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# AS-BUILT REDLINES FOR

# CLARKS GLEN

## SECTION 1 AREA 1

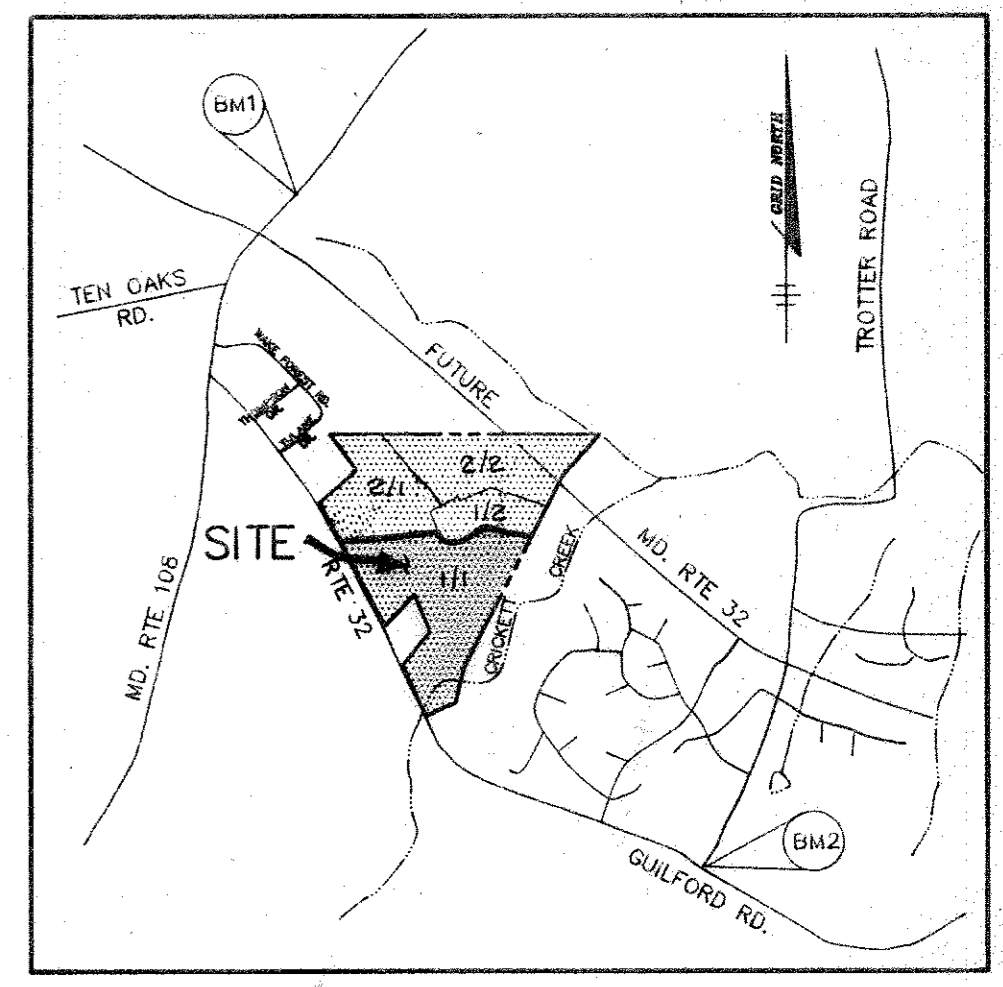
## ROADWAYS, STORM DRAINS

## & STORMWATER MANAGEMENT

### LOTS 1 - 64

### 5th ELECTION DISTRICT

### HOWARD