC.	DATE
BY THE ENGINEER:	
*I/WE 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>John M. Elorriaga</i>	9/15/94
ENGINEER - JOHN M. ELORRIAGA, P.E. # 16891	DATE
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR ALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.	
<i>John R. Robertson</i>	5/4/95
U.S. SOIL CONSERVATION SERVICE	DATE
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>John R. Robertson</i>	5/4/95
HOWARD SOIL CONSERVATION DISTRICT	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>M.K.</i>	6/8/95
CHIEF, LAND DEVELOPMENT DIVISION	DATE
<i>Donald S. Shick Jr.</i>	6-27-95
CHIEF, BUREAU OF HIGHWAYS	DATE
<i>Paul D. Eason</i>	6/30/95
CHIEF, BUREAU OF ENGINEERING	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>Jim Drummond</i>	7/5/95
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	DATE

4-2-96	EXTEND WHITETAIL LANE, MODIFY LOTS 31-34, REVISE WETLAND MITIGATION PER F-95-26
NO DATE	REVISION

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-8105

John M. Elorriaga

OWNER:	PROJECT:
JOSEPH M. ZOLLER III 11696 CARROLL MILL ROAD ELLCOTT CITY, MARYLAND 21043	QUARTERFIELD SECTION 2 LOTS 25-36, PARCELS 3A AND 3B
DEVELOPER/OWNER:	LOCATION:
SDC GROUP, INC. P.O. BOX 417 ELLCOTT CITY, MARYLAND 21041 (410) 465-4244	TAX MAP 23 - PARCELS 5, 8, 82, 101 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE:	DATE:
GRADING PLAN S-93-17 P-94-03 F-95-26	SEPTEMBER 14, 1994 MARCH 20, 1995
DES: JME	DRN: DRK/DBT
SCALE: 1" = 50'	PROJECT NO. 0523 DRAWING 8 OF 13

1738



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."
James R. Moxley Jr. 9-14-94
 DEVELOPER - JAMES R. MOXLEY JR. DATE
 PRESIDENT - SDC GROUP, INC.

BY THE ENGINEER:
 "I/WE 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."
John M. Elorriaga 9/16/94
 ENGINEER - JOHN M. ELORRIAGA, P.E. # 16891 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
John R. Robertson 5/14/95
 U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson 5/14/95
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
M.K. 6/26/95
 CHIEF, LAND DEVELOPMENT DIVISION M.K. DATE
James Schick for 6-27-95
 CHIEF, BUREAU OF HIGHWAYS DATE
Richard Spon 6/28/95
 CHIEF, BUREAU OF ENGINEERING DATE

