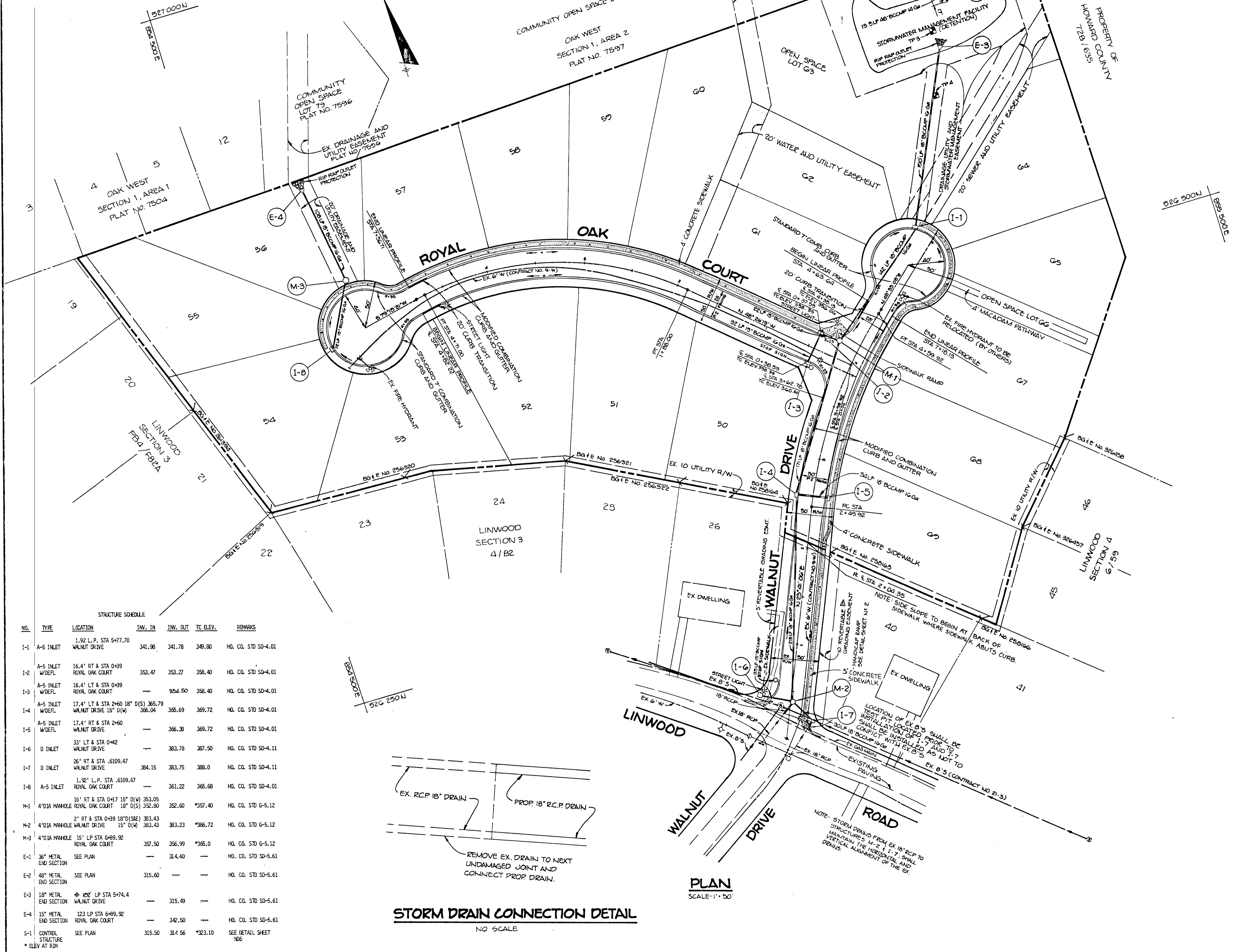


SHEET INDEX	
1	PLAN OF WALNUT DRIVE AND ROYAL OAK COURT
2	PROFILES OF ROYAL OAK COURT AND WALNUT DRIVE
3	DRAINAGE AREA MAP AND DETAILS
4	GRADING AND SEDIMENT CONTROL PLAN
5	GRADING, SEDIMENT CONTROL, AND STORMWATER MANAGEMENT NOTES AND DETAILS
6	STORMWATER MANAGEMENT SPECIFICATIONS AND DETAILS
7	STORM DRAIN PROFILES
8	PLANTING PLAN

<p>€ CURVE DATA FROM € STA 1+80.00 TO € STA 4+71.00</p> <p>ROYAL OAK COURT Δ = 52° 18' 20" R = 310.00' L = 283.00' T = 152.22' Dc = 18° 28' 57" CHD = N 74° 35' 29" W, 273.27'</p>	<p>€ CURVE DATA FROM € STA 2+42.92 TO € STA 4+59.92</p> <p>WALNUT DRIVE Δ = 24° 51' 59" R = 500.00' L = 217.00' T = 110.24' Dc = 11° 27' 33" CHD = N 36° 07' 06" E, 215.30'</p>
--	---



STORM DRAIN CONNECTION DETAIL
NO SCALE

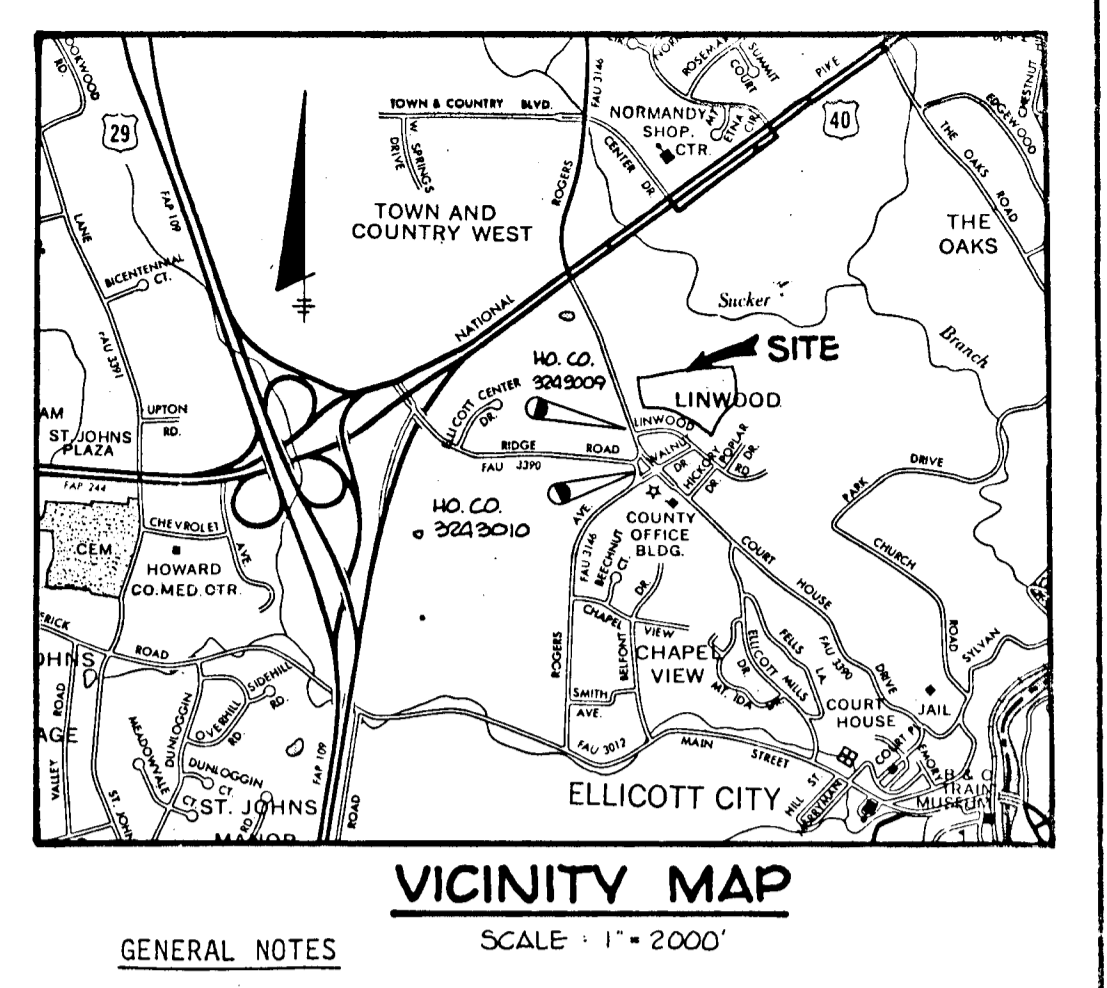
STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	INV. IN	INV. OUT	TC ELEV.	REMARKS
1-1	A-5 INLET	1.92' L.P. STA 5+77.70 WALNUT DRIVE	341.98	341.78	349.80	HO. CO. STD 50-4-01
1-2	A-5 INLET W/OEFL	16.4' RT & STA 0+39 ROYAL OAK COURT	353.47	353.27	358.40	HO. CO. STD 50-4-01
1-3	A-5 INLET W/OEFL	16.4' LT & STA 0+39 ROYAL OAK COURT	354.50	354.30	358.40	HO. CO. STD 50-4-01
1-4	A-5 INLET W/OEFL	17.4' LT & STA 2+60 18" D(S) 365.79 WALNUT DRIVE 15" D(W)	366.04	365.69	369.72	HO. CO. STD 50-4-01
1-5	A-5 INLET W/OEFL	17.4' RT & STA 2+60 WALNUT DRIVE	366.38	366.18	369.72	HO. CO. STD 50-4-01
1-6	D INLET	33' RT & STA 0+42 WALNUT DRIVE	383.78	383.50	388.00	HO. CO. STD 50-4-11
1-7	D INLET	26' RT & STA 5+09.47 WALNUT DRIVE	384.15	383.75	388.00	HO. CO. STD 50-4-11
1-8	A-5 INLET	1.92' L.P. STA 5+09.47 ROYAL OAK COURT	361.22	361.02	365.68	HO. CO. STD 50-4-01
M-1	4" DIA MANHOLE	16' RT & STA 0+17 15" D(W) 353.05 ROYAL OAK COURT 18" D(S) 352.80	352.60	352.60	*357.40	HO. CO. STD 6-5-12
M-2	4" DIA MANHOLE	2' RT & STA 0+39 18" D(S) 383.43 WALNUT DRIVE 15" D(W)	383.43	383.23	*386.72	HO. CO. STD 6-5-12
M-3	4" DIA MANHOLE	15' LP STA 0+89.92 ROYAL OAK COURT	357.50	356.99	*366.00	HO. CO. STD 6-5-12
E-1	36" METAL END SECTION	SEE PLAN	314.40	---	---	HO. CO. STD 50-5-61
E-2	48" METAL END SECTION	SEE PLAN	315.60	---	---	HO. CO. STD 50-5-61
E-3	18" METAL END SECTION	123' LP STA 5+74.4 WALNUT DRIVE	315.49	---	---	HO. CO. STD 50-5-61
E-4	15" METAL END SECTION	123' LP STA 6+89.92 ROYAL OAK COURT	342.50	---	---	HO. CO. STD 50-5-61
S-1	CONTROL STRUCTURE	SEE PLAN	315.50	314.56	*323.10	SEE DETAIL SHEET NO. 6
* ELEV AT RW						

ALL STORM DRAIN BEDDING SHALL BE CLASS 'C'

BENCH MARKS

HO. CO. 3249009 ELEV. 410.075
N 525005.480 E 855079.836
CONC. MONUMENT @ SURFACE, 132' ± WEST OF COURT HOUSE DRIVE IN FRONT OF LIGON BUILDING OF THE HOWARD CO OFFICE COMPLEX.

HO. CO. 3249010 ELEV. 408.675
N 525447.008 E 854849.934
CONC. MONUMENT 0.1' BELOW SURFACE ON S.W. CORNER OF BRIGHTWELL DRIVE & COURT HOUSE DRIVE.



- 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 COUNTY BUREAU OF UTILITIES	992-2366
HOWARD COUNTY CONSTRUCTION INSPECTION SURVEY DIVISION	992-2417/2418
 - ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
 - ALL STREET CURB RETURNS SHALL HAVE 20.0' RADII 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 1984 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-SAC DESIGNED FOR 25 M.P.H., ALL LOCAL STREETS DESIGNED FOR 30 M.P.H.
 - 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 PLAN DIMENSIONS.
 - SUBJECT PROPERTY ZONED R-20 PER 8-2-85 COMPREHENSIVE ZONING PLAN.

APPROVED: HOWARD OFFICE OF PLANNING AND ZONING	7/23/89	
<i>Mark S. Campbell</i> CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	DATE	
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	7/19/89	
<i>Paul Deason</i> CHIEF, LAND DEVELOPMENT DIVISION	DATE	
<i>James W. Walscheid</i> CHIEF, BUREAU OF HIGHWAYS	7/18/89	
<i>William B. Kelly</i> CHIEF, BUREAU OF ENGINEERING	7-20-89	
2-6-91	REVISED SIDEWALK LOCATION STA. 0+00 TO 2+25 WALNUT DRIVE.	
NO.	DATE	REVISION

TRACY, SCHULTE & ASSOCIATES INC.
planning • architecture • engineering

8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465-6105

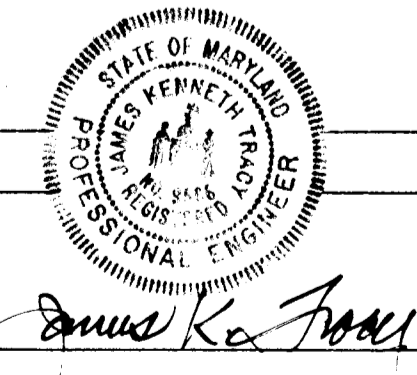
OWNER / DEVELOPER: SECURITY DEVELOPMENT CORP.
P.O. BOX 417
ELLICOTT CITY, MARYLAND 21043

