

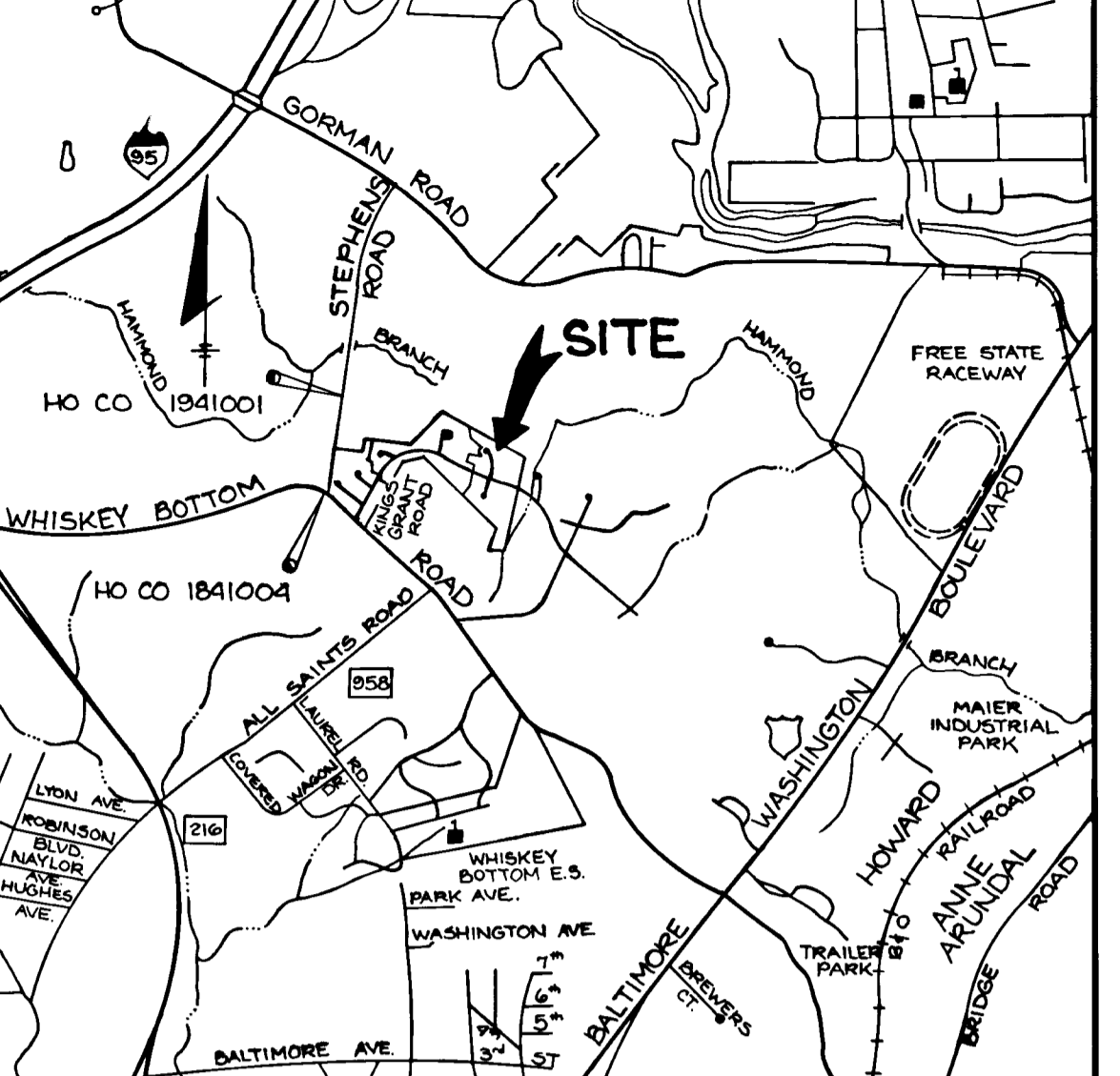
NOTE:
WETLANDS MITIGATION PLAN IS TO BE PROVIDED FOR THIS PROJECT. 0.2525 AC (9875 SF) OF WETLANDS ARE DISTURBED AT THE KING'S GRANT ROAD CROSSING. THE MITIGATION PLAN SHALL PROVIDE FOR A 2:1 MITIGATION AREA OF 0.505 AC (22000 SF) AND SHALL BE REVIEWED BY THE MDE IN ACCORDANCE WITH THE APPROVAL OF WQC 89-WQ-0163

CENTERLINE CURVE DATA						
CH STA.	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
17+11.14 TO 17+35.78 KINGS GRANT RD.	350.00'	42.14'	21.10'	42.11'	S 72°31'49" E	06°53'54"
20+74.45 TO 21+50.95 KINGS GRANT RD.	310.00'	263.04'	140.02'	255.22'	N 51°40'16" W	48°36'59"
14+75.19 TO 14+58.87 QUEENS GUARD CT.	125.00'	166.48'	98.20'	154.44'	N 24°08'00" W	76°18'29"
18+30.07 TO 18+37.88 QUEENS GUARD CT.	109.62'	69.01'	35.69'	67.88'	N 80°19'23" W	36°04'15"
14+02.79 TO 14+72.80 CHATON ROAD	315.00'	169.01'	86.59'	166.99'	N 29°23'29" E	30°44'30"

BENCH MARKS	
HO. CO. #1841004	ELEV. 295.324
REBAR 6" x SOUTH OF SOUTH EDGE OF WHISKEY BOTTOM RD. NEAR THE INTERSECTION OF STEPHENS RD.	E. 843657.878
HO. CO. #1941001	ELEV. 277.873
REBAR 4" x WEST EDGE OF STEPHENS RD. IN FRONT OF HOUSE NO. 8820 0.3' BELOW SURFACE.	E. 843797.549
N 472223.119	E. 843797.549

CENTERLINE CONTROL DATA			
ROAD	CH STATION	NORTH	EAST
KINGS GRANT ROAD	P.C. 17+11.64	N 471355.7012	E 845164.8322
	P.T. 17+35.78	N 471343.0582	E 845205.0045
	P.C. 20+74.45	N 471822.2129	E 849526.763
	P.T. 21+50.95	N 471093.2457	E 849734.5040
QUEENS GUARD COURT	O+0+00	N 471283.8041	E 845441.9750
	P.C. 1+72.19	N 471450.9446	E 845483.6925
	P.C.C. 3+38.67	N 471591.8900	E 845420.5459
	P.T. 4+07.68	N 471603.2999	E 845353.6339
CHATON ROAD	O+0+00	N 471283.8041	E 845441.9750
	P.C. 1+03.79	N 471183.1884	E 845416.8311
	P.T. 2+72.80	N 471037.8908	E 845334.8759
	P.T. 3+72.72	N 470938.4979	E 845296.2051

SHEET INDEX	
No.	DESCRIPTION
1	ROAD PLAN
2	ROAD PROFILES
3	ROAD PROFILE AND DETAILS
4	DRAINAGE AREA MAP & DRAIN PROFILES
5	GRADING, SEDIMENT & EROSION CONTROL
6	STORMWATER MANAGEMENT DETAILS
7	STORMWATER MANAGEMENT NOTES & SEDIMENT CONTROL DETAILS
8	PLANTING PLAN



VICINITY MAP
SCALE: 1"=2000'

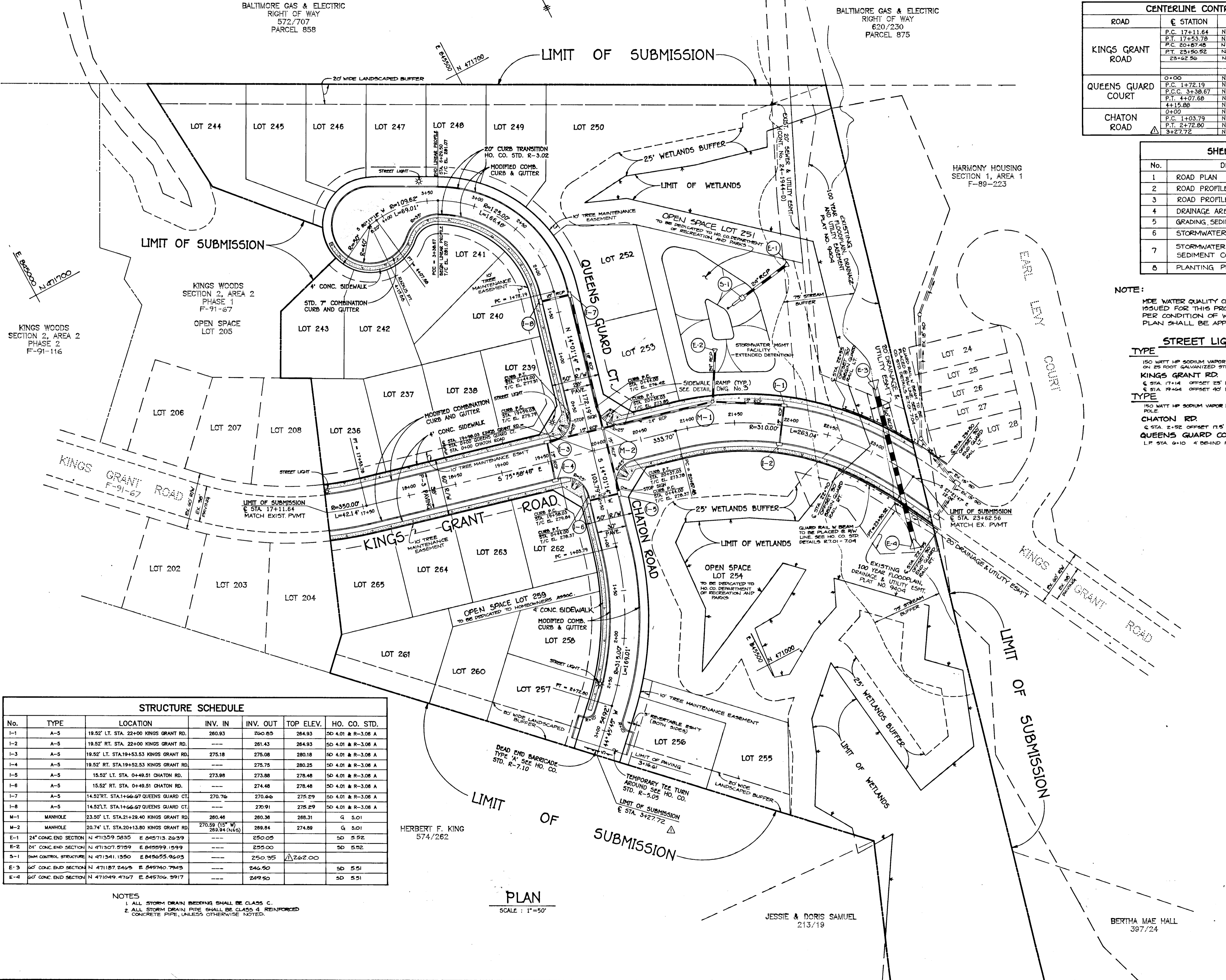
- GENERAL NOTES
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR ROAD CONSTRUCTION.
 - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING 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	393-3649
LONG DISTANCE CABLE DIVISION	393-3553 OR 3554
BALTIMORE GAS AND ELECTRIC	539-8000 EXT. 691
HOWARD CO. BUREAU OF UTILITIES	315-2366
HOWARD CO. CONSTRUCTION INSPECTION SURVEY DIVISION	313-2417 OR 2418
 - ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
 - ALL STREET CURB RETURNS SHALL HAVE 25.0' 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 25 MPH, ALL LOCAL STREETS DESIGNED FOR 30 MPH, ALL MINOR COLLECTORS DESIGNED FOR 35 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 PROCTER.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
 - PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
 - SUBJECT PROPERTY ZONED R-SC PER 6/2/85 COMPREHENSIVE ZONING PLAN.
 - TOPO TAKEN FROM FIELD RUN SURVEY BY TRACY, SCHULTE & ASSOC. DATED 1/23/89.

NOTE:
MDE WATER QUALITY CERTIFICATION NO. 89-WQ-0163 ISSUED FOR THIS PROJECT, (EXPIRATION DATE 3-20-92) PER CONDITION OF WQC A WETLAND MITIGATION PLAN SHALL BE APPROVED BY MDE BY OCT. 1, 1992

STREET LIGHT LEGEND

TYPE	150 WATT HP SODIUM VAPOR LAMP LEGEND MOUNTED FIXTURE ON 25 FOOT GALVANIZED STEEL POLE.
KINGS GRANT RD.	1" x 1/2" OFFSET 23' LEFT 2" x 1/2" OFFSET 40' LEFT
TYPE	150 WATT HP SODIUM VAPOR LAMP FIXTURE ON 14' GREY FIBERGLASS POLE.
CHATON RD.	6" STA. 2+52' OFFSET 17.5' RIGHT
QUEENS GUARD COURT	LP STA. 6+10' 4' BEHIND FACE OF CURB



STRUCTURE SCHEDULE						
No.	TYPE	LOCATION	INV. IN	INV. OUT	TOP ELEV.	HO. CO. STD.
I-1	A-5	19.52' LT. STA. 22+00 KINGS GRANT RD.	280.93	280.63	284.93	SD 4.01 & R-3.08 A
I-2	A-5	19.52' RT. STA. 22+00 KINGS GRANT RD.	---	281.43	284.93	SD 4.01 & R-3.08 A
I-3	A-5	19.52' LT. STA. 19+53.53 KINGS GRANT RD.	275.18	278.08	280.18	SD 4.01 & R-3.08 A
I-4	A-5	19.52' RT. STA. 19+53.53 KINGS GRANT RD.	---	275.75	280.25	SD 4.01 & R-3.08 A
I-5	A-5	15.52' LT. STA. 0+49.51 CHATON RD.	273.98	273.88	278.48	SD 4.01 & R-3.08 A
I-6	A-5	15.52' RT. STA. 0+49.51 CHATON RD.	---	274.48	278.48	SD 4.01 & R-3.08 A
I-7	A-5	14.52' RT. STA. 1+66.67 QUEENS GUARD CT.	270.76	270.66	275.29	SD 4.01 & R-3.08 A
I-8	A-5	14.52' LT. STA. 1+66.67 QUEENS GUARD CT.	---	270.91	275.29	SD 4.01 & R-3.08 A
M-1	MANHOLE	23.50' LT. STA. 21+29.40 KINGS GRANT RD.	260.46	260.36	265.31	G 5.01
M-2	MANHOLE	20.74' LT. STA. 20+13.80 KINGS GRANT RD.	270.58 (18" DI)	269.84 (18" DI)	274.88	G 5.01
E-1	24" CONC. END SECTION	N 471359.5835 E 845713.2639	---	250.05	---	SD 5.52
E-2	24" CONC. END SECTION	N 471307.5759 E 845559.1599	---	255.00	---	SD 5.52
S-1	SWM CONTROL STRUCTURE	N 471341.1350 E 845655.9603	---	250.95	262.00	SD 5.51
E-3	24" CONC. END SECTION	N 471187.2425 E 845740.7943	---	246.50	---	SD 5.51
E-4	24" CONC. END SECTION	N 471049.4767 E 845706.3917	---	249.50	---	SD 5.51

NOTES
1. ALL STORM DRAIN BEDDING SHALL BE CLASS C.
2. ALL STORM DRAIN PIPE SHALL BE CLASS 4 REINFORCED CONCRETE PIPE, UNLESS OTHERWISE NOTED.

PLAN
SCALE: 1"=50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chad Damiano
 CHIEF, LAND DEVELOPMENT DIVISION
 DATE: 4/10/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Anna M. Scroggins
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 4-16-92

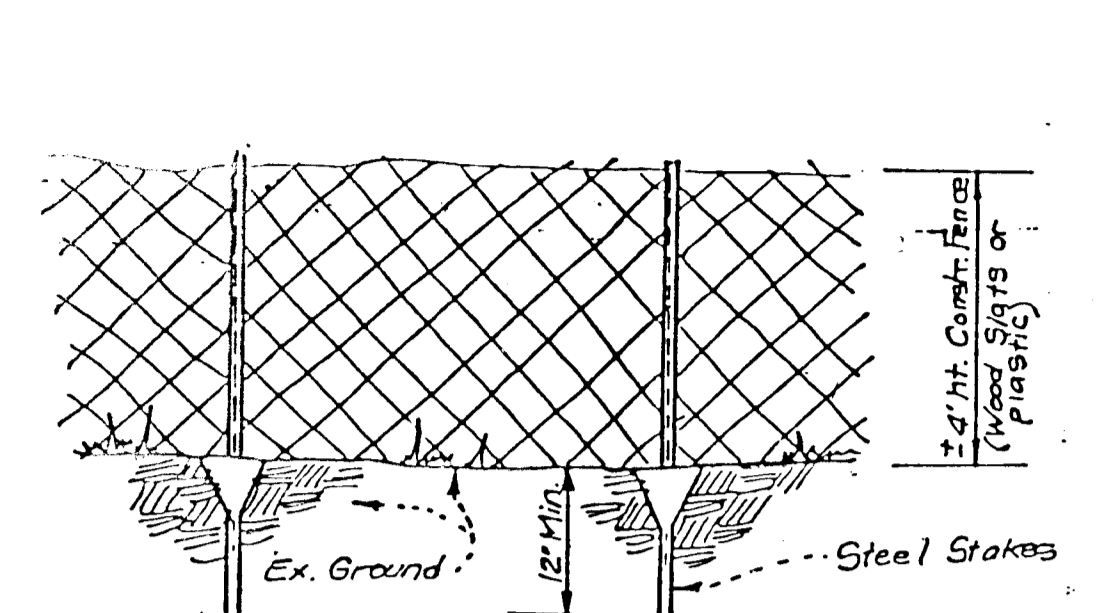
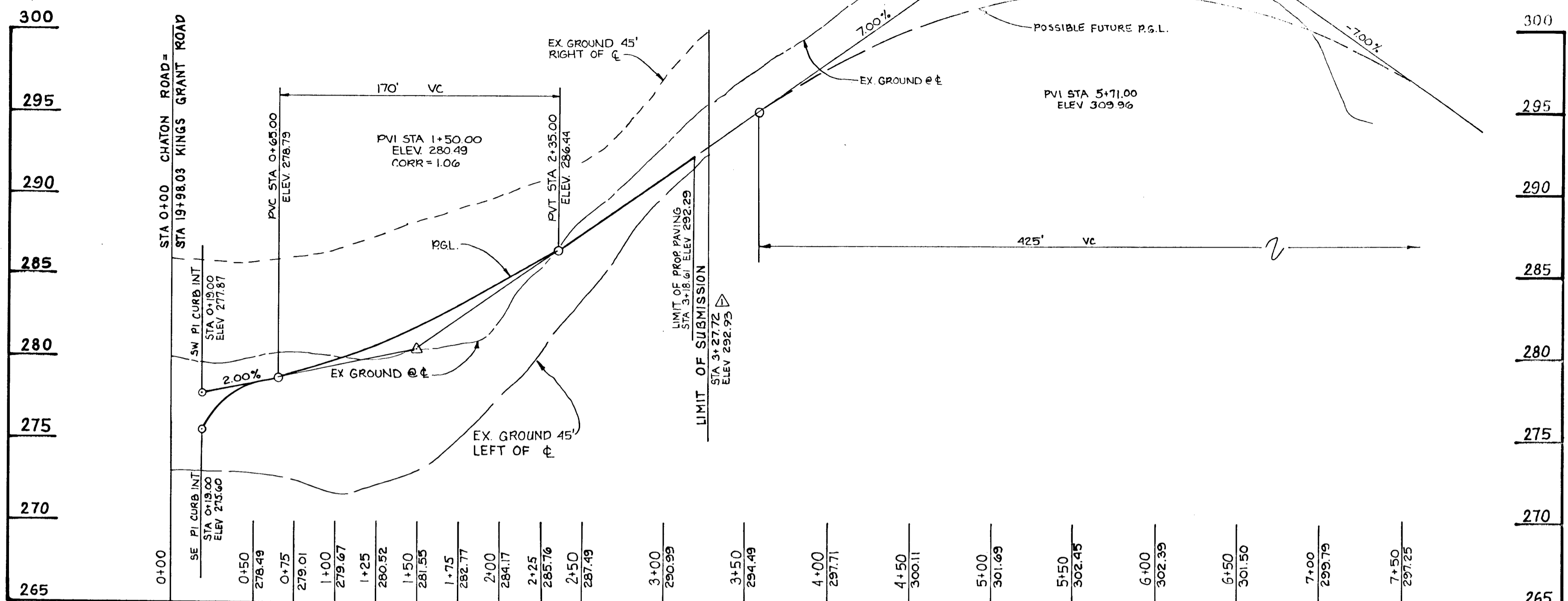
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
William J. Samuel
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
 DATE: 4/16/92

