

C STA	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
11492.30 TO 11493.30	285.00'	155.95'	79.98'	154.01'	S 55°59'38" W	31°21'07"
11493.30 TO 11494.30	200.00'	307.42'	193.37'	278.04'	N 64°17'45" W	88°04'08"
11494.30 TO 11495.30	109.62'	69.01'	35.69'	67.88'	S 02°13'34" E	36°04'15"
11495.30 TO 11496.30	109.62'	69.01'	35.69'	67.88'	S 51°42'09" W	36°04'15"

WOODLAND PARK SECTION 2 AREA 2 PLAT NO. 8532 & 5047

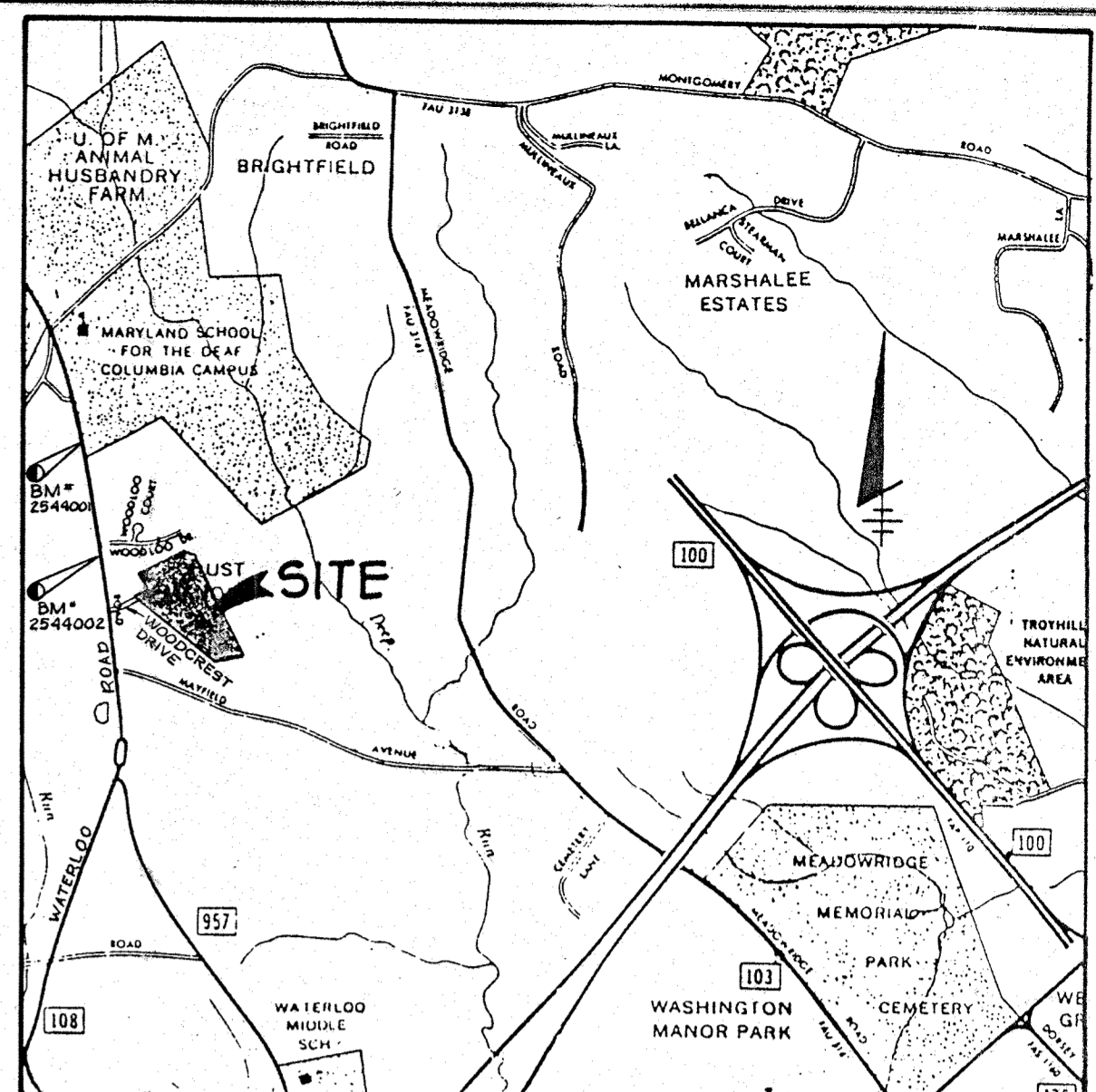
WOODLAND PARK SECTION 2 AREA 3 PLAT NO. 8557 OPEN SPACE LOT 68

BENCH MARKS

HO CO 2544002 N 497877.376 ELEV 384.012
 CONC. MONUMENT 1' BELOW SURFACE

HO CO 2544001 N 499219.034 ELEV. 401.098
 CONC. MONUMENT 2' BELOW SURFACE ON EAST SIDE OF ROUTE 108 IN FRONT OF HOUSE NO. 6054.

HOWARD COUNTY BOARD OF EDUCATION 03/31/2003



- GENERAL NOTES**
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR ROAD CONSTRUCTION.
 - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES, WHERE DIRECTED BY THE ENGINEER, A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
 - CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES AT LEAST THREE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

BELL TELEPHONE SYSTEM	393-3469
LONG DISTANCE CABLE DIVISION	393-3553 OR 3554
BALTIMORE GAS AND ELECTRIC	539-9000 EXT. 691
HOWARD CO. BUREAU OF UTILITIES	283-9000
HOWARD CO. CONSTRUCTION INSPECTION SURVEY DIVISION	318-2417 OR 2418
 - ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
 - ALL STREET CURB RETURNS SHALL HAVE 20.0' RADIUS UNLESS OTHERWISE NOTED.
 - STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
 - INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1988 EDITION.
 - PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
 - DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:

ALL CUL-DE-SACS DESIGNED FOR 30 MPH.	ALL LOCAL STREETS DESIGNED FOR 30 MPH
ALL MAJOR COLLECTORS DESIGNED FOR 30 MPH.	ALL MAJOR COLLECTORS FOR 40 MPH
 - ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM 1929.
 - ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM 95% OF MAXIMUM OBTAINABLE DENSITY DETERMINED BY MARSHALL PROCTOR.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
 - PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO LINE DIMENSIONS.
 - SUBJECT PROPERTY ZONED R-5C PER 8/2/85 COMPREHENSIVE ZONING PLAN.
 - TOPD TAKEN FROM FIELD RUN SURVEY BY TRACY, SCHULTE & ASSOCIATES DATED APRIL 1989
 - NO CLEARING GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLAND OR STREAM BUFFER.



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 45577 Expiration Date: 6-8-18

- NOTE 1. NO CLEARING GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLAND OR STREAM BUFFERS.
- NOTE 2. THESE PLANS SUBJECT TO GENERAL WATER QUALITY CERTIFICATION #88-GWQC-00R FOR SEWER LINE INSTALLATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, LAND DEVELOPMENT DIVISION
 DATE: 7/6/91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
 DATE: 7/14/91

2	10-6-15	REVISE PIPE FROM BCCMP TO 18" HDPE PER F-15-096	BEZ
3	2-4-92	REVISE LOTS 1-10 TO 51-60 AND REVISE GRASSED SWALE AT LOT 58	
NO	DATE	REVISION	

T S A GROUP INC.
 planning • architecture • engineering
 8480 Baltimore National Pike • Elkton City, Maryland 21043 • (301)465-8100

OWNER: WALTER E. AND LORETTA H. NEIGHOFF, ET AL.
 3618 COOLRIDGE AVENUE
 BALTIMORE, MARYLAND 21229

PROJECT: **WOODBROOK**
 SECTION ONE, AREA ONE

LOCATION: TAX MAP 37-PARCELS 126,127,428,530,531,595 AND 596 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DEVELOPER: SECURITY DEVELOPMENT CORP.
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21043
 (301) 465-4244

TITLE: **PLAN OF WOODCREST DRIVE AND WOODCHASE COURT**
 5-09-71 WP 89-180 P 90-17

DATE: JUNE 27, 1990
 MAY 07, 1991

PROJECT NO. 0164

DES: DAM DRN: DRK SCALE: 1" = 50' DRAWING 1 OF 8

SHEET INDEX

NO.	DESCRIPTION
1	PLAN OF WOODCREST DRIVE AND WOODCHASE COURT
2	ROAD PROFILES
3	DETAILS AND DRAINAGE AREA MAP
4	GRADING AND SEDIMENT CONTROL PLAN
5	SEDIMENT CONTROL DETAILS AND STORM DRAIN PROFILES
6	STORMWATER MANAGEMENT DETAILS
7	STORMWATER MANAGEMENT DETAILS
8	PLANTING PLAN

NO.	ITEM	LOCATION	STRUCTURE SCHEDULE	INV. TO	INV. BOT	IC ELEV.	REMARKS
1-1	A-5 INLET	214 11 11.2	302.21	290.98	300.80	510 0 4.91	HO CO
1-2	A-5 INLET	214 11 11.2	310.73	310.53	319.29	510 0 4.91	HO CO
1-3	A-5 INLET	214 11 11.2	317.0	316.77	319.73	510 0 4.91	HO CO
1-4	A-5 INLET	214 11 11.2	315.99	315.79	319.73	510 0 4.91	HO CO
1-5	A-5 INLET	214 11 11.2	316.75	316.55	320.23	510 0 4.91	HO CO
1-6	A-5 INLET	214 11 11.2	317.0	316.77	320.23	510 0 4.91	HO CO
1-7	YARD INLET	214 11 11.2	315.99	315.79	319.73	510 0 4.91	HO CO
1-8	A-5 INLET	214 11 11.2	316.75	316.55	320.23	510 0 4.91	HO CO
1-9	A-5 INLET	214 11 11.2	317.0	316.77	320.23	510 0 4.91	HO CO
1-10	A-5 INLET	214 11 11.2	315.99	315.79	319.73	510 0 4.91	HO CO
M-2	MANHOLE	SEE PLAN	320.33	320.13	328.77	510 0 5.12	HO CO
H-1	MANHOLE	25' DIAM 214 11 11.2	314.93	314.73	325.00	510 0 5.12	HO CO
H-1	24" END SECT	SEE PLAN	209.00			510 0 5.12	HO CO

*For I-10 INV IN SEE F-15-096

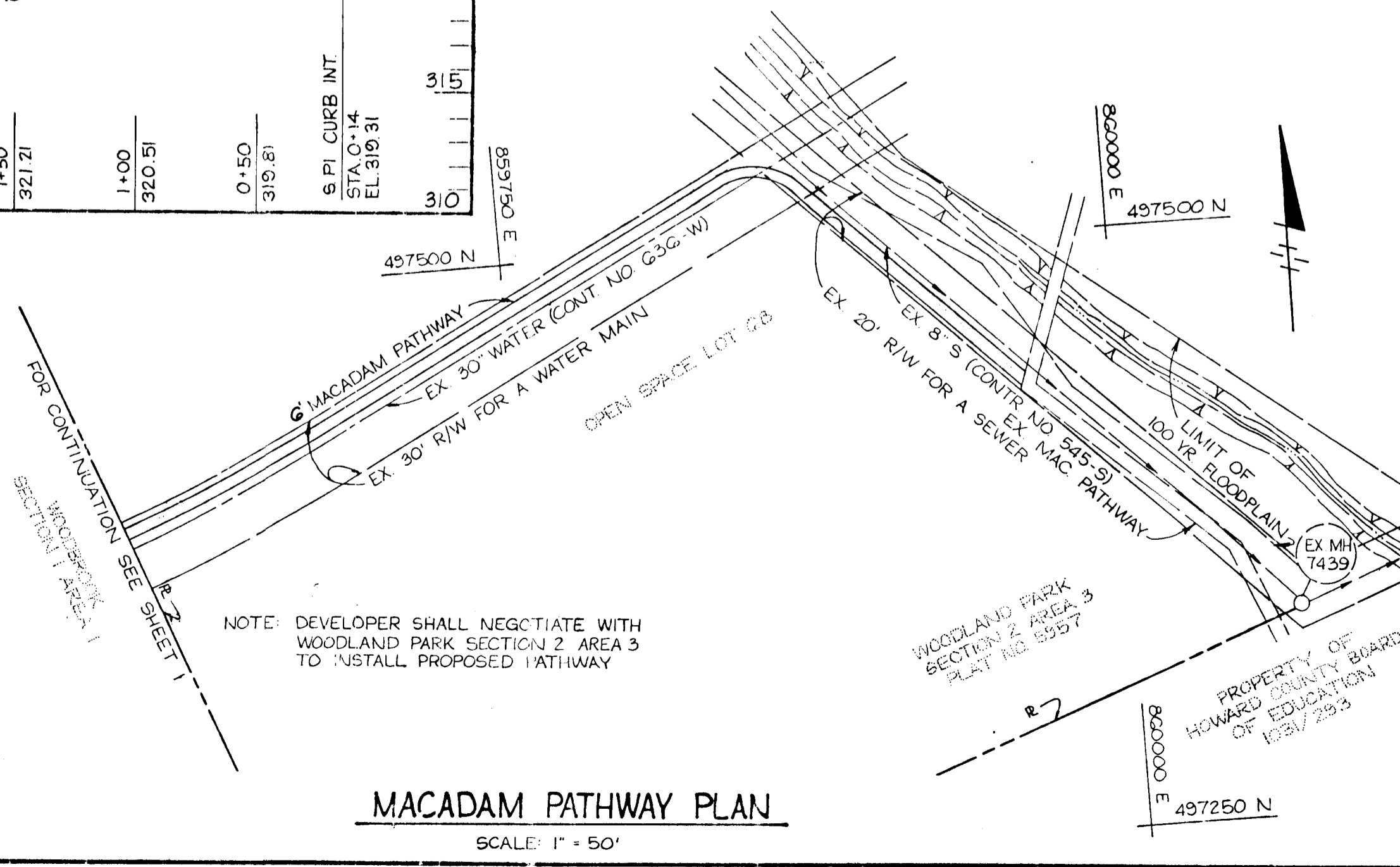
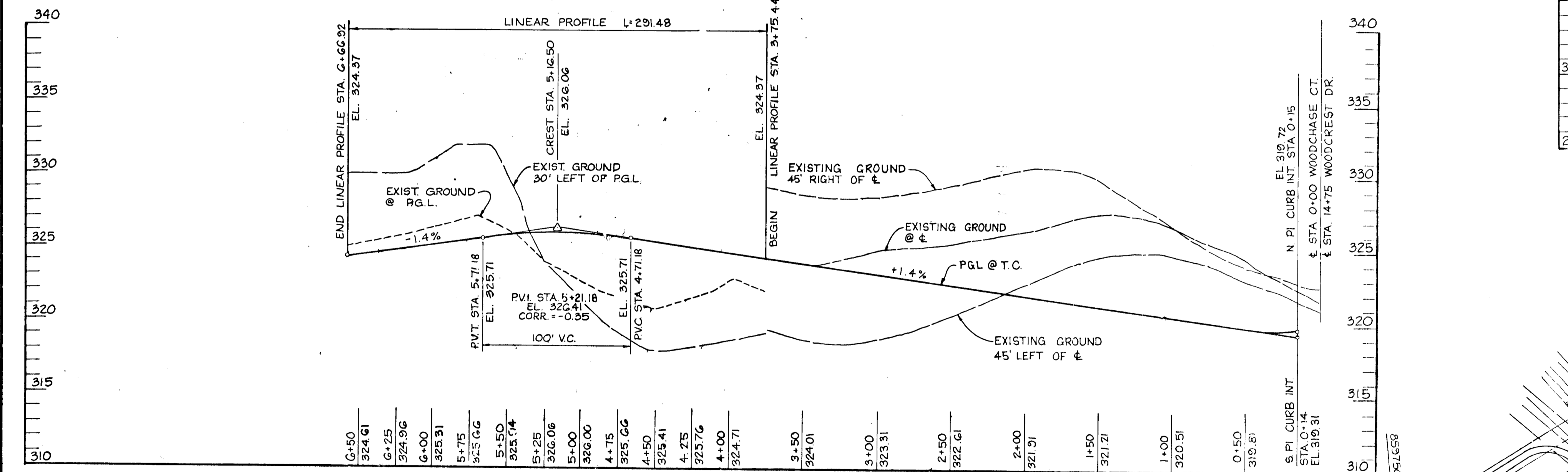
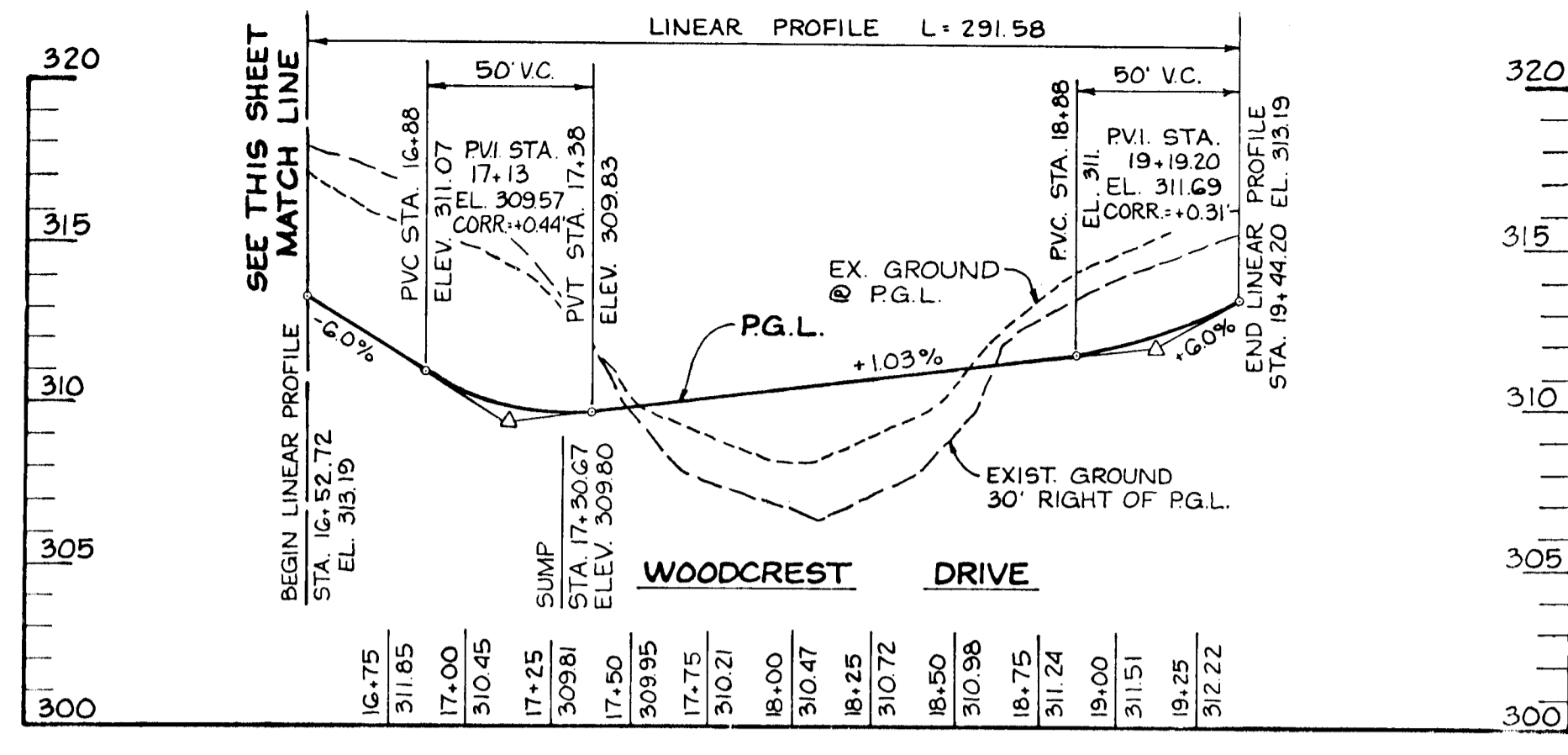
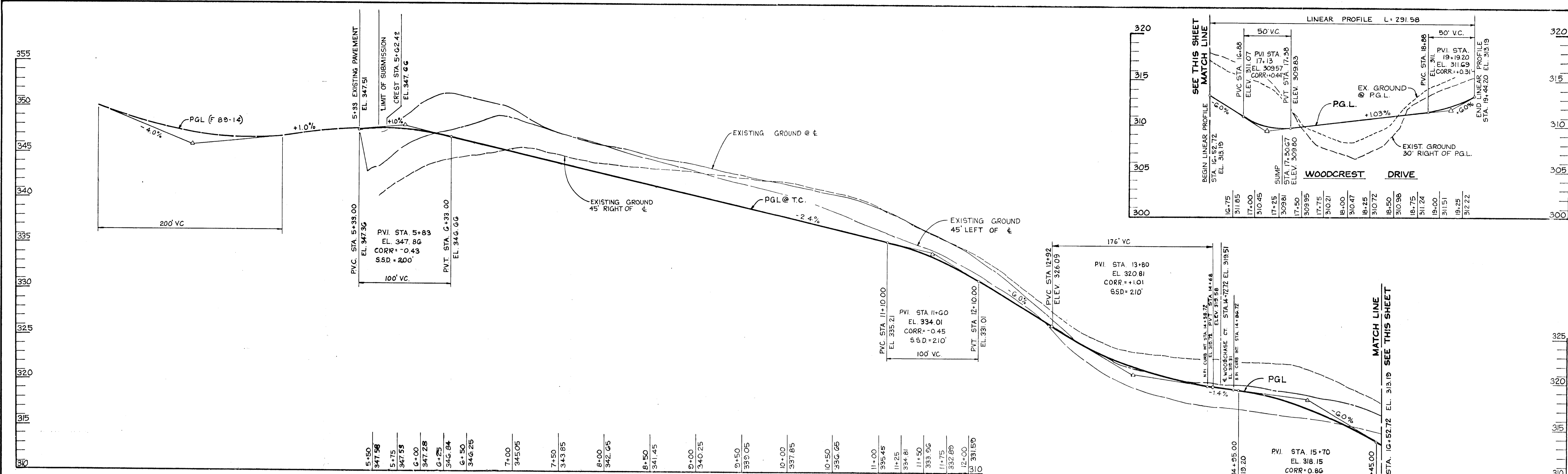
PLAN
SCALE: 1" = 50'