PROJECT: LINWOOD SECTION 5
LOCATION TAX MAP NO 25 PARCEL NO 07
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

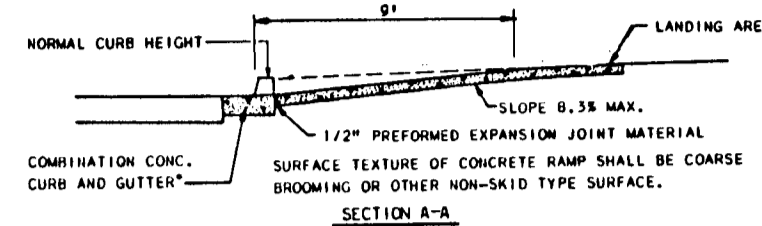
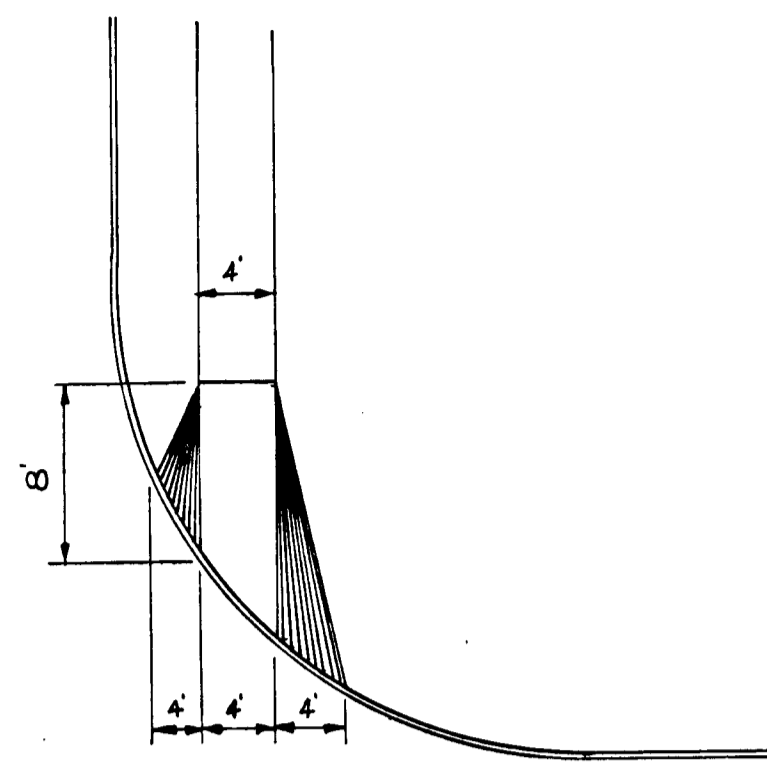
TITLE: PLAN OF WALNUT DRIVE AND ROYAL OAK COURT

DATE: NOV. 8, 1988 PROJECT NO 0074
5-80-91 P. 89-04 F. 89-79
G/22/89

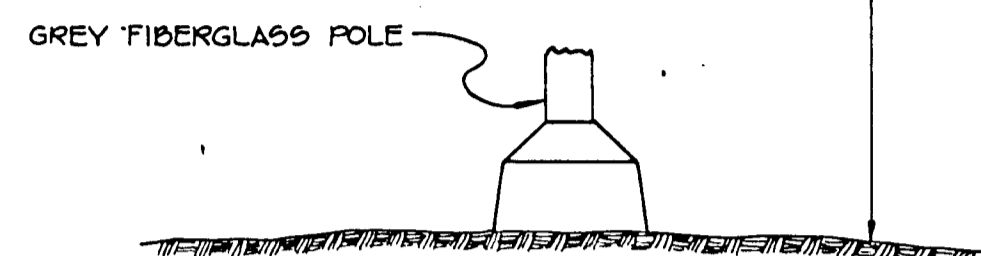
DES. DAM. DRN. JH/MM. SCALE AS SHOWN DRAWING 1 OF 8



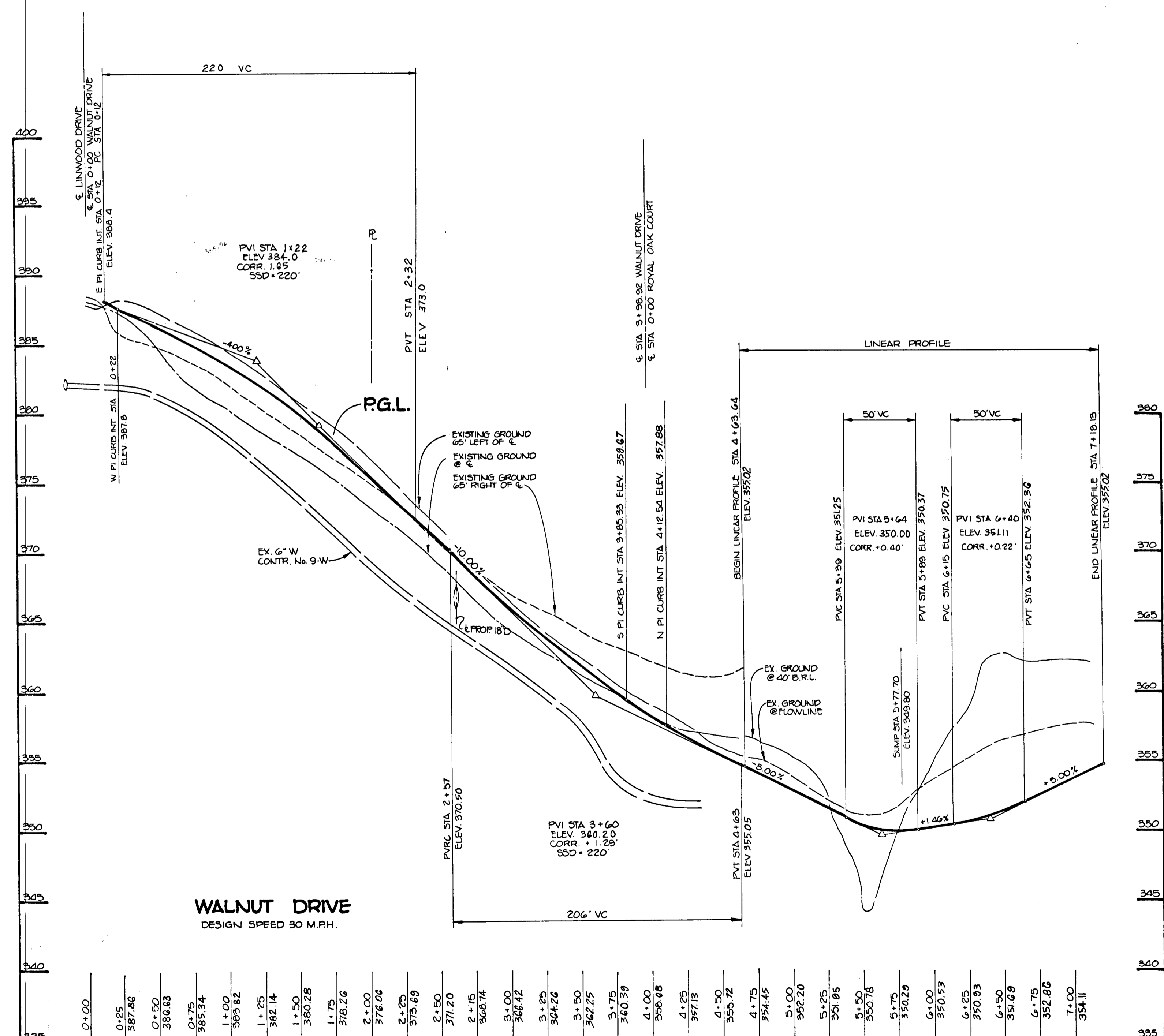
HANDICAP RAMP
NO SCALE



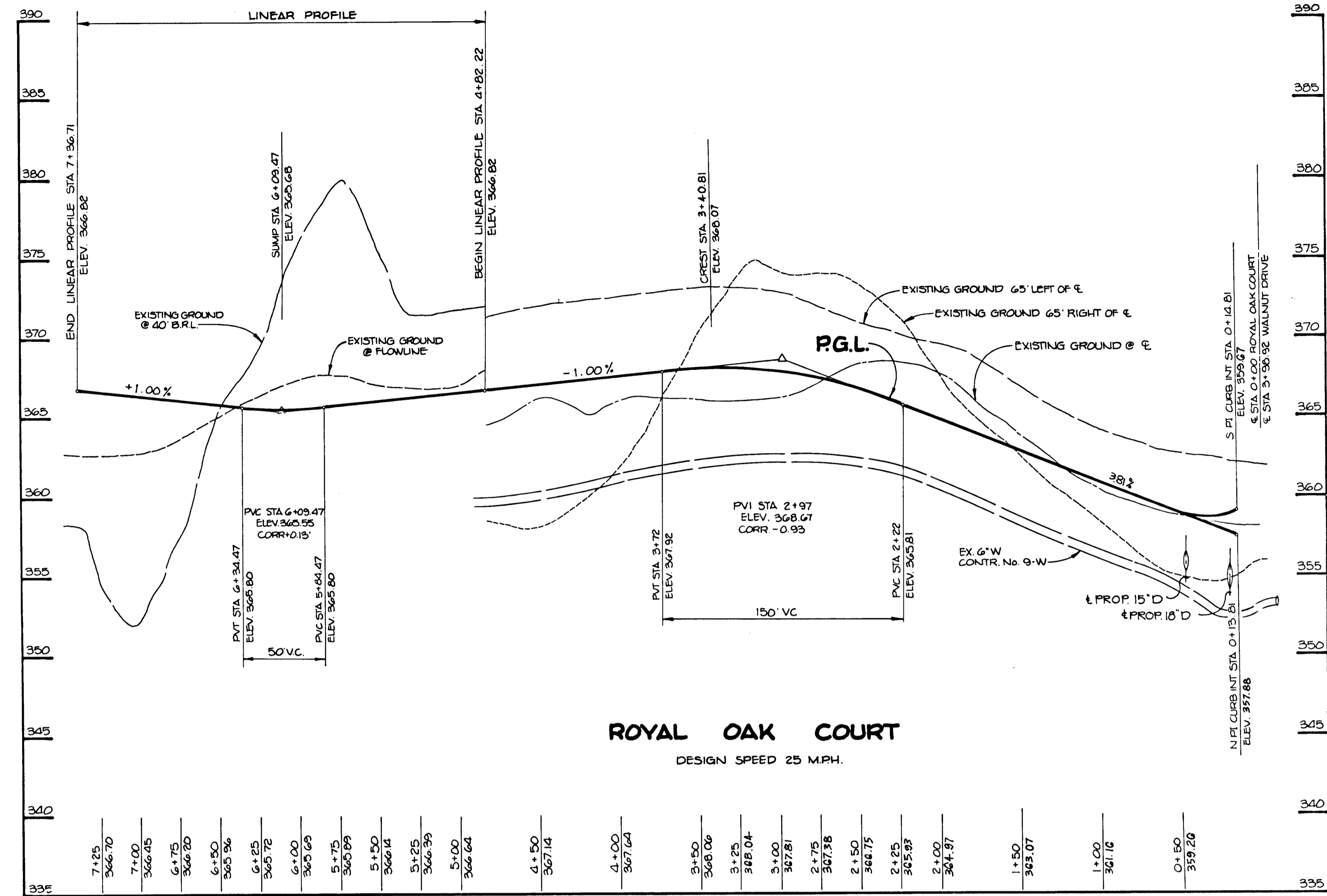
NOTE:
ALL STREET LIGHT FIXTURES TO BE 150 WATT HP SODIUM VAPOR TYPE 14" HIGH AND 19 SHOWN ON THE PLAN AS \star



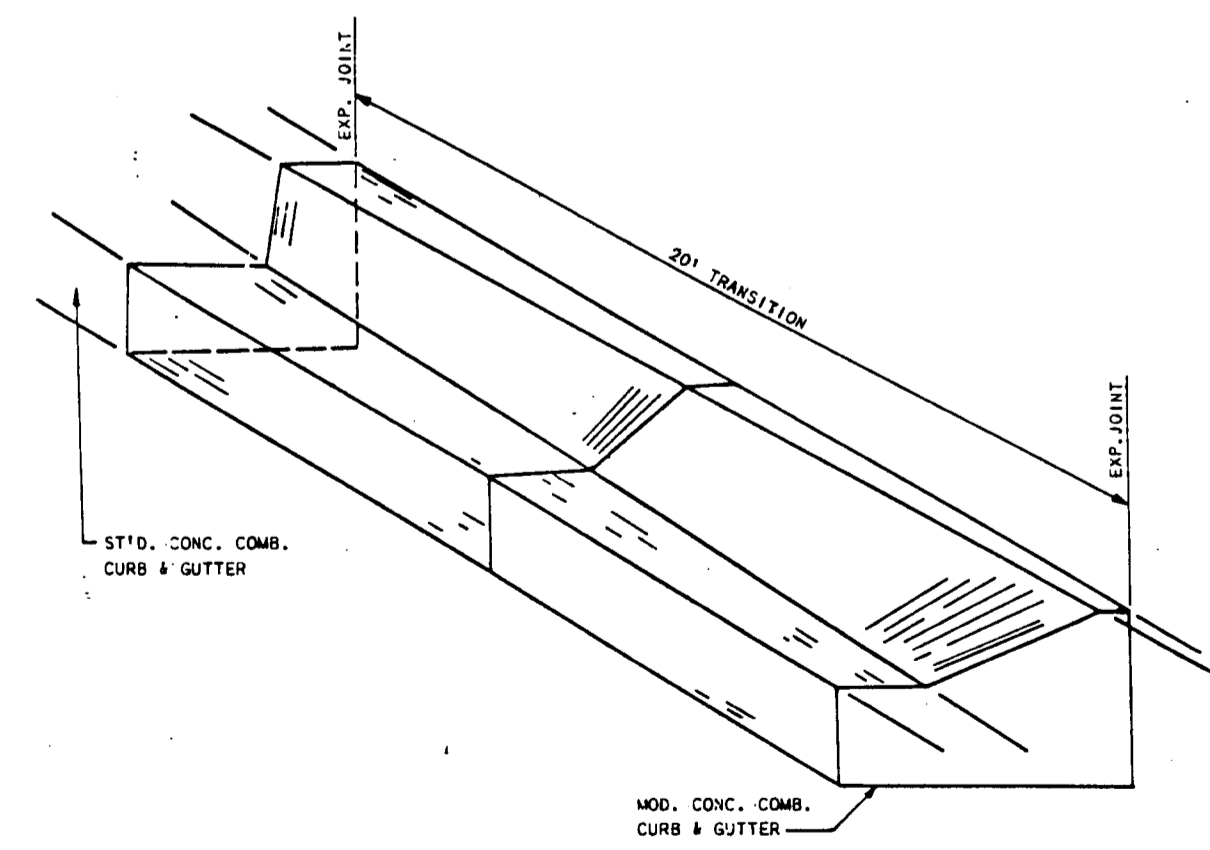
MODERN - LIGHTING FIXTURE
NO SCALE



WALNUT DRIVE
DESIGN SPEED 30 M.P.H.



ROYAL OAK COURT
DESIGN SPEED 25 M.P.H.