COUNTY, MARYLAND



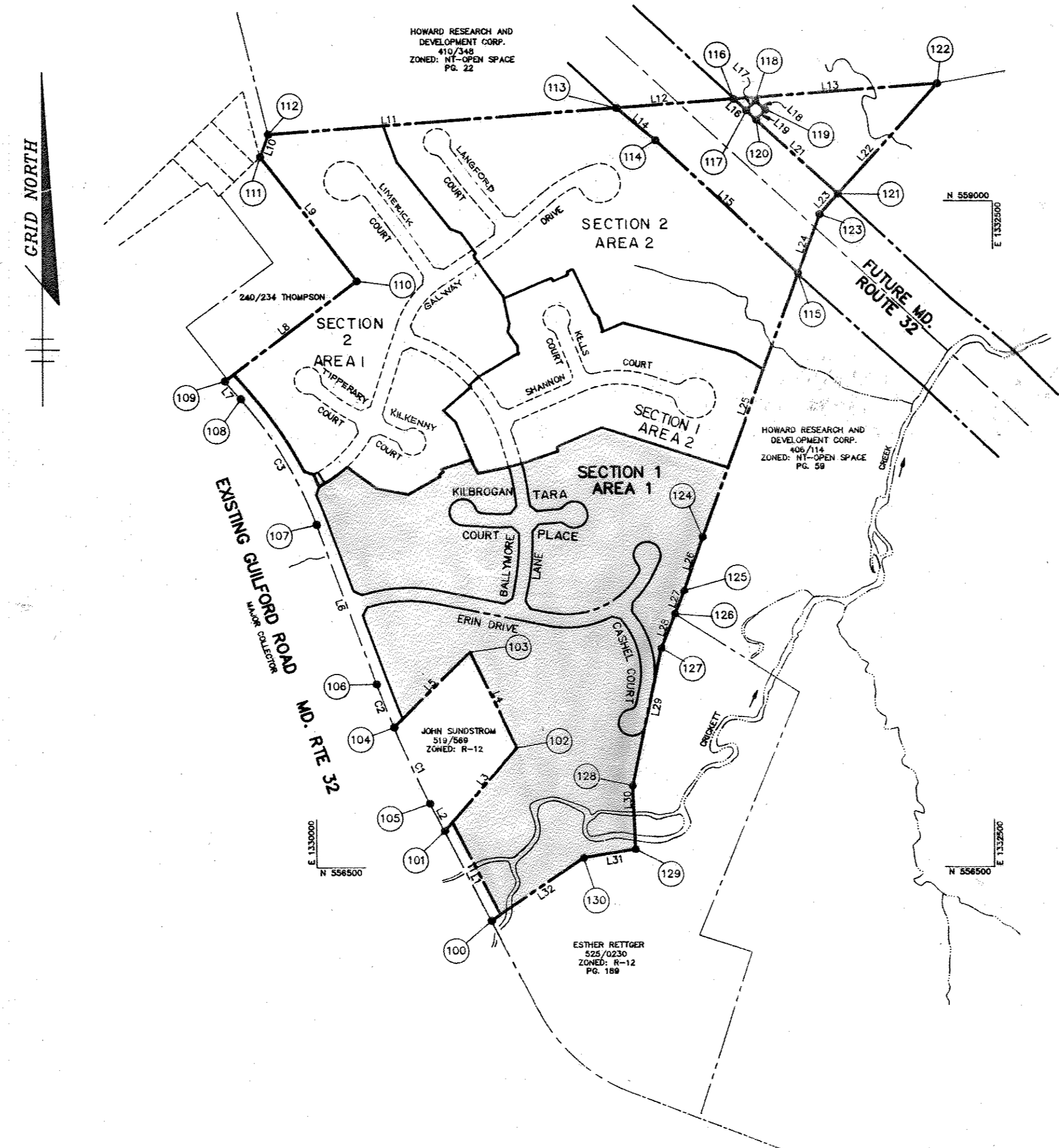
VICINITY MAP  
SCALE: 1" = 2000'

AS-BUILT CONTROL BENCHMARKS

- ✓ BM1 HOWARD COUNTY MONUMENT NO. 2637003  
ELEV. 481.25  
CONCRETE MONUMENT
- ✓ BM2 HOWARD COUNTY MONUMENT NO. 2437003  
ELEV. 472.12  
CONCRETE MONUMENT