Revision Note: On or around October 7, 2019 Capital Project D-1176 (Woodcrest Drive Stormwater Pond & Principal Spillway Replacement) was created. Project replaced 72" BCCMP 18" BCCMP forebay, gabion slope protection, and stream 24" BCCMP storm drain pipe. Pond was retained & converted to existing detention shallow wetland BME. Concrete riser, 24" RCP principal spillway, clay core, & filter diaphragm, Class I Riprap slope protection and outlet protection were installed. Gabion forebay & manhole installed at 10' flow of 24" BCCMP. Sections of existing 8" OIP sanitary sewer located on southern side of pond embankment were abandoned.

275 LF of 24" PVC sanitary sewer and 2 manholes were installed in new sanitary sewer alignment located on southern side of pond beyond the toe of embankment.

Plan Revision Note: On or around 10/20/2020 Capital Project D1176, entitled "Woodcrest Drive Stream Rehabilitation Project" was created to stabilize approx. 8,646 LF along four unnamed tributaries to Deep Run, replace existing 5" dia CML with 12" dia R/C pipe, and replace existing pedestrian bridge illustrated with project limits. An alternative compliance was provided through Department of Planning and Zoning under WP-20-061, approved on 2/10/2020. Sections 16.126(a)(1) and 16.126(a)(2) of the Regulations subject to four approval conditions. For the detailed conditions of approval and current site conditions within the disturbed area please see Capital Project Plans.

1626



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Land Development Division: *Chris Owens* DATE: 7/2/91
 Chief, Bureau of Highways: *Brunville W. Weiland* DATE: 6/19/91
 Chief, Bureau of Engineering: *William J. Ray* DATE: 7-3-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Community Planning and Land Development: *Marsha S. Paupke* DATE: 7/2/91

NO	DATE	REVISION

T S A GROUP INC.
 planning • architecture • engineering
 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465-6105

OWNER: WALTER E. AND LORETTA H. NEIGHOFF, ET AL
 3818. COOLRIDGE AVENUE
 BALTIMORE, MARYLAND 21229

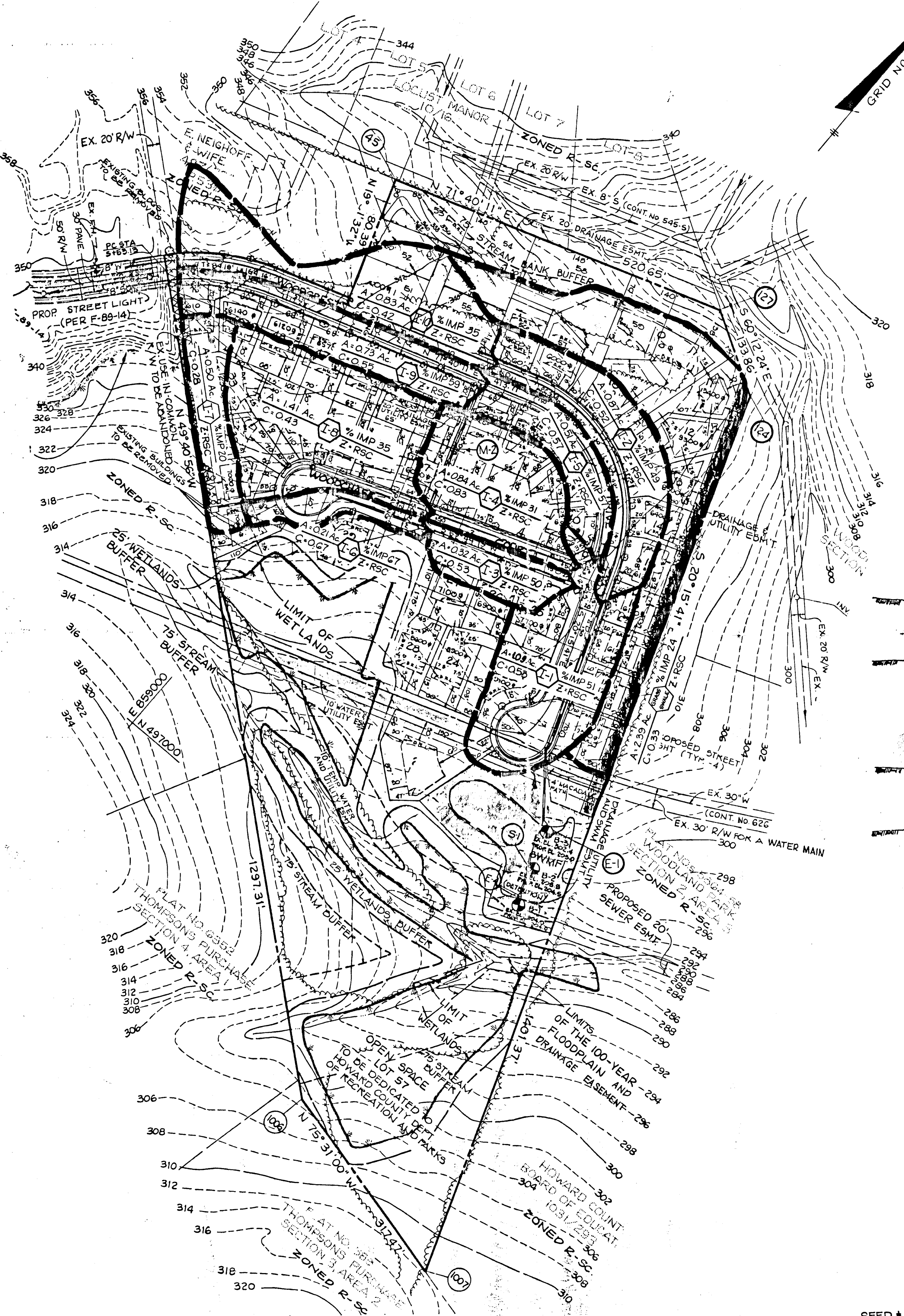
DEVELOPER: SECURITY DEVELOPMENT CORP.
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21043
 (301) 465-4244

PROJECT: WOODBROOK SECTION 1, AREA 1
 LOCATION TAX MAP 37-PARCELS 126, 127, 488, 530, 531, 535, AND 536
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

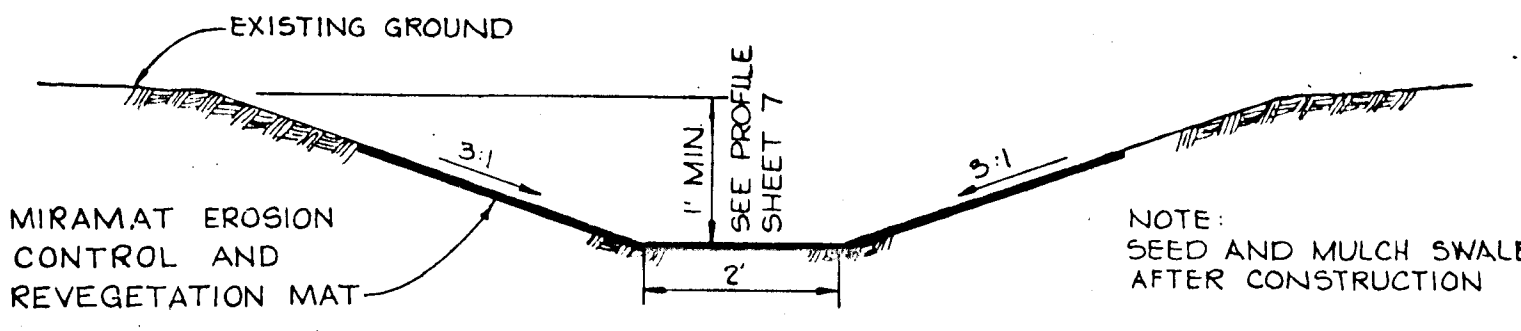
TITLE: ROAD PROFILES AND MACADAM PATHWAY PLAN
 DATE: JUNE 27, 1990
 MAY 07, 1991

DES: DAM DRN: EJS SCALE: AS SHOWN DRAWING: 2 OF 3

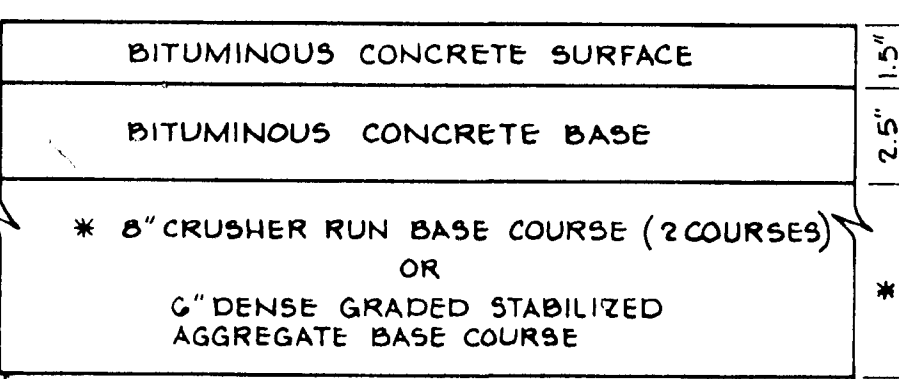
1626



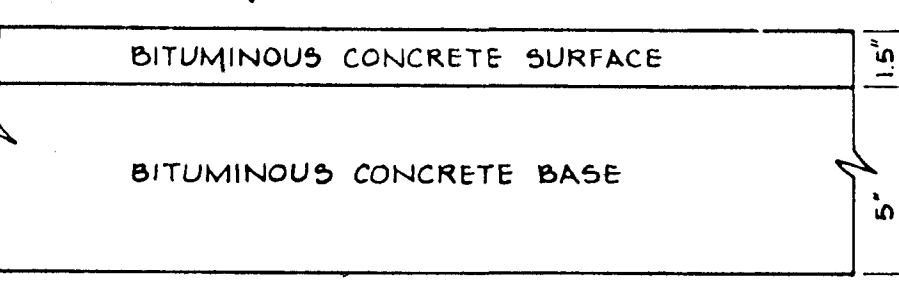
DRAINAGE AREA MAP
SCALE 1"=100'



GRASSED SWALE
NO SCALE

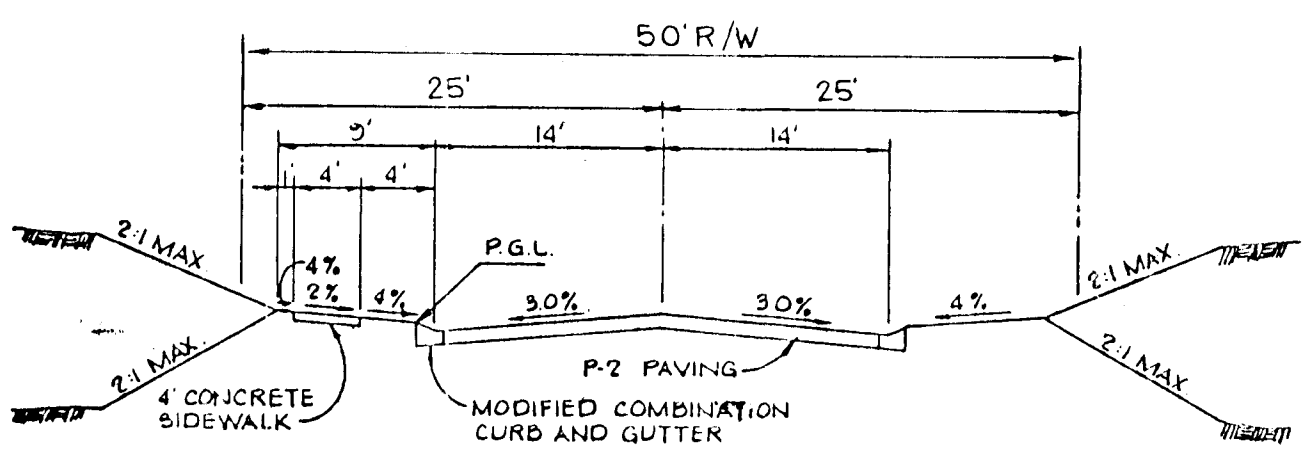


(ALTERNATE)

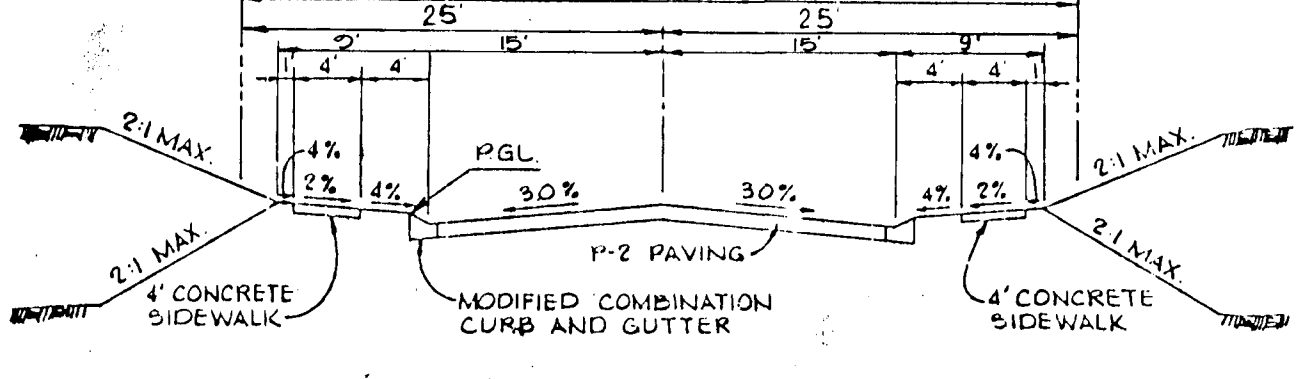


HOWARD COUNTY DESIGN MANUAL VOLUME IV
STANDARD SPECIFICATIONS AND DETAILS FOR
CONSTRUCTION (DRAWING R-2.01)