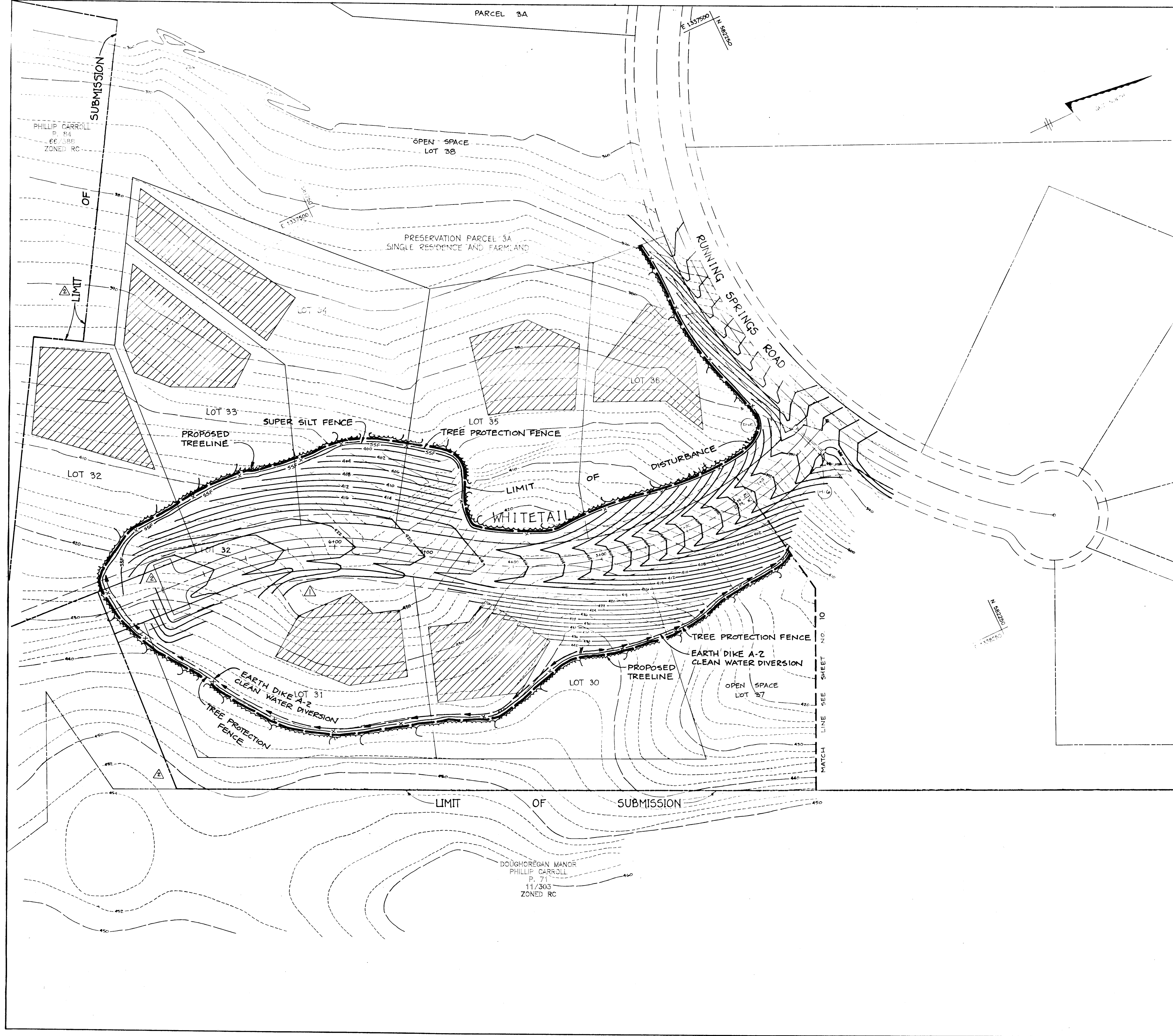
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Ann Drummond 7/5/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH LKH DATE

NO	DATE	REVISION
10-5-95		REVISE WHITETAIL LANE, LOTS 31-35, MODIFY GRADING
8-5-96		REVISE WHITETAIL LANE GRADING

TSA GROUP, INC.
 planning • architecture • engineering
 8400 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-8105
John Schick

OWNER: JOSEPH M. ZOLLER III 11696 CARROLL MILL ROAD ELLCOTT CITY, MARYLAND 21043	PROJECT: QUARTERFIELD SECTION 2 LOTS 25-38, PARCELS 3A AND 3B
DEVELOPER/OWNER: SDC GROUP, INC. P.O. BOX 417 ELLCOTT CITY, MARYLAND 21041 (410) 465-4244	LOCATION: TAX MAP 23 - PARCELS 5, 8, 82, 101 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DES: JME DRN: DRK/DBT	TITLE: GRADING PLAN 5-93-17 P-94-03 F-95-28
DATE: SEPTEMBER 14, 1994 MARCH 22, 1995	PROJECT NO. 0523
SCALE: 1" = 50'	DRAWING 9 OF 13

1738



BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE AS SHOWN ON 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.
James R. Moxley Jr. 9/13/95
 DEVELOPER - JAMES R. MOXLEY JR. DATE
 PRESIDENT - SDC GROUP, INC.

BY THE ENGINEER:
 I/WE 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.
John M. Elorriaga 5/14/95
 ENGINEER - JOHN M. ELORRIAGA, P.E. # 16891 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
Patricia Lef 5/19/95
 U.S. DEPARTMENT OF AGRICULTURE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
John B. Robertson 5/14/95
 U.S. COUNTY OF HOWARD

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 4/21/95
 CHIEF, LAND DEVELOPMENT DIVISION M.K. DATE

Howard's Shirk for 6/27/95
 CHIEF, BUREAU OF HIGHWAYS DATE

Rudolf J. Jenson 6/30/95
 CHIEF, DIVISION OF ENGINEERING DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Gina Summari 7/5/95
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

NO.	DATE	REVISION
10-5-95		REVISE WHITETAIL LANE, LOTS 31-35, MODIFY GRADING
4-2-96		EXTEND WHITETAIL LANE, MODIFY LOTS 31-34, REVISE WETLAND MITIGATION PER F-95-28

TSA GROUP, INC.
 planning • architecture • engineering
 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-8105