CURB TRANSITION DETAIL
NO SCALE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Mark J. Zangli
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE 7/23/89

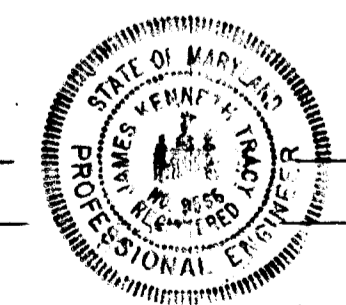
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Paul J. ...
 CHIEF, LAND DEVELOPMENT DIVISION DATE 7/19/89

Lawrence W. Welland
 CHIEF, BUREAU OF HIGHWAYS DATE 1/18/89

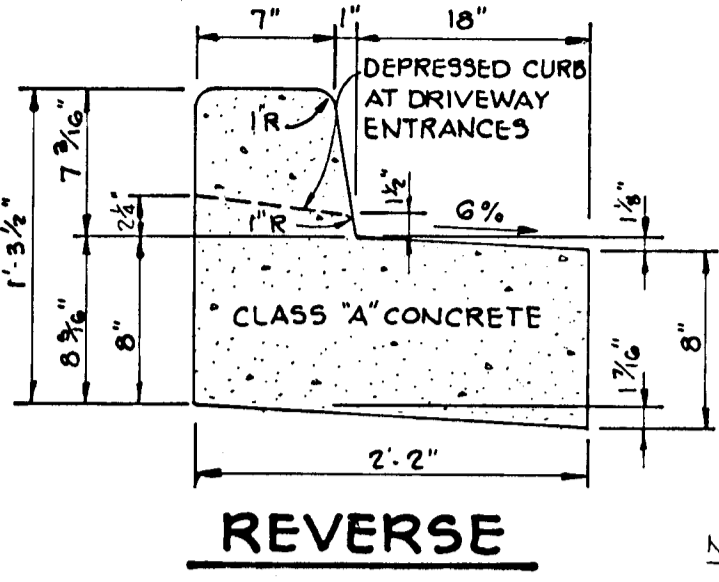
William E. Ray
 CHIEF, BUREAU OF ENGINEERING DATE 7-20-89

NO	DATE	REVISION

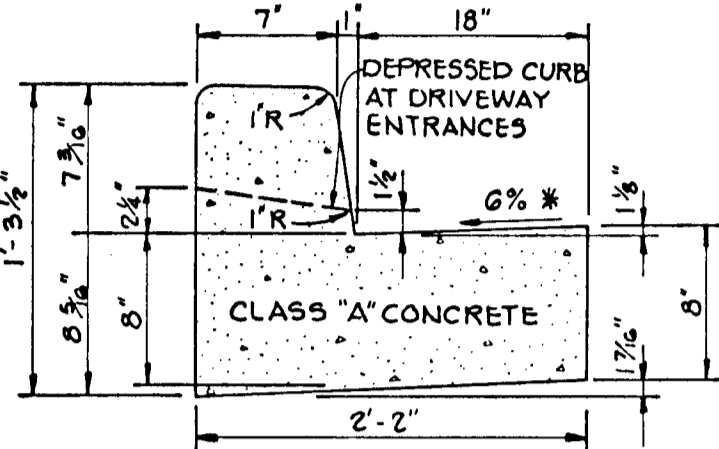
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 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465-6105



OWNER / DEVELOPER: SECURITY DEVELOPMENT CORP. P.O. BOX 417 ELICOTT CITY, MARYLAND 21043	PROJECT: LINWOOD SECTION 5 LOCATION TAX MAP NO. 25 PARCEL NO. 97 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE: PROFILES OF ROYAL OAK COURT AND WALNUT DRIVE	DATE: NOV. 8, 1988 SCALE: HORIZ. 1" = 50' VERT. 1" = 5'
DES. D.A.M. DRN. M.M.	PROJECT NO. 0074 DRAWING 2 OF 8



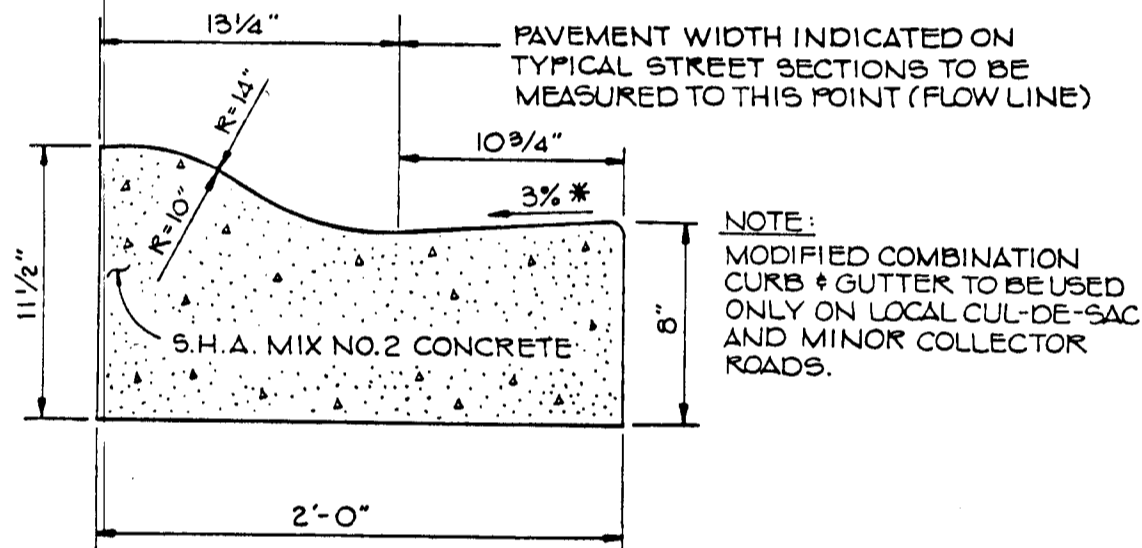
REVERSE



HOWARD COUNTY DESIGN MANUAL VOLUME IV
STANDARD SPECIFICATIONS AND DETAILS FOR
CONSTRUCTION (DRAWING R-301)

GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE
ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED
SECTIONS SHALL BE SLOPED AT THE SAME RATE
AS THE PAVEMENT.

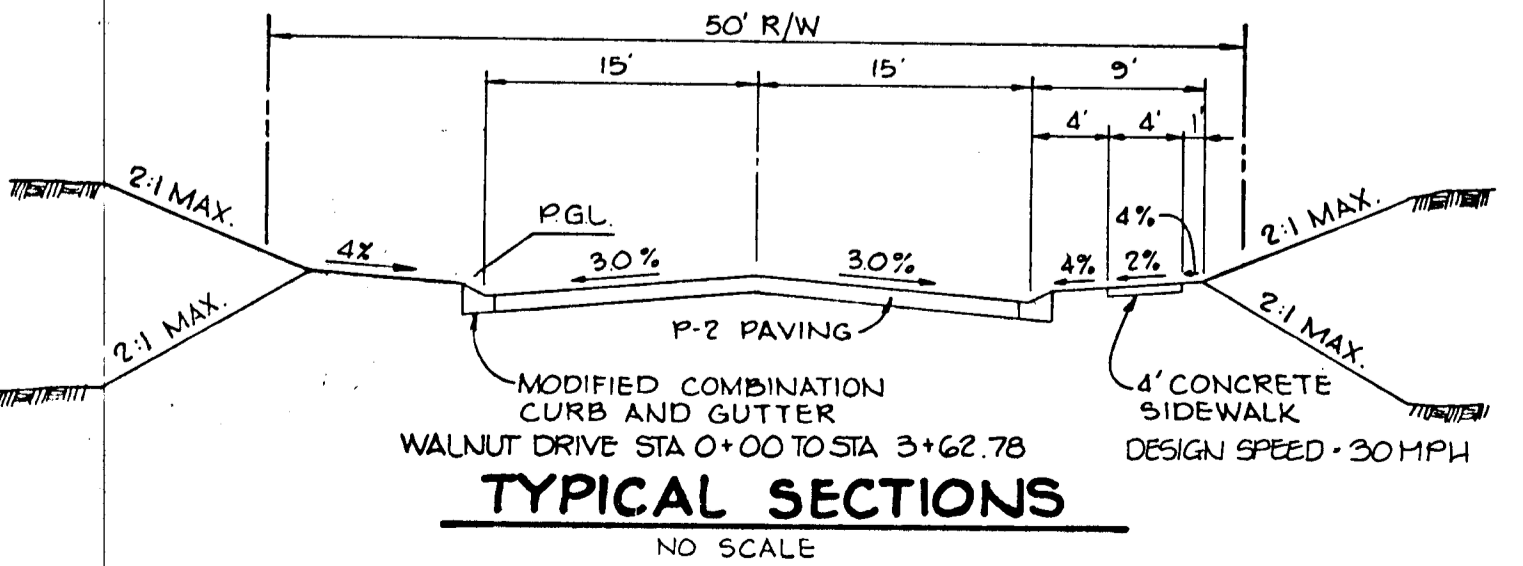
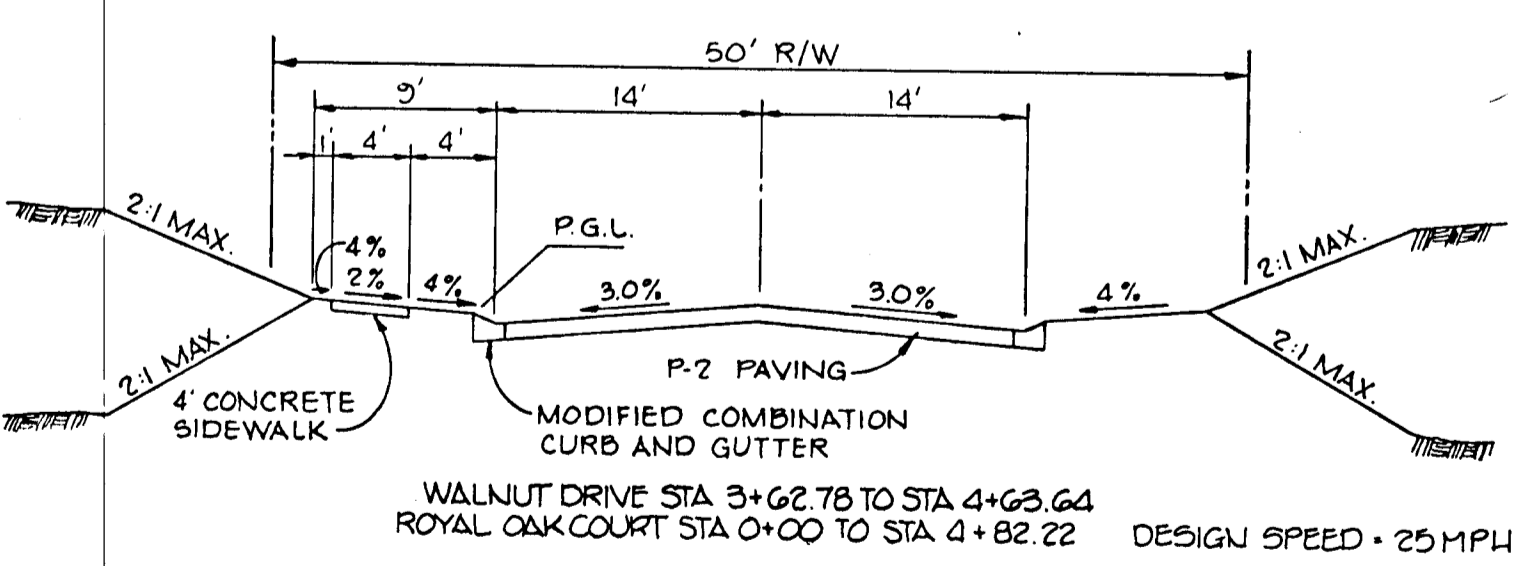
**STANDARD 7" COMBINATION
CURB AND GUTTER**



NOTE:
MODIFIED COMBINATION
CURB & GUTTER TO BE USED
ONLY ON LOCAL CUL-DE-SAC
AND MINOR COLLECTOR
ROADS.

* 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.