NO.	DATE	REVISION
1	7-15-92	CORRECT TOP MH ON S-1; REVISE LIMIT OF SUBMISSION

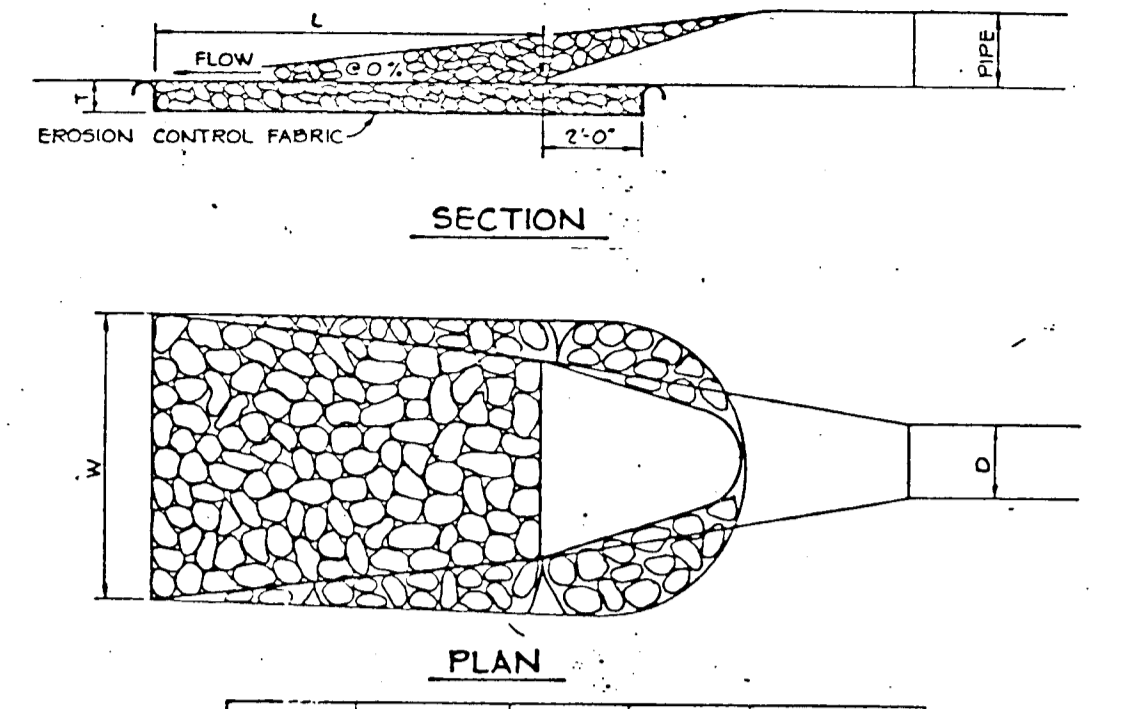
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 planning • architecture • engineering
 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (801)468-8100

OWNER/DEVELOPER: SECURITY DEVELOPMENT CORP. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043 (301) 465-4244	PROJECT: KING'S WOODS SECTION 2, AREA 2 - PHASE 3 LOTS 236-265
LOCATION: TAX MAP 47-PARCELS 136,139,140 AND 857 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: PLAN OF KING'S GRANT ROAD, QUEENS GUARD CT. AND CHATON RD. S-89-29 PB-247 P-90-13 WP-91-193
DATE: MAY 28, 1991 SEPT. 20, 1991	PROJECT NO.: 0084
DES: DRK	DRN: DRK
SCALE: AS SHOWN	DRAWING 1 OF 8

987

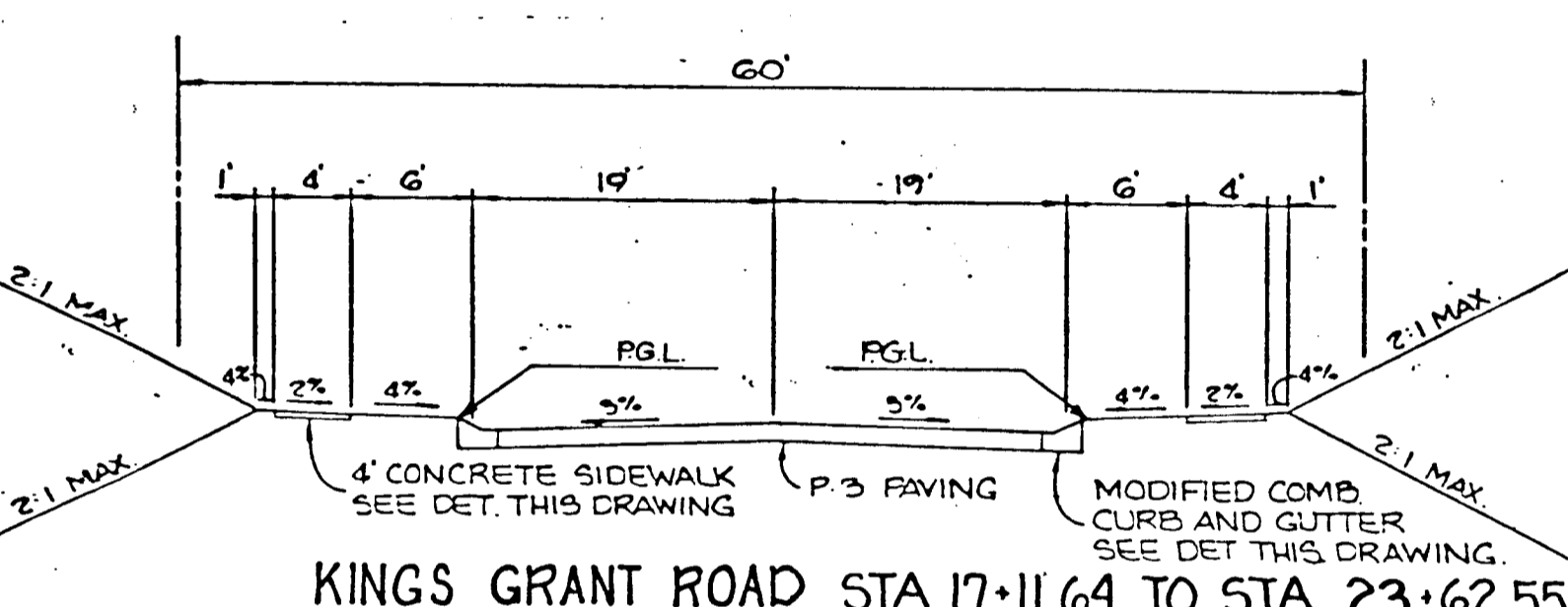


TYPICAL TREE PROTECTION FENCE DETAIL



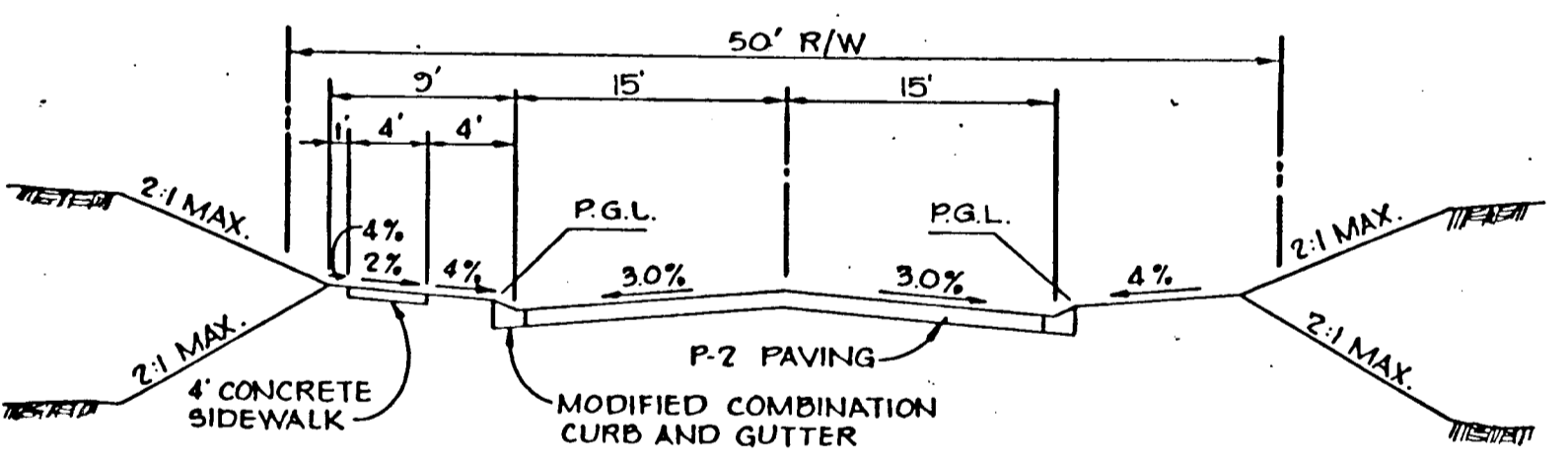
STRUCTURE	d - 50	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	0.50'	8'	10'	1.0'
E-2	0.50'	22'	6'	1.0'
E-3	1.00'	45'	16'	1.50'
E-4	0.50'	25'	16'	1.50'

OUTLET PROTECTION DETAIL
NO SCALE



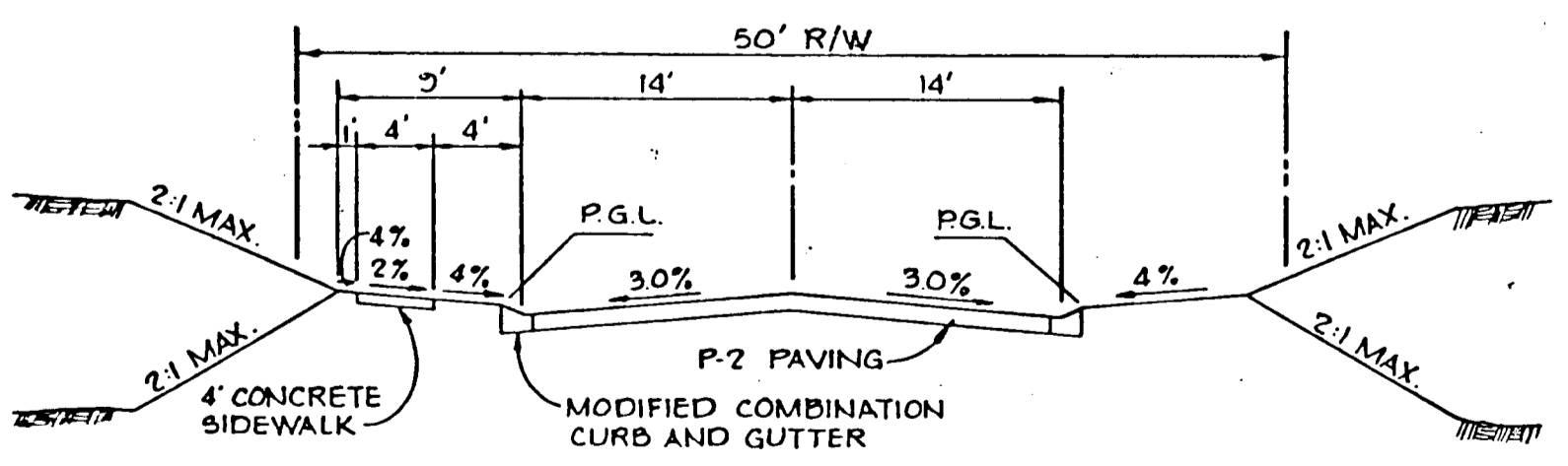
KINGS GRANT ROAD STA 17+11.64 TO STA 23+62.55

CLASSIFICATION: MINOR COLLECTOR
DESIGN SPEED: 35 MPH
ZONING: R3C



CHATON ROAD

CLASSIFICATION: LOCAL ROAD
DESIGN SPEED: 30 MPH
ZONING: R3C

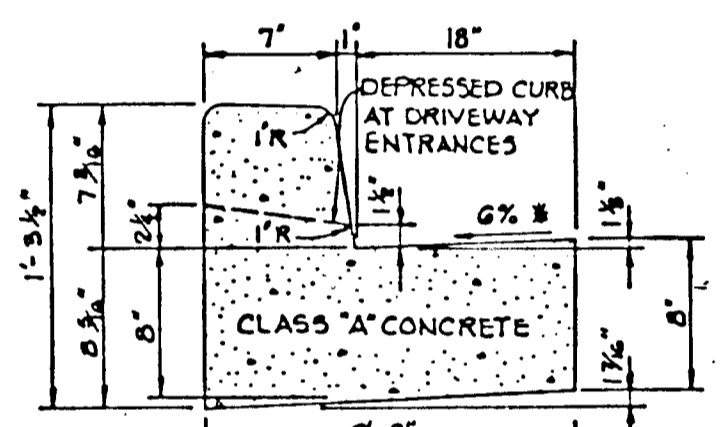


QUEENS GUARD COURT

CLASSIFICATION: CUL-DE-SAC
DESIGN SPEED: 25 MPH
ZONING: R3C

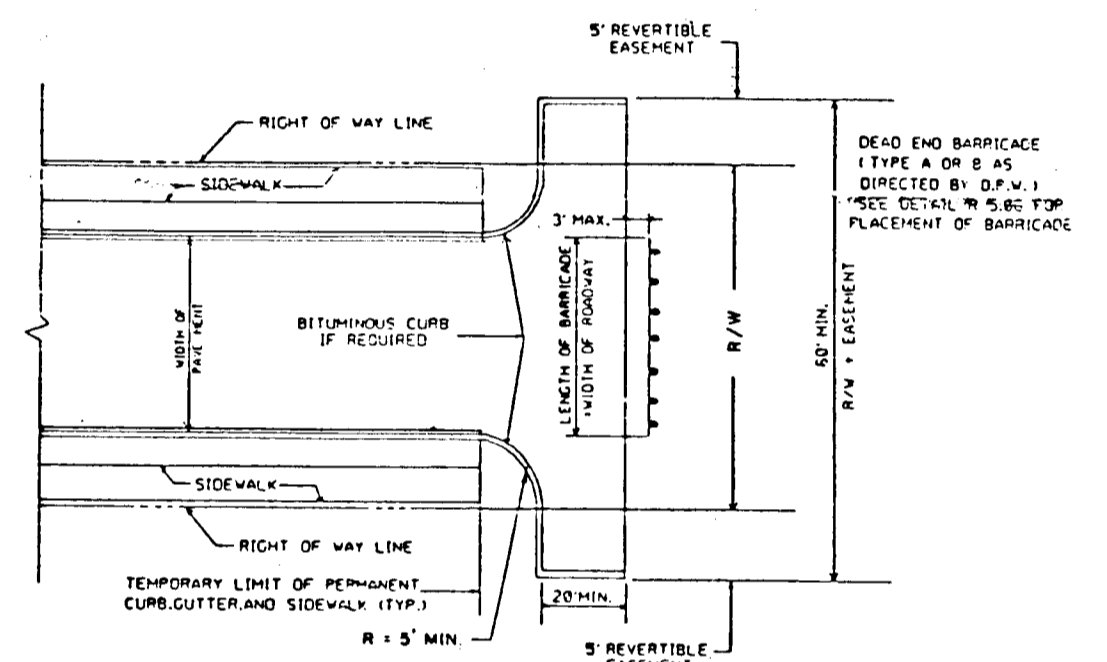
TYPICAL SECTIONS
NO SCALE

CHATON ROAD
SCALE 1" = 5' VERT. 1" = 50' HOR.