OWNER: JOSEPH M. ZOLLER III 11696 CARROLL MILL ROAD ELLICOTT CITY, MARYLAND 21043	PROJECT: QUARTERFIELD SECTION 2 LOTS 25-38, PARCELS 3A AND 3B
DEVELOPER/OWNER: SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 (410) 465-4244	LOCATION: TAX MAP 23 - PARCELS 5, 8, 02, 101 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE: SEDIMENT CONTROL PLAN S-93-17 P-94-03 F-95-28	DATE: SEPTEMBER 14, 1994 MARCH 22, 1995
DES: JMC	DRN: DRJ/DBT
SCALE: 1" = 50'	PROJECT NO. 0523 DRAWING 11 OF 13

1738

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1850).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DYES, PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOO (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	79.0 AC
AREA DISTURBED	7.0 AC
AREA TO BE ROOFED OR PAVED	1.0 AC
AREA TO BE VEGETATIVELY STABILIZED	1.0 AC
TOTAL CUT (TOPSOIL - 5,600 CY)	2,700 CY
TOTAL FILL	2,800 CY
OFFSITE WASTE/BORROW AREA LOCATION	19.5 AC
- 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 CONTROL 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 IS LIMITED TO THREE FEET IN DEPTH 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, DISCOING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 800 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 ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 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 SOO.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 80 LBS/1000 SQ FT) OF UNWEATED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (9 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 1983 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, DISCOING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

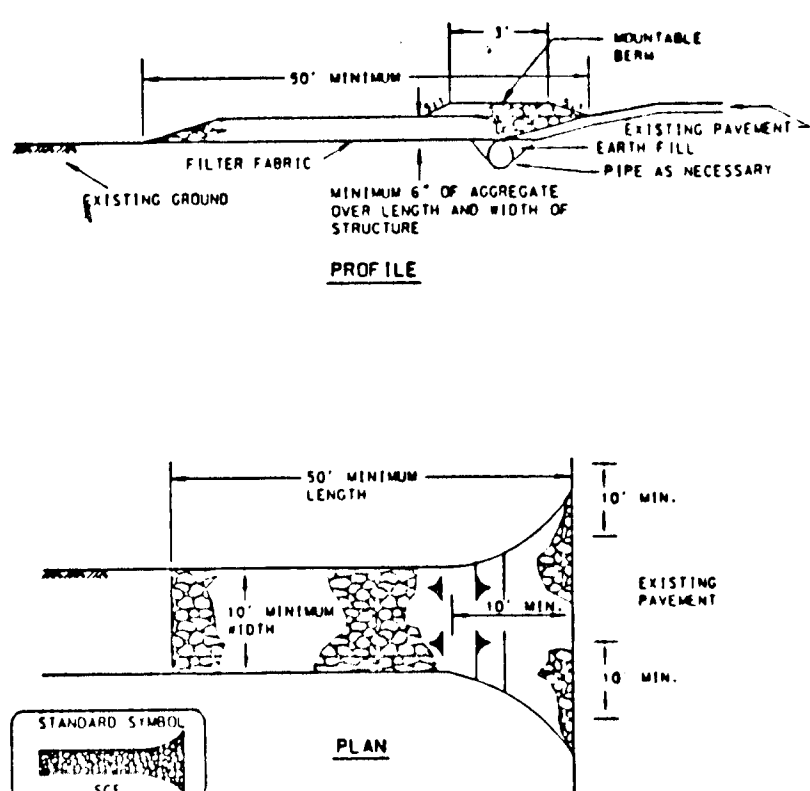
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 800 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARBOR OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0-UreaFORM FERTILIZER (9 LBS/1000 SQ FT).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARBOR OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 80 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: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OPTION (2) USE SOO, OPTION (3) SEED WITH 80 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