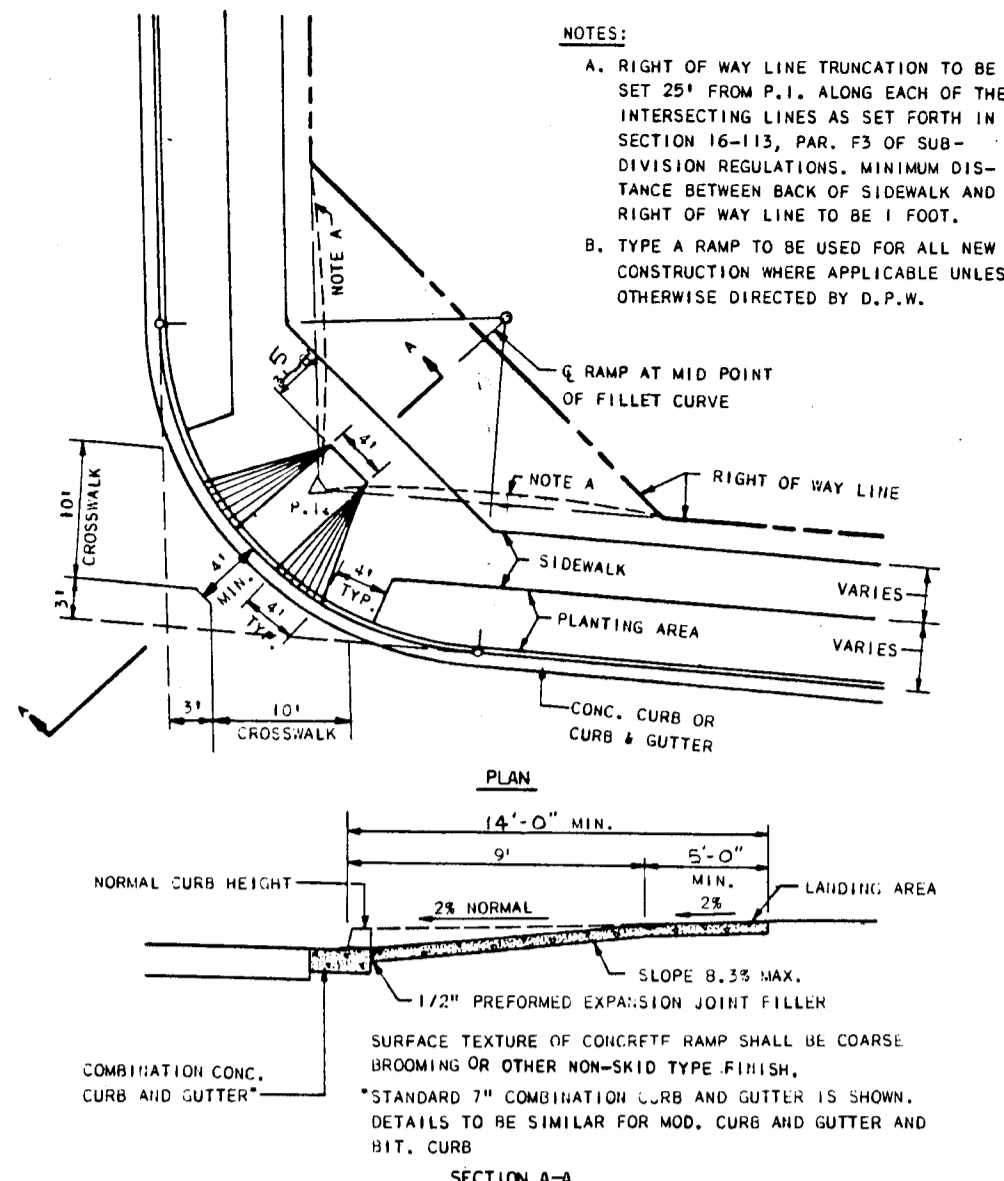
**MODIFIED COMBINATION
CURB AND GUTTER**



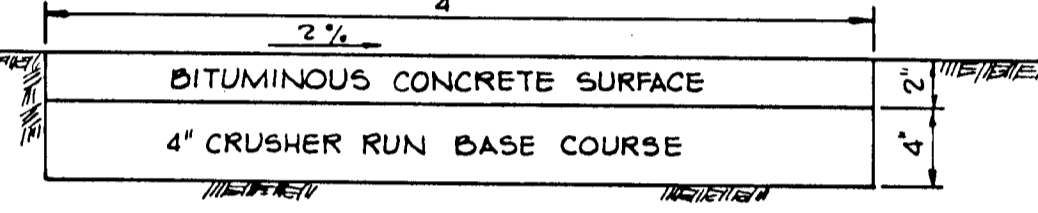
TYPICAL SECTIONS



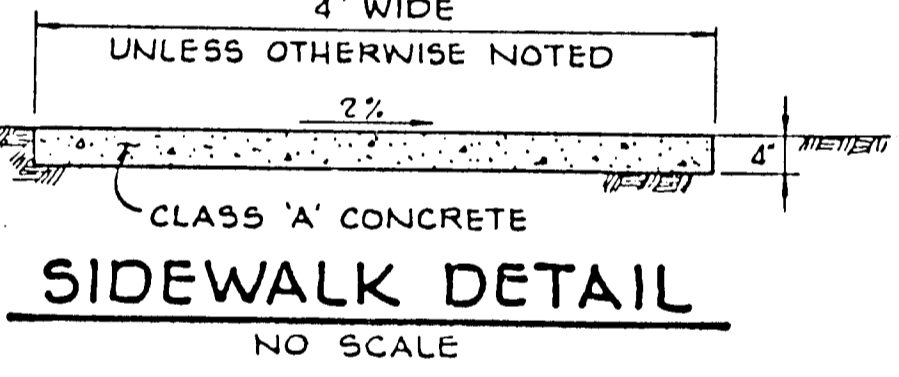
DRAINAGE AREA MAP
SCALE: 1" = 100'



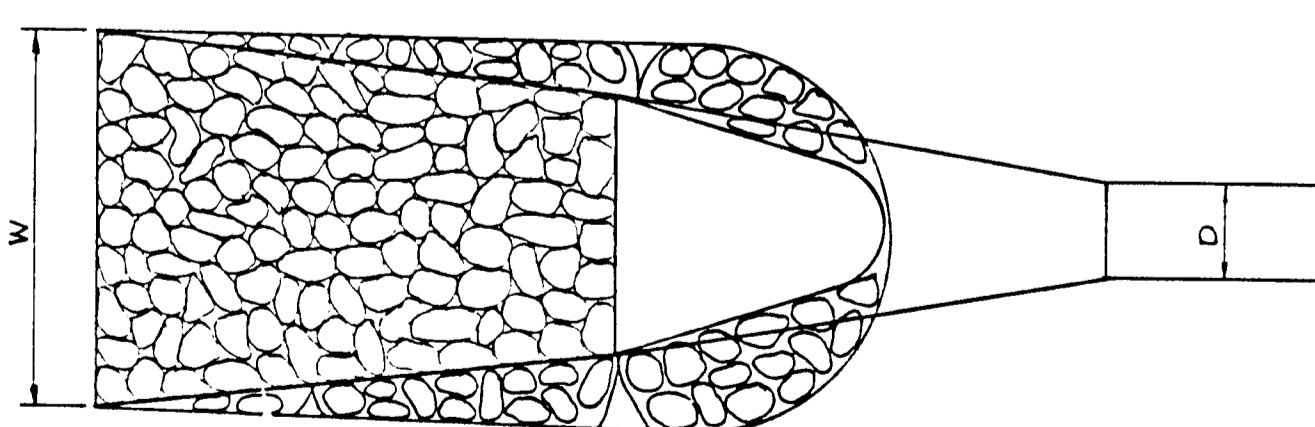
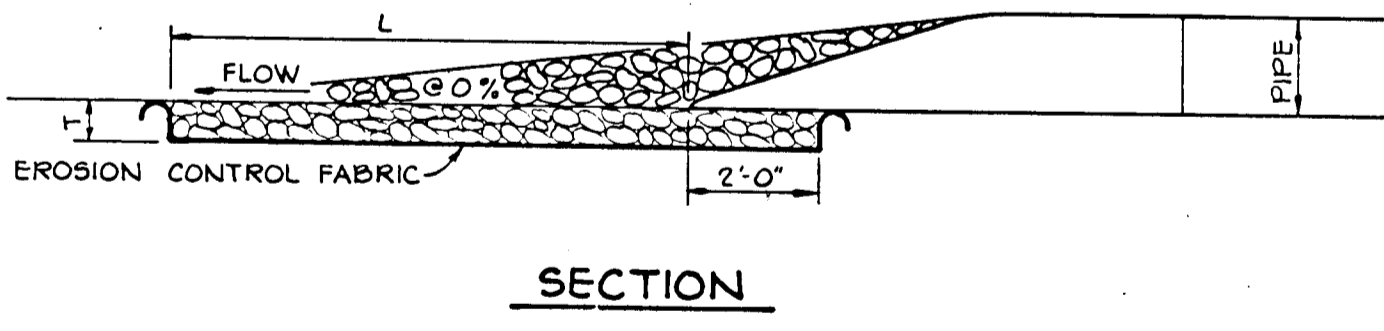
SIDEWALK RAMP
NO SCALE



MACADAM PATHWAY DETAIL
NO SCALE



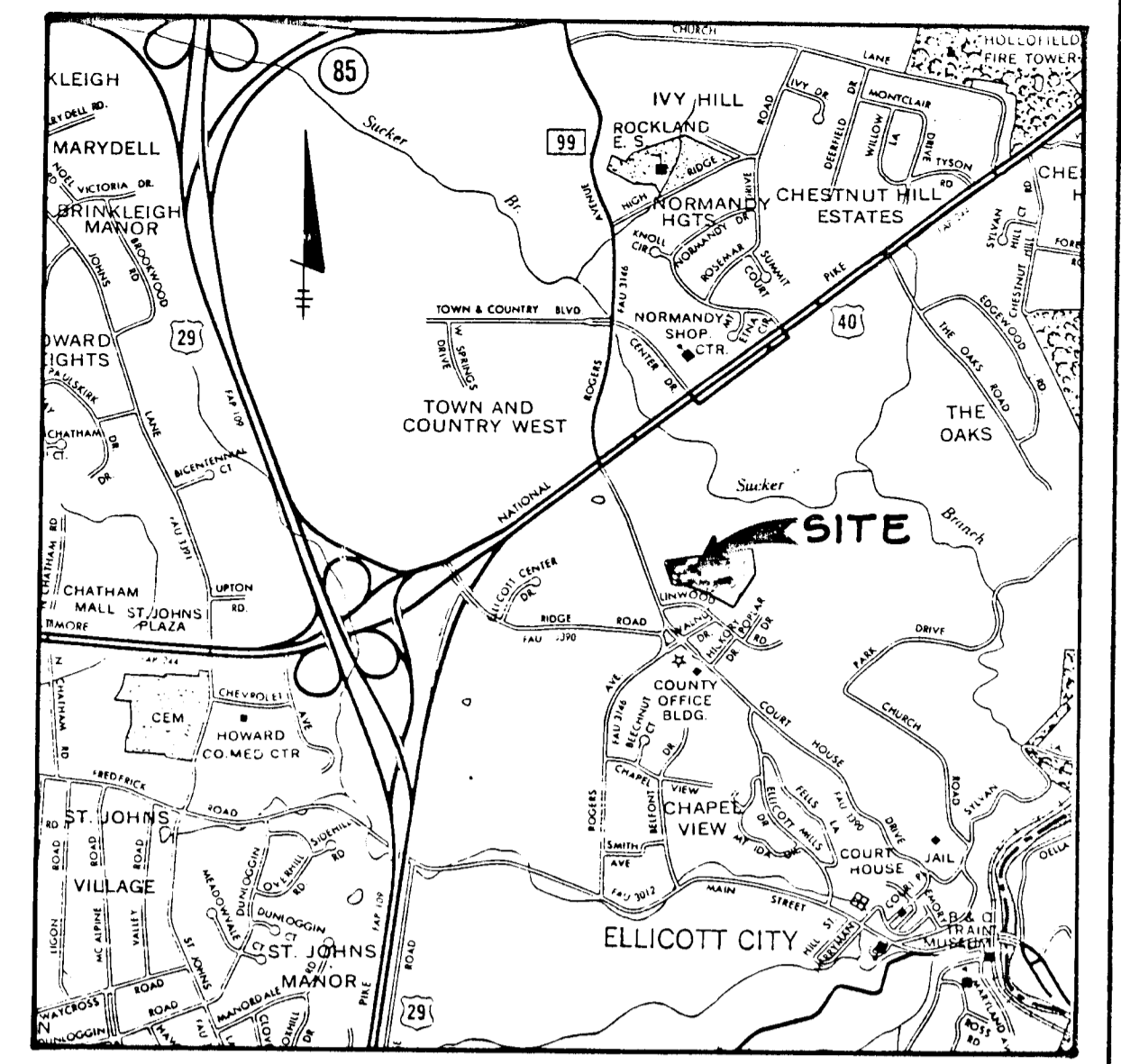
SIDEWALK DETAIL
NO SCALE



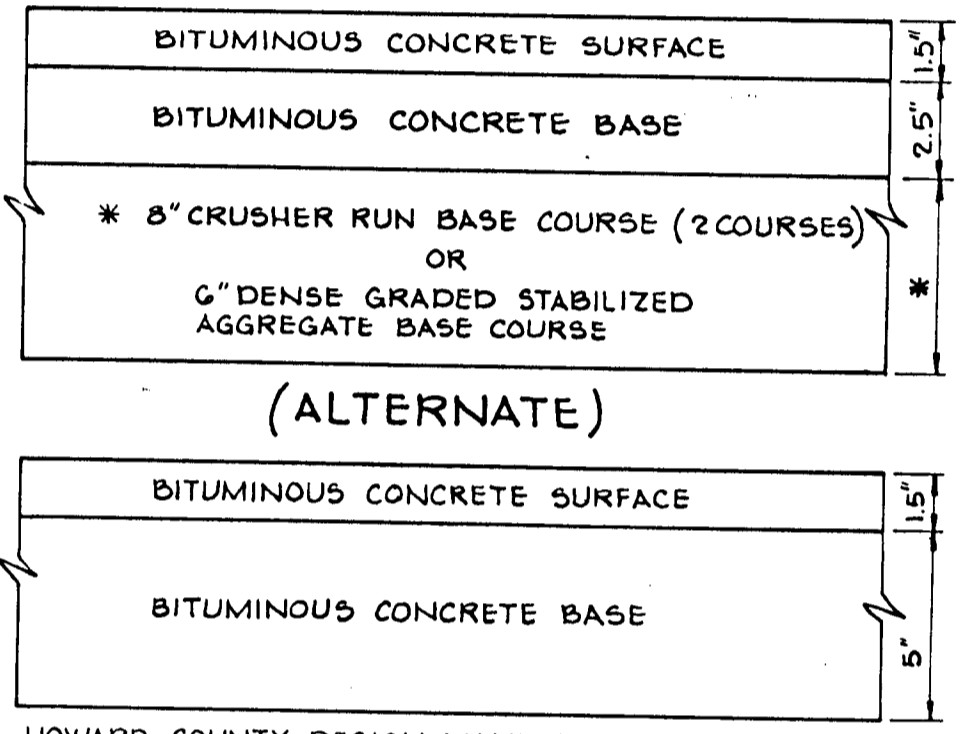
PLAN

STRUCTURE	d - 50	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-3	0.5'	16'	18'	1.35'
E-4	0.5'	10'	12'	1.35'
E-1	0.5'	12'	12'	1.35'

OUTLET PROTECTION DETAIL
NO SCALE



VICINITY MAP
SCALE: 1" = 2000'



(ALTERNATE)

**6 1/2" PAVING, P-2
WALNUT DRIVE
ROYAL OAK COURT**

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
[Signature] 7/21/89
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 7/10/89
CHIEF, LAND DEVELOPMENT DIVISION

[Signature] 7/18/89
CHIEF, BUREAU OF HIGHWAYS

[Signature] 7-20-89
CHIEF, BUREAU OF ENGINEERING

NO	DATE	REVISION

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OWNER / DEVELOPER: SECURITY DEVELOPMENT CORP.
P.O. BOX 417
ELlicOTT CITY, MARYLAND 21043

PROJECT: **LINWOOD**
SECTION 5

LOCATION: TAX MAP NO 25
PARCEL NO 97
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **DRAINAGE AREA MAP
AND DETAILS**

DATE: NOV. 8, 1988
6/26/89

DES. DAM. DRN. J.H./M.M.

SCALE AS SHOWN

PROJECT NO 0074

DRAWING 3 OF 8

STONE OUTLET SEDIMENT TRAP DATA

DRAINAGE AREA	21 Ac
VOLUME REQUIRED	3780 cu ft
VOLUME PROVIDED	3780 cu ft
CREST ELEV.	341.0
CLEANOUT ELEV.	339.0
BOTTOM ELEV.	338.0
TOP ELEV.	342.0
CREST WIDTH	9'

RIP RAP OUTLET SEDIMENT TRAP DATA

DRAINAGE AREA	12.3 Ac
VOLUME REQUIRED	22140 cu ft
VOLUME PROVIDED	24100 cu ft
CREST ELEV.	321.2
CLEANOUT ELEV.	317.8
BOTTOM ELEV.	315.5
TOP ELEV.	323.1
CREST WIDTH	14'

FOREBAY/WATER QUALITY FACILITY NO 1 DATA

BOTTOM ELEVATION	313.6
TOP ELEVATION	315.6
STORAGE REQ.	3341 FT ³ FOREBAY +4211 FT ³ WATER QUALITY =7552 FT ³ TOTAL
STORAGE PROVIDED	11000 FT ³

SEQUENCE OF CONSTRUCTION

- | | |
|-----------|---|
| DAY 1 | 1. OBTAIN A GRADING PERMIT. |
| DAY 2-7 | 2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SEDIMENT TRAPS, AND CONSTRUCT RIP RAP OUTLET TRAP/STORMWATER MANAGEMENT FACILITY AS A SEDIMENT TRAP TO BE CONVERTED AFTER STABILIZATION. |
| DAY 8-18 | 3. GRADE SITE TO SUBGRADE AND STABILIZE IN ACCORDANCE TO TEMPORARY SEEDBED NOTES. RIP RAP OUTLET TRAP/STORMWATER MANAGEMENT FACILITY IS TO BE CONSTRUCTED AS A SWMF. TO BE USED AS A SEDIMENT TRAP AND CONVERTED AFTER STABILIZATION. |
| DAY 19-39 | 4. INSTALL UTILITIES, CURB AND GUTTER AND PAVING. |
| DAY 40-50 | 5. UPON THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR REMOVE STONE OUTLET SEDIMENT TRAP AND CONVERT RIP RAP SEDIMENT TRAP TO STORMWATER MANAGEMENT FACILITY AND WATER QUALITY FACILITY AS FOLLOWS:
1. PUMP OUT ANY IMPOUNDED WATER.
2. REMOVE SEDIMENT AND RESTORE FACILITY TO ORIGINAL GRADES SHOWN ON PLANS.
3. REMOVE STONE FILTER AT E-2 AND STABILIZE FACILITY IN ACCORDANCE WITH PERMANENT SEEDBED NOTES. |



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."