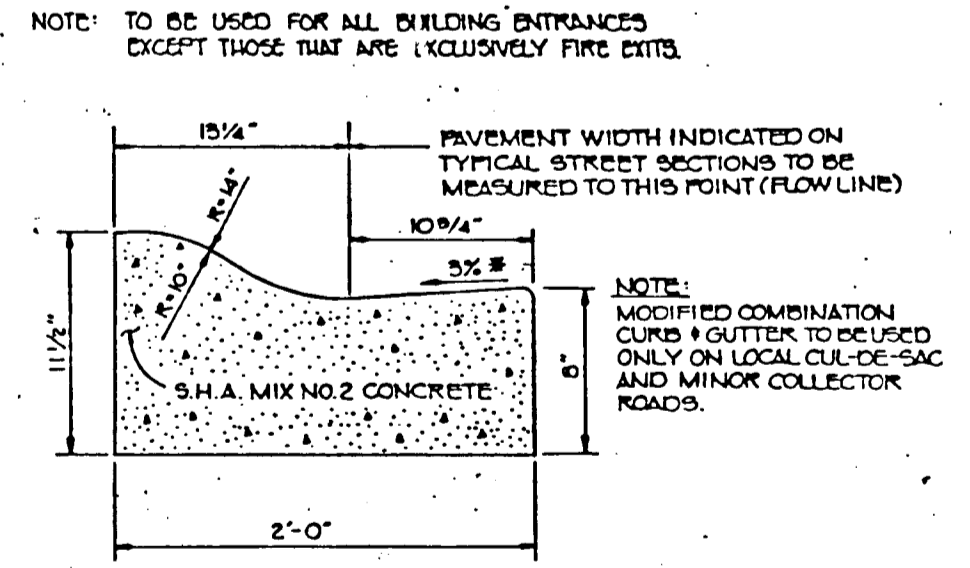
HOWARD COUNTY DESIGN MANUAL VOLUME IV
STANDARD SPECIFICATIONS AND DETAILS FOR
CONSTRUCTION (DRAWING R-3.01)

STANDARD 7" COMBINATION CURB AND GUTTER
NO SCALE



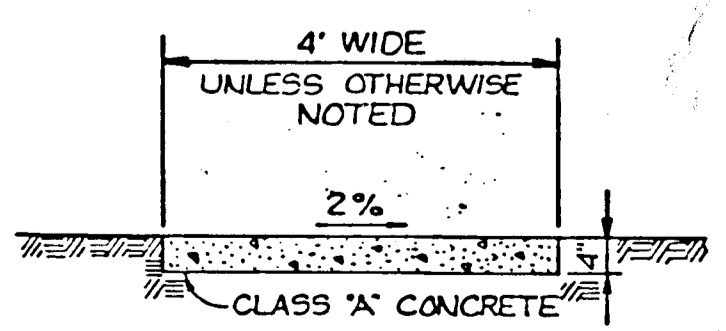
- NOTES:
1. A TEE TURN-AROUND SHALL BE USED IN LIEU OF A CUL-DE-SAC ONLY IF THE STREET IS TO BE EXTENDED IN THE FUTURE.
 2. BITUMINOUS CURB SHALL EXTEND AROUND THE TEE TURN-AROUND IF AND AS REQUIRED TO CONTROL CURB DRAINAGE FROM THE ROADWAY SECTION.
 3. REFER TO STANDARD R-5.06 FOR TYPICAL ROADWAY PROFILE OF TEMPORARY LIMIT OF PAVING.
 4. PROVIDE REVERSIBLE EASEMENT FOR CONSTRUCTION.
 5. PROVIDE EASEMENTS AS REQUIRED FOR PLACEMENT OF PAVEMENT BARRICADE AND ANY NECESSARY GRADING (SEE DETAIL R 5.06.)

TEE TURN-AROUND
NO SCALE

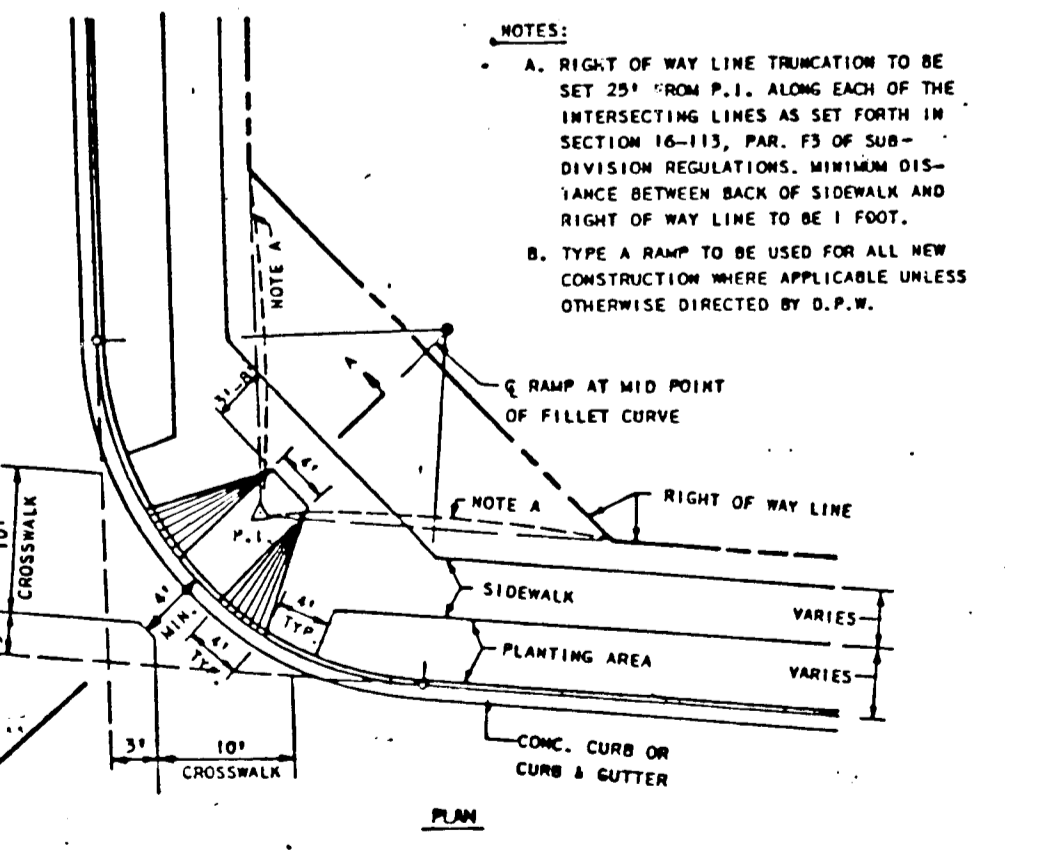


* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.

MODIFIED COMBINATION CURB AND GUTTER
NO SCALE



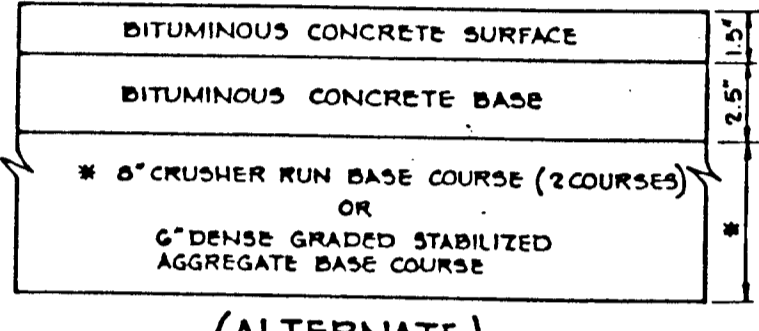
SIDEWALK DETAIL
NO SCALE



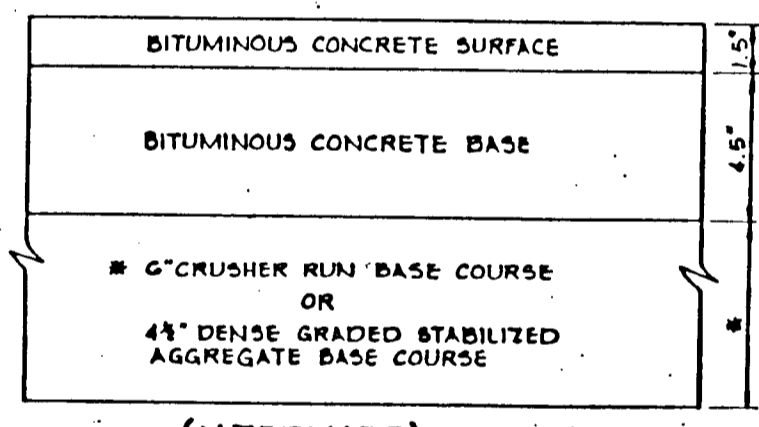
NOTES:

- A. RIGHT OF WAY LINE TRUNCATION TO BE SET 25' FROM P.L. ALONG EACH OF THE INTERSECTING LINES AS SET FORTH IN SECTION 16-113, PAR. F3 OF SUB-DIVISION REGULATIONS. MINIMUM DISTANCE BETWEEN BACK OF SIDEWALK AND RIGHT OF WAY LINE TO BE 1 FOOT.
- B. TYPE A RAMP TO BE USED FOR ALL NEW CONSTRUCTION WHERE APPLICABLE UNLESS OTHERWISE DIRECTED BY D.P.W.

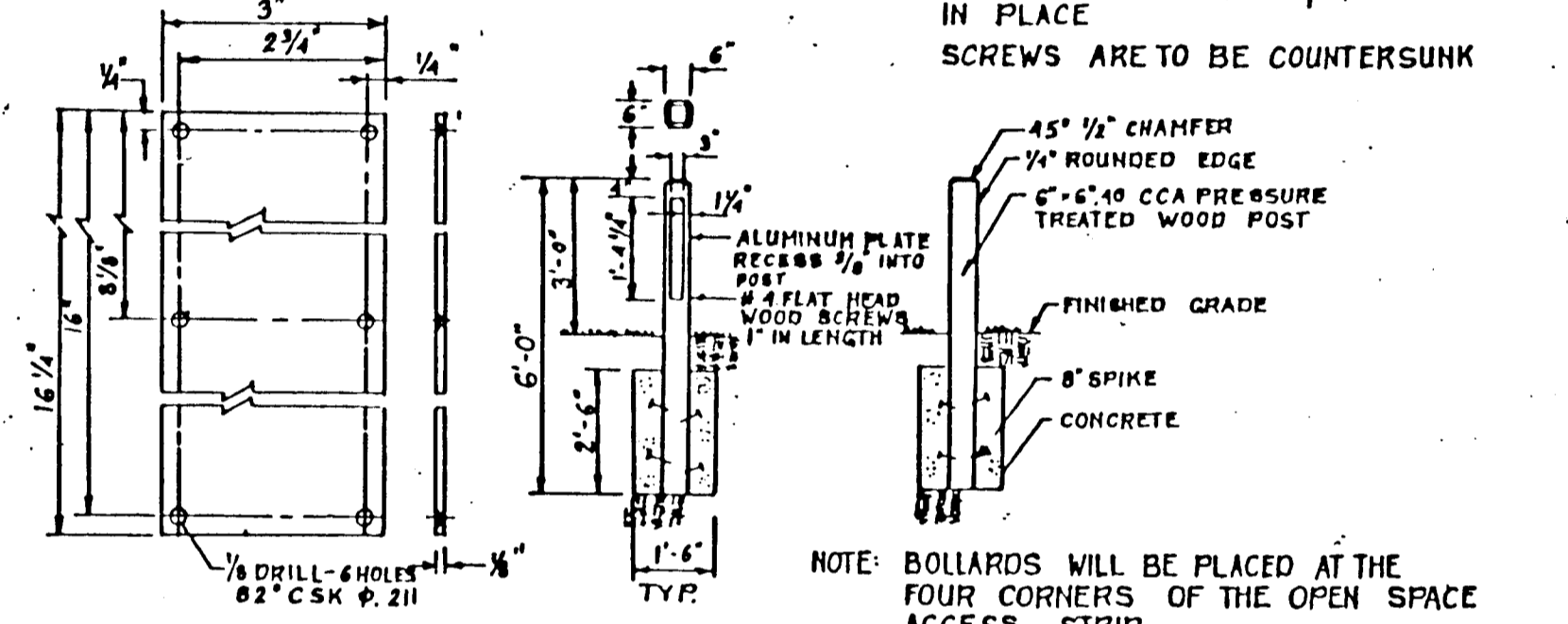
SIDEWALK RAMP DETAIL
NO SCALE



6" PAVING, P-2



8" PAVING, P-3



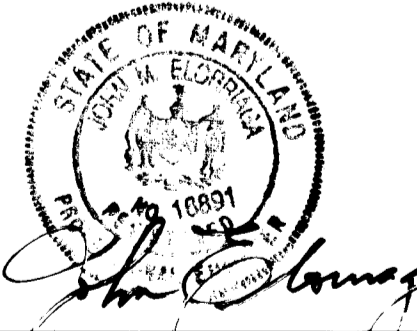
OPEN SPACE BOLLARD DETAIL
NO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chad Dammann CHIEF, LAND DEVELOPMENT DIVISION
Alan M. Longman CHIEF, BUREAU OF HIGHWAYS
Acme CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Bruna J. Stewart CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

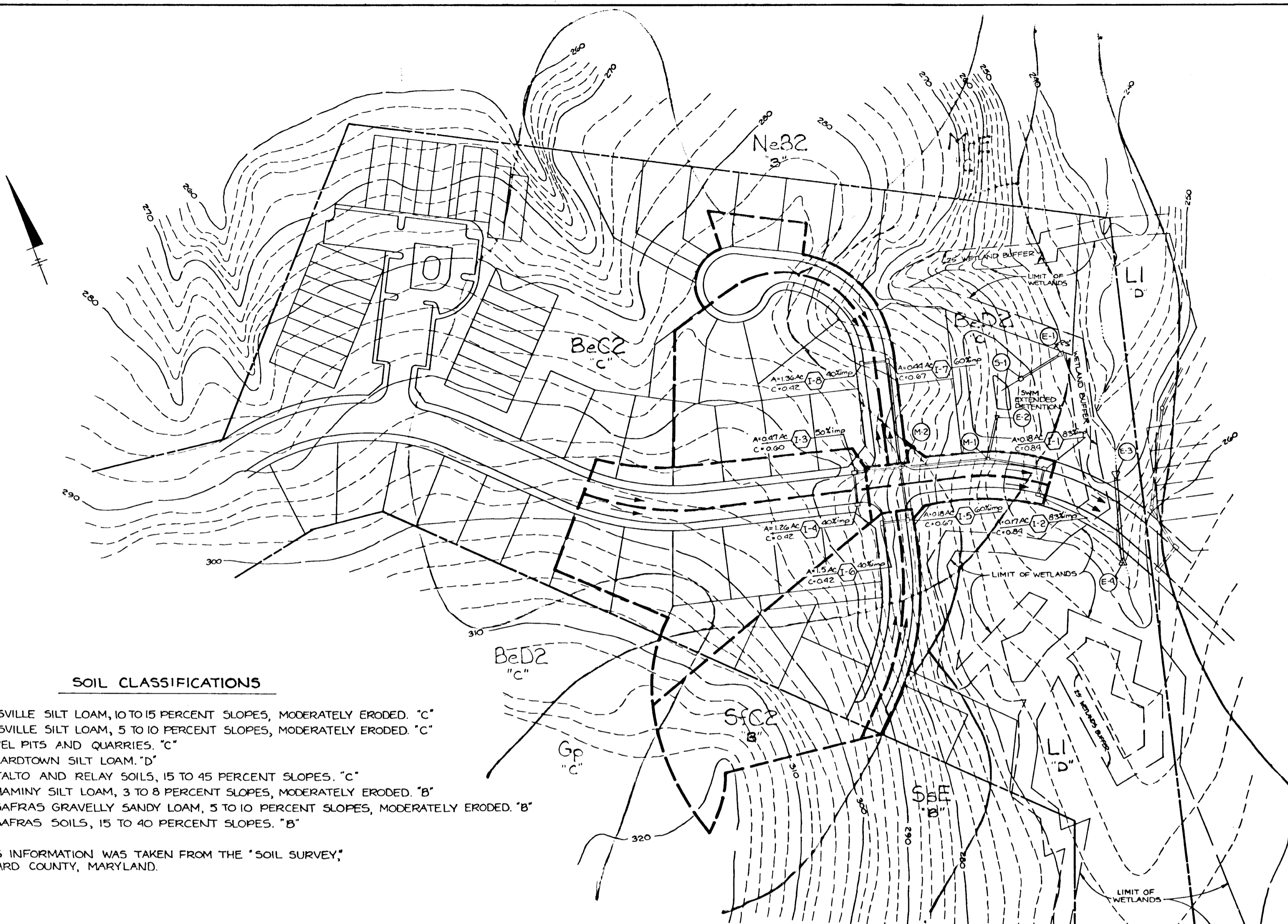
7-15-92	REVISE LIMIT OF SUBMISSION
NO DATE	REVISION

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OWNER	PROJECT
SECURITY DEVELOPMENT CORP. 8480 BALTIMORE NATIONAL PIKE SUITE 415 ELLICOTT CITY, MARYLAND 21043	KING'S WOODS SECTION 2, AREA 2, PHASE 3 LOTS 236-265
LOCATION	TITLE
TAX MAP NO. 47 PARCEL 138 6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	ROAD PROFILES & DETAILS
DATE: MAY 25, 1991 SEPT. 20, 1991	PROJECT NO. 0084
DES: DRK	DRN: DBT
SCALE AS SHOWN	DRAWING 3 OF 8