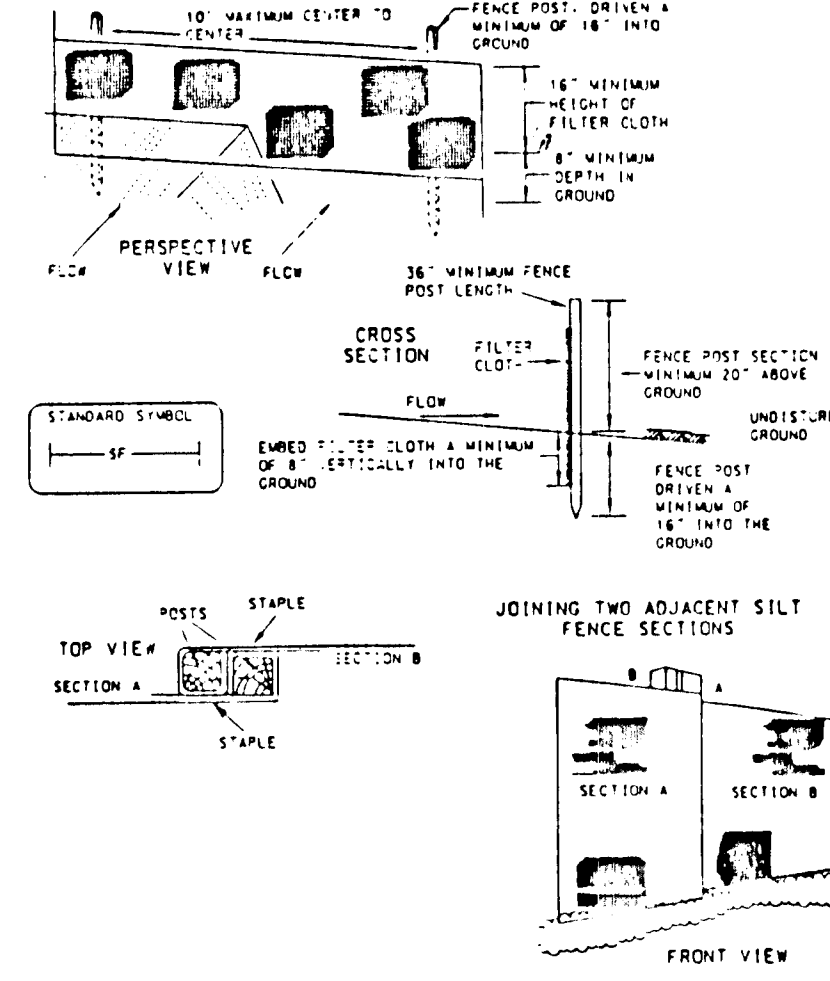
MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 80 LBS/1000 SQ FT) OF UNWEATED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

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



Construction Specifications

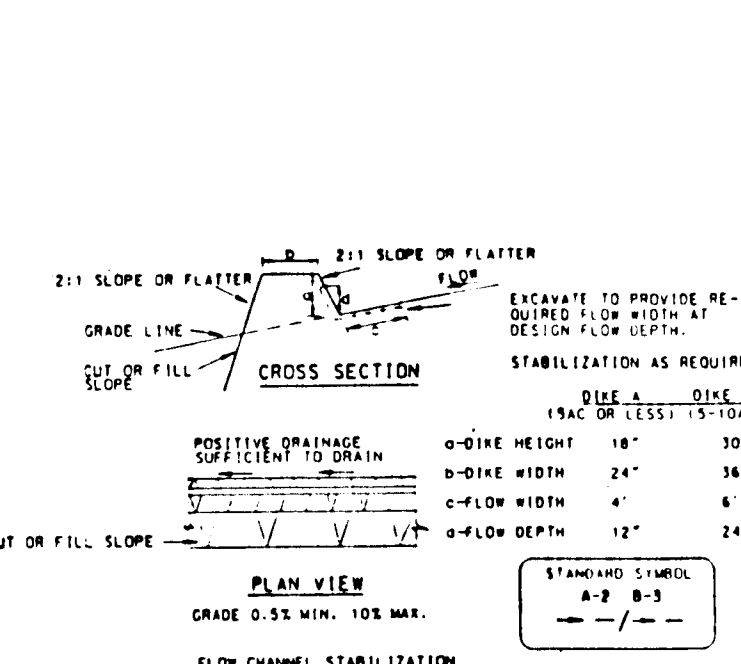
- Length - minimum of 50' (30' for single residence lots).
- Height - 10' minimum, should be aligned with the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground or on a prepared surface. The silt fence shall be constructed on a firm, level surface. The silt fence shall be constructed on a firm, level surface. The silt fence shall be constructed on a firm, level surface.
- Stone - crushed aggregate 1 1/2" to 3", or recycled or recycled concrete equivalent shall be placed at least 8" deep over the length and width of the entrance.
- Surface water - all surface water flowing to or diverted through construction entrances shall be directed through the entrance, maintaining positive drainage. Pipe installed through the silt fence shall be placed in a trench and shall be protected with a concrete curb with 1/2" slope and a minimum of 4" of stone over the pipe. Pipe shall not be placed over the drainage when the silt fence is located at a high spot and has no drainage to either side. If a high spot is encountered, a 4" minimum will be required.
- Location - a stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Entrances leaving the site must extend over the entire length of the stabilized construction entrance.