James K. Tracy
ENGINEER: JAMES K. TRACY
DATE: 11-10-88

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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Steve K. Breeden
DEVELOPER: STEVE K. BREEDEN
DATE: 6/26/89

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.

James M. Helm
U.S. SOIL CONSERVATION SERVICE
DATE: 7/1/89

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Mark S. Campbell
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
DATE: 7/2/89

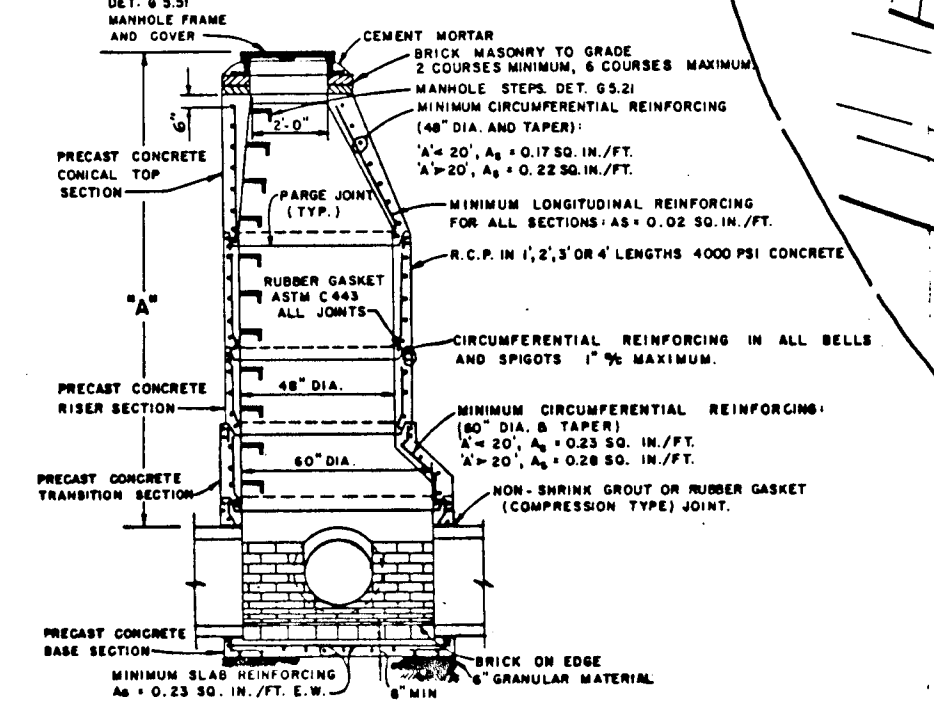
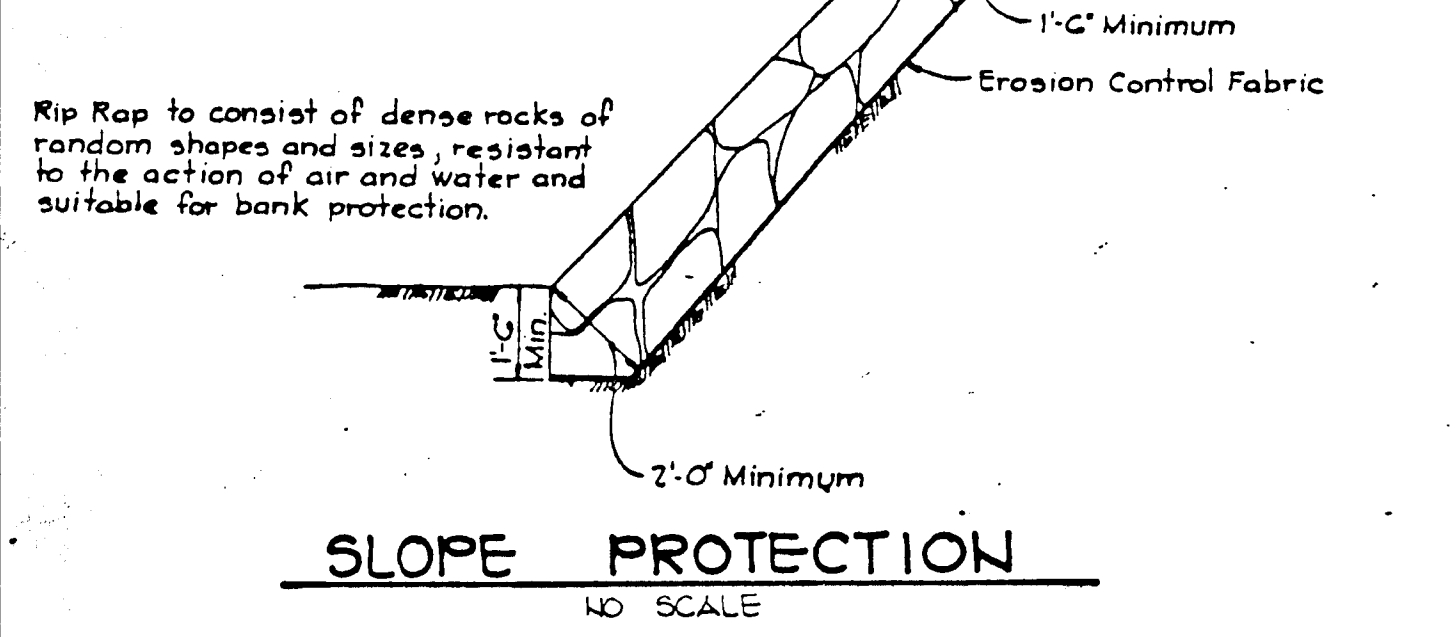
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Paul D. Depa
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 7/19/89
Lawrence W. Welstead
CHIEF, BUREAU OF HIGHWAYS
DATE: 7/18/89

James B. Rely
CHIEF, BUREAU OF ENGINEERING
DATE: 7-20-89

NO	DATE	REVISION

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8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465-6105

Note: Erosion Control Fabric shall be as manufactured by Carthage Mills, Inc. Erosion Control Division, 124 W. GGth Street, Cincinnati, Ohio or approved equal.



GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES

- MANHOLE BASE SHALL BE SET ON 6-INCH GRANULAR MATERIAL ON FIRM SUBGRADE.
- EXCAVATION BELOW PIPES SHALL BE BACKFILLED WITH GRANULAR OR SELECT MATERIAL 1/2 OF WAY TO TOP OF PIPE.
- CONNECTION BETWEEN MANHOLE WALL AND SEWER SHALL BE NON-SHRINK GROUT OR RUBBER GASKET (COMPRESSION TYPE) JOINT.
- MANHOLE STEPS SHALL BE AS SPECIFIED ON DETAIL SS-21. MANHOLE COVER SHALL BE AS SPECIFIED ON DETAIL SS-22.
- PAVING & CURB SHALL BE EPoxy COATING, 1/2 IN. DRY, SANITARY SEWER ONLY. (EXTERIOR SURFACE ONLY).
- EXCEPT STORM DRAIN PIPE.
- PROVIDE PIPE JOINT WITHIN 2'-0" MAXIMUM FROM OUTSIDE OF MANHOLE WALL.
- MANHOLE CHANNELS SHALL BE FORMED TO PROVIDE A SMOOTH HYDRAULIC TRANSITION BETWEEN PIPES. BENCHES SHALL BE NON-SHRINK GROUT OR RUBBER GASKET AND BENCHES SHALL BE FORMED FROM SEWER SERVICE. GRADE AS SHOWN ON PLANS.
- MANHOLE SHALL BE IN ACCORDANCE WITH ASTM C498 EXCEPT AS SHOWN.

PLAN
SCALE: 1"=50'

NOTE: [Hatched Area Symbol] INDICATES AREAS OF 25% OR GREATER SLOPES TO REMAIN ONSITE OUTSIDE OF STORMWATER MANAGEMENT AREA.

OWNER / DEVELOPER:	PROJECT
SECURITY DEVELOPMENT CORP P.O. BOX 417 ELICOTT CITY, MARYLAND 21043	CLINWOOD SECTION 5
	LOCATION TAX MAP NO 25 PARCEL NO 97 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
	TITLE GRADING AND SEDIMENT CONTROL PLAN
	DATE NOV 8, 1988 PROJECT NO 0074 6/26/89
DES. DAM.	DRN JH / M.M.
	SCALE: 1"=50' DRAWING 4 OF 8

Depth (feet)	Sample No.	Depth (feet)	Description of Materials	Remarks
1	1	1	Top Soil	
2	2	2	Brown, wet, saturated, Silty SAND Some clays, some gravel sized particles	Elevations were estimated from the topographic plan provided by the Client
3	3	2	(SM)	
4	4	4	Sandy LOAM	
5	5	5	Brown, saturated, Silty SAND	
6	6	6	(SM)	
7	7	7	Sandy LOAM	
8	8	3	Brown, wet, Sandy SILT/Silty SAND (ML/SM)	
9	9	9	Sandy LOAM	
10	10	10		Water Level: 7'

TP 1

Depth (feet)	Sample No.	Depth (feet)	Description of Materials	Remarks
0.5	1	0.5	Topsoil	
1	2	2	Brown, wet, saturated, Silty SAND Some clays, some gravel sized particles	Elevations were estimated from the topographic plan provided by the Client
2	3	2	(SM)	
3	4	4	Sandy LOAM	
4	5	5	Brown, saturated, Silty SAND	
5	6	6	(SM)	
6	7	7	Sandy LOAM	
7	8	7	Cave in	
8	9	8		
9	10	9		
10	10	10		Water Level: 3'

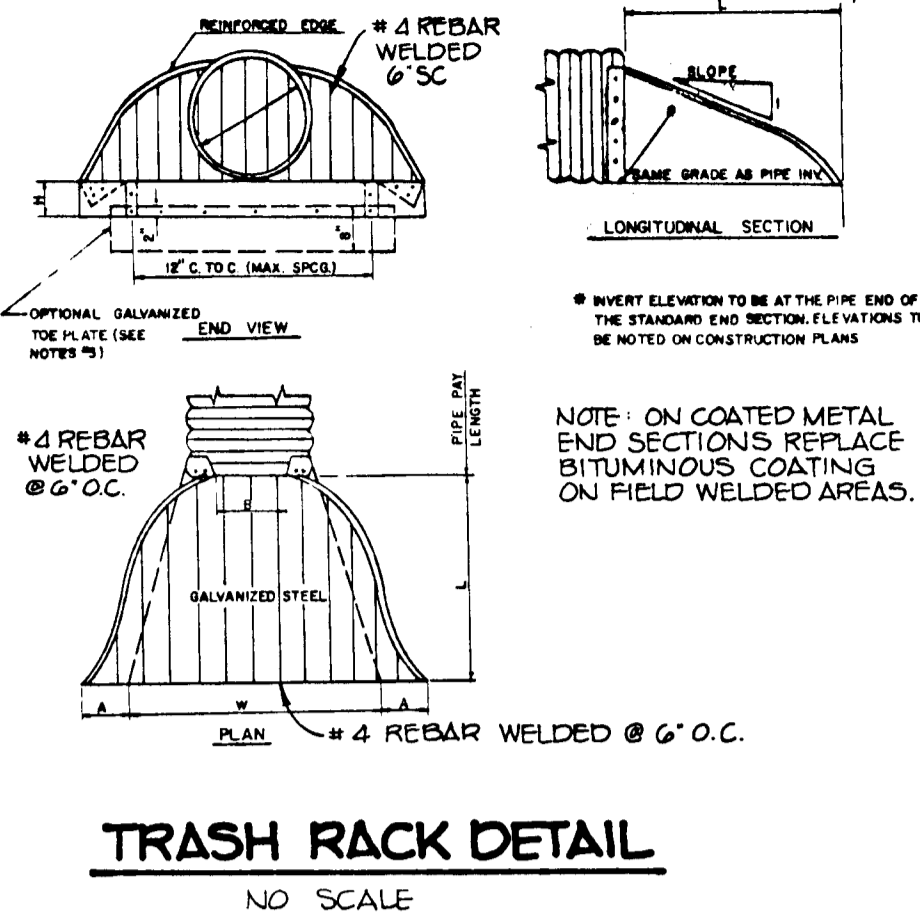
TP 2

Depth (feet)	Sample No.	Depth (feet)	Description of Materials	Remarks
1	1	1	Top Soil	
2	2	2	Brown-Gray, Mottled wet, Sandy SILT Some clays, trace roots, large boulders	Elevations were estimated from the topographic plan provided by the Client
3	3	2	(ML)	
4	4	4	Silt LOAM	
5	5	5	Brown-light tan, mottled, wet-saturated, Sandy SILT/Silty SAND	
6	6	6	(ML/SM)	
7	7	3	Sandy LOAM	
8	8	8		
9	9	9		
10	10	10		Water Level: 7.5'

TP 3

Depth (feet)	Sample No.	Depth (feet)	Description of Materials	Remarks
1	1	1.5	Top Soil	
2	2	2	Brown, moist, Sandy SILT	Elevations were estimated from the topographic plan provided by the Client
3	3	2	(ML)	
4	4	4	Silt LOAM	
5	5	6	Brown, wet-saturated Silty SAND	
6	6	6	(SM)	
7	7	3	Sandy LOAM	
8	8	8		
9	9	9		
10	10	10		Water Level: 8'