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SOIL CLASSIFICATIONS

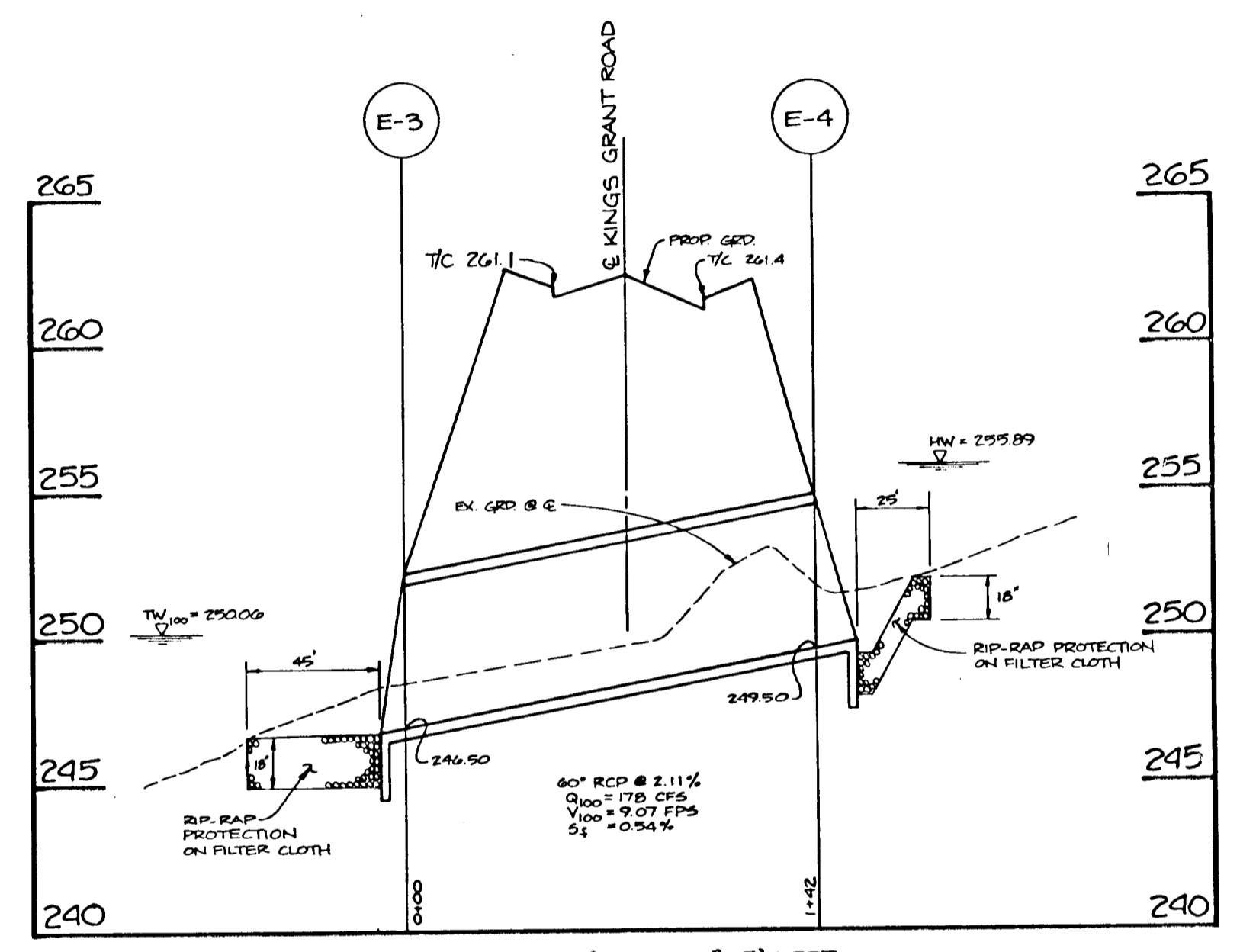
- BeD2 BELTSVILLE SILT LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED. "C"
- BeC2 BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED. "C"
- Gp GRAVEL PITS AND QUARRIES. "C"
- L1 LEONARDTOWN SILT LOAM. "D"
- MrE MONTALTO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES. "C"
- NeB2 NESHAMINY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED. "B"
- SfC2 SASSAFRAS GRAVELLY SANDY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED. "B"
- S5E SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES. "B"

SOILS INFORMATION WAS TAKEN FROM THE "SOIL SURVEY," HOWARD COUNTY, MARYLAND.

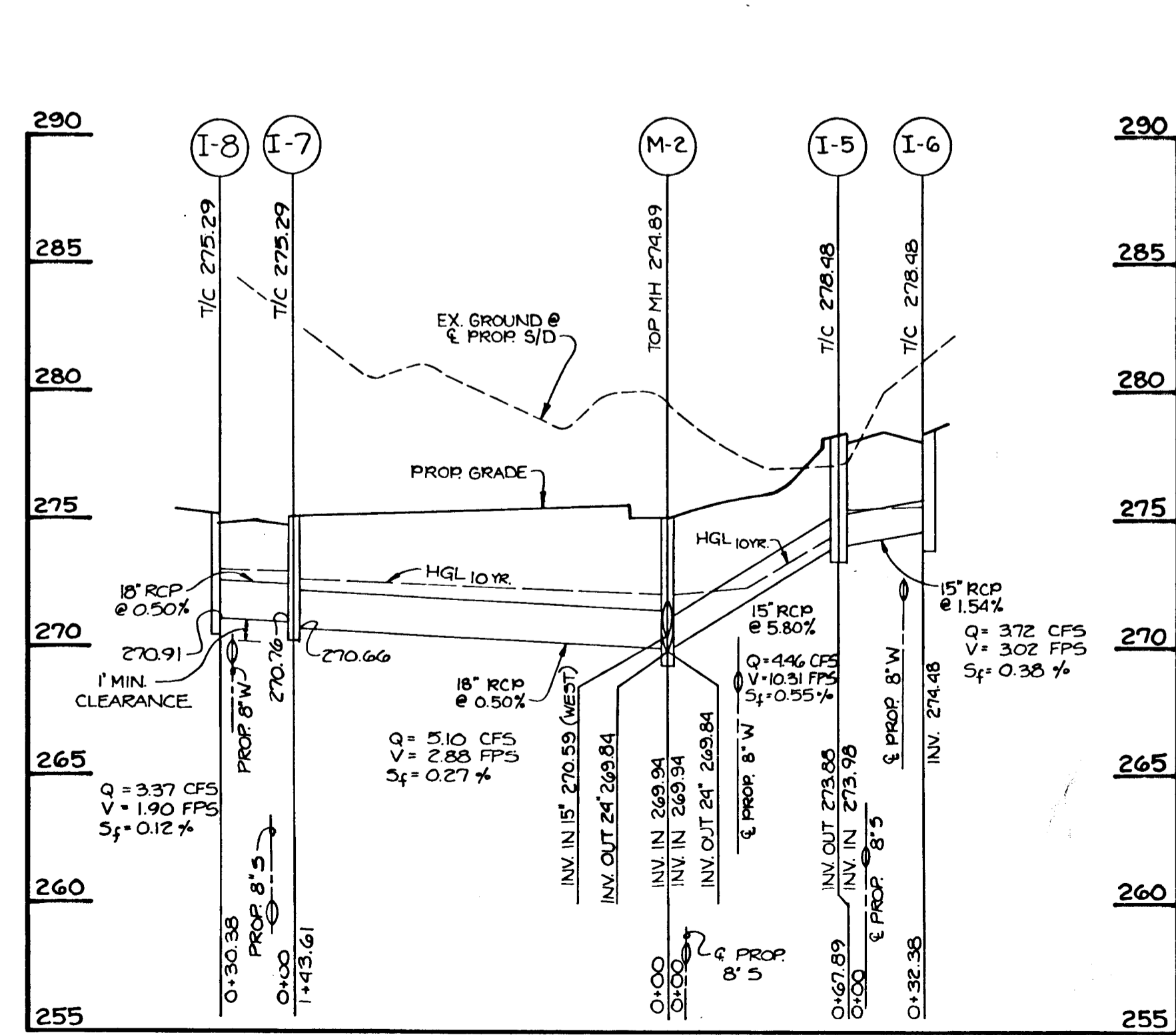
DRAINAGE AREA MAP

SCALE: 1"=100'

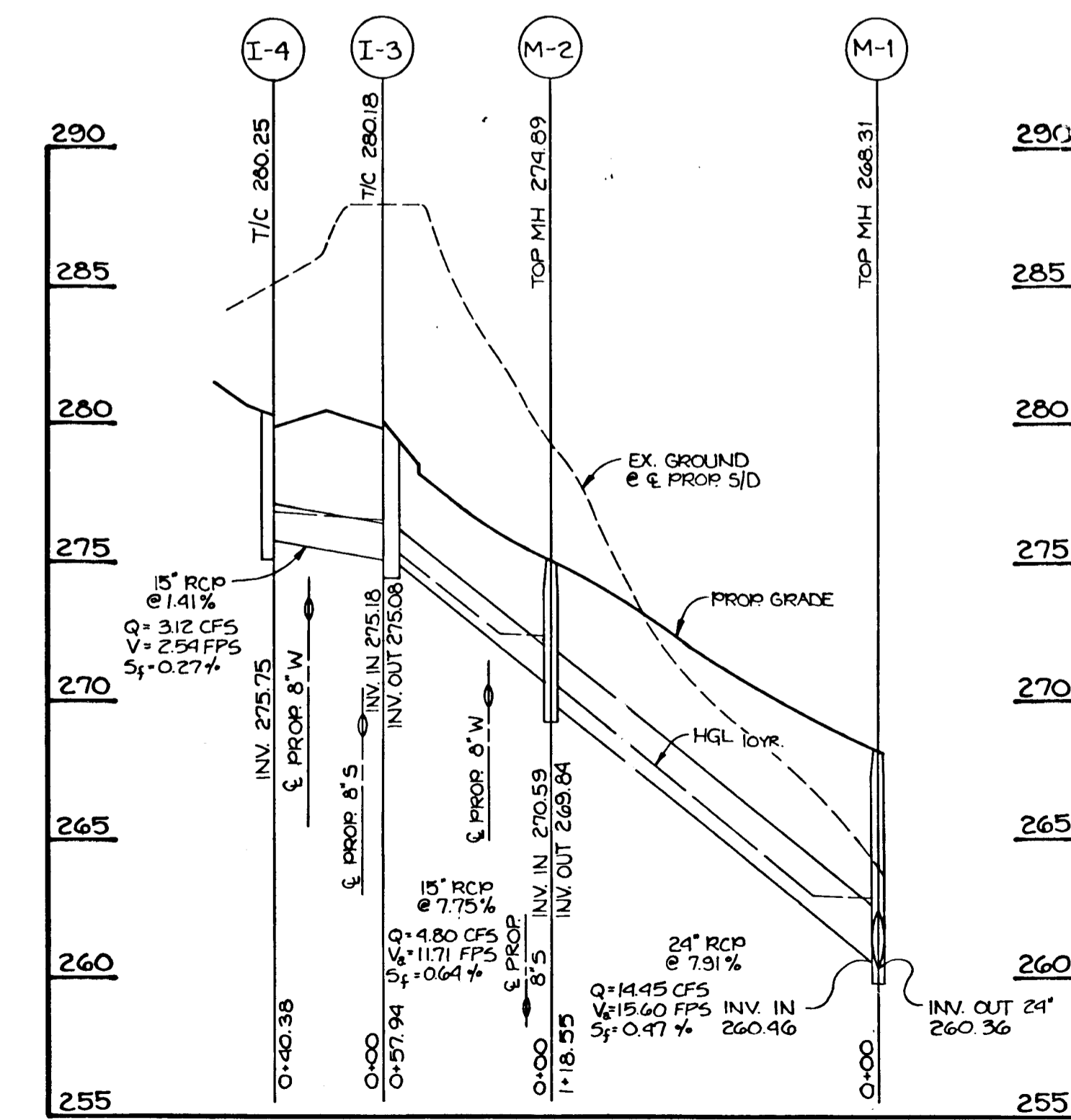
NOTE:
 ALL REINFORCED CONCRETE STORM DRAIN PIPE IS TO BE CLASS 4 UNLESS OTHERWISE NOTED.
 WRA WATERWAY CONSTRUCTION PERMIT NO. 89-TC-1197 ISSUED 6/28/89
 100 YR FLOODPLAIN STUDY APPROVED PER F-89-223 (HARMONY LANE) FLOODPLAIN PER PLAT NO. 9404.



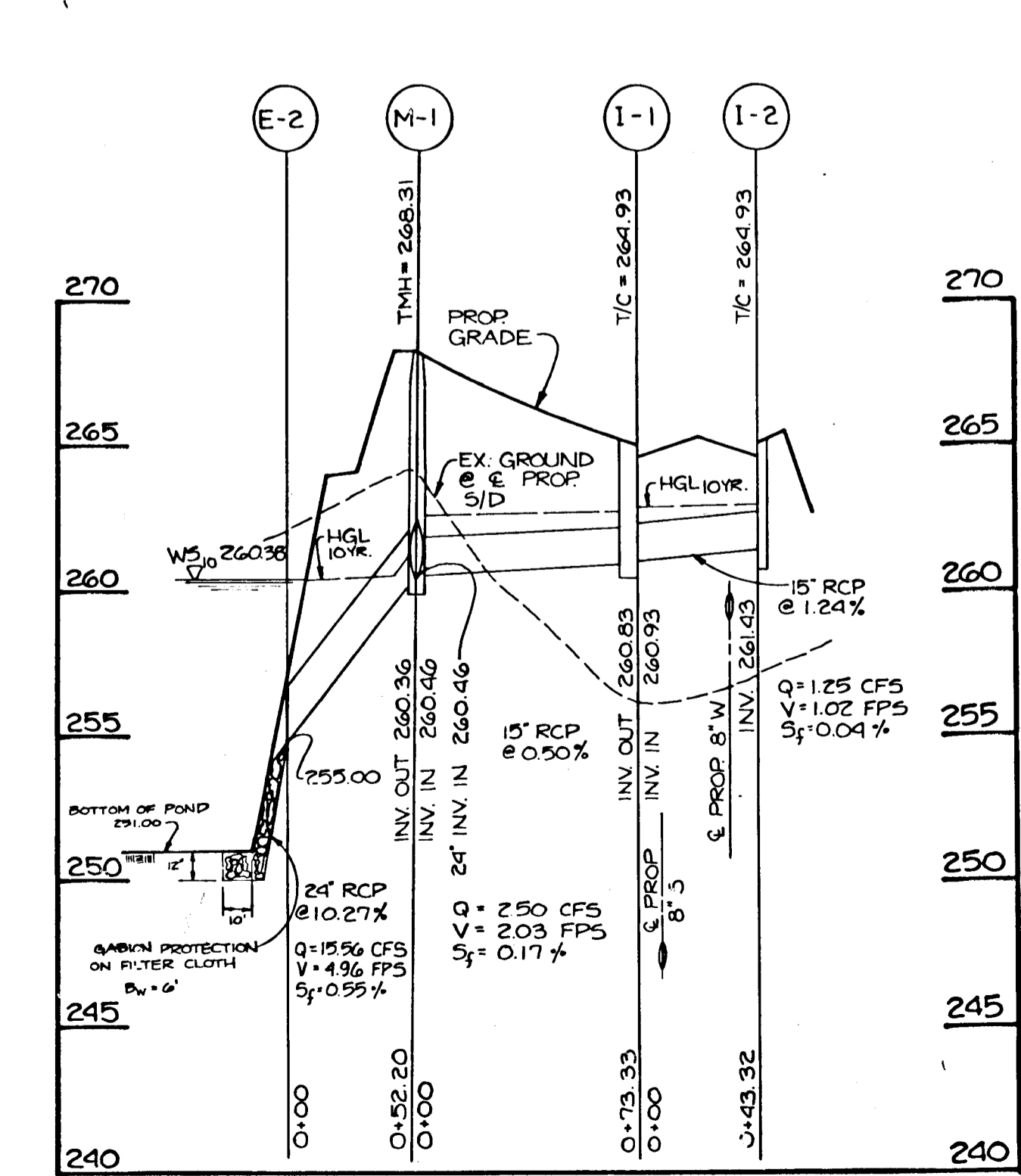
SCALE: 1"=50' HORIZ.; 1"=5' VERT.



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



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



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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Alan M. Ferguson 4/16/92
 CHIEF, LAND DEVELOPMENT DIVISION DATE
Alan M. Ferguson 4/16/92
 CHIEF, BUREAU OF HIGHWAYS DATE
Alan M. Ferguson 4-16-92
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Thomas J. Roman 4/16/92
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

NO	DATE	REVISION

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 8400 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 469-0100

John E. Roman

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

PROJECT: **KING'S WOODS**
 SECTION 2, AREA 2 - PHASE 3
 LOTS 236-265

LOCATION: TAX MAP 47-PARCELS 138,139,140 AND 857
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: **DRAINAGE AREA MAP**
STORM DRAIN PROFILES
 5-89-29 PB-247 P-90-13 WP-91-193

DATE: MAY 20, 1991 PROJECT NO. 0084
 DEPT. 20, 1991

DES. DRX DRN: DBT SCALE: A5 SHOWN DRAWING 4 OF 8

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- NOTES:
1. MOE WATER QUALITY CERTIFICATION NO. 89-WQ-063, ISSUED FOR THIS PROJECT. (EXPIRATION DATE: 3-30-95)
 2. 100 YR FLOODPLAIN STUDY APPROVED PER F-89-223 (HARMONY LANE)
 3. FLOODPLAIN PER PLAT NO. 7404.

- SEQUENCE OF CONSTRUCTION
- DAY 1 - OBTAIN A GRADING PERMIT.
 - DAY 1-10 - INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE AND STORMWATER MANAGEMENT FACILITIES. PERMIT REQUIRED. PERMIT FACILITY SHALL HAVE LOW FLOW ORIFICE ADJACENT WITH STORMWATER TREATMENT CONTROL TRAP TO ACT AS SEDIMENT TRAP.
 - DAY 11-15 - POND TO INV. 254.00, RISER, OUTFALL DRAIN AND STORMWATER DETENTION BASIN ARE TO BE CONSTRUCTED PRIOR TO ANY OTHER SITE DISTURBANCE. POND-OUT IS TO BE PLACED ON THE EXISTING SEDIMENT CONTROL.
 - DAY 16-17 - INSTALL GOR-RAP AND RIP-RAP STABILIZATION PRIOR TO BEGINNING SITE GRADING.
 - DAY 18-19 - INSTALL TEMPORARY STORMWATER TRAP, SANDTRAP AND TRAP PROTECTION FENCE.
 - DAY 19-20 - GRADE SITE TO SUBGRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEDIMENT CONTROL.
 - DAY 21-22 - INSTALL STONE DRAINAGE, RISER AND RISER PROTECTION. PERMIT REQUIRED. PERMIT FACILITY SHALL HAVE LOW FLOW ORIFICE ADJACENT WITH STORMWATER TREATMENT CONTROL TRAP TO ACT AS SEDIMENT TRAP.
 - DAY 23-24 - DETAILS CURB AND GUTTER AND PAVING.
 - DAY 25-26 - REVEALIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEDIMENT CONTROL.
 - DAY 27-28 - UPON THE APPROVAL OF THE HOWARD COUNTY DISTRICT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES, REMOVE STORMWATER TRAP AND COVERED STORMWATER TRAP. REMOVE STORMWATER MANAGEMENT FACILITY AS FOLLOWS AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEDIMENT CONTROL.