Construction Specifications

- A detail of the silt fence shall be shown on the plan, and contain the following minimum requirements:
 - The type, size, and spacing of fence posts.
 - The type of filter cloth used.
 - The method of fastening the filter cloth to the facing board.
 - Accumulated sediment must be removed when it reaches 50% of the height of the fabric.
- Where areas of filter cloth are together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Design considerations are not required.
- Silt fence posts shall be spaced close to the fabric as possible.
- The area below the fence must be undisturbed or stabilized.
- Silt fence fabric shall be placed over the silt fence specifications listed in Table 21.
- Fence posts (for fabrications) shall be spaced at a minimum of 36 inches (long, wood posts), 24" x 24", with a minimum cross section of 1.0 square inches and be of sound quality hardwood. Steel posts shall be standard 1/2" or 3/4" section with not less than 1.00 pound per linear foot.

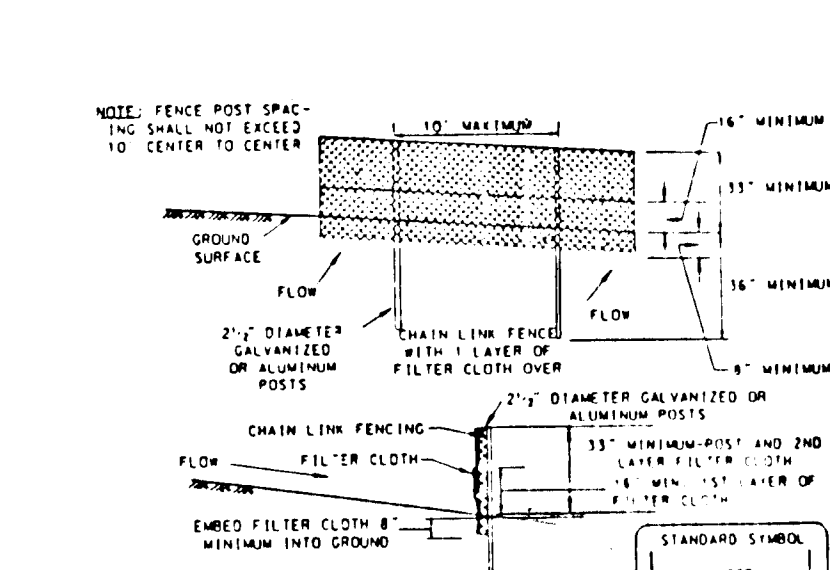
STABILIZED CONSTRUCTION ENTRANCE



Construction Specifications

- Seed and cover with straw mulch.
 - Seed and cover with Erosion Control matting or straw with sod.
 - Line with geotextile Class C and Class 1 Fibropap or recycled concrete equivalent.
 - Type B only: Line with geotextile Class C and Class 1 Fibropap.
- CONSTRUCTION SPECIFICATIONS**
- All temporary earth dikes shall have unimpaired positive grade to an outlet. Silt structures may be necessary for grades less than 1:5.
 - Outlet diverted from an undisturbed area shall be conveyed to a sediment trapping device.
 - Outlet diverted from an undisturbed area shall outlet directly into an undisturbed/stabilized area of a non-erodible velocity.
 - All traps, ditches, drains, obstructions, and other obstructions must be fenced and disposed of so as not to interfere with the functioning of the dike.
 - The dike shall be protected or shored to firm, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will reduce flow.
 - Fill shall be compacted by earth moving equipment.
 - All earth retaining and related construction shall be placed so that it will not interfere with the functioning of the dike.
 - Inspection and maintenance must be provided satisfactorily and after each rain event.

SILT FENCE



Construction Specifications

- Fencing shall be 42" height in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' foot fence shall be used, substituting 42" high fabric and 6' foot length posts.
- The posts do not need to set in concrete.
 - Chain link fence shall be fastened securely to the fence posts with wire ties or staples.
 - 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 anchored a minimum of 6" into the ground.
 - When two sections of filter cloth obtain each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt basins removed when "bulged" device in the silt fence.