TP 4

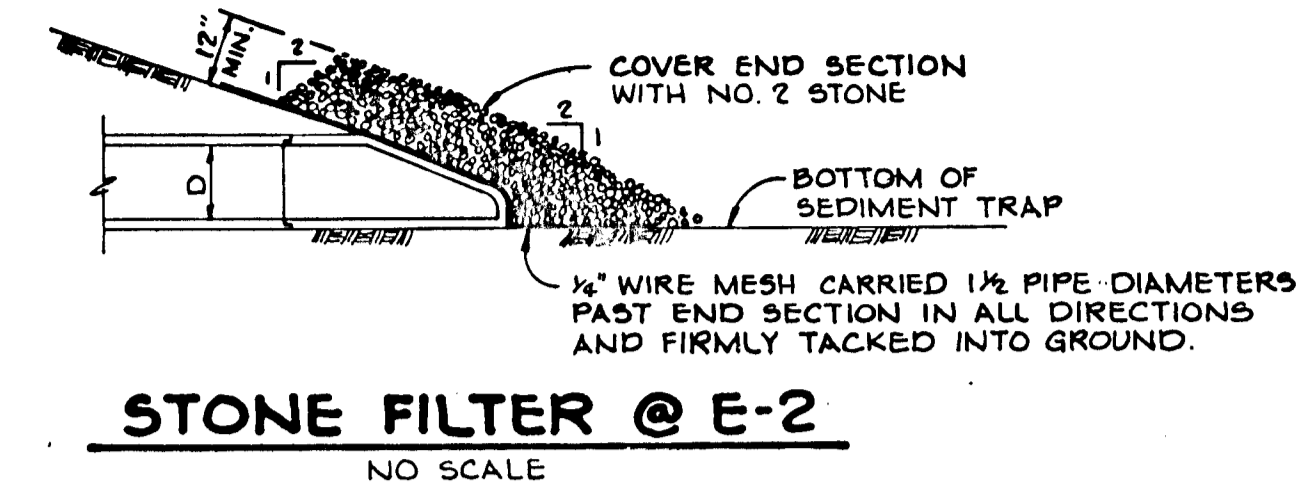


TRASH RACK DETAIL
NO SCALE

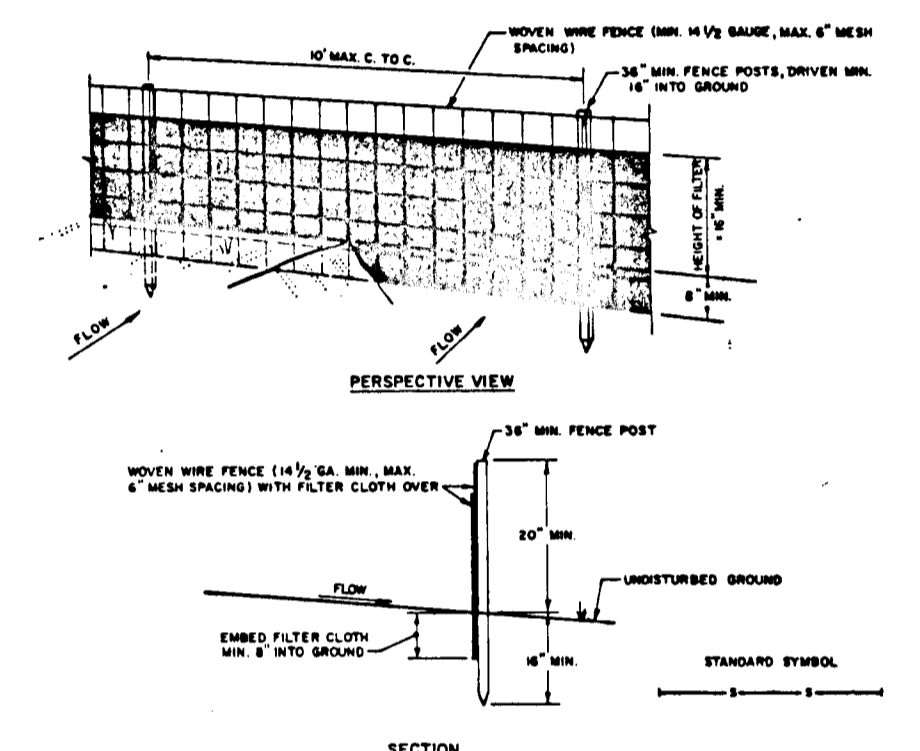
SEDIMENT CONTROL NOTES

- 1) 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 (992-2437).
- 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3) FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- 5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (Sec. 51) SOD (Sec. 54), TEMPORARY SEEDING (Sec. 50) AND MULCHING (Sec. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 7) SITE ANALYSIS:

TOTAL AREA OF SITE	10.2 ACRES
AREA DISTURBED	3.2 ACRES
AREA TO BE ROOFED OR PAVED	0.9 ACRES
AREA TO BE VEGETATIVELY STABILIZED	2.3 ACRES
TOTAL CUT	5581 CU. YDS.
TOTAL FILL	3012 CU. YDS.



STONE FILTER @ E-2
NO SCALE



PERMANENT SEEDBED PREPARATION

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

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

- 1) 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/10000 sq ft)
- 2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 lbs/1000 sq ft) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 lbs/1000 sq ft) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30 AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 lbs/1000 sq ft) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 lbs/1000 sq ft) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 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 SOD. 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 UNKNOTTED 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 SEEDBED PREPARATION

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

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

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 lbs/1000 sq ft).

SEEDING: FOR 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 WEEPING LOVEGRASS (.07 lbs/1000 sq ft). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

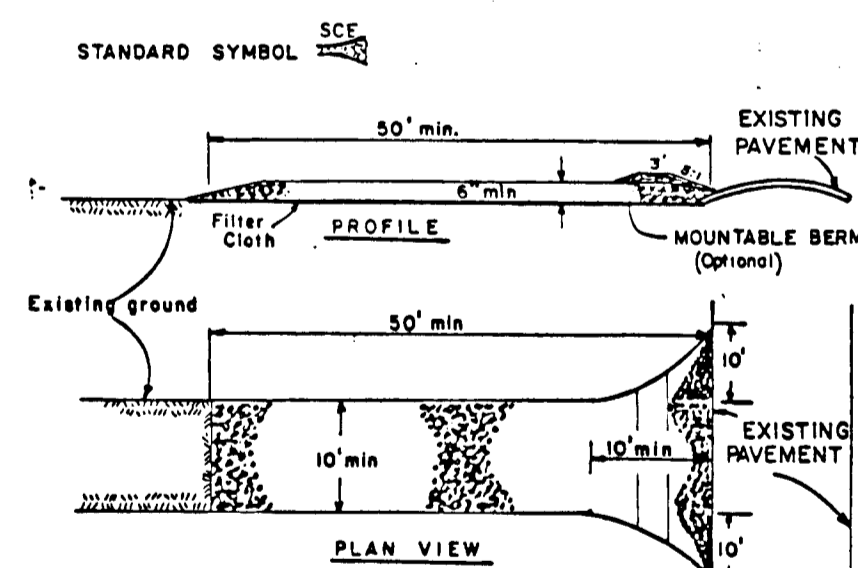
MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 lbs/1000 sq ft) OF UNKNOTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 gal/1000 sq ft) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, 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.

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24\"/>

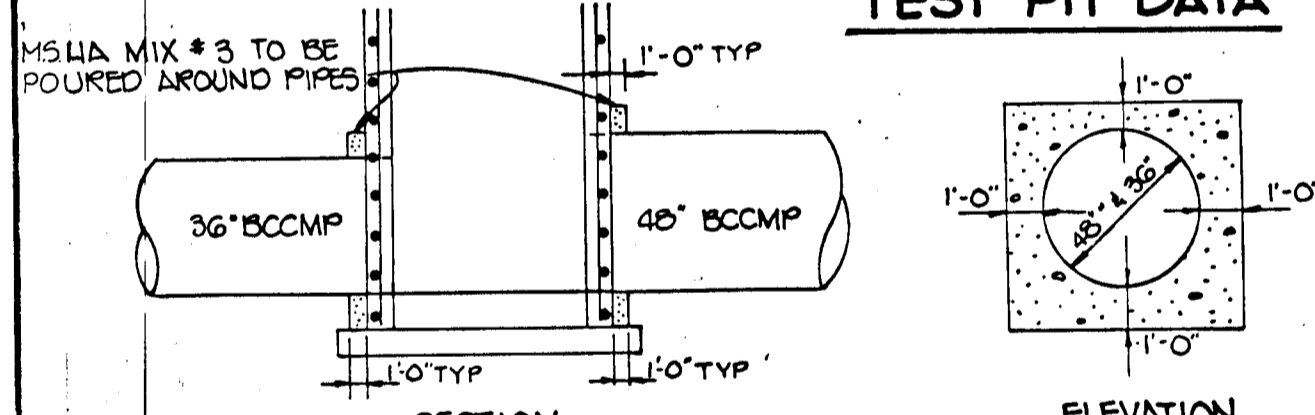
SILT FENCE
NO SCALE



1. Stone Size - Use 1/2\"/>

STABILIZED CONSTRUCTION
ENTRANCE
NO SCALE

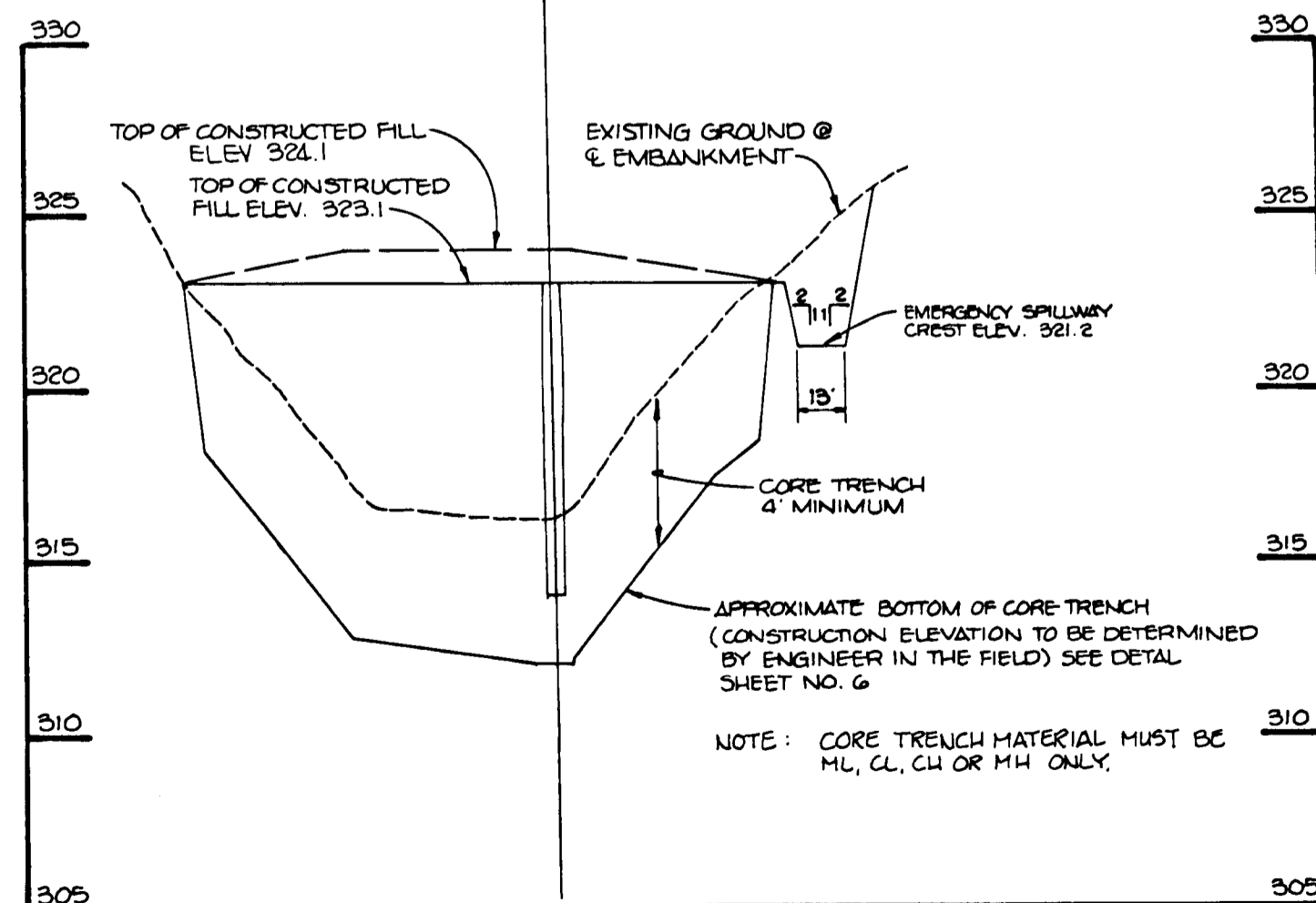
TEST PIT DATA



ELEVATION

SECTION
CONCRETE COLLAR DETAIL
(FOR STANDARD 5'-0\"/>

NO SCALE



PROFILE THROUGH EMBANKMENT
SCALE: HORIZ. 1\"/>

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: James K. Tracy 11-10-88
DATE

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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER: Steve K. Breedon 11-19-88
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.

James M. Helton 7/10/89
U.S. SOIL CONSERVATION SERVICE #4 DATE

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

Stephen L. Helton 7/10/89
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Janice S. 2. Campbell 7/27/89
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Paul H. ... 7/10/89
CHIEF, LAND DEVELOPMENT DIVISION DATE

Dr. ... 7/18/89
CHIEF, BUREAU OF HIGHWAYS DATE

... 7-20-89
CHIEF, BUREAU OF ENGINEERING DATE

NO	DATE	REVISION

TRACY, SCHULTE & ASSOCIATES INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465-6105

OWNER: SECURITY DEVELOPMENT CORP.
P.O. BOX 417
ELLCOTT CITY, MARYLAND 21043

PROJECT: LINWOOD SECTION 5

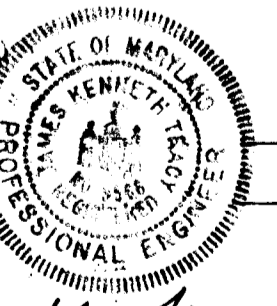
LOCATION: TAX MAP NO. 25 PARCEL NO. 97
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: 8-88-91 P. 89-04 F. 89-79
GRADING, SEDIMENT CONTROL AND
STORMWATER MANAGEMENT NOTES AND
DETAILS

DATE: NOV. 8, 1988 PROJECT NO. 0074
01/20/89

SCALE: AS SHOWN DRAWING 5 OF 8

DES. DAM DRN. MM



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 side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be ML, CL, CH, OR MH, soil only 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-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, Plasti-Cote, 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, 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 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 5-3/4 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 along 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.