P-2 PAVING DETAIL
NO SCALE

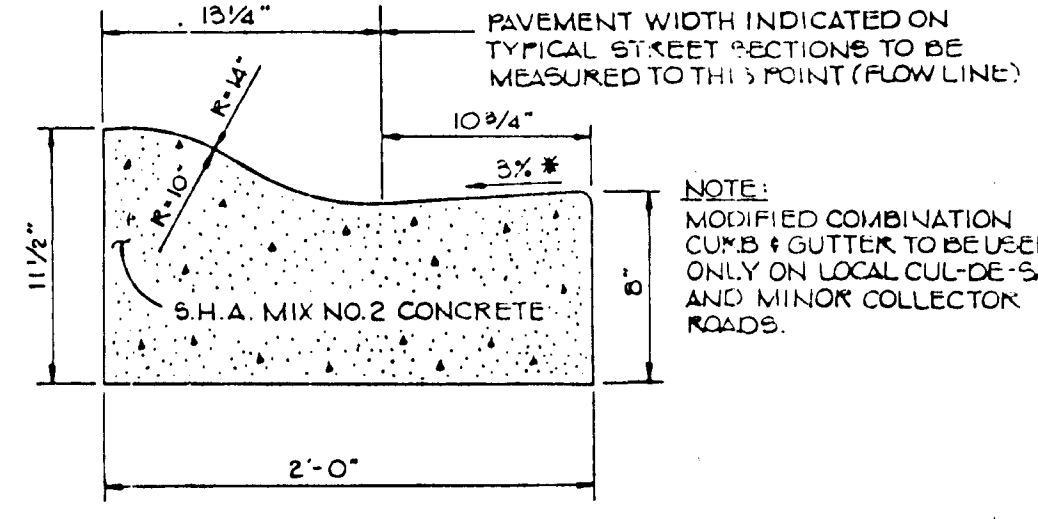


WOODCREST DRIVE FROM STA. 15+11.72 TO STA. 16+52.72
WOODCHASE COURT FROM STA. 0+40 TO STA. 3+75.44
CLASSIFICATION: CUL-DE-SAC
DESIGN SPEED 25 MPH

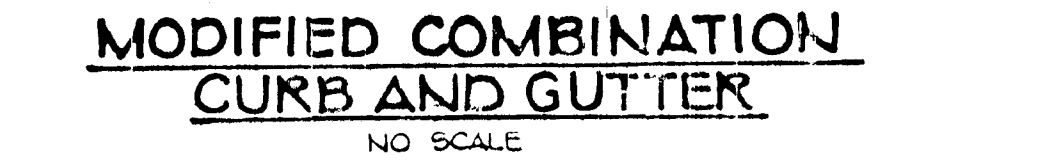


TYPICAL SECTION
NO SCALE

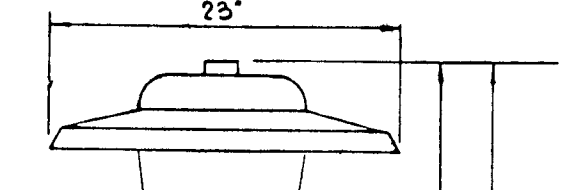
WOODCREST DRIVE FROM STA. 5+33 TO STA. 14+33.13
CLASSIFICATION: LOCAL ROAD
DESIGN SPEED 30 MPH



MODIFIED COMBINATION CURB AND GUTTER
NO SCALE

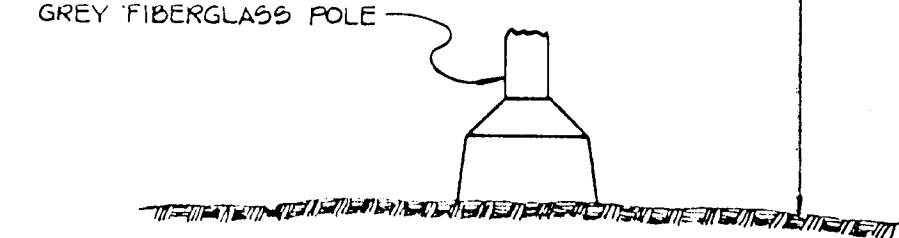


MACADAM PATHWAY DETAIL
NO SCALE

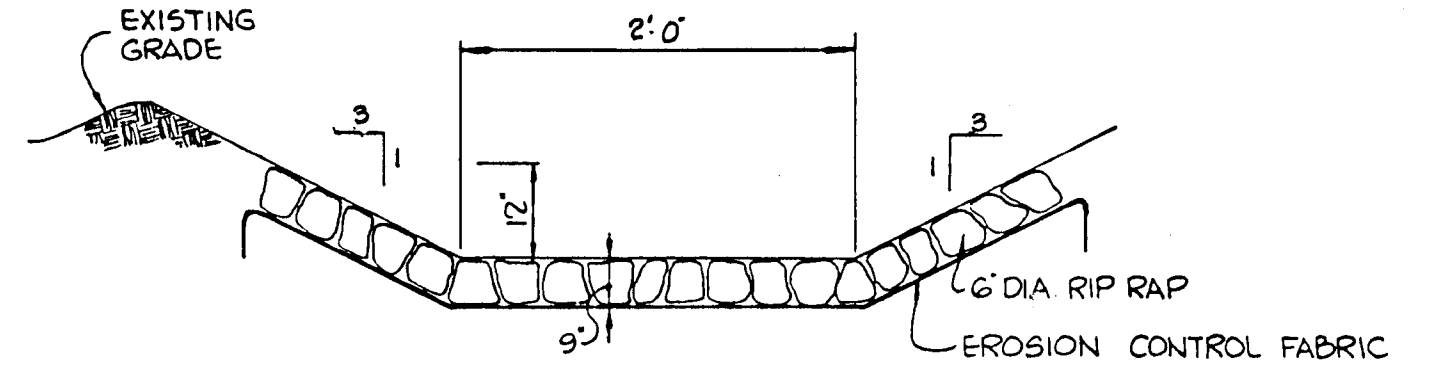


DETAIL - LIGHTING FIXTURE
NO SCALE

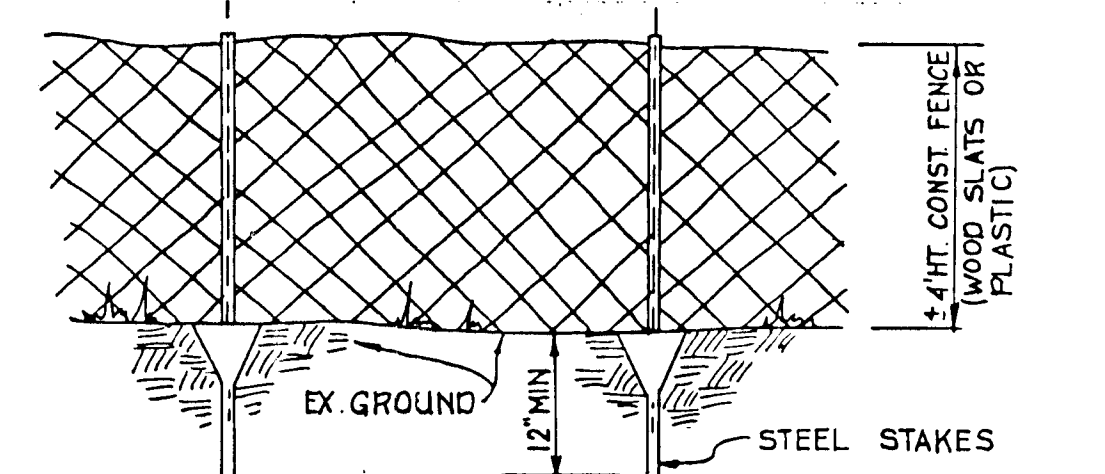
NOTE: ALL STREET LIGHT FIXTURES TO BE 150 WATT HP SODIUM VAPOR TYPE, 14\"/>



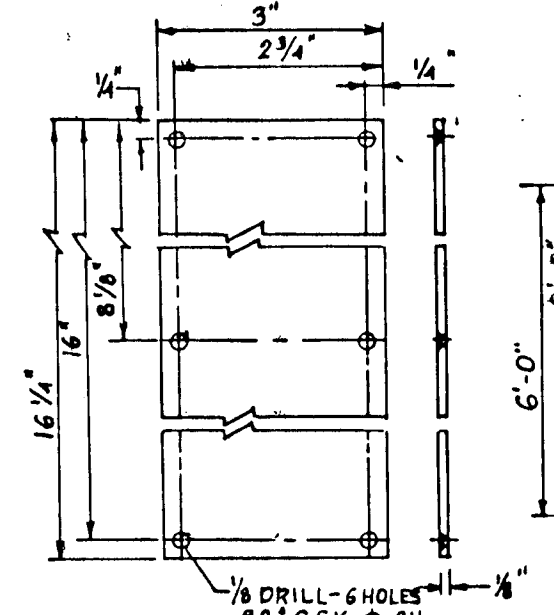
DETAIL - LIGHTING FIXTURE
NO SCALE



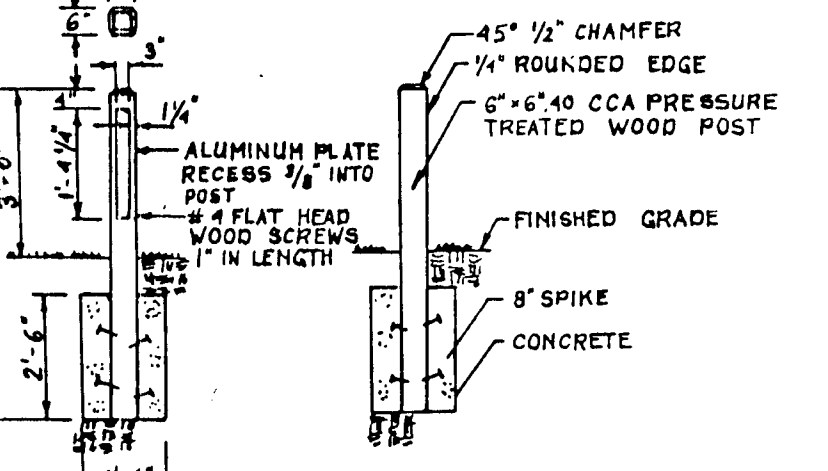
RIP RAP SWALE
NOT TO SCALE



TEMPORARY TYPICAL TREE PROTECTION FENCE
DETAIL

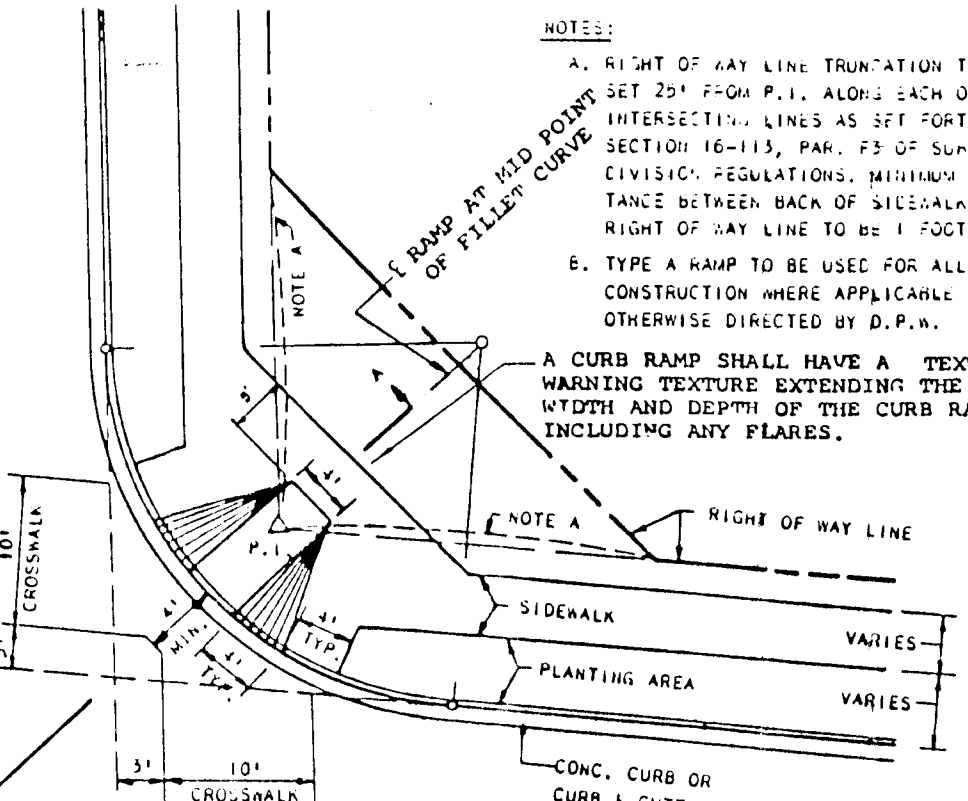


NOTE: PLATE TO BE SCREWED & GLUED IN PLACE. SCREWS ARE TO BE COUNTERSUNK.

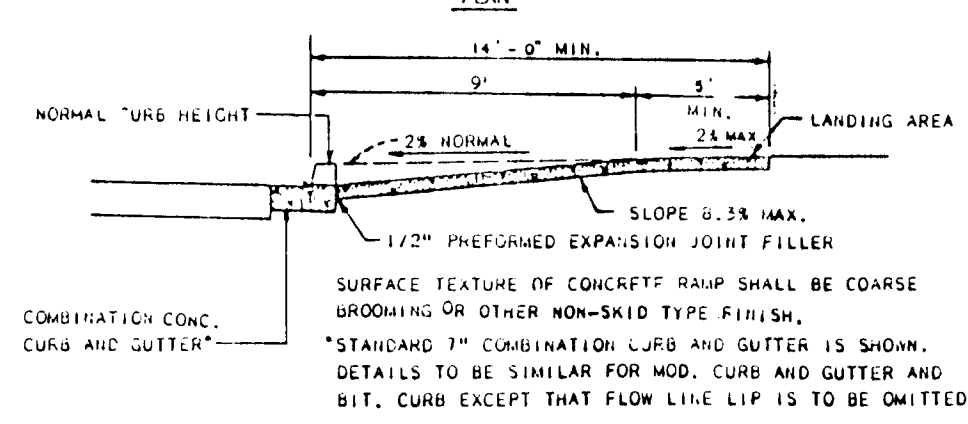


NOTE: BOLLARDS WILL BE PLACED AT THE FOUR CORNERS OF THE OPEN SPACE ACCESS STRIP. THE ALUMINUM PLATE WILL ONLY BE REQUIRED ON THE FRONT RIGHT BOLLARD DIRECTLY FACING THE ROAD.

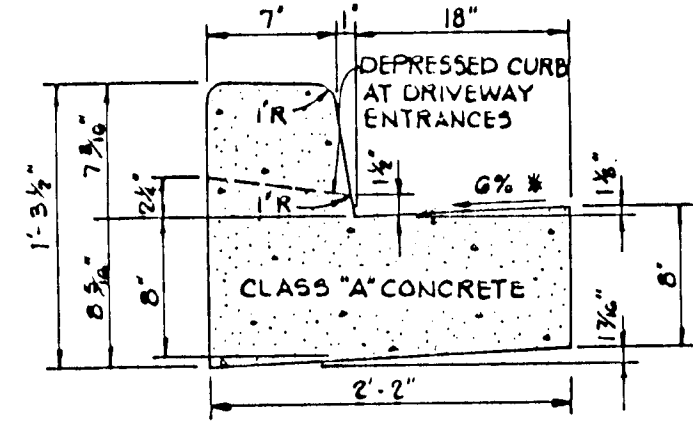
OPEN SPACE BOLLARD DETAIL



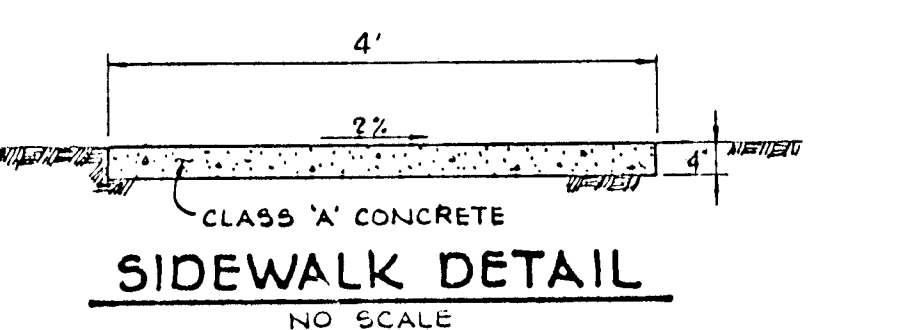
SIDEWALK RAMP
NO SCALE



SIDEWALK RAMP
NO SCALE



STANDARD 7\"/>



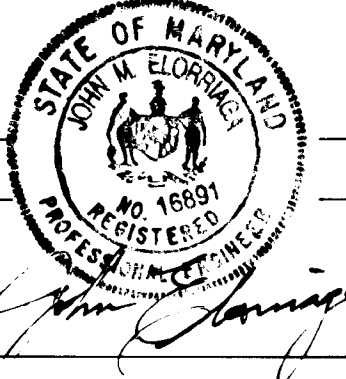
SIDEWALK DETAIL
NO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Walter E. Neighoff 7/2/99
CHIEF, LAND DEVELOPMENT DIVISION
Brownville W. Welton 6/19/99
CHIEF, BUREAU OF HIGHWAYS
William E. Ray 7-2-99
CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Frank J. DeLuca 7/2/99
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

NO	DATE	REVISION
2-4-02	REVISE D.A. TO I-10	REVISION

T S A GROUP INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465-6105



OWNER WALTER E. AND LORRETTA H. NEIGHOFF, ET. AL 3018, COOLRIDGE AVENUE BALTIMORE, MARYLAND 21220	PROJECT WOODBROOK SECTION I, AREA 1 LOCATION TAX MAP 37- PARCELS 126, 127, 488, 530, 531, 505 AND 506, 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DEVELOPER SECURITY DEVELOPMENT CORP P.O. BOX 417 ELLCOTT CITY MARYLAND 21043 (301) 465-6105	TITLE DETAILS AND DRAINAGE AREA MAP DATE: JUNE 27, 1990 MAY 07, 1991 PROJECT NO 01G4
DESIGNER DRN EJS	SCALE AS SHOWN DRAWING 3 OF 8