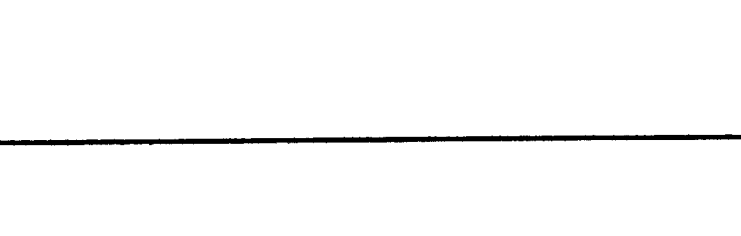
UPPER SILT FENCE



Construction Specifications

- Forest protective fence only.
- Retention area will be set as part of the review process.
- Boundaries of retention area shall be staked and flagged prior to installation.
- Root damage should be avoided.
- Protective signage may also be used.
- Device should be maintained throughout construction.

TREE PROTECTION FENCE



HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

BLVD	DATE	NO	DEPTH	SCALE	NO	REMARKS	NO	REMARKS
10-26-94	10-26-94	1	3-3.5	1	1'	Topsoil		
		2	12-8-10	2	8"	Groundwater encountered at 8.0' while drilling		
		3	14-11-18	3	18"	Groundwater encountered at 14.1' while drilling		
		4	11-8-7	4	10"	Groundwater encountered at 11.8' while drilling		
		5	4-4-7	5	14"	Groundwater encountered at 4.4' while drilling		

SAMPLER TYPE: 100mm SHANK UNLINED, 2" DIAMETER, 30" LONG, ROCK CORE DIA. 2.5"

SAMPLE CONDITIONS: UNDISTURBED, UNLINED, UNLINED, UNLINED

GROUND WATER DEPTH: AT LOCATION 4.2', 11.8', 14.1', 12.8', 4.4'

BORING METHOD: HAND-DRIVEN, HAND-DRIVEN, HAND-DRIVEN, HAND-DRIVEN, HAND-DRIVEN

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

BLVD	DATE	NO	DEPTH	SCALE	NO	REMARKS	NO	REMARKS
10-26-94	10-26-94	1	1-1-1	1	1'	Topsoil		
		2	3-18-8	2	8"	Groundwater encountered at 3.18' while drilling		
		3	21-25-8	3	8"	Groundwater encountered at 21.25' while drilling		
		4	12-17-7	4	10"	Groundwater encountered at 12.17' while drilling		
		5	4-3-3	5	14"	Groundwater encountered at 4.3' while drilling		

SAMPLER TYPE: 100mm SHANK UNLINED, 2" DIAMETER, 30" LONG, ROCK CORE DIA. 2.5"

SAMPLE CONDITIONS: UNDISTURBED, UNLINED, UNLINED, UNLINED

GROUND WATER DEPTH: AT LOCATION 4.2', 11.8', 14.1', 12.8', 4.4'

BORING METHOD: HAND-DRIVEN, HAND-DRIVEN, HAND-DRIVEN, HAND-DRIVEN, HAND-DRIVEN

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

BLVD	DATE	NO	DEPTH	SCALE	NO	REMARKS	NO	REMARKS
10-26-94	10-26-94	1	3-9-7	1	1'	Topsoil		
		2	4-11-7	2	12"	Groundwater encountered at 4.11' while drilling		
		3	11-8-17	3	18"	Groundwater encountered at 11.8' while drilling		
		4	22-26-47	4	18"	Groundwater encountered at 22.26' while drilling		
		5	25-29-38	5	14"	Groundwater encountered at 25.29' while drilling		

SAMPLER TYPE: 100mm SHANK UNLINED, 2" DIAMETER, 30" LONG, ROCK CORE DIA. 2.5"

SAMPLE CONDITIONS: UNDISTURBED, UNLINED, UNLINED, UNLINED

GROUND WATER DEPTH: AT LOCATION 4.2', 11.8', 14.1', 12.8', 4.4'

BORING METHOD: HAND-DRIVEN, HAND-DRIVEN, HAND-DRIVEN, HAND-DRIVEN, HAND-DRIVEN

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE, TREE PROTECTION FENCE AND SUPER SILT FENCE. INSTALL SEDIMENT TRAPS, EARTH DIKES, AND TEMPORARY B'COMP (CLEAN WATER DIVERSION). STABILIZE.
- CONSTRUCT ROAD GRADING.
- INSTALL ARCH CULVERT.
- CONSTRUCT STORM DRAIN CULVERT TO PREVENT RUNOFF FROM BEING TRAPPED BEHIND ROADWAY.
- COMPLETE ROADWAY TO SUBGRADE. STABILIZE ROADSIDE SWALES. REMOVE SEDIMENT TRAPS UPON APPROVAL BY SEDIMENT CONTROL OFFICER. COMPLETE EMBANKMENT GRADING. STABILIZE. CONSTRUCT PAVING.
- FINAL GRADE SITE AND PERMANENTLY STABILIZE.
- INSTALL LANDSCAPING.
- UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES. PERMANENTLY STABILIZE AS REQUIRED.