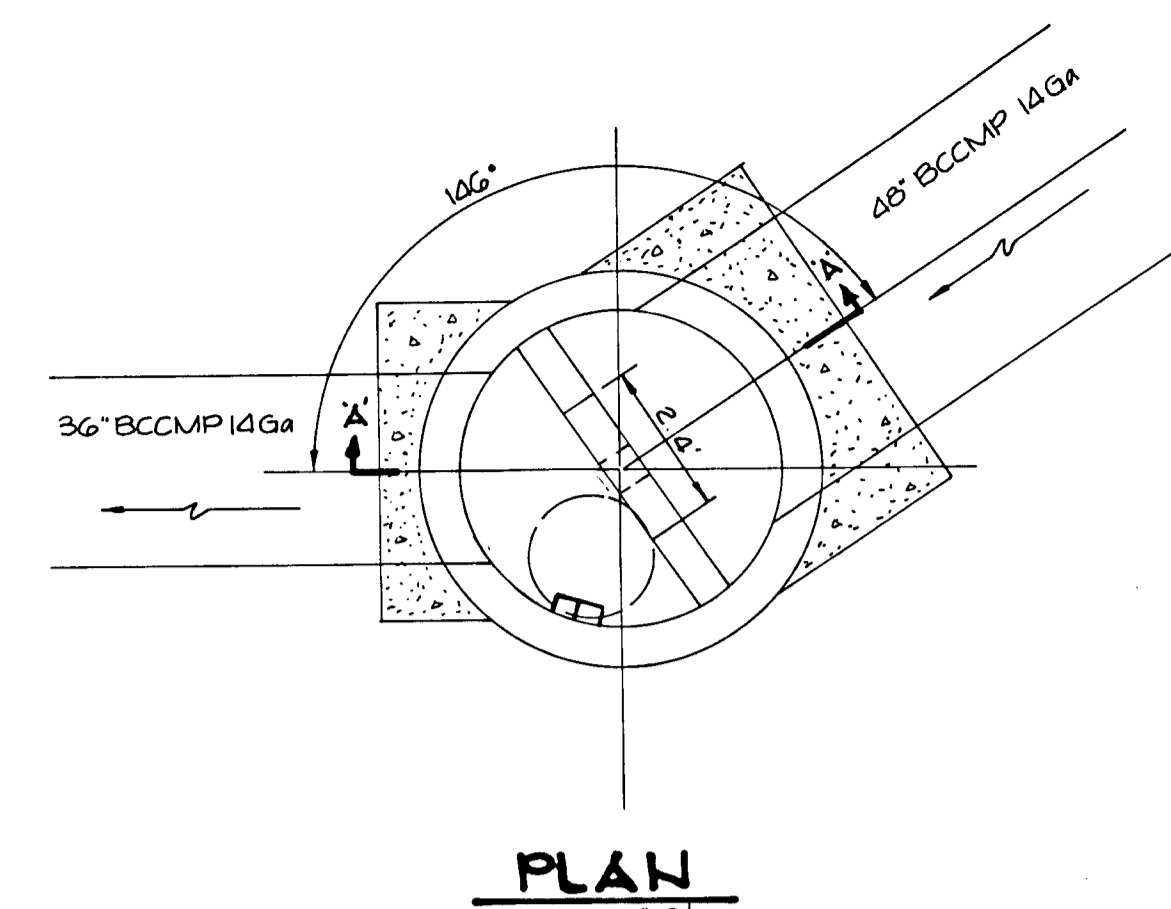
9. Placing Temperature - Concrete may not be placed at temperatures below 37°F with the temperature falling, or 34° with the temperature rising.

VI. STABILIZATION

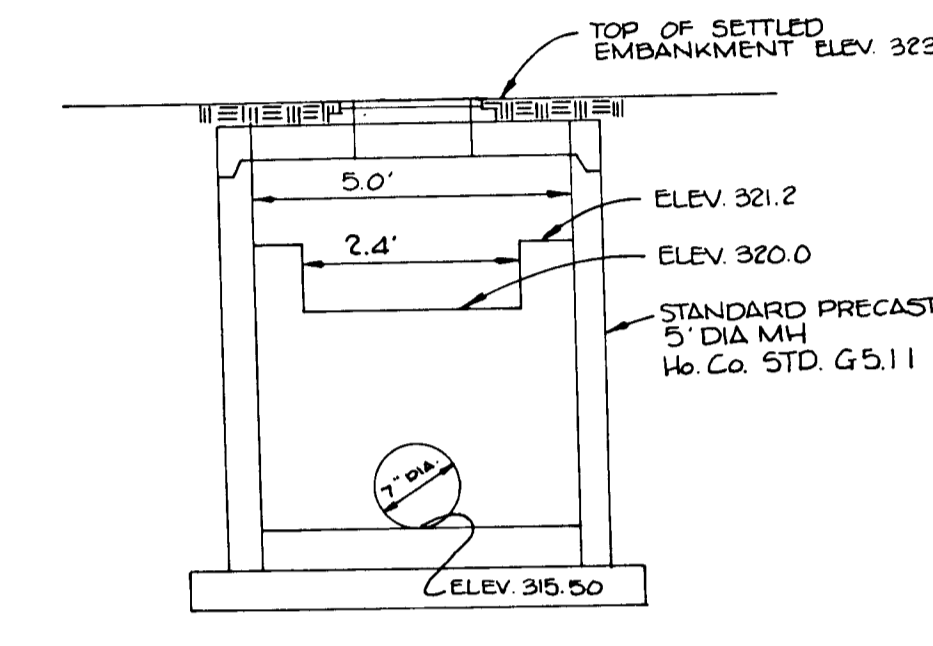
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching (if required) in accordance with the vegetative treatment 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.

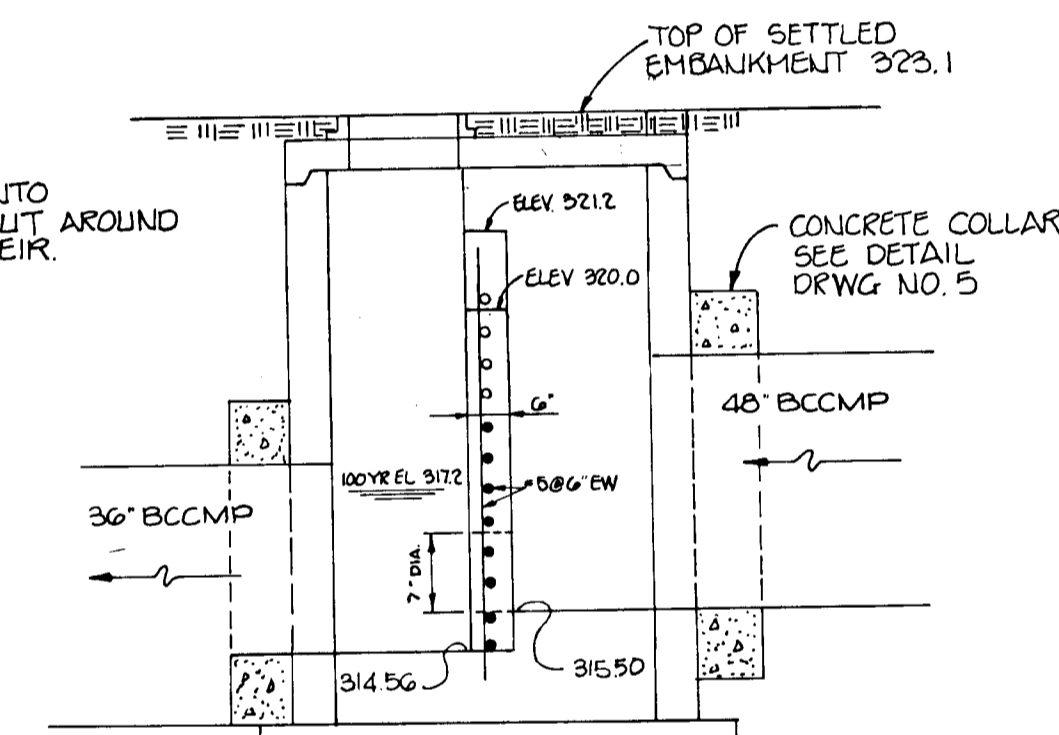


PLAN SCALE 1"=3

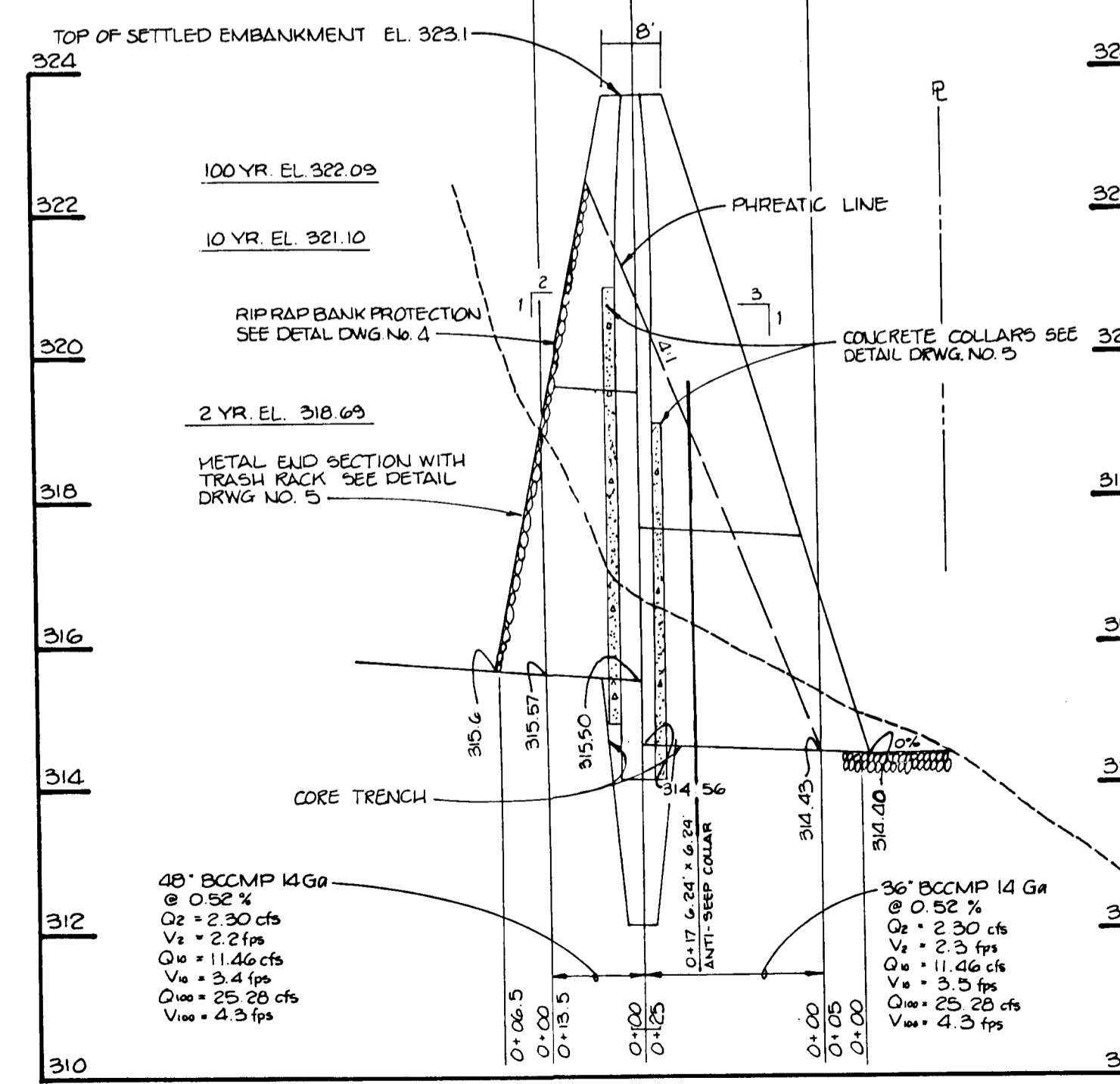


WEIR ELEVATION NO SCALE

NOTE: CARRY REINFORCING STEEL INTO WALLS AND BASE AND GROUT AROUND STEEL PRIOR TO POURING WEIR.

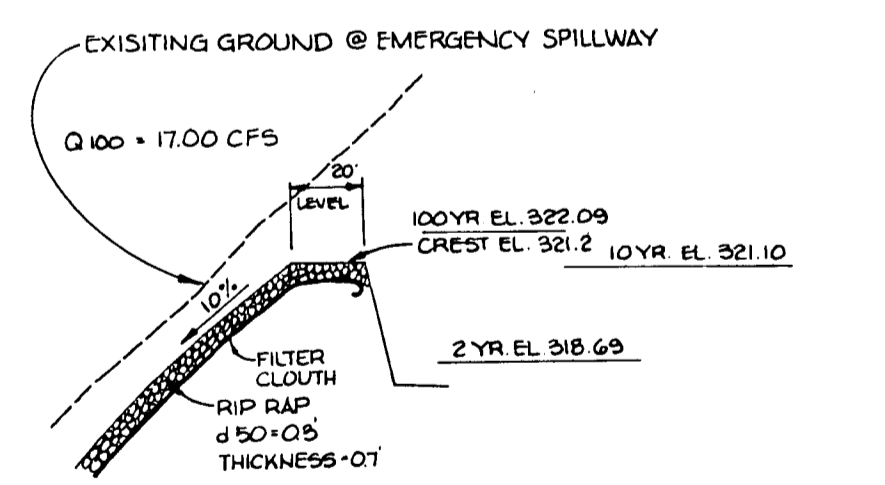


SECTION 'A-A' DETAIL 5-1



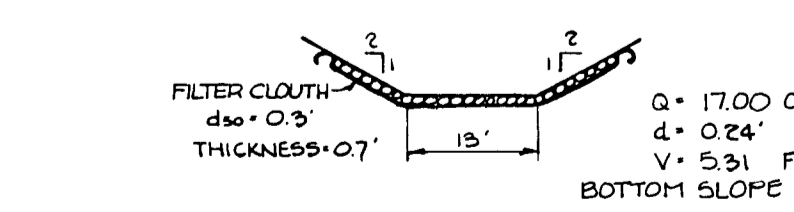
PROFILE THROUGH PRINCIPAL SPILLWAY

SCALE: HORIZ. 1"=20' VERT. 1"=2'

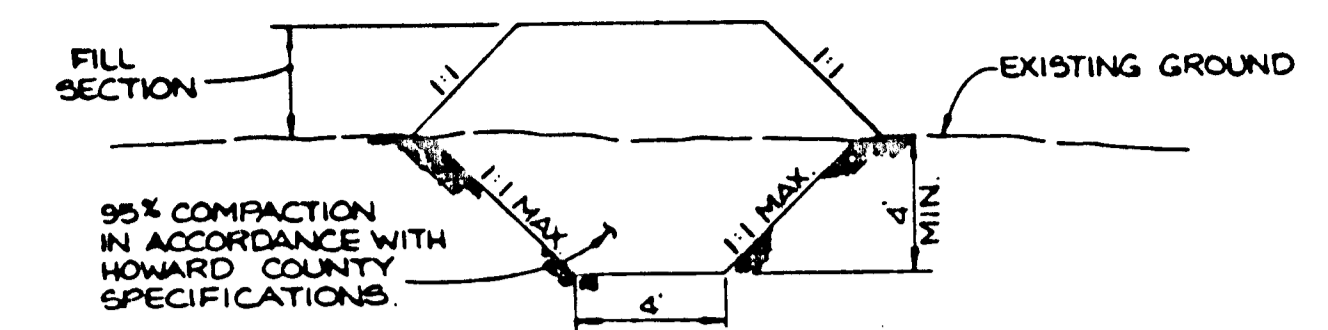


PROFILE THROUGH EMERGENCY SPILLWAY

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



EMERGENCY SPILLWAY OUTLET CHANNEL



CORE TRENCH SECTION

NO SCALE

NOTE: CORE TRENCH MATERIAL MUST BE ML, CL, CH OR MH ONLY.