- SEDIMENT CONTROL NOTES
- 1) A NOTICE OF 14 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2437).
 - 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - 3) FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DICES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 - 4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
 - 5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. FOR PERMANENT SEEDINGS (Sec. 311) SOIL (Sec. 34), TURFGRASS SEEDING (Sec. 30) AND MULCHING (Sec. 32), TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
 - 6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 - 7) SITE ANALYSIS:

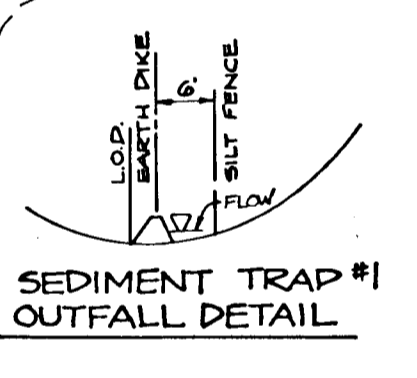
TOTAL AREA OF SITE	11.70 ACRES
AREA DISTURBED	4.14 ACRES
AREA TO BE ROOFED OR PAVED	1.84 ACRES
AREA TO BE VEGETATIVELY STABILIZED	7.52 ACRES
TOTAL CUT	9200 CU. YDS.
TOTAL FILL	7300 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	F-91-116
 - 8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
 - 9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
 - 10) 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.

SEDIMENT BASIN

MAX DRAINAGE AREA 6.52 AC
 STORAGE REQUIRED 11,736 CF (27 AC-F)
 STORAGE PROVIDED 0.40 AC-F TO RISER
 RISER CREST ELEV. 259.00 CREST
 BASIN BOTTOM ELEV. 254.00
 CLEANOUT ELEV. 256.50

STONE OUTLET SEDIMENT TRAP #1

DRAINAGE AREA 1.8 AC
 STORAGE REQUIRED 3240 CF
 STORAGE PROVIDED 3276 CF
 TRAP BOTTOM DIM. 10' x 60'
 STORAGE DEPTH 3'
 SIDE SLOPE 3:1
 BOTTOM ELEV. 256.00
 EMBANKMENT ELEV. 261.00
 CREST ELEV. 260.00
 CREST LENGTH 8'



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 MARYLAND DEPT. 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. Moxley, Jr. 5-29-91
 DEVELOPER: JAMES R. MOXLEY, JR. DATE
 SECURITY DEVELOPMENT CORPORATION - PRESIDENT

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, SEDIMENT AND EROSION 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. Elorriaga, P.E. 6/29/91
 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 M. Elorriaga, P.E. 4/12/92
 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.

Robert J. Zehner 4/12/92
 HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

John M. Elorriaga, P.E. 4/16/92
 CHIEF, LAND DEVELOPMENT DIVISION DATE

John M. Elorriaga, P.E. 4/10/92
 CHIEF, BUREAU OF HIGHWAYS DATE

John M. Elorriaga, P.E. 4-16-92
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John M. Elorriaga, P.E. 4/28/92
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

NO	DATE	REVISION
7-15-92		RELOCATE EMERGENCY SPILLWAY - ADD RIP-RAP PROTECTION
4-13-93		REVISE EMERGENCY SPILLWAY PER SOIL CONSERVATION REQUEST.

TSA GROUP, INC.
 planning • architecture • engineering
 8400 Baltimore National Pike • Ellicott City, Maryland 21043 • (301)468-6106

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

PROJECT: KING'S WOODS SECTION 2, AREA 2, PHASE 3
 LOTS 236-265

LOCATION: TAX MAP 47-PARCELS 138,139,140 AND 057
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: GRADING, SEDIMENT AND EROSION CONTROL PLAN
 5-89-29 PB-247 P-90-13 MO-91-195

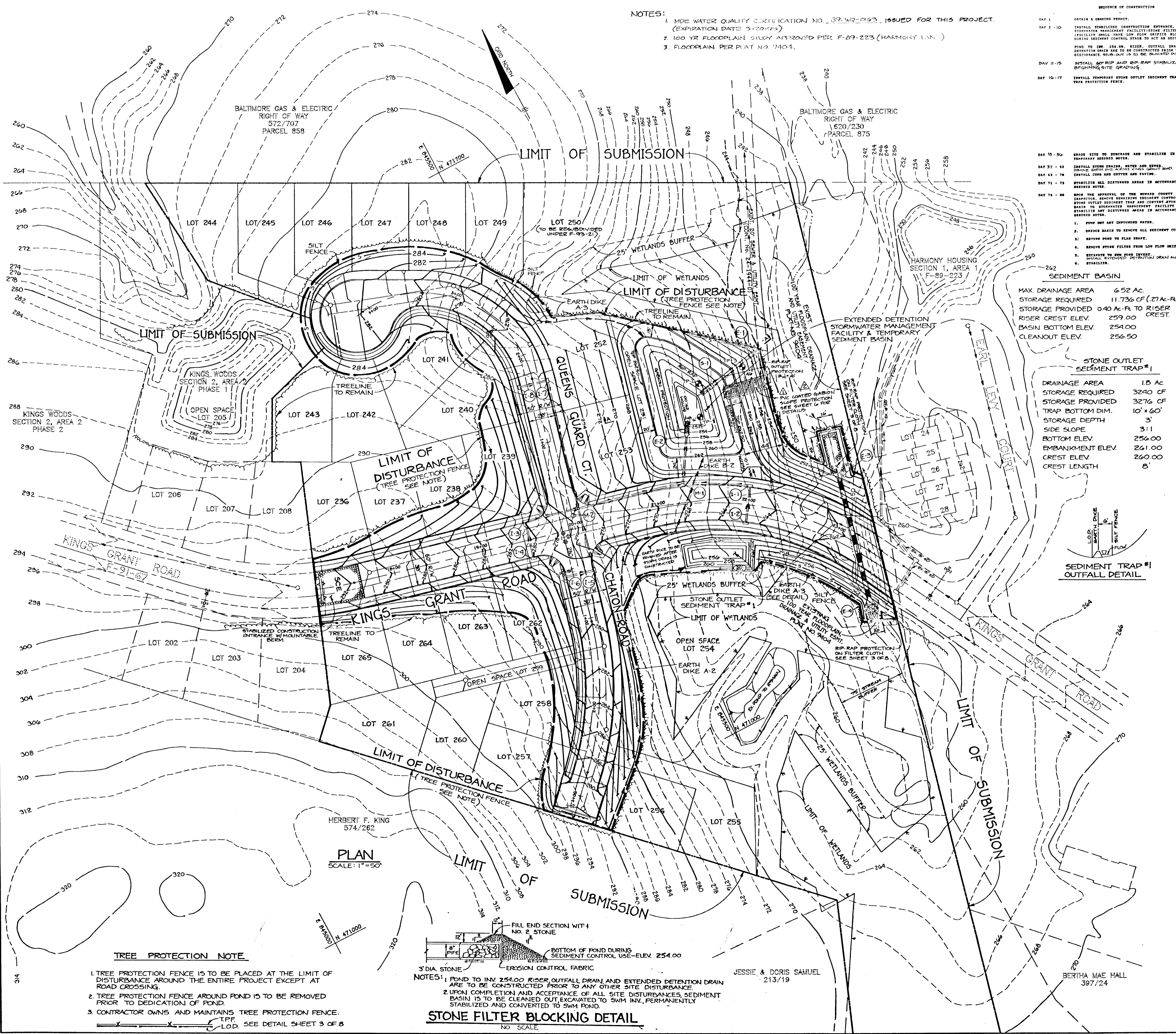
DATE: MAY 25, 1991
 (SEPT. 20, 1991)

PROJECT NO. 0084

SCALE: 1" = 50'

DRAWING 5 OF 8

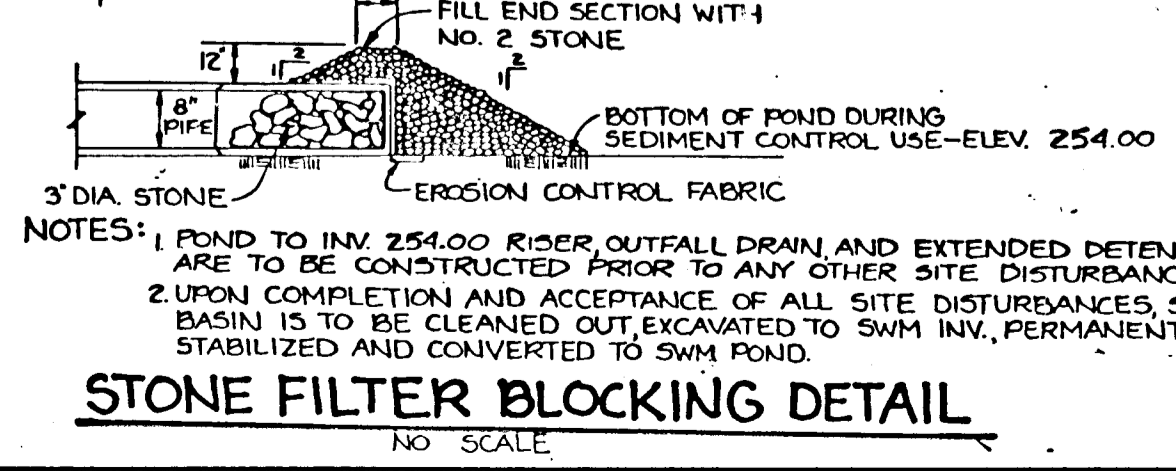
DES: DRK DRN: DBT



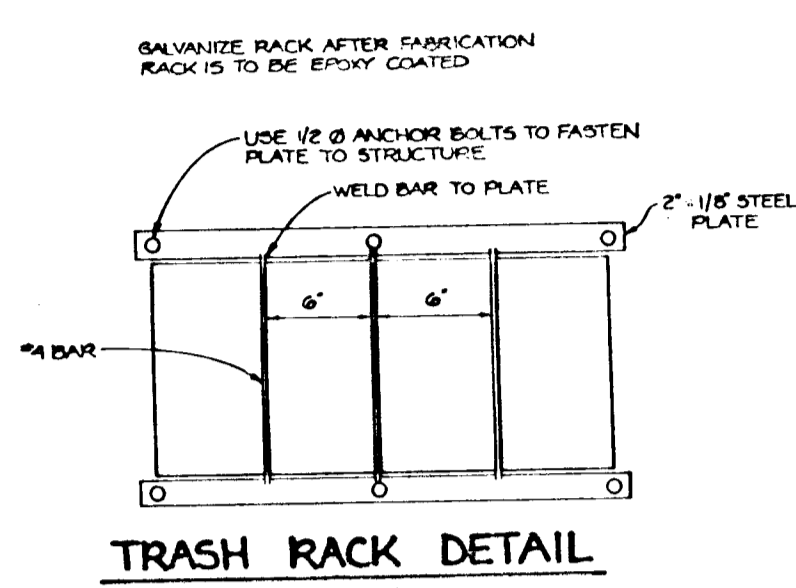
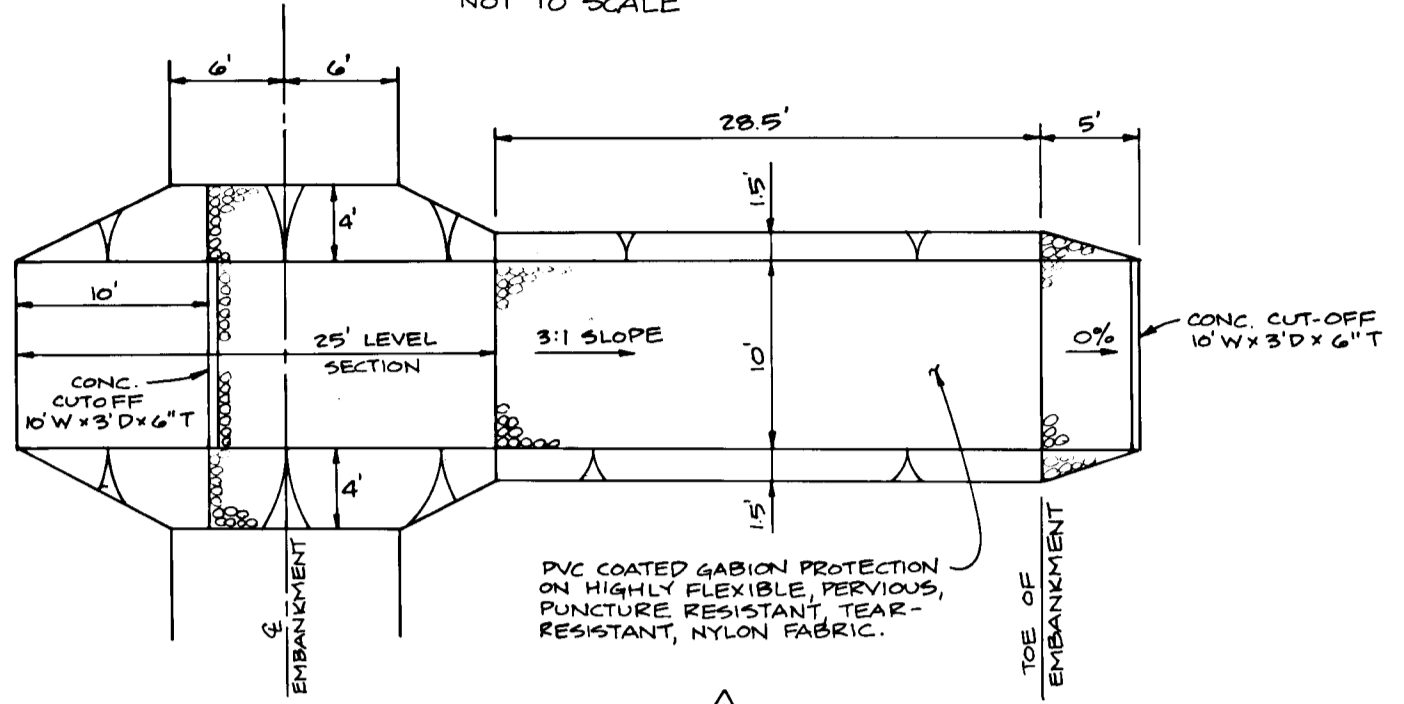
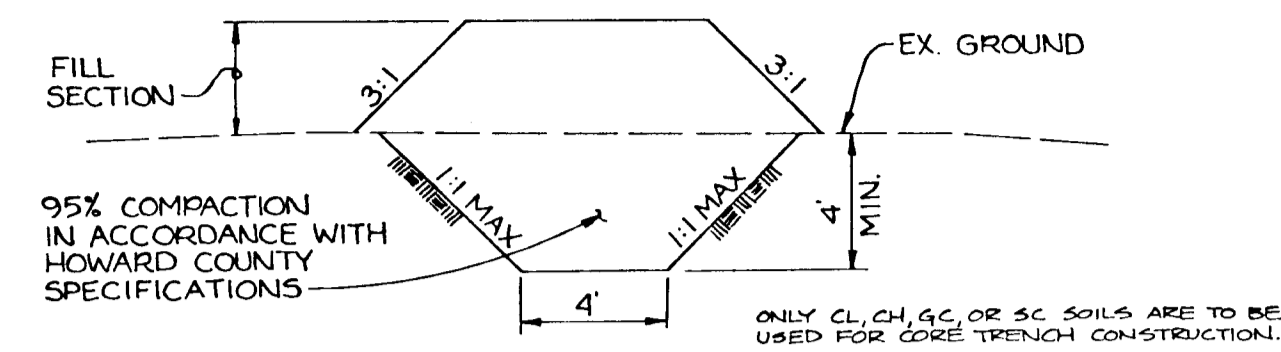
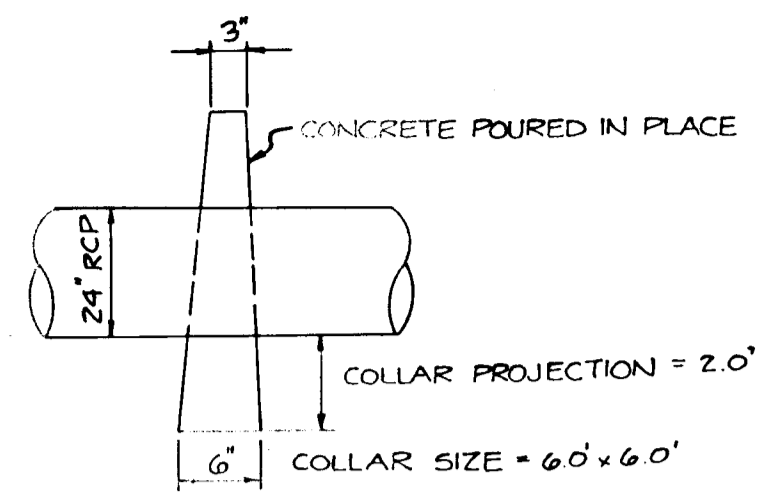
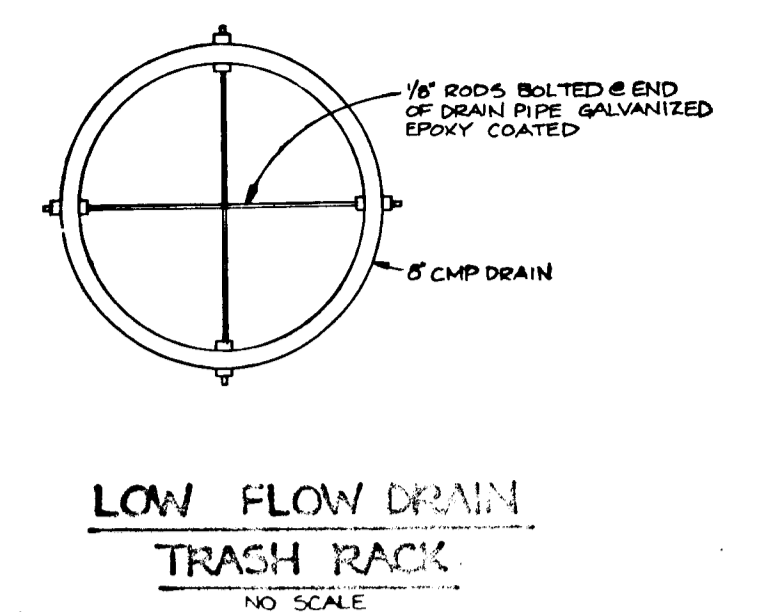
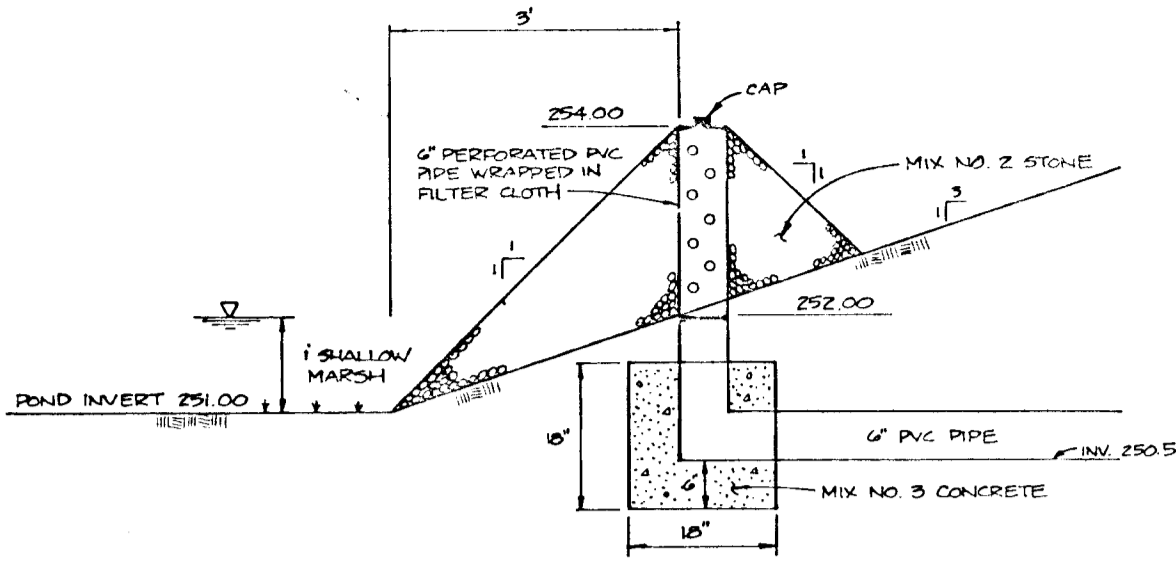
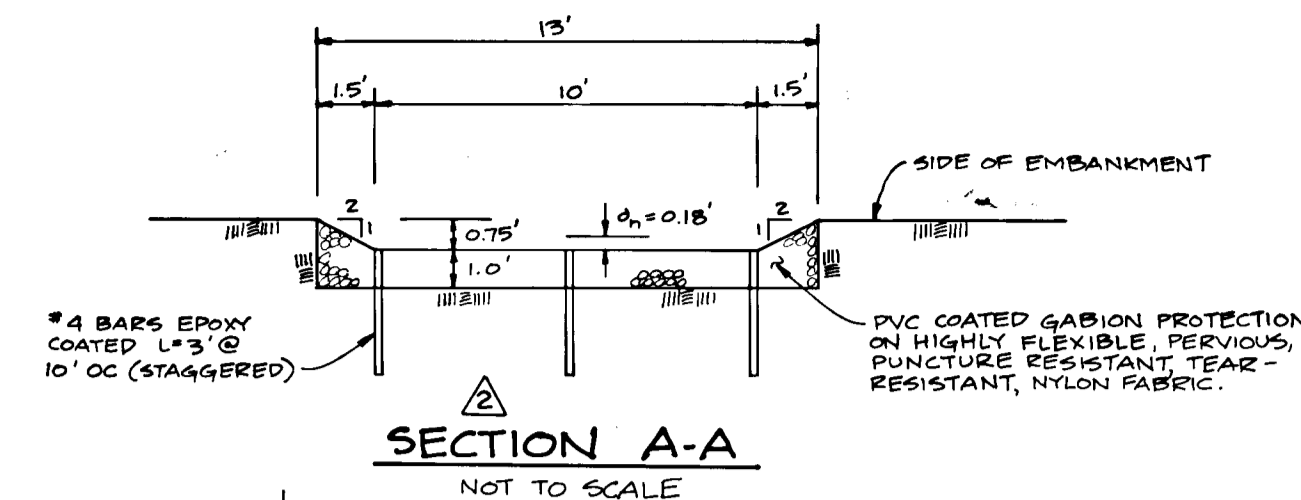
TREE PROTECTION NOTE