WOODLAND PARK
SECTION 2 AREA 2
PLAT NO. 586675267

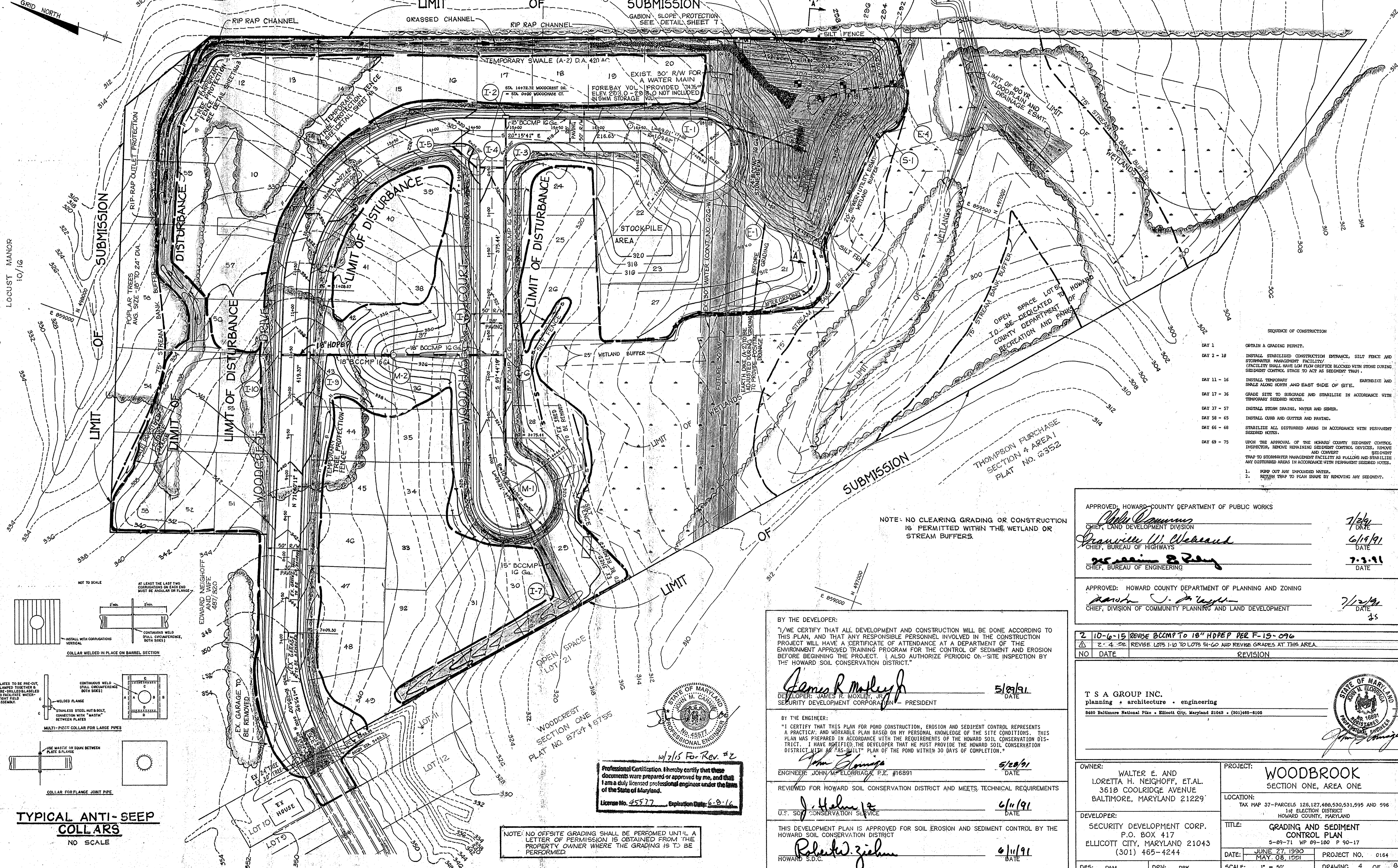
WOODLAND PARK
SECTION 2 AREA 3
PLAT NO. 5957

DRAINAGE, UTILITY, ACCESS AND
STORMWATER MANAGEMENT EASEMENT

TEST PIT NO. 1 DATA
EX. GROUND ELEV. 299.6
WATER LEVEL AFTER 24 HRS. 291.75
WATER ENCOUNTERED 289.35
STORMWATER MANAGEMENT FACILITY
DETENTION (SEDIMENT BASIN)

HOWARD COUNTY
BOARD OF EDUCATION
10317 293

LIMIT OF SUBMISSION



- SEQUENCE OF CONSTRUCTION
- DAY 1 OBTAIN A GRADING PERMIT.
 - DAY 2 - 18 INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE AND STORMWATER MANAGEMENT FACILITY (FACILITY SHALL HAVE LOW ELEVATION BLOCKED WITH STONE DURING SEDIMENT CONTROL STAGE TO ACT AS SEDIMENT TRAP).
 - DAY 11 - 16 INSTALL TEMPORARY STREAM BANK BUFFER, BARRIERS AND SHALE ALONG NORTH AND EAST SIDE OF SITE.
 - DAY 17 - 36 GRADE SITE TO SUBGRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDING NOTES.
 - DAY 37 - 57 INSTALL STORM DRAINS, WATER AND SEWER.
 - DAY 58 - 65 INSTALL CURB AND CUTTER AND PAVING.
 - DAY 66 - 68 STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
 - DAY 69 - 75 UPON THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE REMAINING SEDIMENT CONTROL DEVICES, REMOVE SEDIMENT TRAP TO STORMWATER MANAGEMENT FACILITY AS FOLLOWS AND STABILIZE ANY DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
 1. HOP OUT ANY DISCHARGED WATER.
 2. RETURN TRAP TO PEAK SHAPE BY REMOVING ANY SEDIMENT.

NOTE: NO CLEARING GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLAND OR STREAM BUFFERS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chris Dammus
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 7/24/91

Lawrence W. Weiland
CHIEF, BUREAU OF HIGHWAYS
DATE: 6/19/91

William R. Remy
CHIEF, BUREAU OF ENGINEERING
DATE: 7-3-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Joseph J. DeWright
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
DATE: 7/2/91

BY THE DEVELOPER:
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

James R. Malley Jr.
DEVELOPER: JAMES R. MOXLEY, JR.
SECURITY DEVELOPMENT CORPORATION - PRESIDENT
DATE: 5/29/91

BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

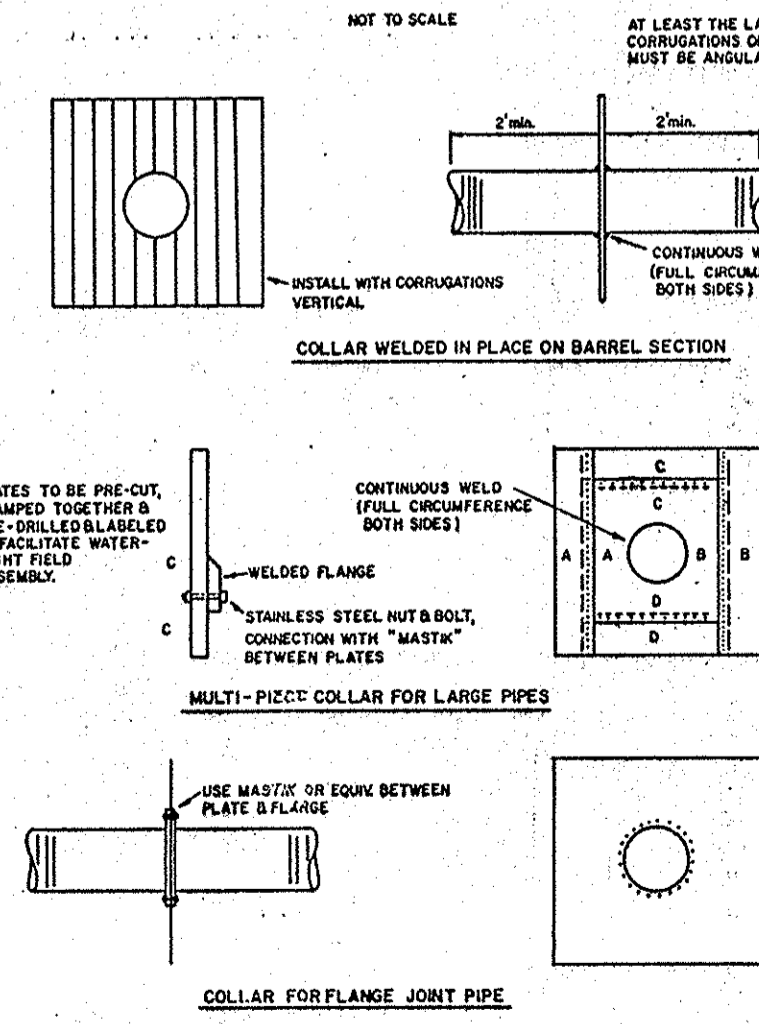
John M. Floriaggi
ENGINEER: JOHN M. FLORIOGAGGI, P.E. #16891
DATE: 5/20/91

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

J. Helms Jr.
U.S. SOIL CONSERVATION SERVICE
DATE: 6/11/91

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

Robert W. Ziehm
HOWARD S.D.C.
DATE: 6/11/91



TYPICAL ANTI-SEEP COLLARS
NO SCALE

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 45577. Expiration Date: 6-2-16

NOTE: NO OFFSITE GRADING SHALL BE PERFORMED UNTIL A LETTER OF PERMISSION IS OBTAINED FROM THE PROPERTY OWNER WHERE THE GRADING IS TO BE PERFORMED.

NO	DATE	REVISION
2	10-6-15	REVISE BCCMP TO 18" HOPEP PER F-15-096
3	4-22	REVISE LOTS 1-10 TO LOTS 51-60 AND REVISE GRADES AT THIS AREA.

T S A GROUP INC.
planning • architecture • engineering
8460 Baltimore National Pike • Ellicott City, Maryland 21048 • (301)465-8105

OWNER: WALTER E. AND LORETTA H. NEIGHOFF, ET AL.
3618 COOLRIDGE AVENUE
BALTIMORE, MARYLAND 21229

DEVELOPER: SECURITY DEVELOPMENT CORP.
P.O. BOX 417
ELLCOTT CITY, MARYLAND 21043
(301) 465-4244

DES: DAM DRN: DRK

PROJECT: WOODBROOK
SECTION ONE, AREA ONE

LOCATION: TAX MAP 37-PARCELS 126,127,480,530,531,595 AND 596
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: GRADING AND SEDIMENT CONTROL PLAN

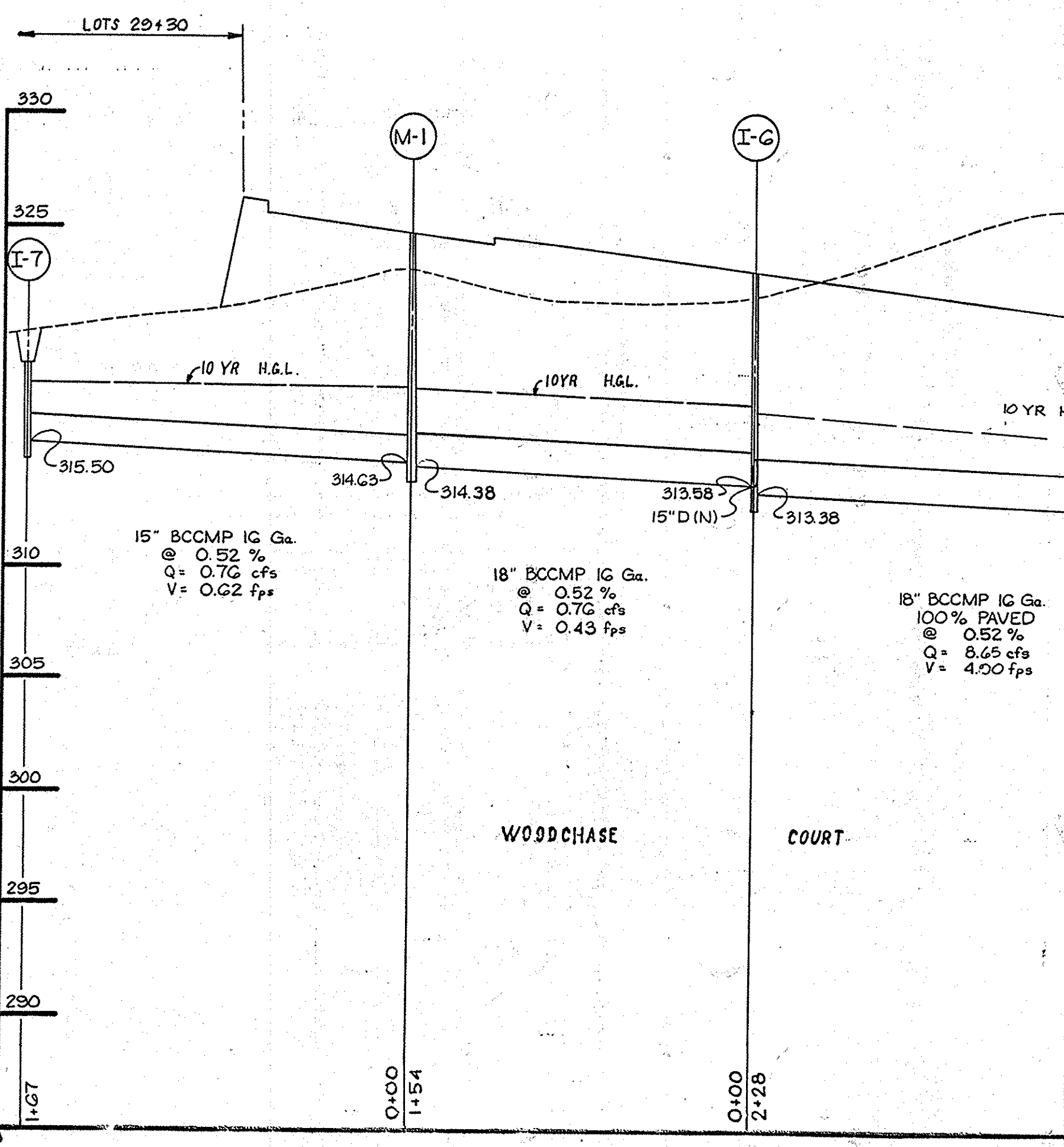
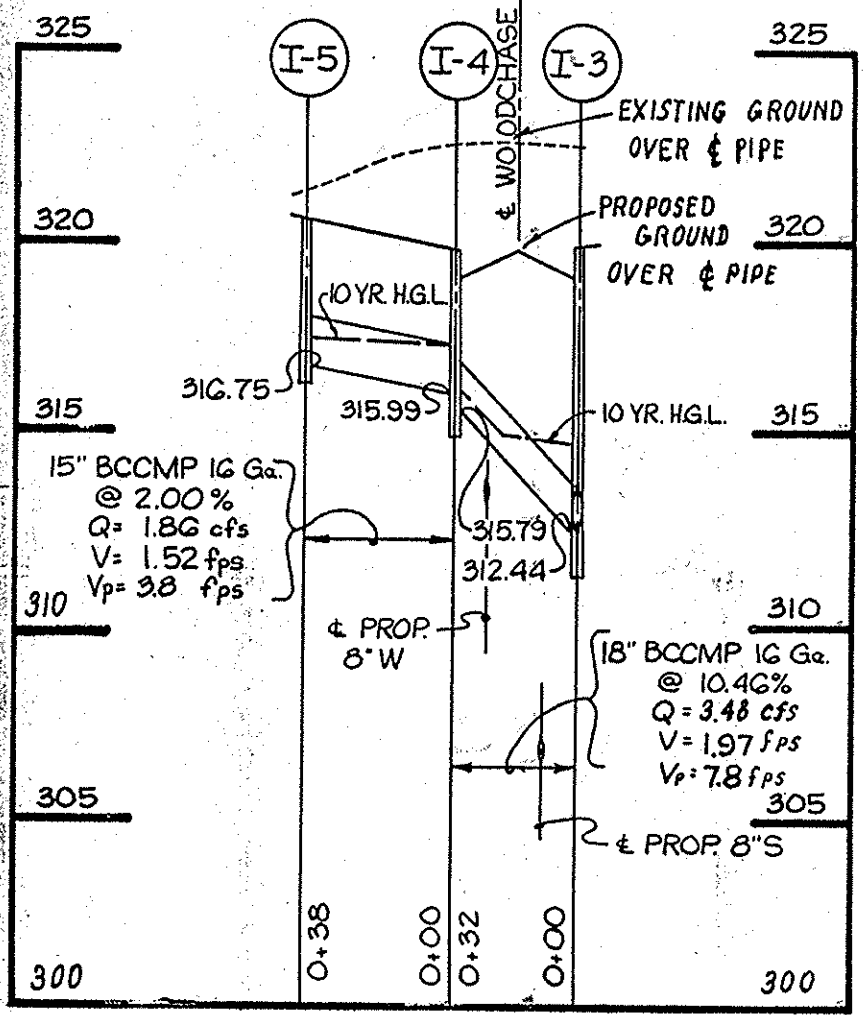
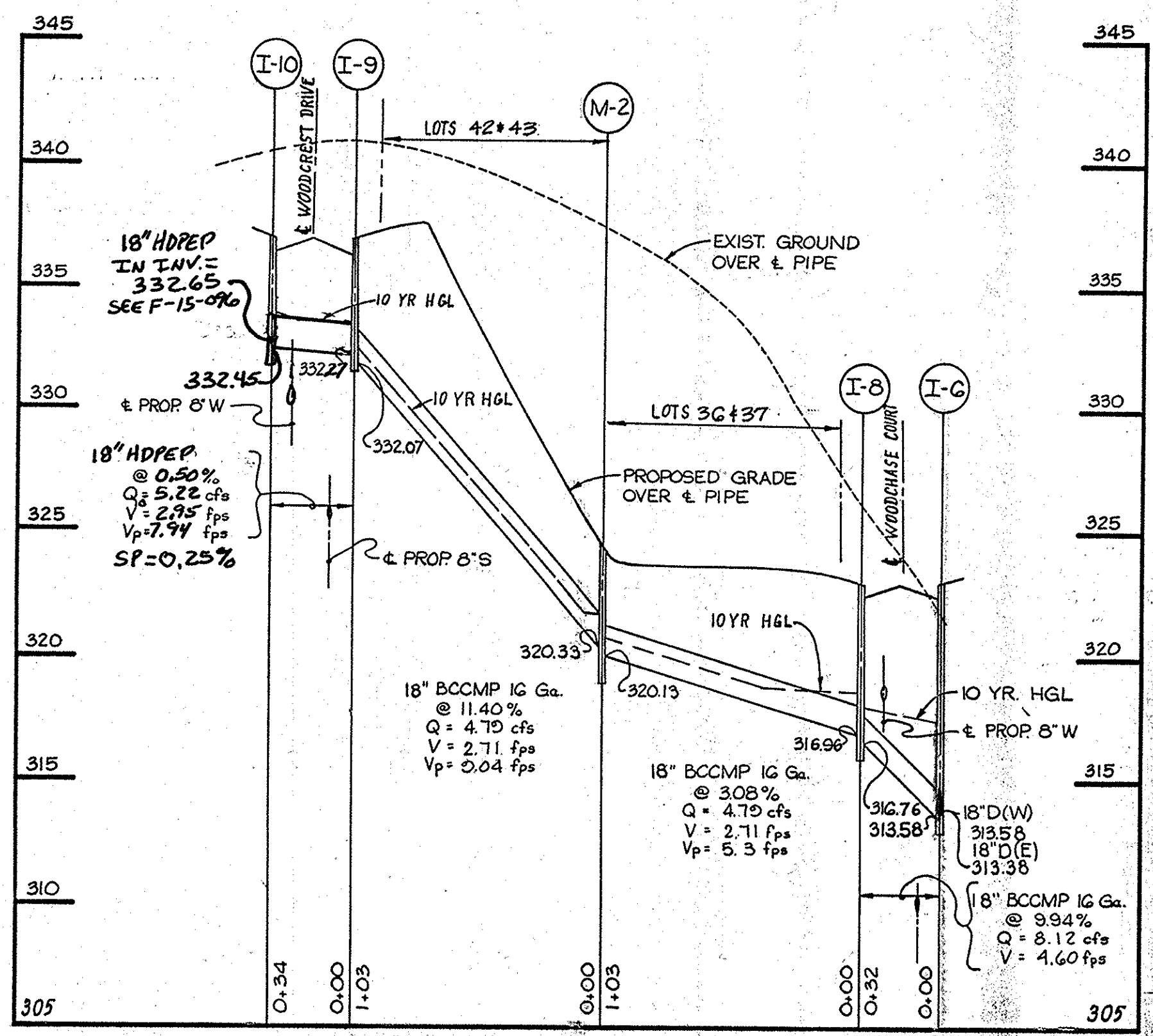
DATE: JUNE 27, 1990
MAY 08, 1991