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: JAMES K. TRACY 11-10-88 DATE

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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER: STEVE K. BREEDON 11-10-88 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.

U.S. SOIL CONSERVATION SERVICE 7/10/89 DATE

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

APPROVED: HOWARD S.C.D. 7/10/89 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING 7/27/89 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 7/19/89 DATE

7/18/89 DATE

7-20-89 DATE

Table with columns: NO, DATE, REVISION

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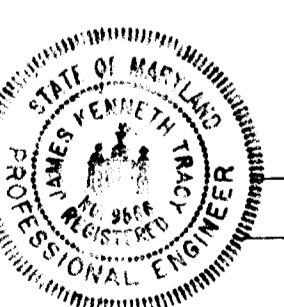
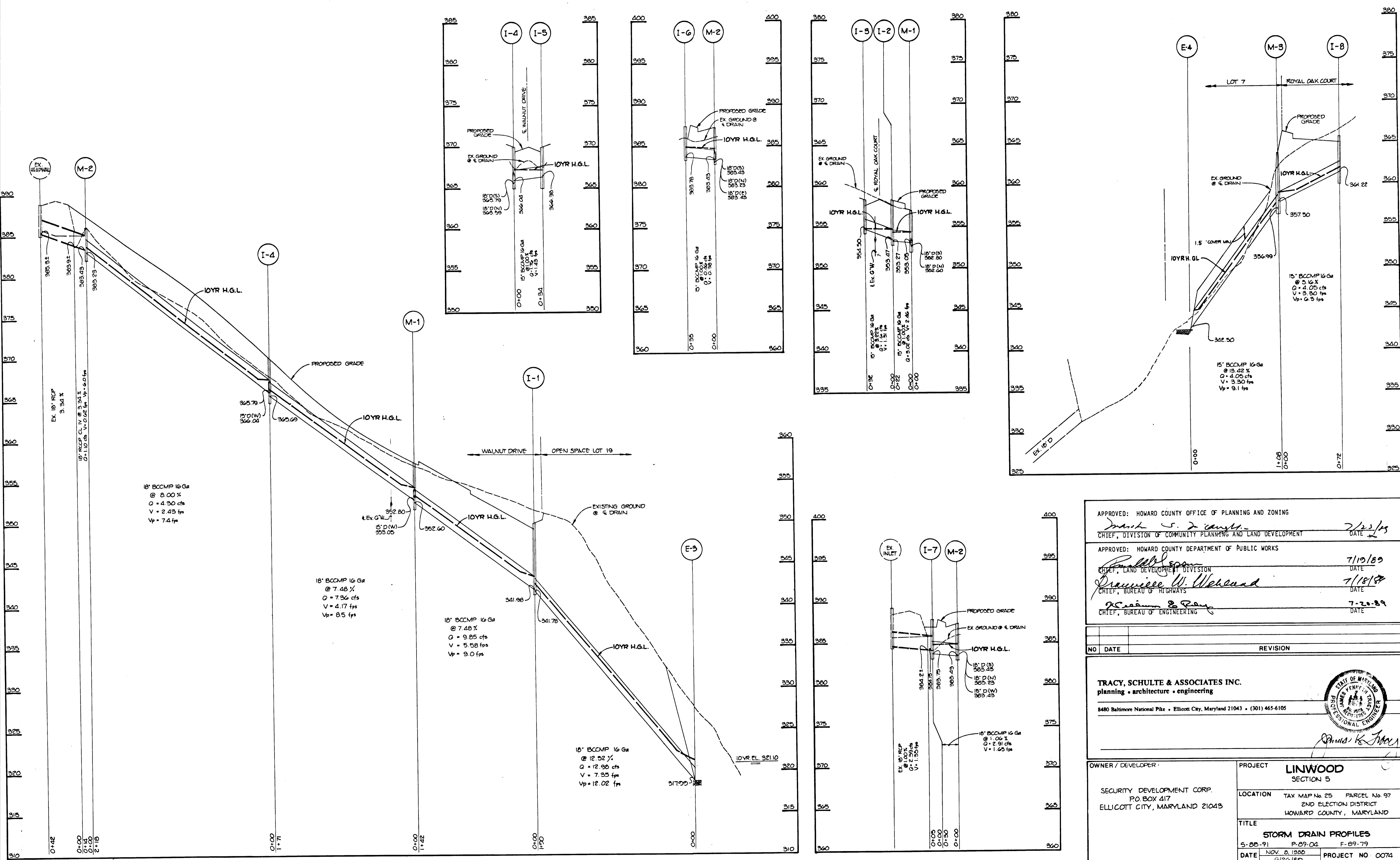


Table with columns: OWNER/DEVELOPER, PROJECT, LOCATION, TITLE, DATE, PROJECT NO., SCALE, DRAWING



316

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Mark S. D. [Signature] 7/23/89
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 7/19/89
 CHIEF, LAND DEVELOPMENT DIVISION DATE

[Signature] 7/18/89
 CHIEF, BUREAU OF HIGHWAYS DATE

[Signature] 7-20-89
 CHIEF, BUREAU OF ENGINEERING DATE

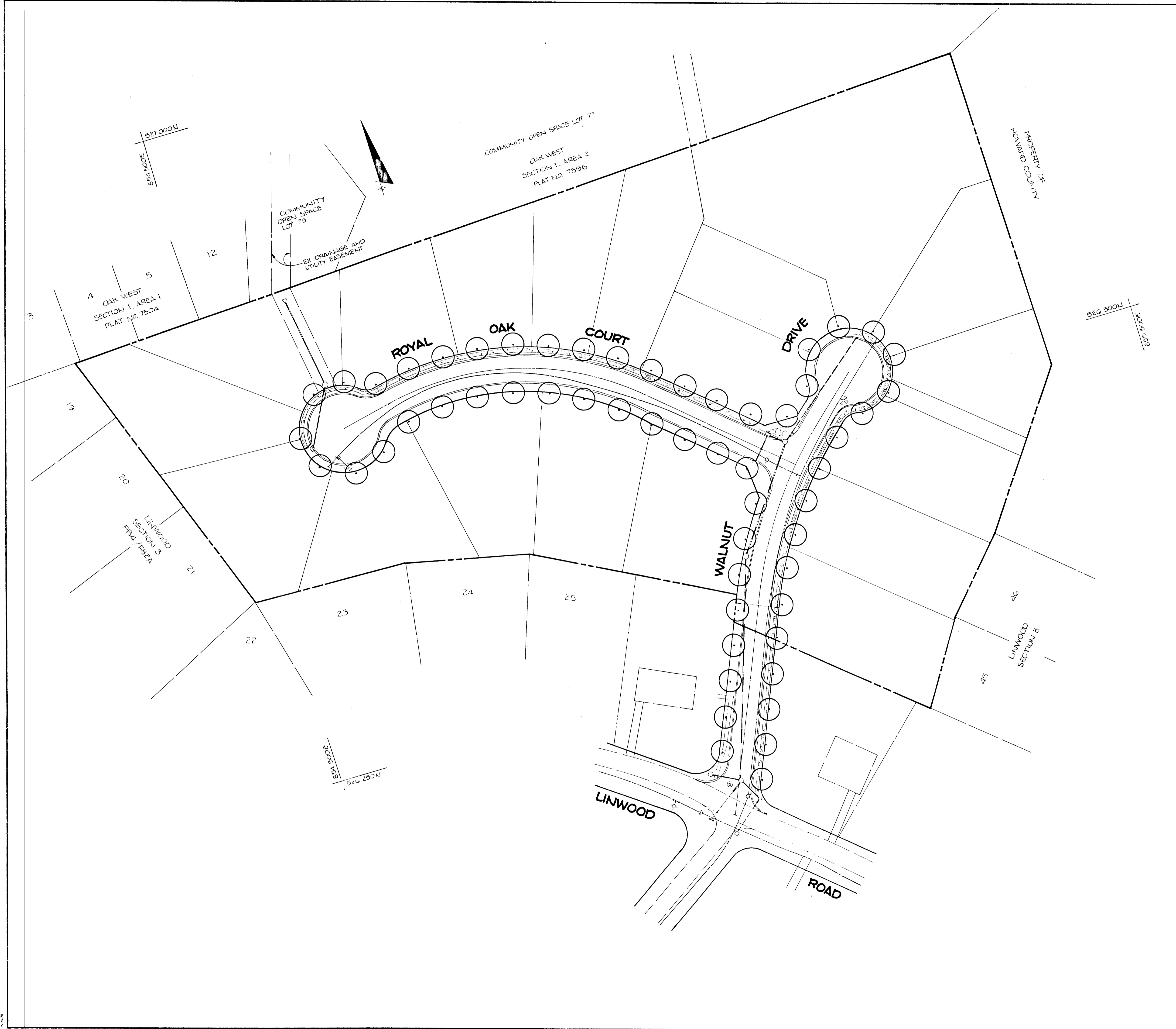
NO	DATE	REVISION

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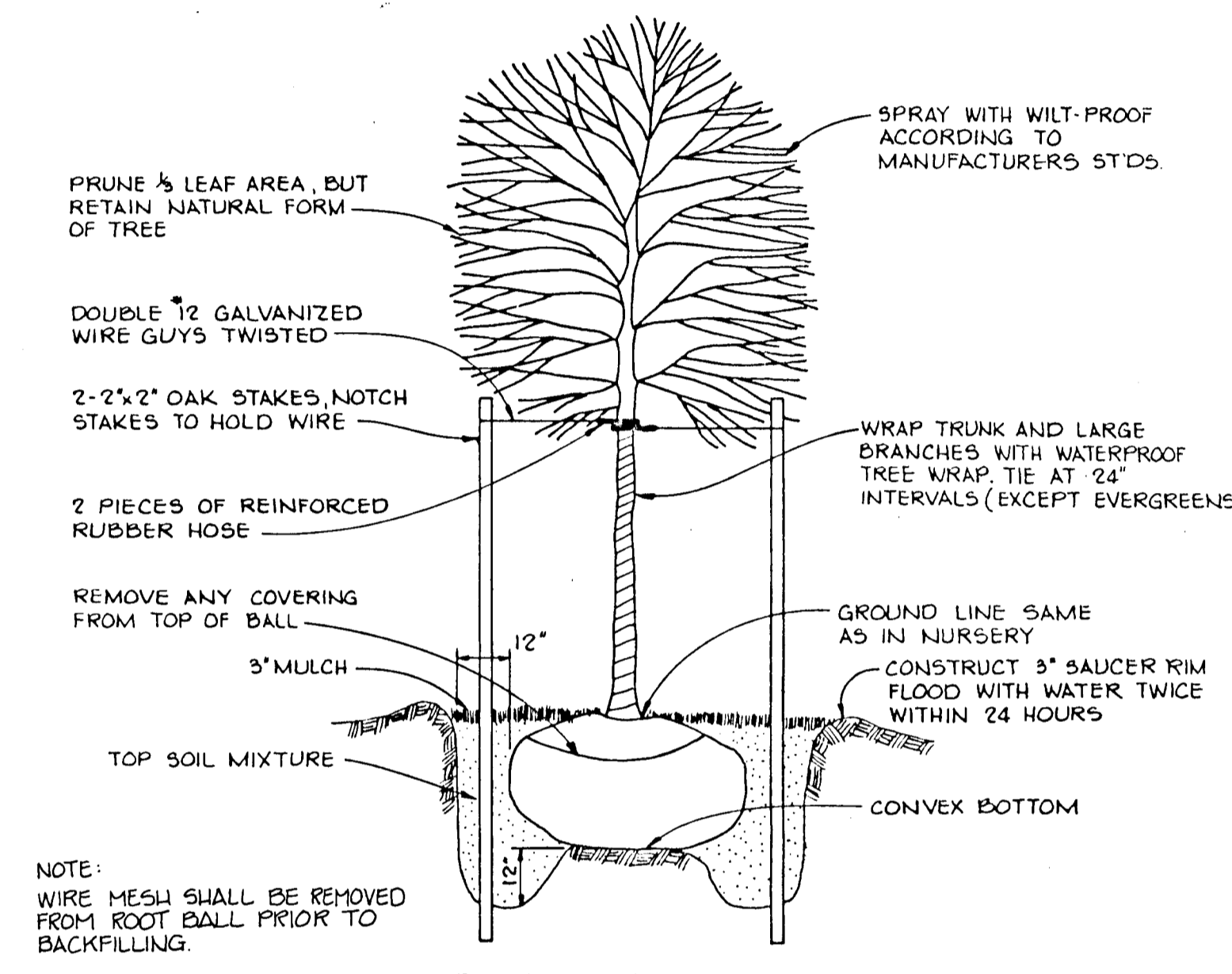
[Signature]
 PROFESSIONAL ENGINEER

OWNER / DEVELOPER SECURITY DEVELOPMENT CORP. P.O. BOX 417 ELLCOTT CITY, MARYLAND 21043	PROJECT LINWOOD SECTION 5
TITLE STORM DRAIN PROFILES	LOCATION TAX MAP No. 25 PARCEL No. 97 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE NOV. 8, 1988 GJG/BJD	PROJECT NO 0074
DES: DAM	DRN: MM
SCALE HORIZ. 1" = 50' VERT. 1" = 5'	DRAWING 7 OF 8

F-89-79



PLANT LIST			
SYMBOL	QUANTITY	NAME	REMARKS
○		ACER RUBRUM RED MAPLE	2 1/2" MIN. CAL. B & B FULL HEAD
TOTAL	56		



TREE PLANTING DETAIL
NO SCALE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Frank S. DeAngelis
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE: _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Paul D. [Signature] 7/10/89 DATE
Lawrence W. Wellwood 7/18/89 DATE
 CHIEF, BUREAU OF HIGHWAYS

William E. Ray 7-20-89 DATE
 CHIEF, BUREAU OF ENGINEERING

NO	DATE	REVISION

TRACY, SCHULTE & ASSOCIATES INC.
 planning • architecture • engineering
 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (301) 465-6105

James K. [Signature]

OWNER / DEVELOPER: SECURITY DEVELOPMENT CORP P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043	PROJECT LINWOOD SECTION 5
TITLE PLANTING PLAN	LOCATION TAX MAP NO 25 PARCEL NO 27 240 ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE 5-08-91 P-09-04 F-09-79 NOV. 8, 1988 6/26/89	PROJECT NO 0074
DES. DAM	DRN JH / MM
SCALE 1"=50'	DRAWING 8 OF 8

3416