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.

James R. Kinsley 9-14-94
 JAMES R. KINSELY, JR.
 DATE

BY THE ENGINEER:

I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE AND EXPERIENCE. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

John M. Elorriaga 5/14/95
 JOHN M. ELORRIAGA, P.E. #16891
 DATE

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

John R. Robertson 5/14/95
 JOHN R. ROBERTSON
 U.S. SOIL CONSERVATION SERVICE
 DATE

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

John R. Robertson 5/14/95
 JOHN R. ROBERTSON
 HOWARD SOIL CONSERVATION DISTRICT
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

James R. Kinsley 6/6/95
 JAMES R. KINSELY, JR.
 CHIEF, LAND DEVELOPMENT DIVISION M.C.
 DATE

James R. Kinsley 6/30/95
 JAMES R. KINSELY, JR.
 CHIEF, BUREAU OF HIGHWAYS
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Qina Swain 7/5/95
 QINA SWAIN
 CHIEF, BUREAU OF LAND DEVELOPMENT AND RESEARCH
 DATE

NO	DATE	REVISION

TSA GROUP, INC.
 planning • architecture • engineering

8840 Baltimore National Pike • Millersville City, Maryland 21045 • (410) 465-8100

OWNER: JOSEPH M. ZOLLER III
 11696 CARROLL MILL ROAD
 ELLICOTT CITY, MARYLAND 21043

PROJECT: QUARTERFIELD SECTION 2
 LOTS 25-30, PARCELS 3A AND 3B

LOCATION: TAX MAP 23 - PARCELS 5, 6, 82, 101
 3rd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

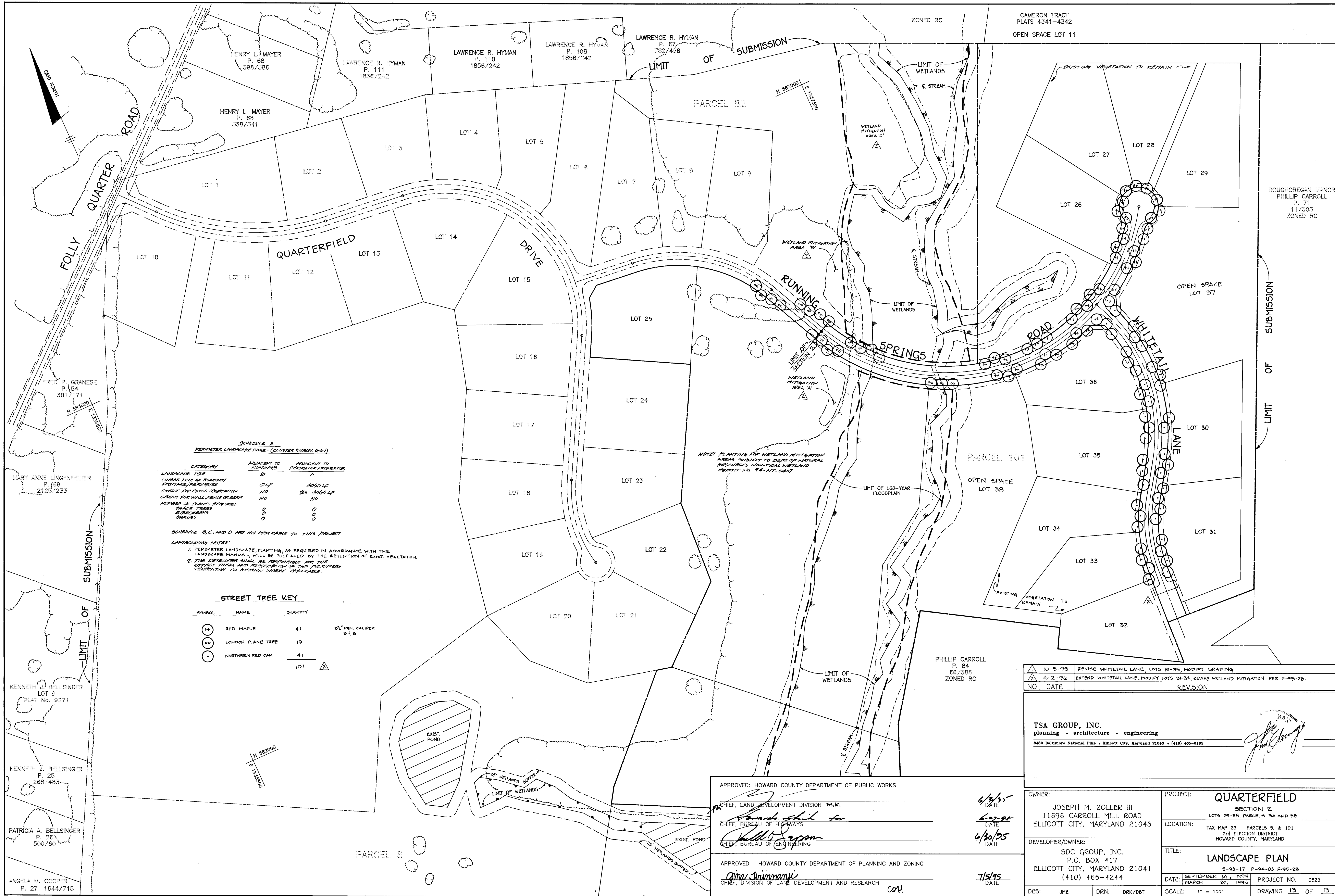
DEVELOPER/OWNER: SDC GROUP, INC.
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 (410) 465-4244