PROJECT NO. 0164

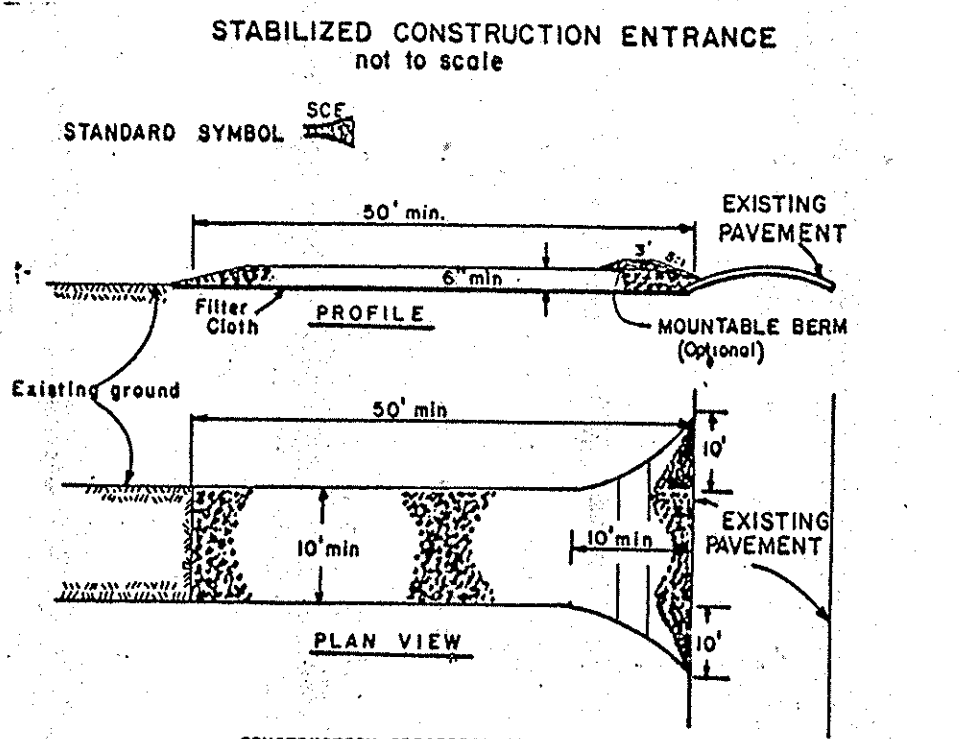
SCALE: 1" = 50'

DRAWING 4 OF 8

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 45577 Exp. Date: 6-3-15

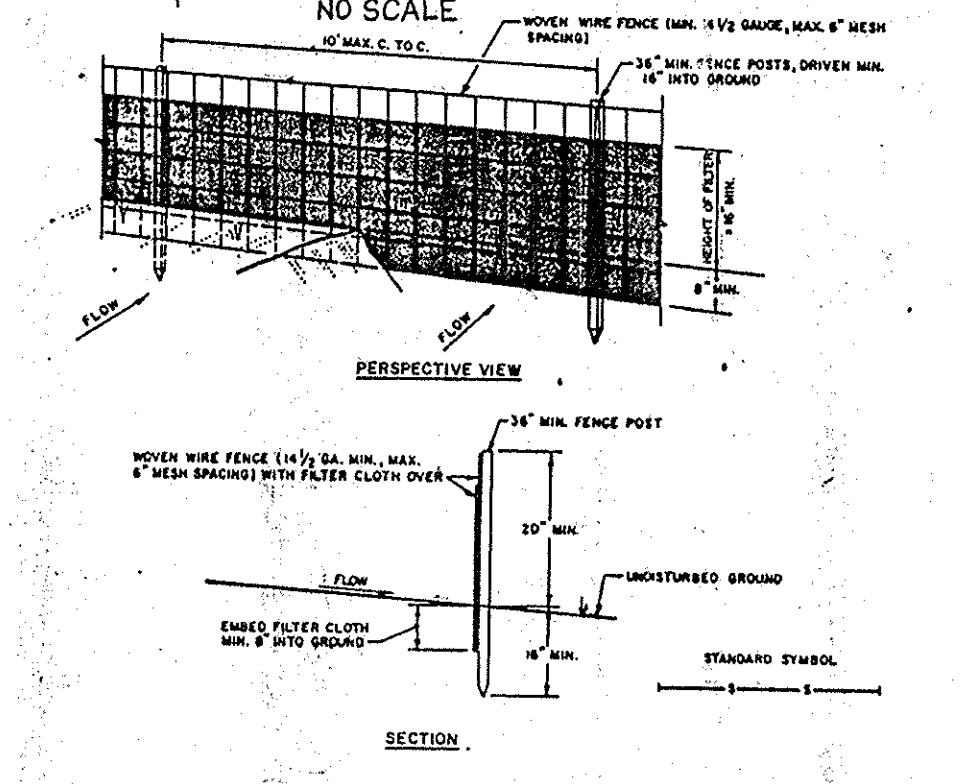


STORM DRAIN PROFILES
 SCALE: HOR - 1" = 50'
 VER - 1" = 5'



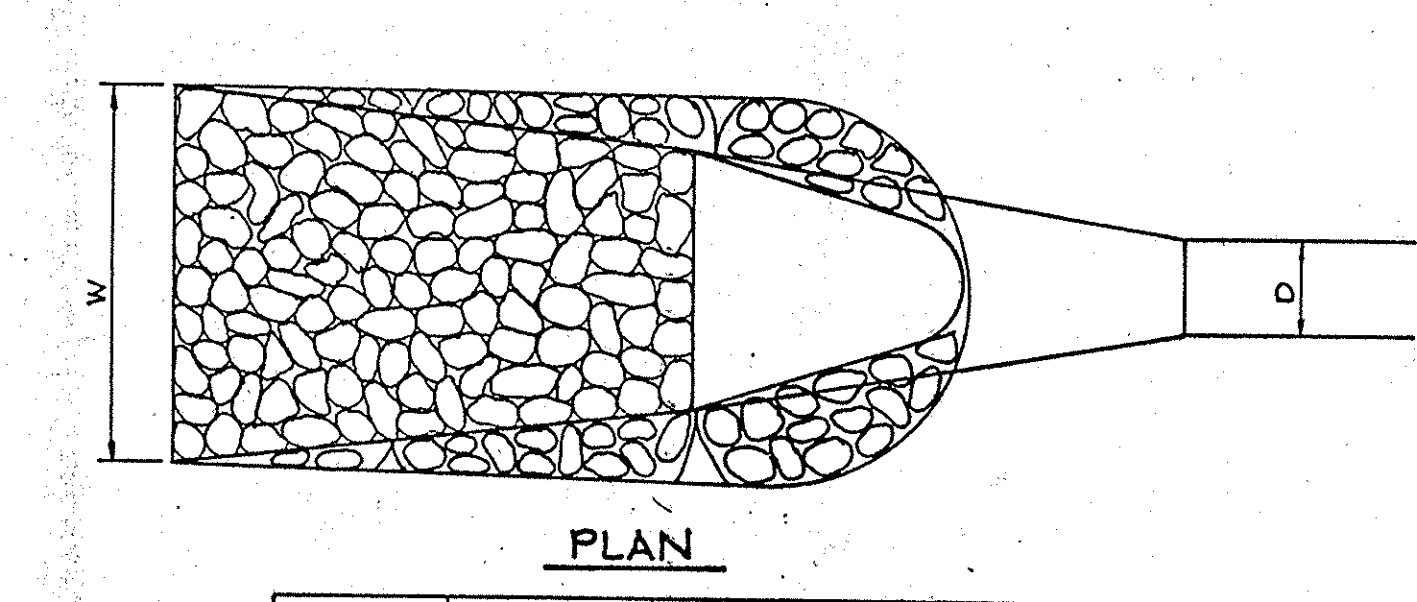
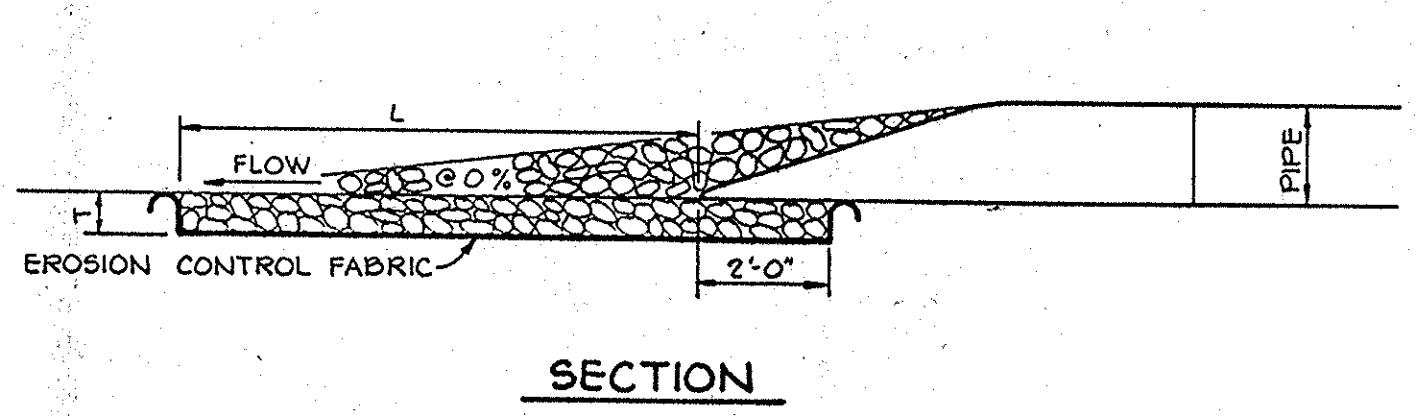
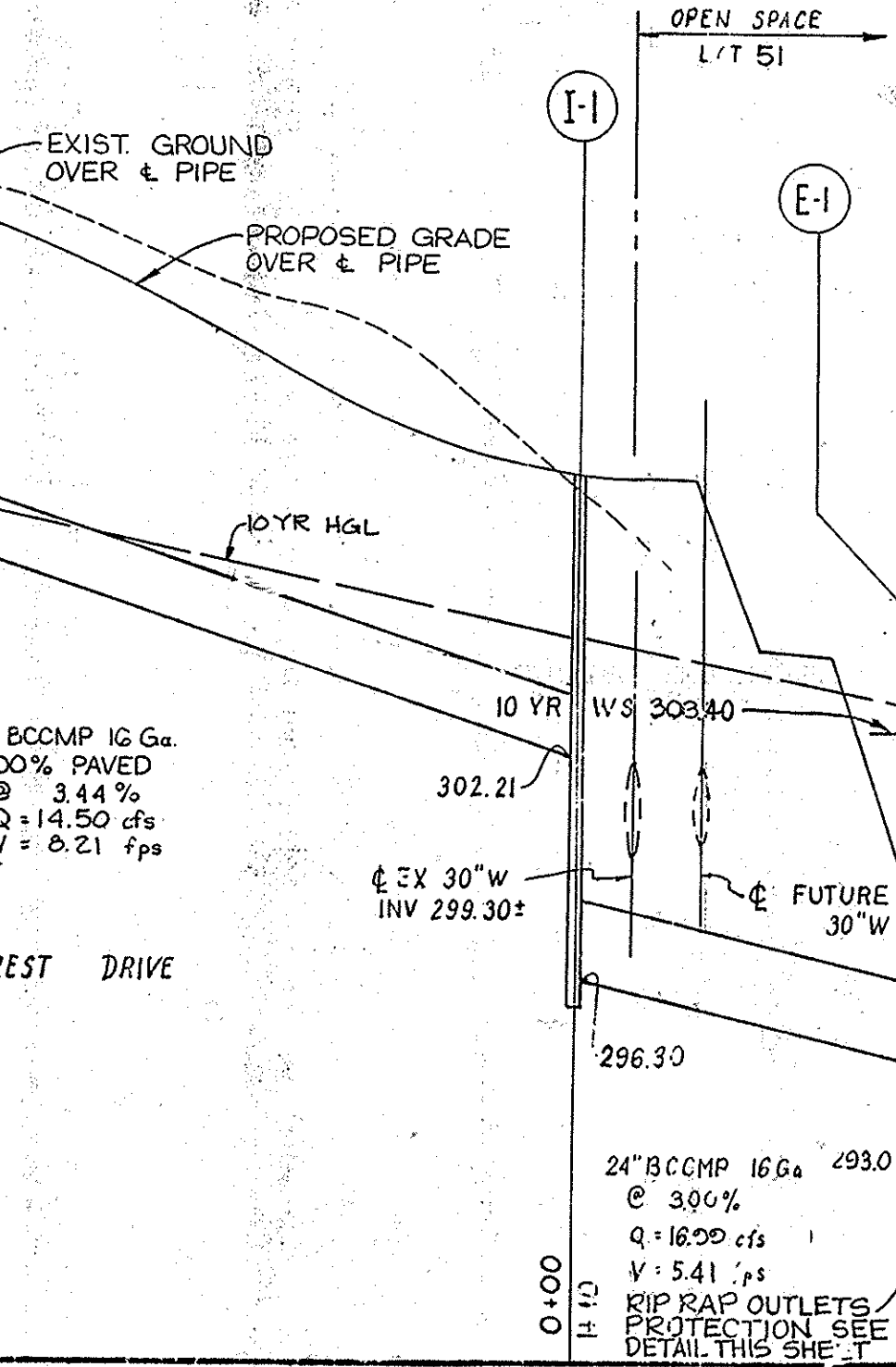
- CONSTRUCTION SPECIFICATIONS**
- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
 - Length - as required, but not less than 50 feet (except on a simple residence lot where a 30 foot minimum length would apply).
 - Thickness - not less than six (6) inches.
 - Width - Two (2) foot minimum, but not less than the full width at points where ingress or egress occurs.
 - Filter Cloth - will be placed over the entire area prior to placing of stone. Filter cloth will not be required on a simple family residence lot. Filter will not be required on a simple family residence lot.
 - Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable beam with 5:1 slopes will be permitted.
 - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleaning of any measures used to trap sediment. All sediment applied, dropped, washed or tracked onto public right-of-way must be removed immediately.
 - Washing - Washes shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
 - Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE
 NO SCALE



- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
- MOVIE WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO MOVIE WIRE FENCE WITH TIES SPACED EVERY 2' AT TOP AND MID SECTION.
 - When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
 - MAINTENANCE SHALL BE PERFORMED AS SOON AS MATERIAL ROOFS WHEN "MATS" DEVELOP IN THE SILT FENCE.

SILT FENCE
 NO SCALE



STRUCTURE	d - 50	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	0.5'	10'	10'	1.13'

OUTLET PROTECTION DETAIL
 NO SCALE

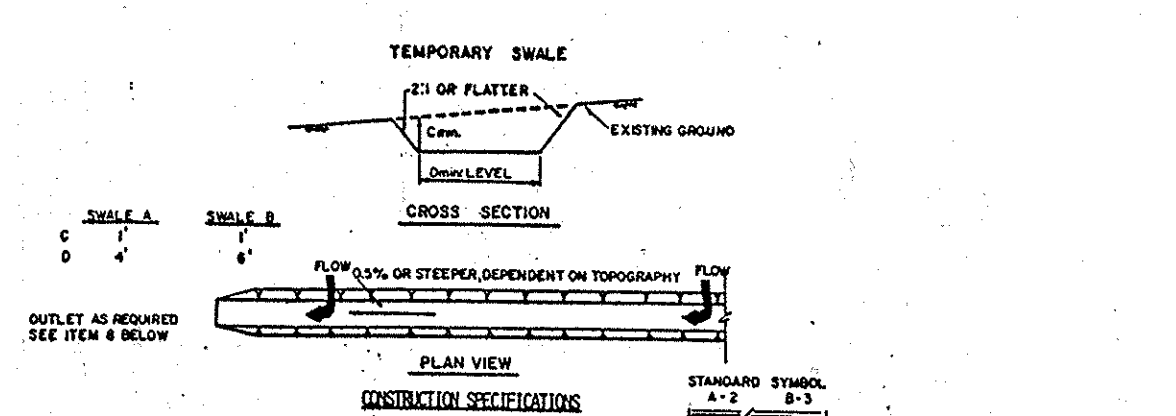
- PERMANENT SEEDING PREPARATION**
- SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 lbs/1000 sq ft) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 lbs/1000 sq ft) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 lbs/1000 sq ft).
 - ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 lbs/1000 sq ft) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (22 lbs/1000 sq ft) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

- SEEDING:** FOR PERIODS MARCH 1 THRU APRIL 30 AND AUGUST 1 THRU OCTOBER 15, SEED WITH 50 LBS PER ACRE (1.4 lbs/1000 sq ft) OF KENTUCKY 31 TALL FESCUE. FOR PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (1.05 lbs/1000 sq ft) OF KEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED SITE AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOO. OPTION (3) SEED WITH 60 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 90 lbs/1000 sq ft) OF UNROOTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 gal/1000 sq ft) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 gal/1000 sq ft) FOR ANCHORING.
- MAINTENANCE:** INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

- TEMPORARY SEEDING PREPARATION**
- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
- SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, 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 PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 lbs/1000 sq ft). FESCUE PER ACRE AND 2 LBS PER ACRE (1.05 lbs/1000 sq ft) OF KEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED SITE AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.
- MULCHING:** APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 lbs/1000 sq ft) OF UNROOTED 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 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.