1. TREE PROTECTION FENCE IS TO BE PLACED AT THE LIMIT OF DISTURBANCE AROUND THE ENTIRE PROJECT EXCEPT AT ROAD CROSSING.
2. TREE PROTECTION FENCE AROUND POND IS TO BE REMOVED PRIOR TO DEDICATION OF POND.
3. CONTRACTOR OWNS AND MAINTAINS TREE PROTECTION FENCE.

T.P.F. SEE DETAIL SHEET 3 OF 8



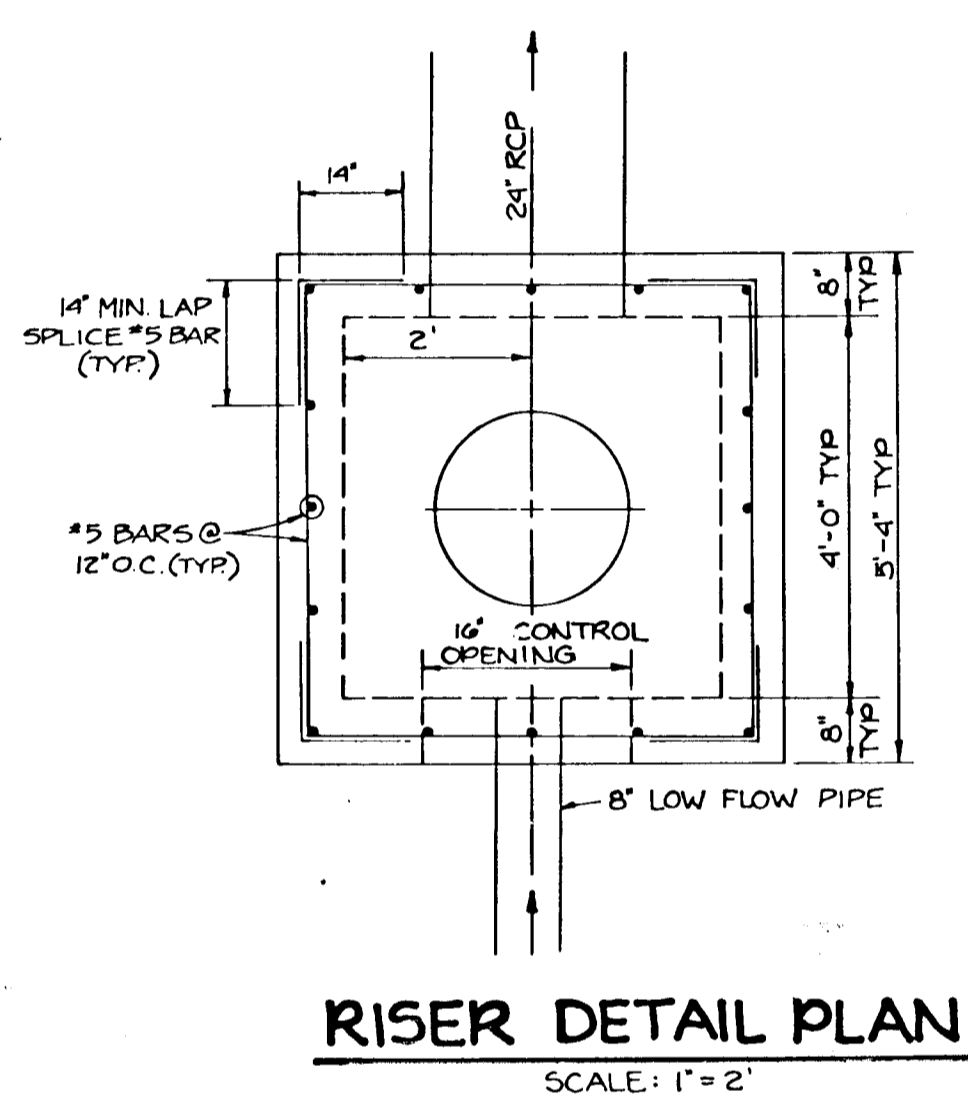
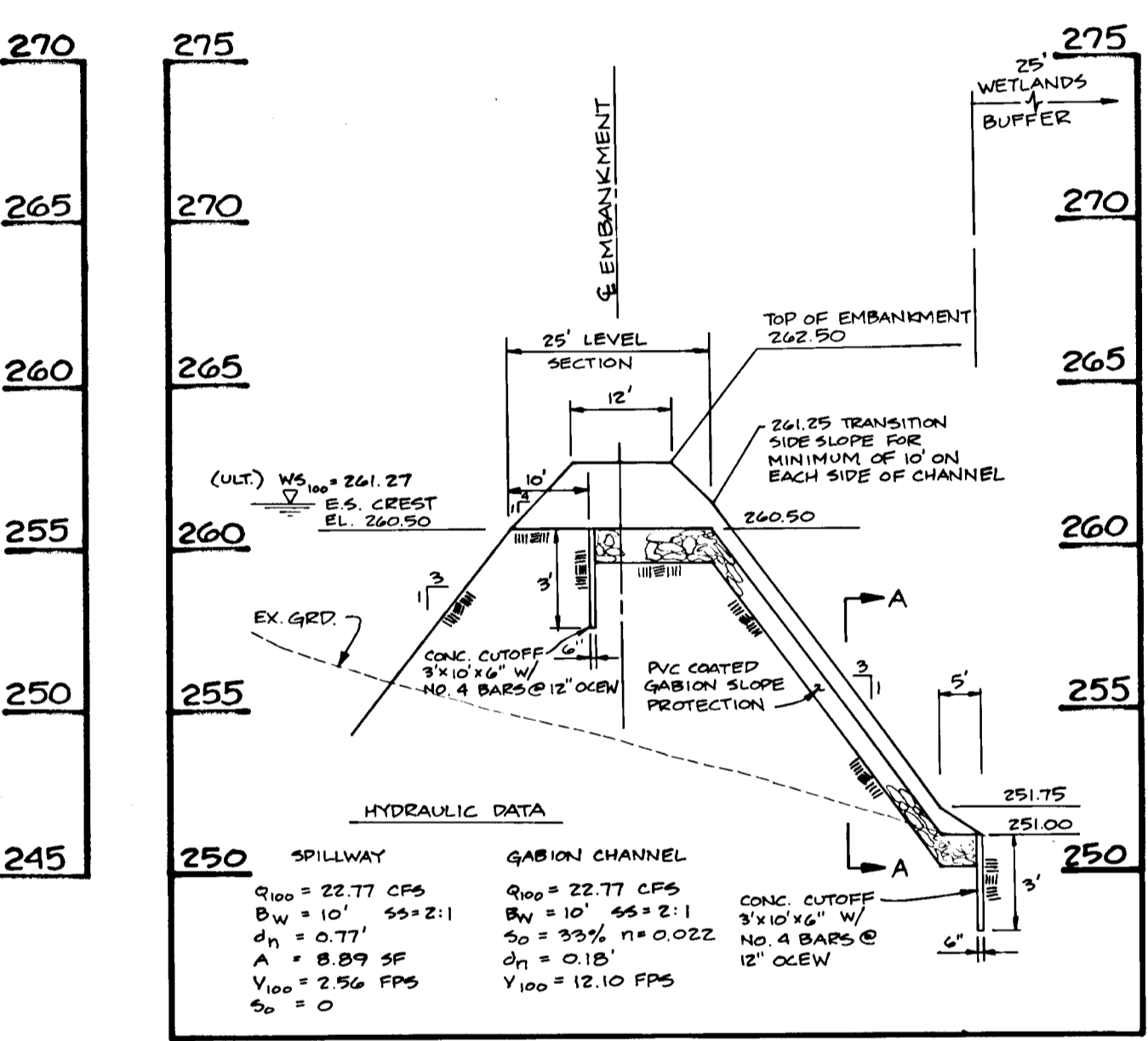
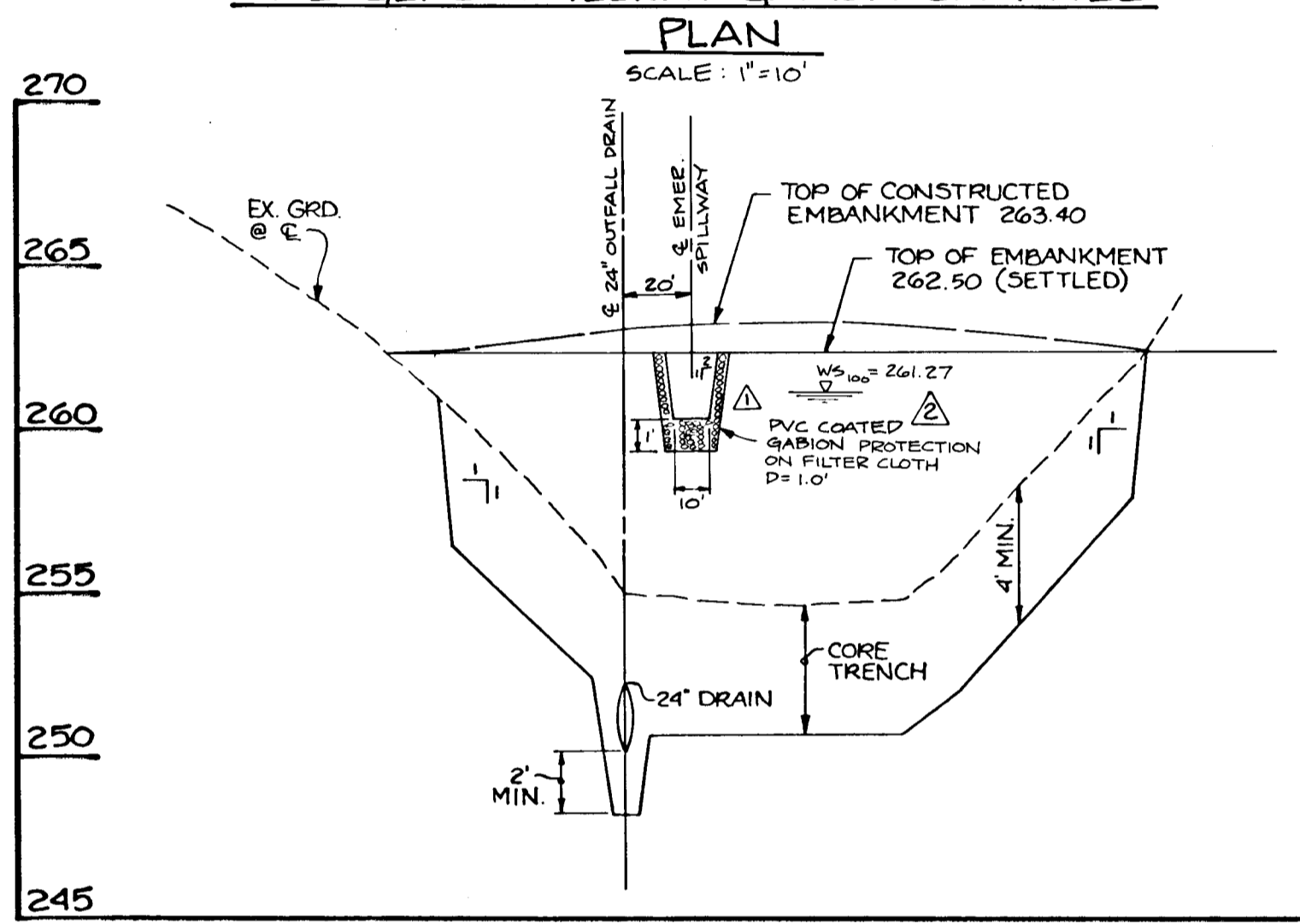
987