TITLE: SEDIMENT CONTROL NOTES AND DETAILS

DATE: SEPTEMBER 14, 1994
 MARCH 20, 1995

DES: JME DRN: DRK/OBT SCALE: AS SHOWN DRAWING 12 OF 13

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SCHEDULE A
PERIMETER LANDSCAPE EDGE - (CLUSTER SUBDIVISION)

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	OLF	A000 LF
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	NO	185 A000 LF
CREDIT FOR EXIST. VEGETATION	NO	NO
CREDIT FOR WALL, FENCE OR BERT	NO	NO
NUMBER OF PLANTS REQUIRED	0	0
SHADE TREES	0	0
EVERGREENS	0	0
SHRUBS	0	0

SCHEDULE B, C, AND D ARE NOT APPLICABLE TO THIS PROJECT

LANDSCAPING NOTES:

- PERIMETER LANDSCAPE PLANTING, AS REQUIRED IN ACCORDANCE WITH THE LANDSCAPE MANUAL, WILL BE FULFILLED BY THE RETENTION OF EXIST. VEGETATION.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR THE RETENTION OF EXIST. VEGETATION TO REMAIN WHERE APPLICABLE.

STREET TREE KEY

SYMBOL	NAME	QUANTITY	2 1/2" MIN. CALIPER @ 4' @
⊕	RED MAPLE	41	
⊙	LONDON PLANE TREE	19	
⊙	NORTHERN RED OAK	41	
		101	⚠

NOTE: PLANTING FOR WETLAND MITIGATION AREAS SUBJECT TO DEPT OF NATURAL RESOURCES ANNUAL WETLAND PERMIT NO. 94-NIT-0497

NO	DATE	REVISION
1	10-5-95	REVISE WHITETAIL LANE, LOTS 31-35, MODIFY GRADING
2	4-2-96	EXTEND WHITETAIL LANE, MODIFY LOTS 31-34, REVISE WETLAND MITIGATION PER F-95-28.

TSA GROUP, INC.
planning • architecture • engineering
8400 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-8105

John M. Zoller III

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Howard Shil
CHIEF, LAND DEVELOPMENT DIVISION M.K.
DATE: 4/30/95

John M. Zoller III
CHIEF, BUREAU OF HIGHWAYS
DATE: 6-27-95

John M. Zoller III
CHIEF, BUREAU OF ENGINEERING
DATE: 4/30/95

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Gina Trimmann
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
DATE: 7/5/95

OWNER: JOSEPH M. ZOLLER III 11696 CARROLL MILL ROAD ELLICOTT CITY, MARYLAND 21043	PROJECT: QUARTERFIELD SECTION 2 LOTS 25-38, PARCELS 9A AND 9B
DEVELOPER/OWNER: SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 (410) 465-4244	LOCATION: TAX MAP 23 - PARCELS 5, & 101 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE: LANDSCAPE PLAN 5-93-17 P-94-03 F-95-28	DATE: SEPTEMBER 14, 1994 MARCH 20, 1995
DES: JME	DRN: DRK/DBT
SCALE: 1" = 100'	DRAWING 13 OF 13

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