- SEDIMENT CONTROL NOTES**
- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2427).
 - ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: (1) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, (2) 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. 50), 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: 10.42 ACRES
 AREA DISTURBED: 0.15 ACRES
 AREA TO BE ROOFED OR PAVED: 1.4 ACRES
 AREA TO BE VEGETATIVELY STABILIZED: 8.87 ACRES
 TOTAL CUT: 160.93 CU. YDS.
 TOTAL FILL: 140.38 CU. YDS.
 OFFSITE WASTE/BARRON AREA LOCATION ON SITE.
 - ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
 - ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DEW SEDIMENT CONTROL INSPECTOR.
 - ALL SEDIMENT TRAPS 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 TEMPORARY SWALES SHALL HAVE UNDISTURBED POSITIVE GRADE TO AN OUTLET.
- DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVERTED TO A SEDIMENT TRAPPING DEVICE.
- DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT RESPECTIVE VELOCITY.
- ALL TRENCHES, SWALES, TRAPPS, OBSTRUCTIONS, AND OTHER UNDESIRABLE MATERIAL SHALL BE REPAIRED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
- THE SWALE SHALL BE EQUIPPED OR SHIPPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL SPEED EROSION.
- FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
- ALL EARTH MOVING AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
- STABILIZATION SHALL BE AS PER THE CHART BELOW:

TEMPORARY SWALE
 NO SCALE

BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

ENGINEER: JOHN M. FLORIO, P.E. #16981 DATE: 5/26/11

BY THE DEVELOPER:
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER: JAMES R. MOLEY, FOR SECURITY DEVELOPMENT CORPORATION, PRESIDENT DATE: 5/26/11

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

J. Halpin, U.S. SOIL CONSERVATION SERVICE DATE: 6/11/11

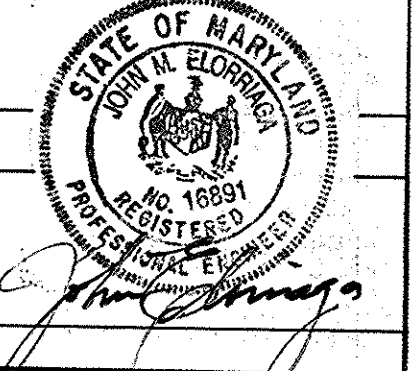
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: Robert J. Ziehn, HOWARD S.C.D. DATE: 6/11/11

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, LAND DEVELOPMENT DIVISION DATE: 7/26/11
 Dawnelle W. Cleveland, CHIEF, BUREAU OF HIGHWAYS DATE: 6/19/11
 James E. Kay, CHIEF, BUREAU OF ENGINEERING DATE: 7-2-11
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE: 7/12/11

NO	DATE	REVISION
2	10-6-15	REVISE STORM DRAIN PROFILE PER F-15-096
1	2-4-11	REVISE H.G.L.

T S A GROUP INC.
 planning • architecture • engineering
 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465-6105



OWNER: WALTER E. AND LORETTA H. NEIGHOFF ET AL
 3618, COOLRIDGE AVENUE
 BALTIMORE, MARYLAND 21229

DEVELOPER: SECURITY DEVELOPMENT CORP.
 80 BOX 417
 ELLICOTT CITY, MARYLAND 21043

PROJECT: **WOOD BROOK**
 SECTION I AREA I
 LOCATION: TAX MAP 37 PARCELS 126, 127, 488, 530
 531, 535 AND 536
 1ST ELECTION DISTRICT
 HOWARD COUNTY MARYLAND

TITLE: **SEDIMENT CONTROL DETAILS AND STORM DRAIN PROFILES**

DATE: JUNE 27, 1990
 MAY 08, 1991

PROJECT NO: 0164

DES: DAM DRN: JLM SCALE: AS SHOWN DRAWING 5 OF 8

I. SITE PREPARATION

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

Areas to be covered by the pond or reservoir will be cleared of all trees, brush, logs, 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.

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

II. EARTH FILL

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish or frozen stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

Placement

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

Compaction

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

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

Cutoff Trench

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

III. STRUCTURAL BACKFILL

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

IV. PIPE CONDUITS

All pipes shall be circular in cross section.

A. Corrugated Metal Pipe

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specifications M-199 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

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

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

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Coupling bands, anti-seep collars, 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. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

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

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

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

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

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

B. Reinforced Concrete Pipe

1. Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. An approved equivalent is AWWA Specification C-301.

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", 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.

4. Backfilling shall conform to structural backfill as shown above.

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

C. For pipes of other materials, specific specifications shall be shown on the drawings.

V. CONCRETE

1. Materials

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

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

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

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

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

2. Design Mix - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-8 to 6 U.S. Gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

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

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

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

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

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

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

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

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

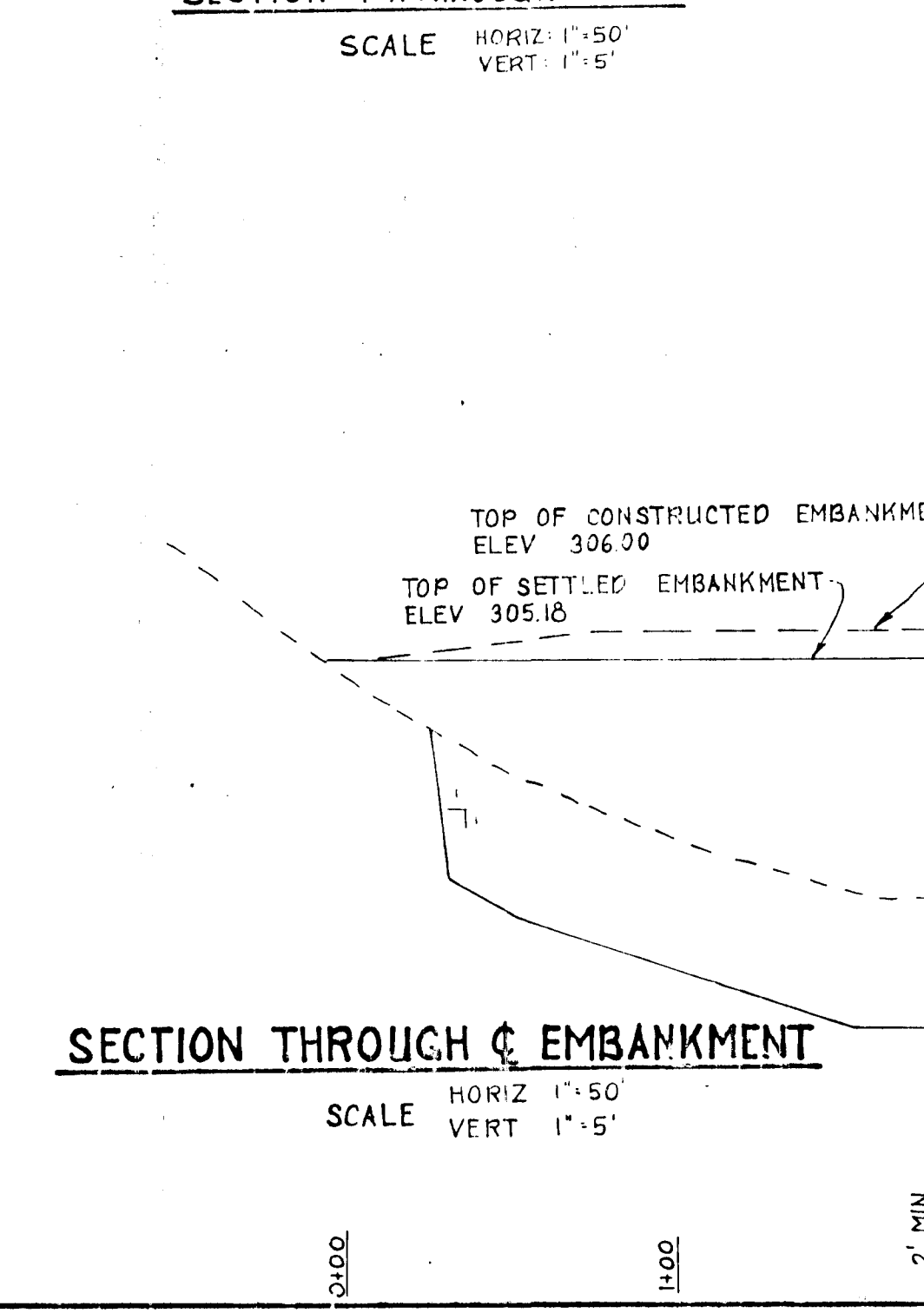
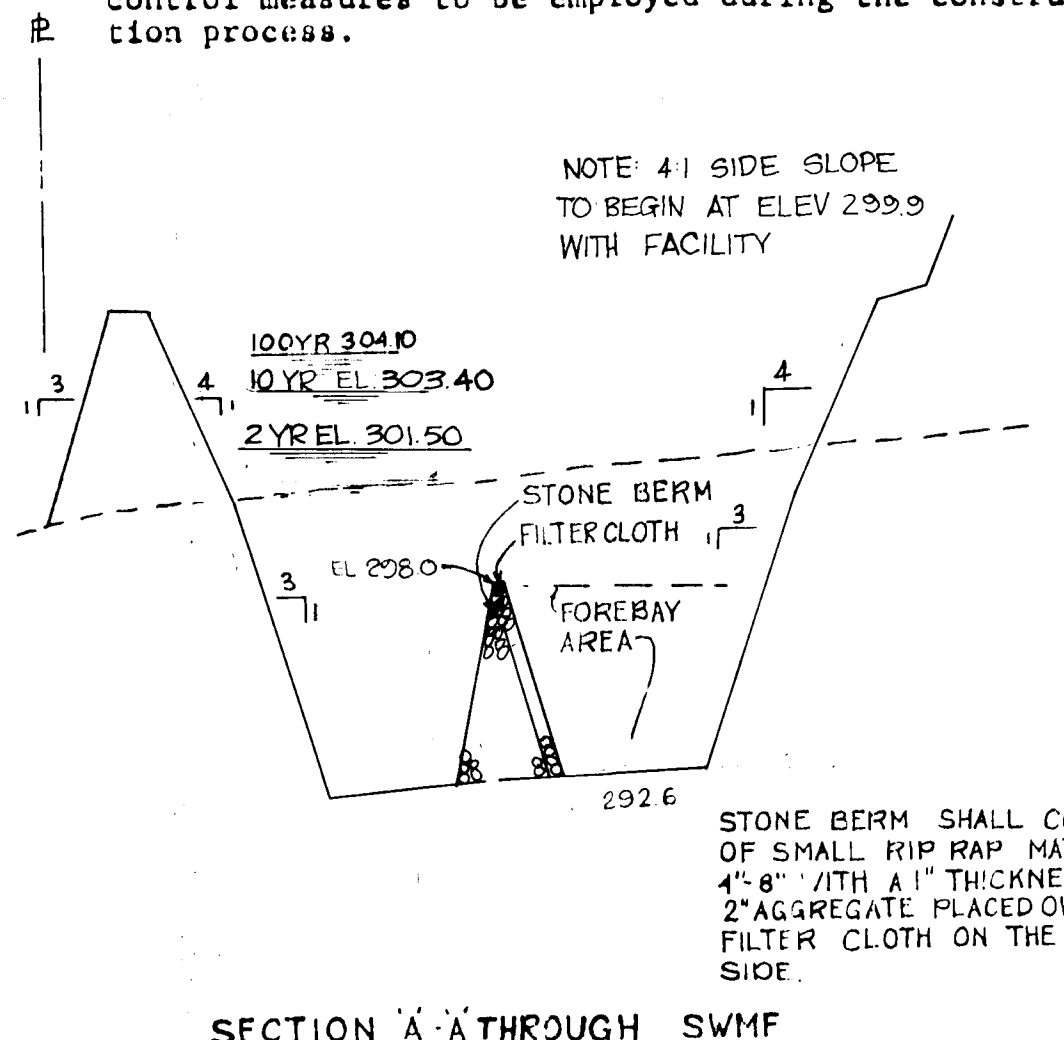
9. Placing Temperature - Concrete may not be placed at temperatures below 37°F with the temperature falling, or 34° with the temperature rising.

VI. 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 (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

VII. EROSION AND SEDIMENT CONTROL

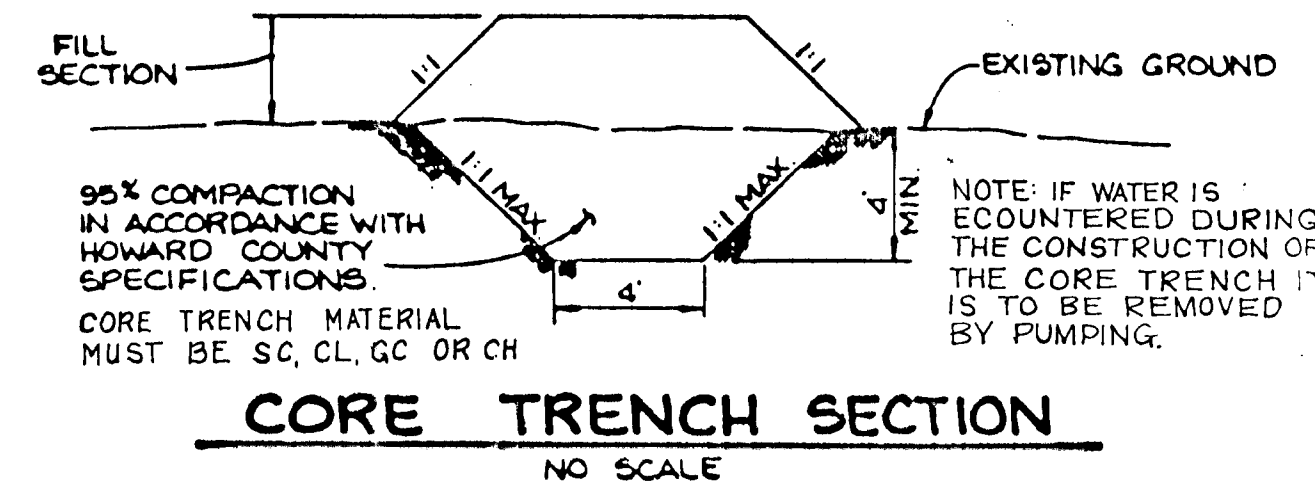
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction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



BORING LOG B-1. A table with columns: ELEV., MATERIAL DESCRIPTION, STN. NO., DEPTH, SCALE, SAMPLE NO., SAMPLE DATA, TYPE, REL., NOTES. It lists soil layers from 1 ft to 10 ft depth, including light brown moist soil, silty clay sand, and silty clay loam.

BORING LOG B-2. A table with columns: ELEV., MATERIAL DESCRIPTION, STN. NO., DEPTH, SCALE, SAMPLE NO., SAMPLE DATA, TYPE, REL., NOTES. It lists soil layers from 1 ft to 15 ft depth, including light brown moist soil, silty clay sand, and silty clay loam.

BORING LOG B-3. A table with columns: ELEV., MATERIAL DESCRIPTION, STN. NO., DEPTH, SCALE, SAMPLE NO., SAMPLE DATA, TYPE, REL., NOTES. It lists soil layers from 1 ft to 15 ft depth, including light brown moist soil, silty clay sand, and silty clay loam.



BY THE ENGINEER: I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. ENGINEER: JOHN M. ELLORRAGA PE # 10801 DATE: 5/28/91

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 WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT. DEVELOPER: JAMES R. MULLICH JR. SECURITY DEVELOPMENT CORPORATION - PRESIDENT DATE: 5-29-91

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.