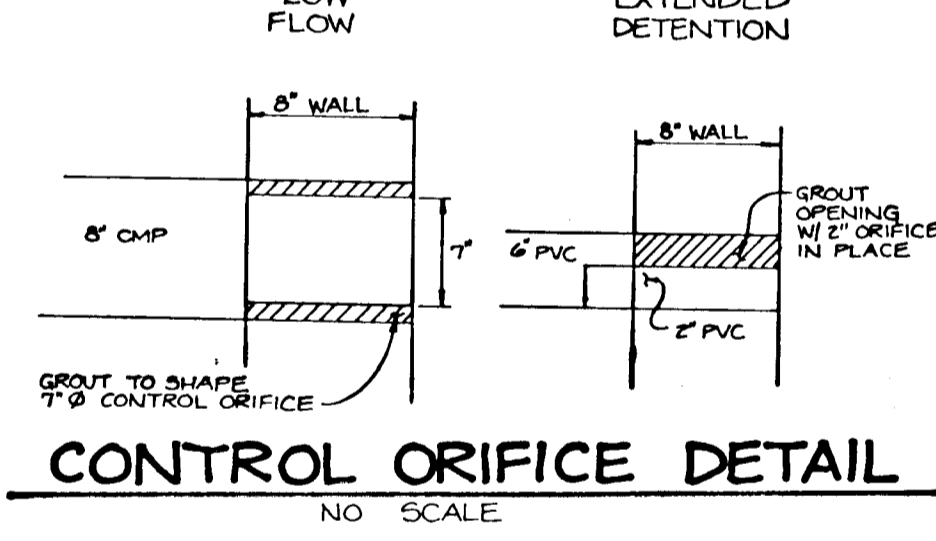
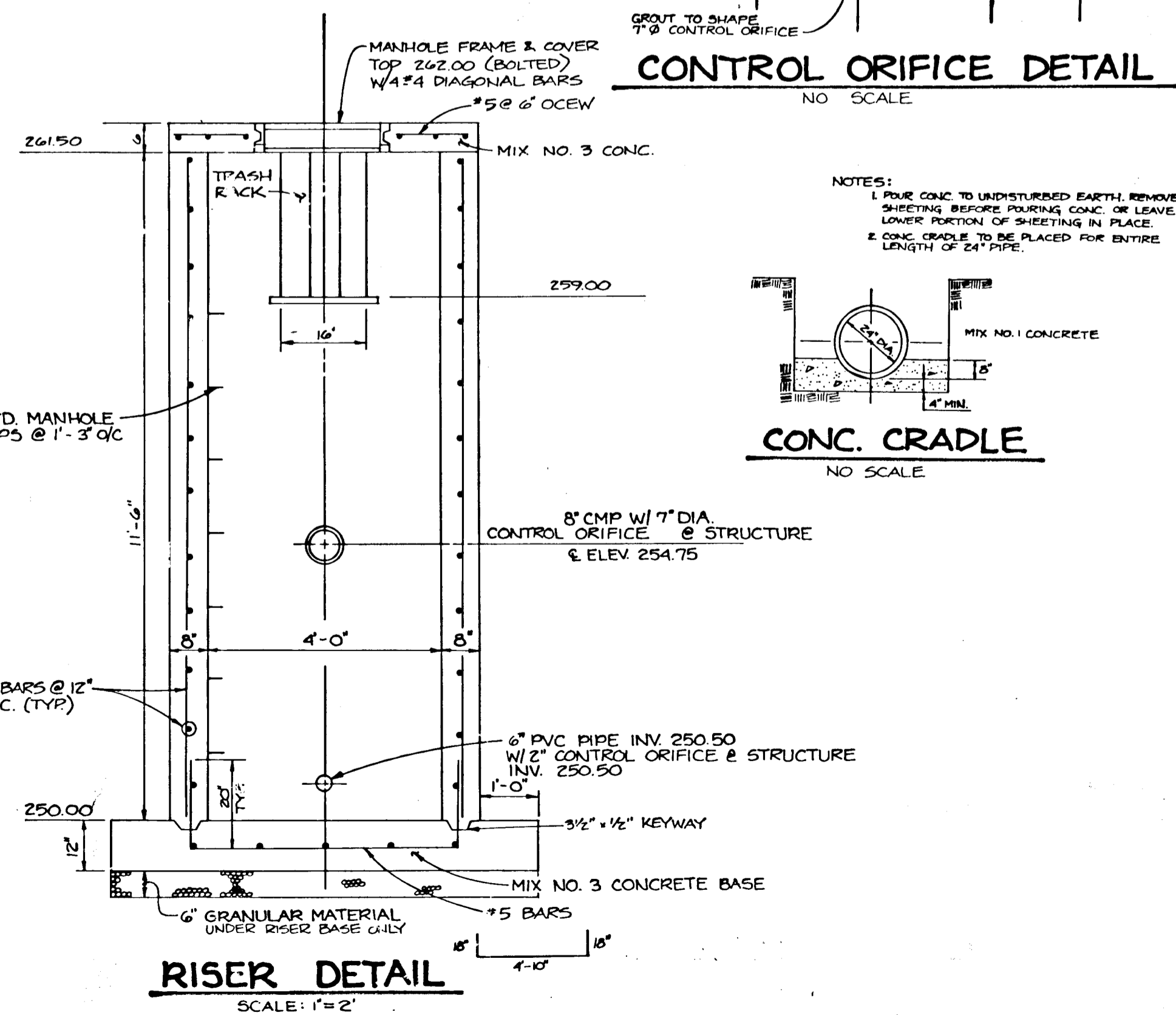
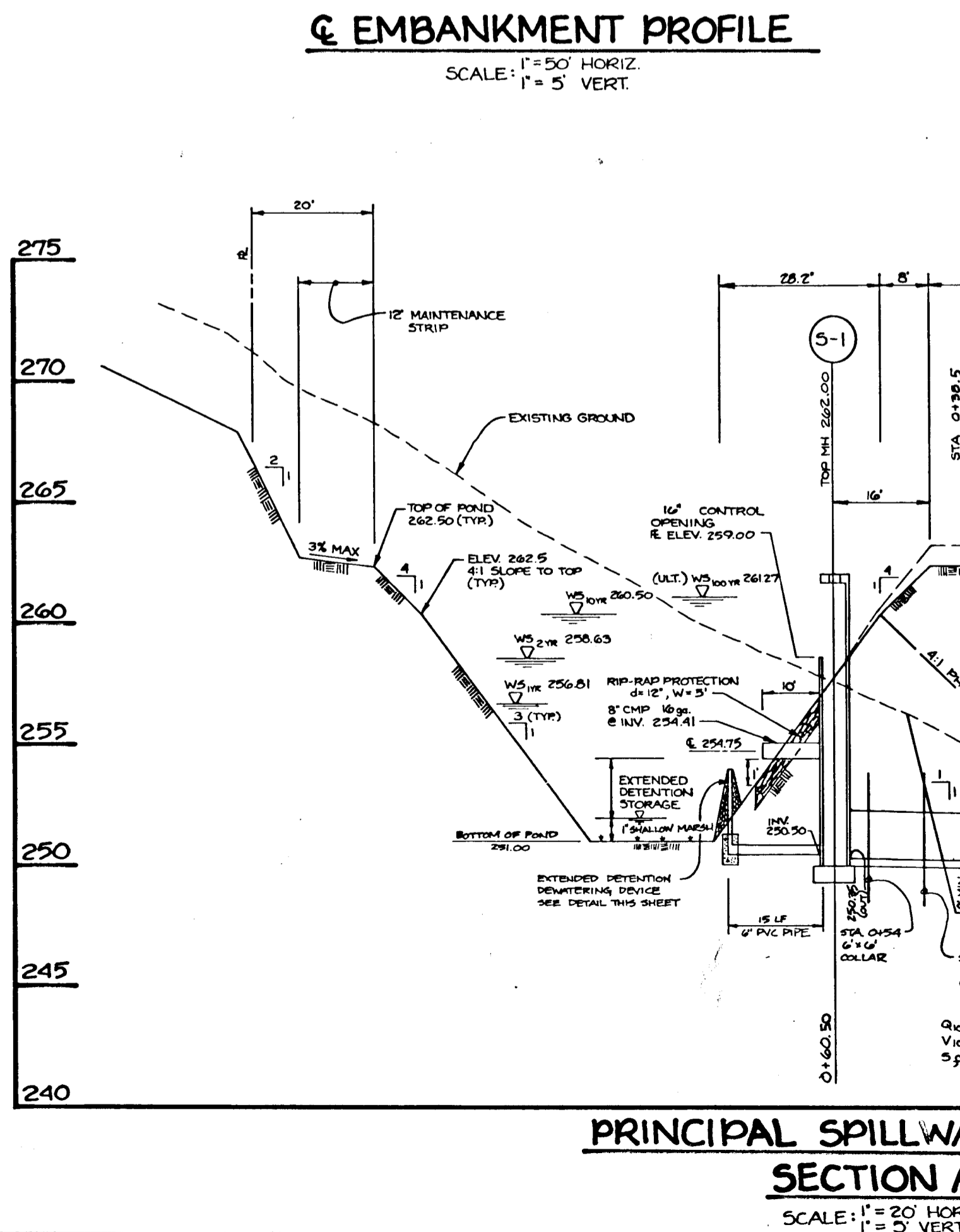
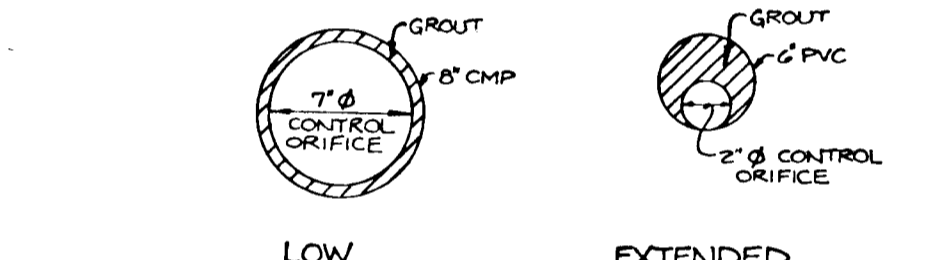
CONC. ANTI-SEEP COLLAR
NO SCALE
NOTE: MINIMUM 2' DIVISION BETWEEN COLLAR AND PIPE JOINT.

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND 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 MARYLAND 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. Moxley, Jr.
DEVELOPER: JAMES R. MOXLEY, JR.
SECURITY DEVELOPMENT CORPORATION - PRESIDENT
5-29-91
DATE



- NOTES:
- MATERIAL FOR EMBANKMENT CONSTRUCTION IS TO BE USCS GC, SC, CH, OR CL.
 - ONLY CL, CH, GC, OR SC SOILS ARE TO BE USED FOR CORE TRENCH CONSTRUCTION.
 - ALL SLOPES AROUND POND ARE TO BE 3:1 MAX.
 - IF SHOULD WATER BE ENCOUNTERED DURING CONSTRUCTION OF CORE TRENCH, IT IS TO BE REMOVED BY PUMPING.



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. Elorriaga
ENGINEER: JOHN M. ELORRIAGA, P.E. # 16891
5/20/91
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 M. Elorriaga
U.S. SOIL CONSERVATION SERVICE
4/12/92
DATE

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

Robert W. Zichem
HOWARD S.C.D.
4/2/92
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

John D. Dawson, Jr.
CHIEF, LAND DEVELOPMENT DIVISION
4/16/92
DATE

John M. Penzance
CHIEF, BUREAU OF HIGHWAYS
4/16/92
DATE

John D. Dawson, Jr.
CHIEF, BUREAU OF ENGINEERING
4-16-92
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John D. Dawson, Jr.
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
4/20/92
DATE

NO	DATE	REVISION
7-15-92		RELOCATE EMERGENCY SPILLWAY, ADD RIP-RAP PROTECTION
4-13-93		REVISE EMERGENCY SPILLWAY PER SOIL CONSERVATION REQUEST

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

OWNER: SECURITY DEVELOPMENT CORP. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043 (301) 465-4244	PROJECT: KING'S WOODS SECTION 2, AREA 2 - PHASE 3 LOTS 236-265
DEVELOPER: SECURITY DEVELOPMENT CORP. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043 (301) 465-4244	LOCATION: TAX MAP 47-PARCELS 138,139,140 AND 857 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DEVELOPER:	TITLE: STORMWATER MANAGEMENT DETAILS 5-89-29 PB-247 P-90-13 WP-91-193
DES: JME DRN: DBT	DATE: MAY 28, 1991 SEPT. 20, 1991 PROJECT NO. 0084 SCALE: AS SHOWN DRAWING 6 OF 8

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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, oversize stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

Placement

Areas on which fill 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 tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

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

Cutoff Trench

Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be as shown on the drawings, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The 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 pipe shall be circular in cross section.

A. Corrugated Metal Pipe

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specifications M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

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

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

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Coupling bands, anti-seep collars, and sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. 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 down stream 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

- Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.
- Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.
- Sand - The sand used in concrete 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.
- 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.
- 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 5-1/2 to 8 U.S. gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2.3:1-1/2. 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 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 along form surfaces, in corners, and around embedded items.

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

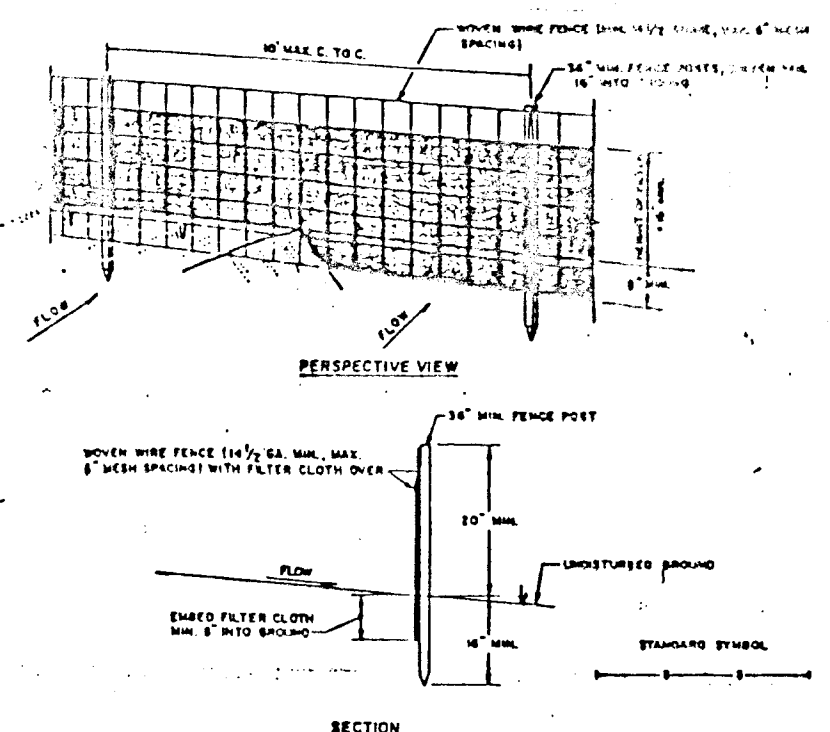
8. Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary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

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

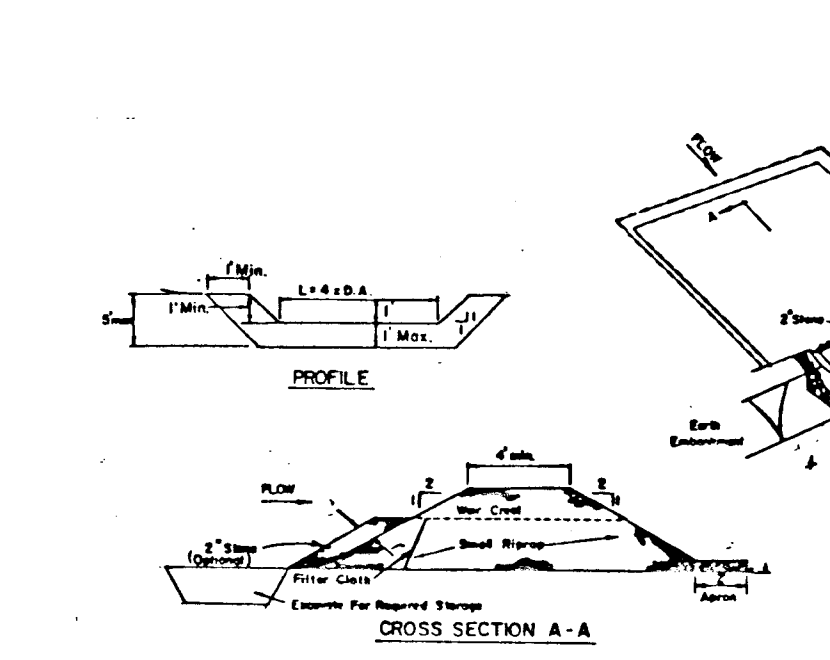
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction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



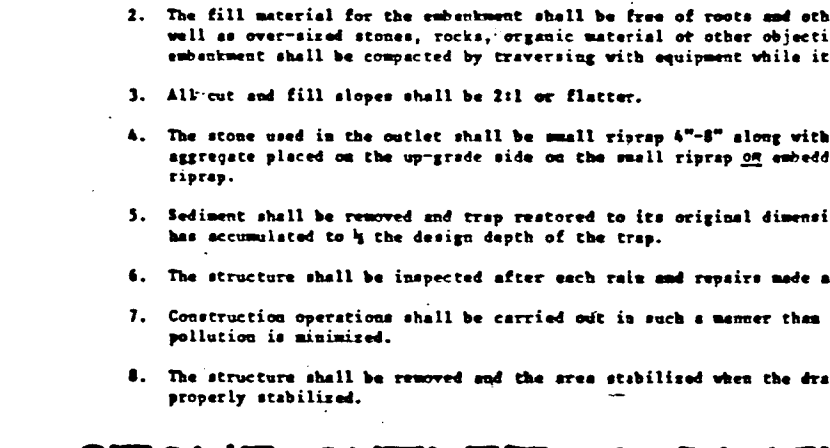
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- When wire fence to be fastened securely to fence posts with wire ties or staples.
- Filter cloth to be fastened securely to fence posts with wire ties or staples every 2' at top and mid section.
- When top sections of filter cloth are laid back over top of fence, they shall overlap by six inches and be folded.
- Maintenance shall be performed as needed and material removed when it develops in the silt fence.