APPROVED: J. Helm 12 U.S. SOIL CONSERVATION SERVICE DATE: 6/11/91

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

APPROVED: Robert W. Ziehm HOWARD SOIL CONSERVATION SERVICE DATE: 6/11/91

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING DATE: 7/12/91

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS DATE: 7/24/91

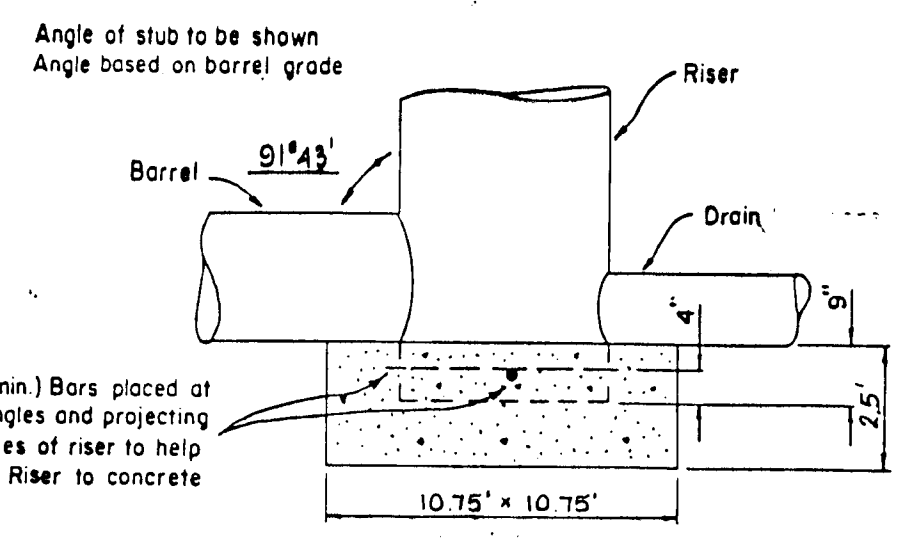
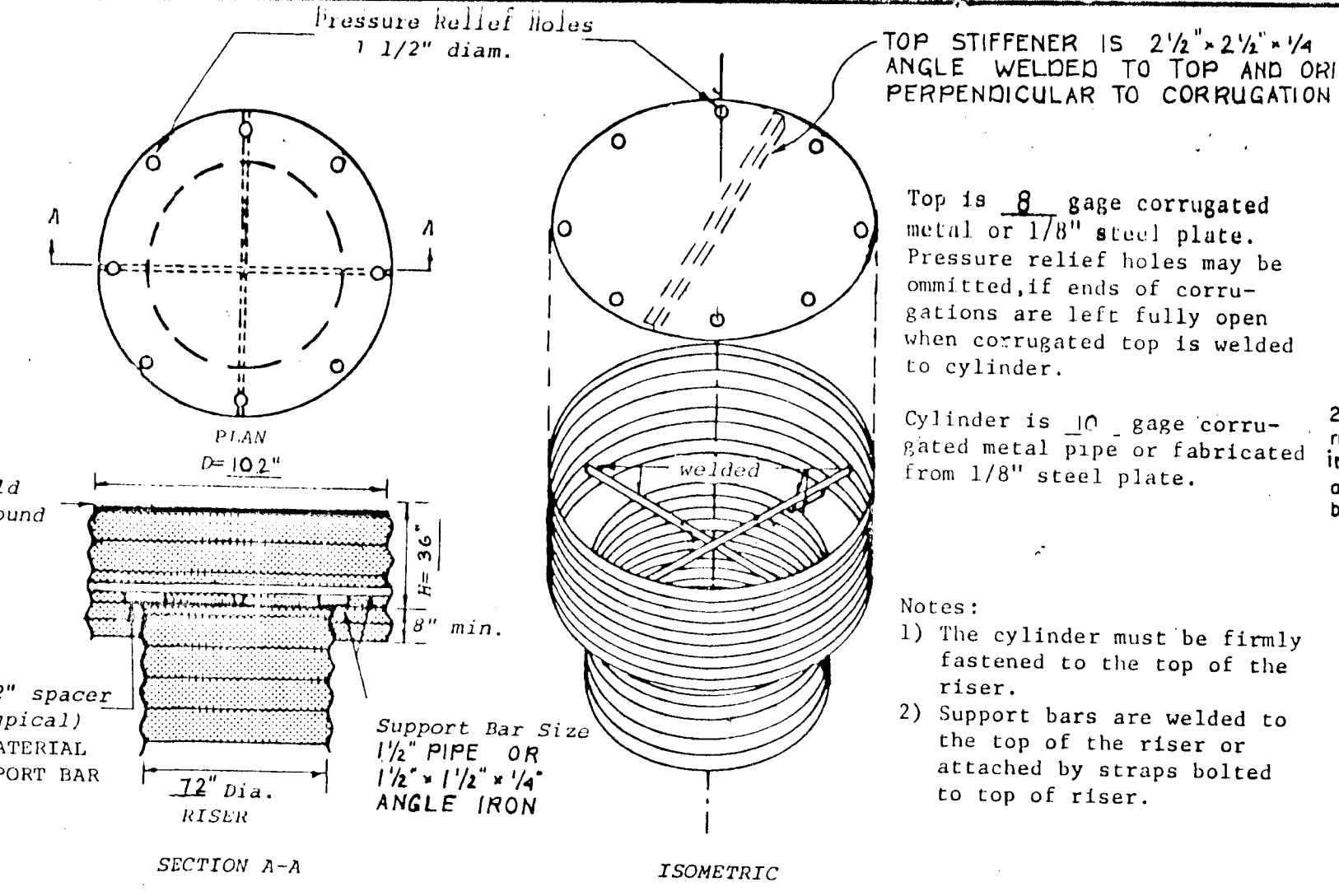
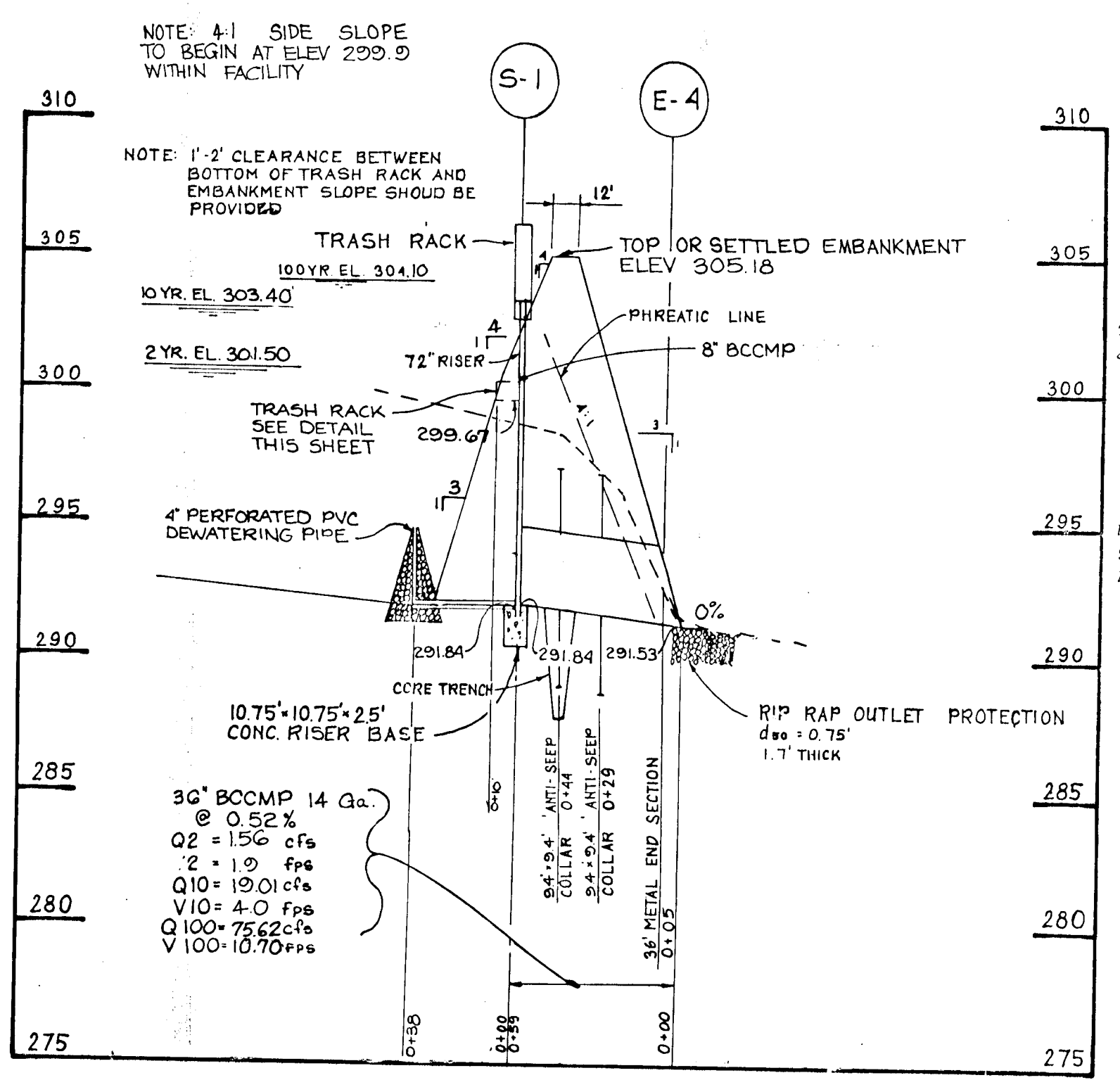
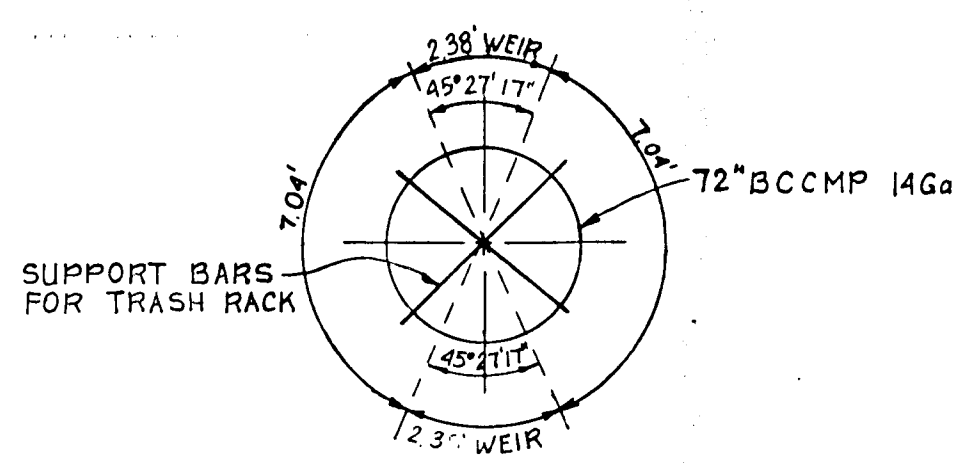
APPROVED: William B. Rely DATE: 7-29-91

NO. DATE REVISION

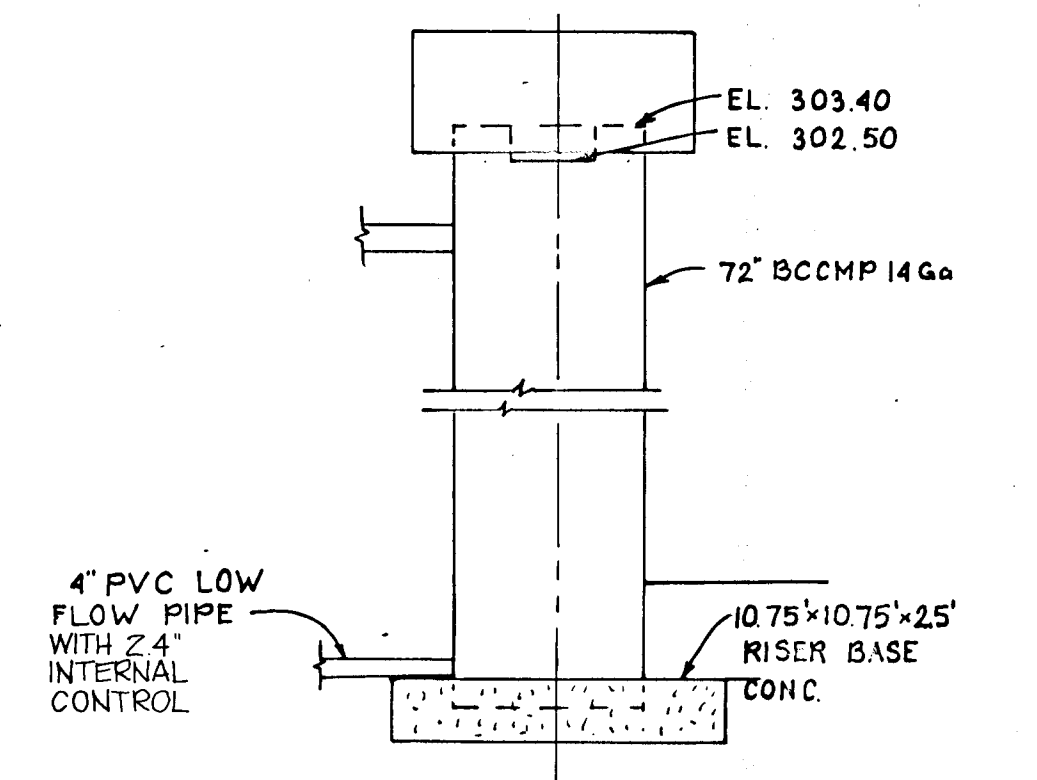
T S A GROUP INC. planning • architecture • engineering 8480 Baltimore National Pike • Suite 418 • Ellicott City, Maryland 21043 • (301) 465-6105

OWNER: WALTER E AND LORETTA H. NEIGHOFF, ET AL. 3618 COOLRIDGE AVENUE BALTIMORE, MARYLAND 21229 PROJECT: WOODBROOK SECTION ONE, AREA ONE LOCATION: TAX MAP 37- PARCELS 126, 127, 488, 530, 531, 536 AND 536 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND DEVELOPER: SECURITY DEVELOPMENT CORP. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043 (301) 465-4244 TITLE: STORMWATER MANAGEMENT DETAILS DATE: JUNE 27, 1990 MAY 08, 1991 PROJECT NO.: 0164 SCALE: AS SHOWN DRAWING: G OF 8

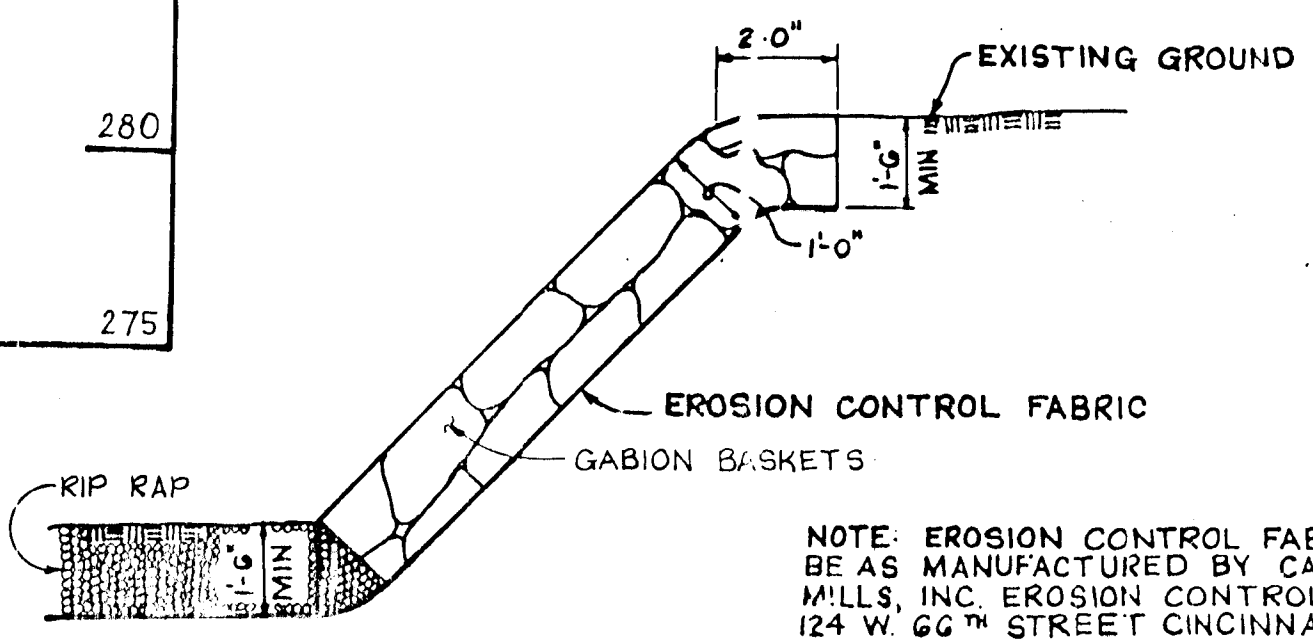
10/8/91



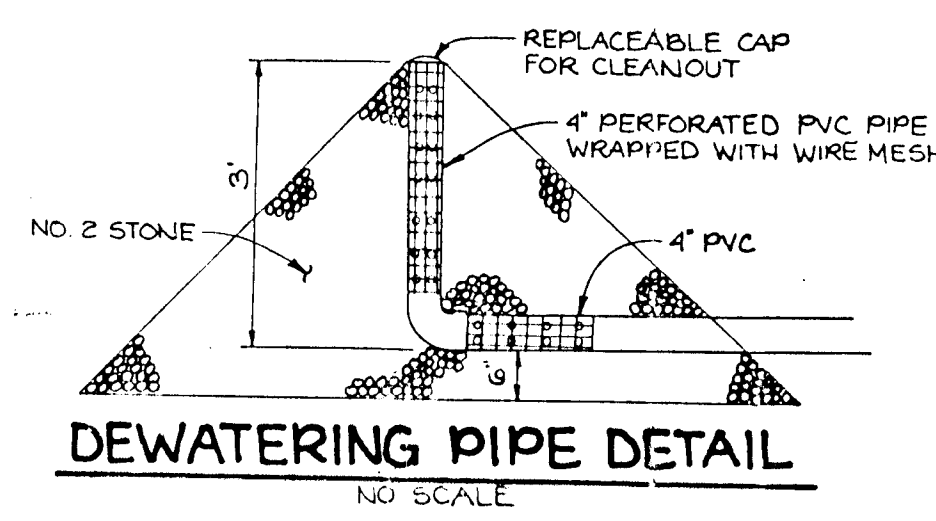
NOTES:
 1. The concrete base shall be poured in such a manner to insure that the concrete fills the bottom of the riser to the invert of the outlet pipe to prevent the riser from breaking away from the base.
 2. With aluminum or aluminized pipe, the embedded section must be painted with zinc chromate or equivalent.
 3. Riser base may be sized as computed using floatation with a factor of safety of 1.2.



RISER DETAIL
NO SCALE



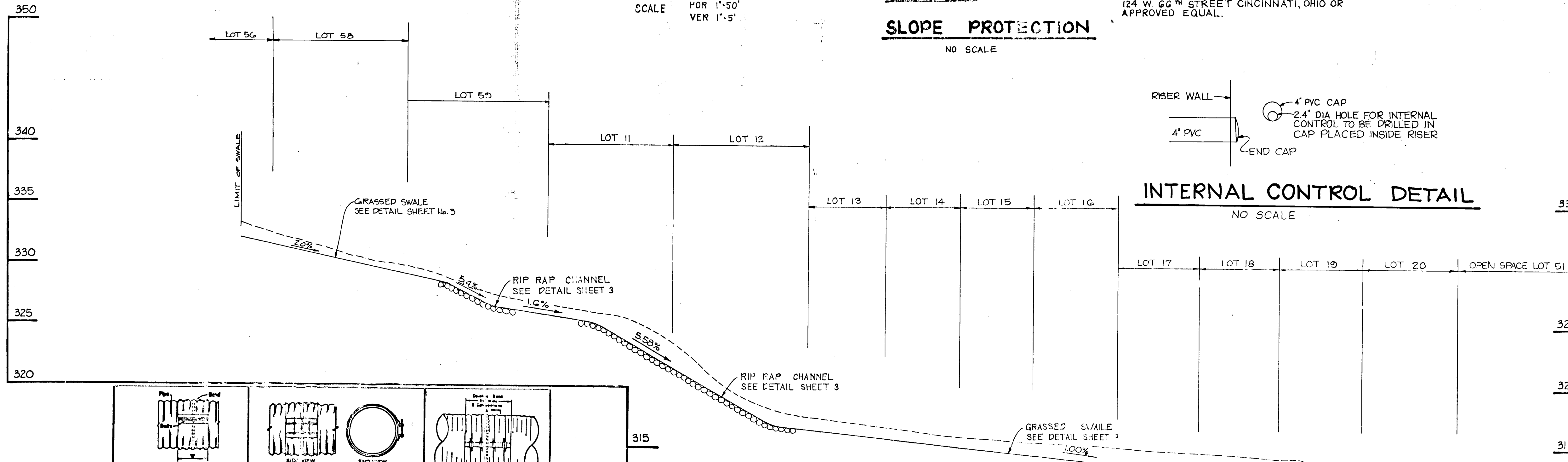
SLOPE PROTECTION
NO SCALE



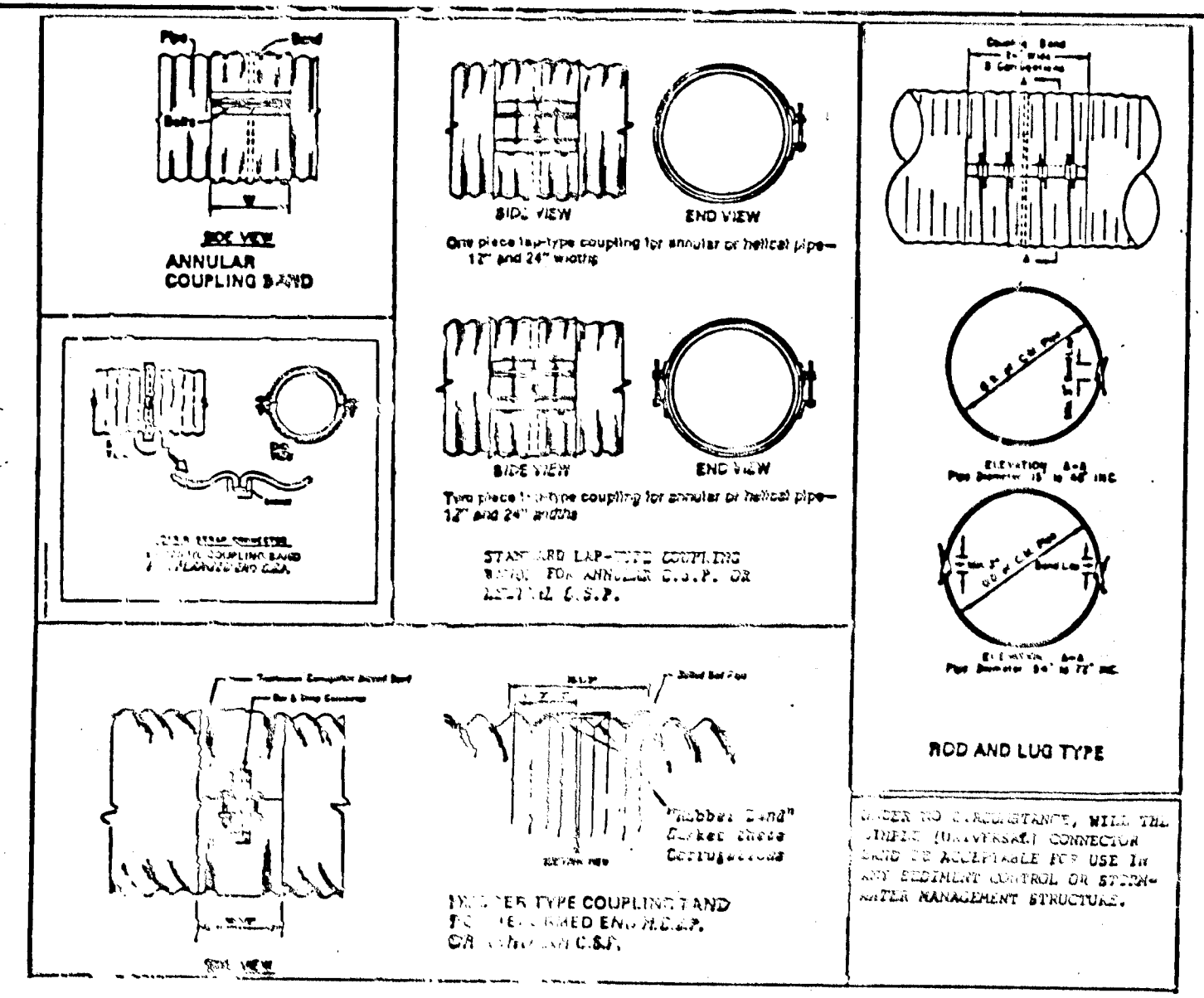
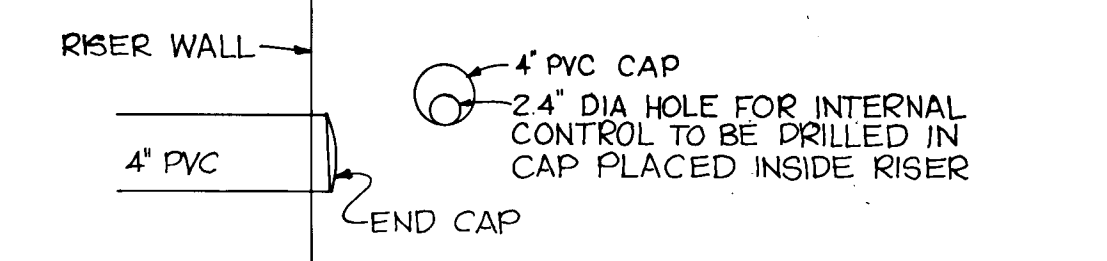
DEWATERING PIPE DETAIL
NO SCALE

PROFILE OF PRINCIPLE SPILLWAY

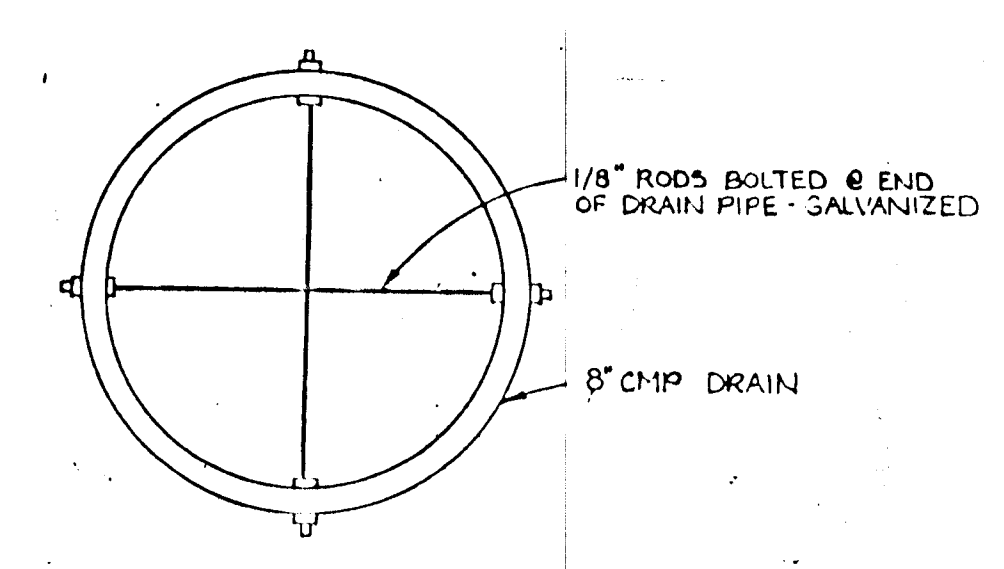
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



INTERNAL CONTROL DETAIL
NO SCALE



PIPE COUPLING END DETAIL
NO SCALE



LOW FLOW DRAIN TRASH RACK
NO SCALE

PROFILE SWALE LOT 2 TO SWMF AND PROFILE E-3 TO E-2

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

BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
 ENGINEER: JOHN M. ELORRIAGA, PE # 16891 DATE: 5/28/91

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 WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
 DEVELOPER: James R. Manly, Jr. DATE: 5-29-91

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.
 U.S. SOIL CONSERVATION SERVICE DATE: 6-11-91

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: Robert W. Ziehm, HOWARD S.O.D. DATE: 6-11-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, LAND DEVELOPMENT DIVISION DATE: 7/2/91
 APPROVED: Howie W. Welstead, CHIEF, BUREAU OF HIGHWAYS DATE: 6/19/91
 APPROVED: William B. Pugh, CHIEF, BUREAU OF ENGINEERING DATE: 7-9-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE: 7/2/91

REVISION: 2-4-92 REVISE PROFILE OF GRASSED SWALE AND REMOVE E-2 TO E-3

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OWNER: WALTER E. AND LORETTA H. NEIGHOFF, ET AL
 3618 COOLRIDGE AVENUE, BALTIMORE, MARYLAND 21229

DEVELOPER: SECURITY DEVELOPMENT CORP.
 PO BOX 417, ELICOTT CITY, MARYLAND 21043 (301) 465-6105

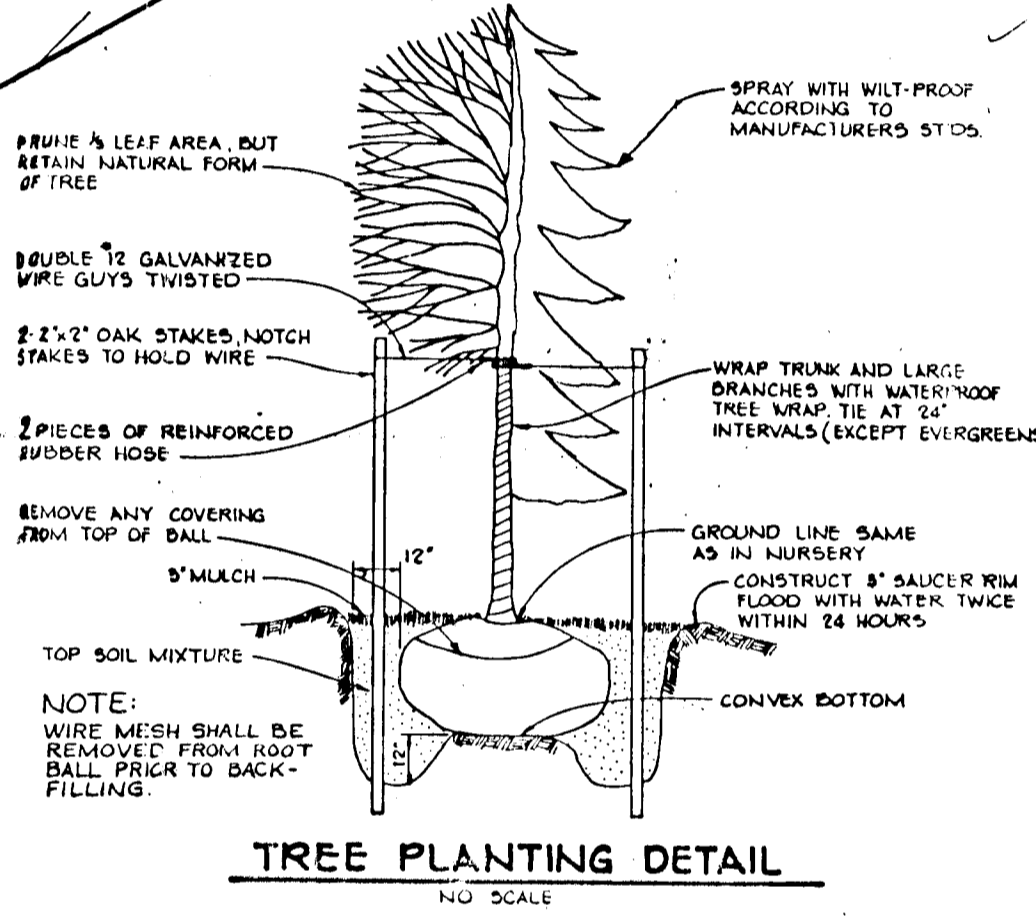
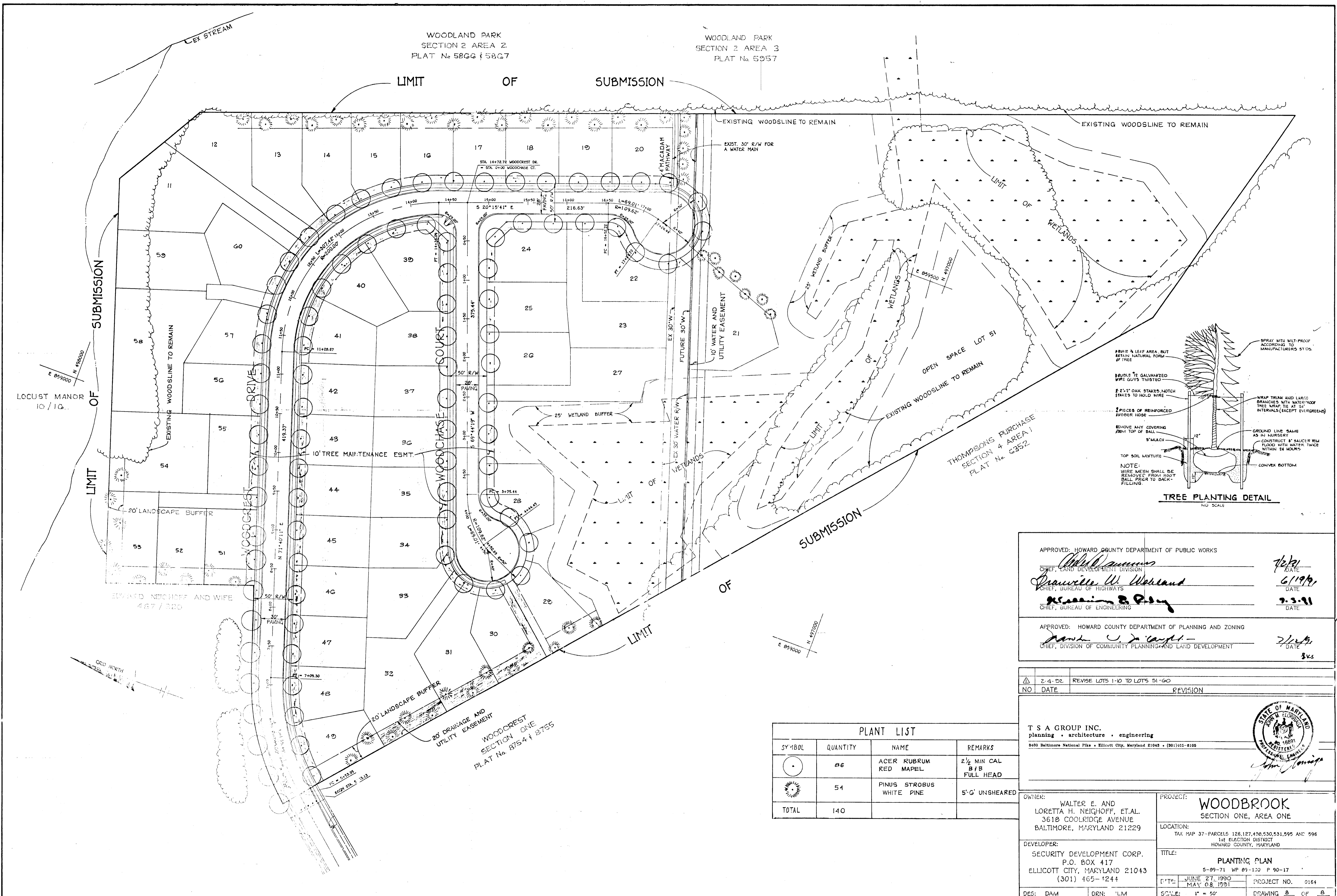
PROJECT: WOODBROOK SECTION I, AREA 1
 LOCATION: TAX MAP 37 PARCELS 12G, 12H, 48B, 53G, 53H, 53S, AND 53Q
 1ST ELECTION DISTRICT HOWARD COUNTY MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS

DATE: JUNE 27, 1990 / MAY 08, 1991 PROJECT NO: 01G4

DES: DAM DRN: JLM SCALE: AS SHOWN DRAWING: 7 OF 8

1006



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Charles Williams
 CHIEF, LAND DEVELOPMENT DIVISION
 DATE: 7/2/91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Drayville W. Welland
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 6/11/91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
William B. Poy
 CHIEF, BUREAU OF ENGINEERING
 DATE: 7-3-91

NO	DATE	REVISION
2-4-92		REVISE LOTS 1-10 TO LOTS 51-60

PLANT LIST			
SYMBOL	QUANTITY	NAME	REMARKS
●	86	ACER RUBRUM RED MAPLE	2 1/2 MIN CAL BFB FULL HEAD
☼	54	PINUS STROBUS WHITE PINE	5'-6" UNSHEARED
TOTAL	140		

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STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 No. 16891
John J. Conroy

OWNER: WALTER E. AND LORETTA H. NEIGHOFF, ET AL.
 3618 COOLRIDGE AVENUE
 BALTIMORE, MARYLAND 21229

PROJECT: WOODBROOK SECTION ONE, AREA ONE

LOCATION: TAX MAP 37-PARCELS 126,127,430-530,531,595 AND 596
 1st ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

DEVELOPER: SECURITY DEVELOPMENT CORP.
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21043
 (301) 465-1244

TITLE: PLANTING PLAN
 5-99-71 WP 09-150 P 90-17

DATE: JUNE 27, 1990
 MAY 08, 1991

PROJECT NO. 0164

DES: DAM DRN: LHM SCALE: 1" = 50'

DRAWING 8 OF 8

1686