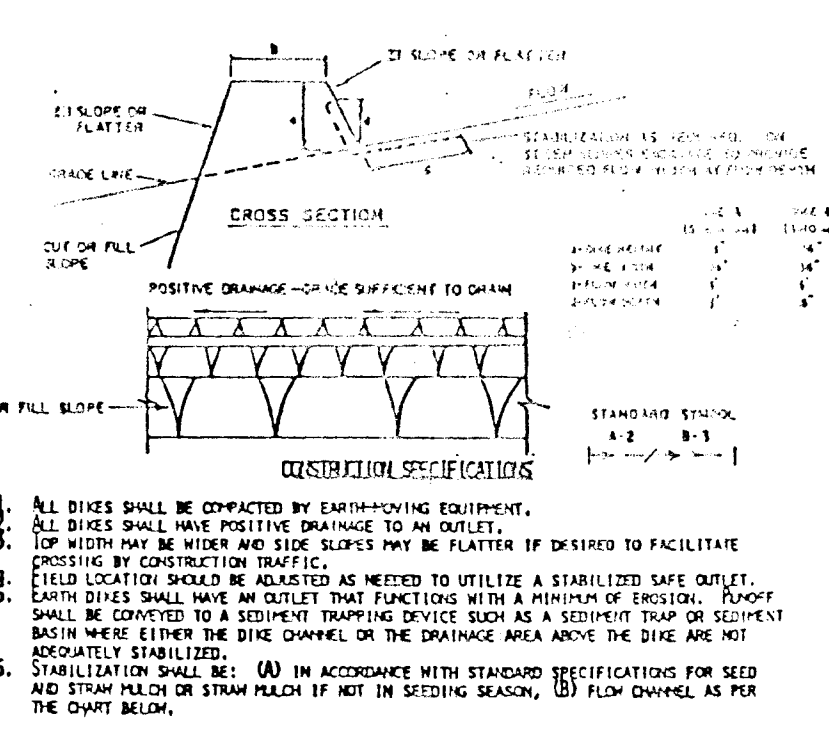
SILT FENCE
NO SCALE



EARTH DIKE
NO SCALE



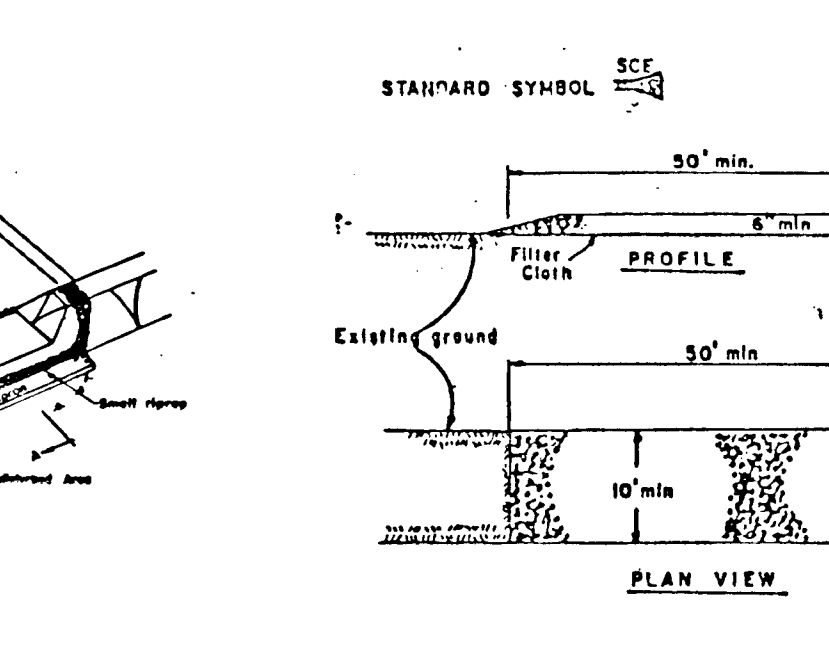
STONE OUTLET SEDIMENT TRAP
NO SCALE



CONSTRUCTION SPECIFICATIONS

- All dikes shall be constructed by earthmoving equipment.
- Top width shall be wide and side slopes shall be flattened to facilitate passage by construction traffic.
- Earth dikes shall be constructed with a minimum of erosion. They shall be covered to a sediment trapping device such as a sediment trap or sediment stabilizer.
- Stabilized areas shall be (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD AND STRIP MULCH OR STRIP MULCH (IF NOT IN SIFTING SEASON), (B) FLOW CHANNEL AS PER THE OWNER'S PLAN.

EARTH DIKE
NO SCALE



STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

- Stone Size - One 3" stone, or equivalent, or recycled concrete equivalent.
- Length - As required, but not less than 10 feet (except on a single entrance lot where a 30 foot minimum length would apply).
- Thickness - Not less than six (6) inches.
- Width - Ten (10) feet 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 will not be required on a single family residence lot.
- Surface Water - Will be placed over the entire area prior to placing of stone. A mounded berm with six (6) slopes will be provided.
- Maintenance - The entrance shall be maintained in a condition which will prevent backing up of sediment onto the right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any materials used to trap sediment. All sediment applied, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-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.
- Toxicity Inspection and needed maintenance shall be provided after each rain.

TEMPORARY SEEDING PREPARATION

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RESTORED 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). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF KEEPING LOVEGRASS (.07 lbs/1000 sq ft). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOU.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 lbs/1000 sq ft) OF UNWITTED SMALL GRASS 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 HARRARD STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

CONSTRUCTION SPECIFICATIONS

DIVISION	ITEM	QUANTITY	UNIT
DIVISION 1	1	5-3.0E	SEED AND STRAW MULCH
	2	3.1-5.0E	SEED AND STRAW MULCH
	3	1-1.0E	SEED WITH LIME, OR SOU
DIVISION 2	1	1.1-2.0E	LINED RIP-RAP 4'-8"
	2	1.1-2.0E	LINED RIP-RAP 4'-8"

TEMPORARY SEEDING PREPARATION

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RESTORED 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). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF KEEPING LOVEGRASS (.07 lbs/1000 sq ft). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOU.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 lbs/1000 sq ft) OF UNWITTED SMALL GRASS 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 HARRARD STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

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 UREA-FORM 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. 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 60 LBS PER ACRE (1.4 lbs/1000 sq ft) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.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 AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOU. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 lbs/1000 sq ft) OF UNWITTED SMALL GRASS 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 SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

BY THE DEVELOPER:

JAMES R. MOXLEY, JR.
SECURITY DEVELOPMENT CORPORATION, PRESIDENT
DATE: 5-29-91

BY THE ENGINEER:

JOHN W. ELORRIGAGA, P.E. # 16891
ENGINEER
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: 4/12/92

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

HOWARD S.C.D.
DATE: 4/12/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 4/16/92

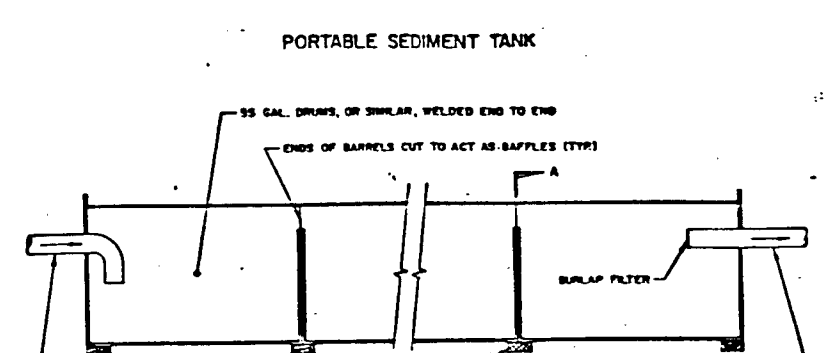
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 4/16/92

CHIEF, BUREAU OF HIGHWAYS
DATE: 4-16-92

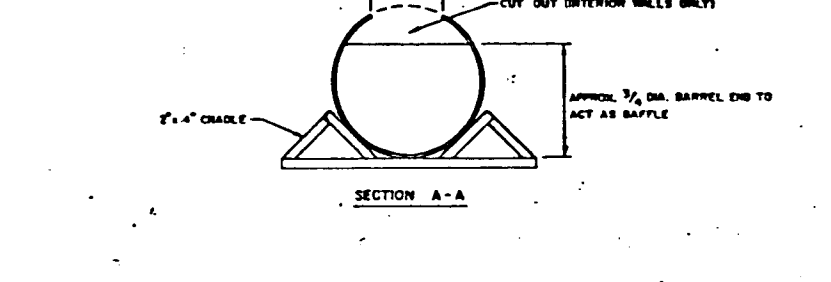
CHIEF, BUREAU OF ENGINEERING
DATE: 4/20/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 4/20/92

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
DATE: 4/20/92



PORTABLE SEDIMENT TANK
NO SCALE



TEST PIT 1
NO SCALE

DEPTH (FEET)	NO.	DEPTH (FEET)	DESCRIPTION OF MATERIALS	REMARKS
0.0	S-1	1	Topsoil and Root Zone	Not suitable for use
2.0	S-2	3	Light brown, moist, Silty and Clayey SAND (S-C-SM)	In-situ test performed at 7.5 ft below site grade
4.5	S-3	6	Orange-brown, moist, Silty SAND (SM), trace clay	
5.0	S-4	10	Multicolored, moist, Silty GLA (CL), little sand	Terminated at 10 ft

DEPTH (FEET)	NO.	DEPTH (FEET)	DESCRIPTION OF MATERIALS	REMARKS
0.0	S-1	1.5	Topsoil and Root Zone	Water at Completion
2.0	S-2	3.0	Brown, moist, Silty CLAY (CL), little sand	Not suitable for use
3.0	S-3	5.0	Light brown to beige, moist, Silty SAND (SM), little to some gravel	After 1.5 hours: 10.5'
6.5	S-4	7.0	Orange-brown, moist, Silty CLAY (CL) trace to little sand	In-situ test performed at 7.5 ft below site grade
9.5	S-5	10.0	Light grey, moist, Clayey SILT (ML), little sand	Not suitable for use
10.0	S-5	10.0	Clay Loam	Terminated at 10.5 ft

DEPTH (FEET)	NO.	DEPTH (FEET)	DESCRIPTION OF MATERIALS	REMARKS
0.0	S-1	1.0	Topsoil and Root Zone	Not suitable for use
2.0	S-2	2.5	Light brown, moist Silty SAND (SM), trace clay	
5.0	S-3	9.5	Orange-brown to grey, moist Silty CLAY (CL-ML), little sand	In-situ test performed at 7.5 ft below site grade
10.0	S-4	11.5	Clay Loam	Terminated at 11.5 ft

PORTABLE SEDIMENT TANK
NO SCALE

TEST PIT 1
NO SCALE

TEST PIT 2
NO SCALE

TEST PIT 3
NO SCALE

NO.	DATE	REVISION

TSA GROUP, INC.
planning • architecture • engineering
8400 Baltimore National Pike • Ellicott City, Maryland 21043 • (301)465-8105

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

PROJECT: KING'S WOODS
SECTION 2, AREA 2 - PHASE 3
LOTS 236-265

LOCATION: TAX MAP 47-PARCELS 138,139,140 AND 857
8th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

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

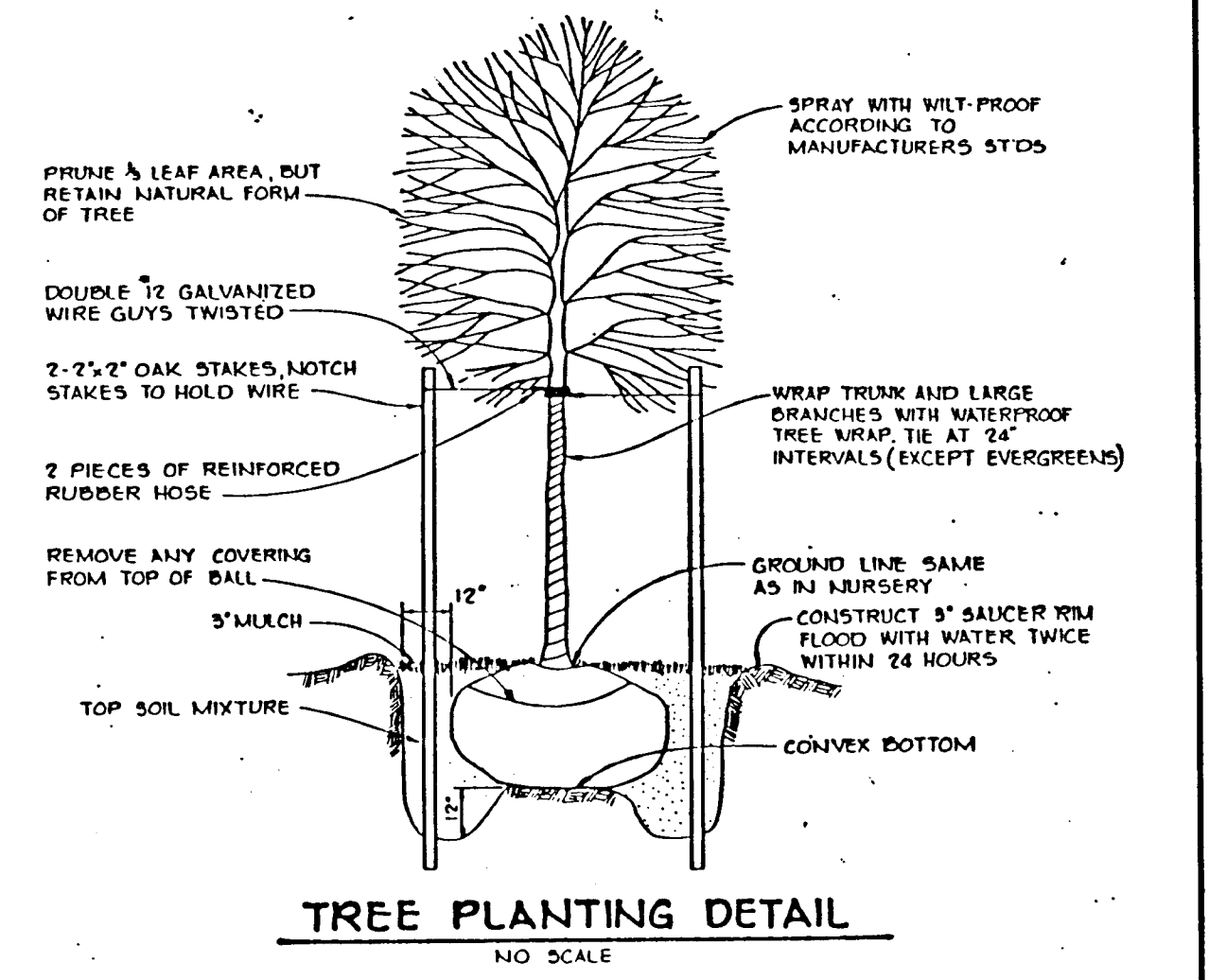
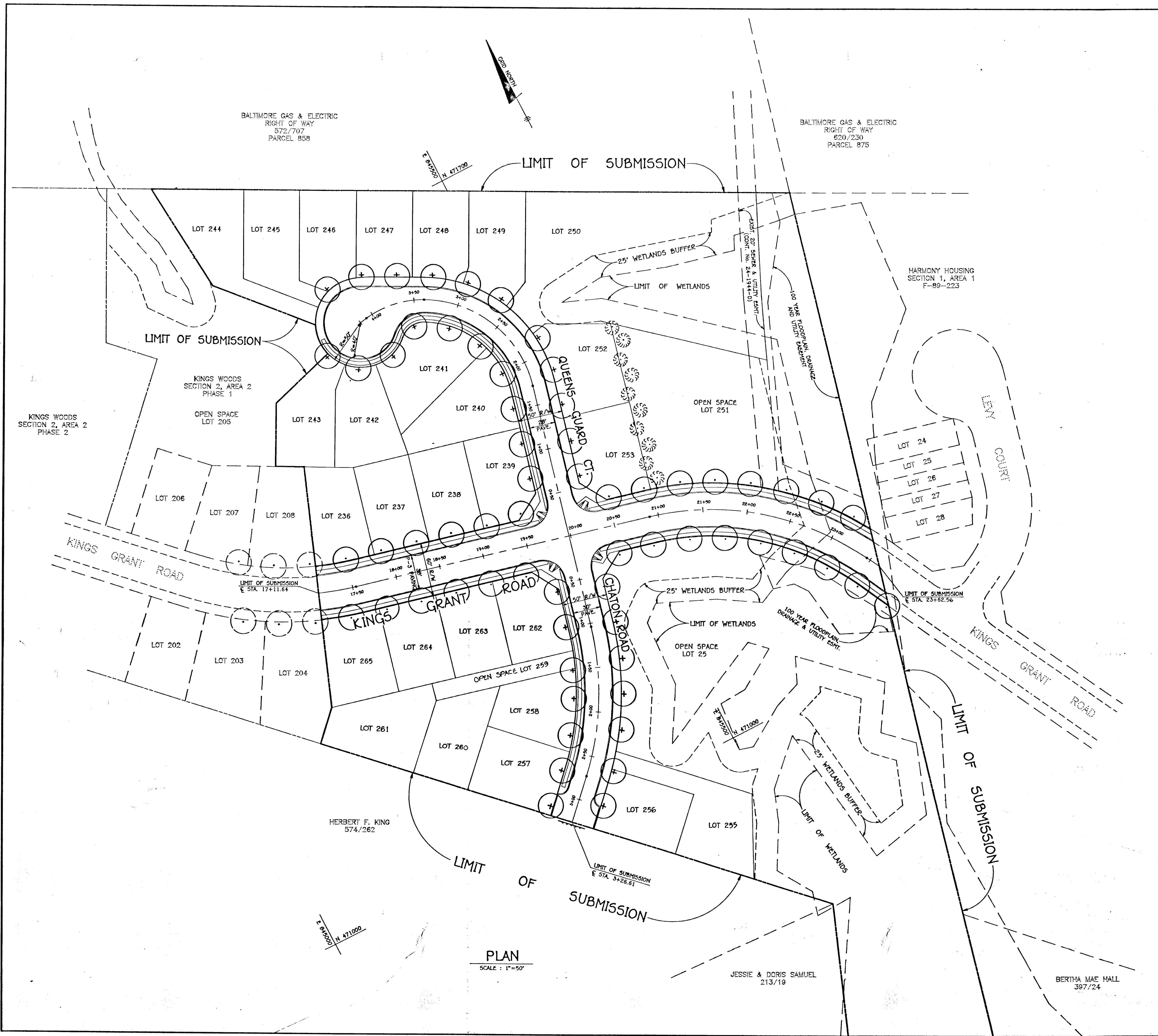
TITLE: SEDIMENT CONTROL DETAILS AND STORMWATER MANAGEMENT NOTES
5-89-29 PB-247 P-90-13 WP-91-193

DATE: MAY 28, 1991
PROJECT NO. 0084

DES: JME DRN: DRK SCALE: AS SHOWN DRAWING 7 OF 8

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PLANT LIST			
SYMBOL	QUANTITY	NAME	REMARKS
○	29	QUERCUS BOREALIS Red Oak	2 1/2 MIN. CAL. B & B FULL HEAD
+	35	ACER RUBRUM Red Maple	2 1/2 MIN. CAL. B & B FULL HEAD
⊗	10	PINUS STROBUS White Pine	5'-6' UNSHEARED
TOTAL	74		



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Howard County
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 4/16/92

John W. Pennington
CHIEF, BUREAU OF HIGHWAYS
DATE: 4/16/92

William S. Ray
CHIEF, BUREAU OF ENGINEERING
DATE: 4-16-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Thomas Samuel
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
DATE: 4/20/92

NO.	DATE	REVISION

TSA GROUP, INC.
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8480 Baltimore National Pike • Millcott City, Maryland 21043 • (301)465-8106

John C. Stinger

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

PROJECT: KING'S WOODS SECTION 2, AREA 2 - PHASE 3
LOTS 236-265

LOCATION: TAX MAP 47-PARCELS 138, 139, 140 AND 057
8TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: PLANTING PLAN
5-89-29 PB-247 P-90-13 WP-91-105

DATE: MAY 28, 1991
SEPT. 20, 1991

PROJECT NO. 0004

SCALE: 1" = 50'

DRAWING 8 OF 8

DES: DRK DRN: DBT

987