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. 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. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
3. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
4. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION AT (410) 311-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
5. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
  - BELL TELEPHONE SYSTEM 303-3649
  - LONG DISTANCE CABLE DIVISION 393-3553 OR 3554
  - BALTIMORE GAS AND ELECTRIC CO. 539-6000
  - HOWARD COUNTY BUREAU OF UTILITIES 315-6900
  - COLONIAL PIPELINE 795-1390
6. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
7. ALL LOCAL STREET INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS & SPECIFICATIONS. ALL GUILFORD ROAD INLETS SHALL BE IN ACCORDANCE WITH M.S.A. STANDARDS & SPECIFICATIONS.
8. ALL STREET CURB RETURNS SHALL HAVE 25' RADII UNLESS OTHERWISE NOTED.
9. STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.A., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
10. 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.
11. DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:
  - ERIN DRIVE 30 M.P.H.
  - BALTIMORE LANE 30 M.P.H.
  - CASHEL COURT 30 M.P.H.
  - KILBROGAN COURT 30 M.P.H.
  - TARA PLACE 30 M.P.H.
12. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
13. ALL FILL AREAS WITHIN ROADWAY AND UNBUILT STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.
14. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
15. PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
16. SUBJECT PROPERTY ZONED R-12 PER 10-18-83 COMPREHENSIVE ZONING PLAN.
17. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
18. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS "C" AS SHOWN IN FIG. 11.4, VOLUME I OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
19. SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S. S-94-16, WP-94-31, P-94-25
20. STORMWATER MANAGEMENT FACILITIES #1 AND #2 PROPOSED FOR THIS SITE ARE CLASS "A" HAZARD FACILITIES. WATER QUALITY FOR SINF #1 WILL BE EXTENDED DETENTION. WATER QUALITY FOR SINF #2 WILL BE WET STORAGE. BOTH FACILITIES WILL BE OWNED AND MAINTAINED BY HOWARD COUNTY.
21. TOPOGRAPHY SHOWN HEREON WAS PERFORMED BY WINGS AERIAL MAPPING COMPANY, MARCH 1994. ALL CONTOURS ARE TWO FOOT INTERVALS.
22. PUBLIC WATER AND SEWER SYSTEMS AS PER CONTRACT NO. 34-3344-D ARE TO BE UTILIZED FOR THIS SITE. SEWER SERVICE DRAINAGE AREA: MIDDLE PATIENT.
23. NOISE STUDY WAS PREPARED BY RIEMER MUEGGE & ASSOCIATES, INC. AND APPROVED P-94-25.
24. GEOTECHNICAL STUDY FOR STORMWATER MANAGEMENT AND PAVEMENT FOR THIS PROJECT IS PROVIDED BY GEO-TECHNOLOGY ASSOCIATES INC., JUNE 1994, AND WAS APPROVED ON NOV 10, 1994.
25. ALL STREET LIGHTS SHALL BE LOCATED BETWEEN 2'-0" AND 4'-0" BEHIND FACE OF CURB.
26. STREET LIGHT PLACEMENT AND TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. II (1988) AND AS MODIFIED BY THE "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1987)" WHICH INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. STREET TREES TO BE PLACED 20' FROM STREET LIGHTS.
27. WP-94-31 - APPROVED 12-17-93 WAS A WAIVER TO SECTION 16.12(b)(6)(i) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO ALLOW 5 ADJOINING PIPESTEMS USING A SINGLE SHARED DRIVEWAY ACCESS FROM A PUBLIC ROAD.
28. THE PAVEMENT DETAILS SHOWN ON THESE PLANS REFLECT THE HOWARD COUNTY MINIMUM STANDARD PAVEMENT SECTIONS AND ARE NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING, THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE. ANY PAVEMENT SECTION DETERMINED BY THE GEOTECHNICAL ENGINEER THAT IS LESS THAN THE HOWARD COUNTY MINIMUM STANDARD, SHALL FIRST BE APPROVED BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. THE TESTING AND GEOTECHNICAL ENGINEER SHALL BE FURNISHED BY THE OWNER.
29. CONTRACTOR SHALL PROVIDE A 20' TRANSITION WHEN CONNECTING MODIFIED CURB & GUTTER TO STANDARD CURB & GUTTER. SEE STANDARD DETAIL R-3.02.
30. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCING, SCHEDULING, AND SAFETY PRECAUTIONS & PROGRAMS.
31. SIDEWALK RAMPS SHALL BE INSTALLED AT ALL INTERSECTIONS AND SHALL CONFORM TO THE CURRENT ADA REQUIREMENTS.
32. A TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP AND WAS APPROVED ON NOV. 19, 1994.
33. THE AFFORESTATION/REFORESTATION AREAS AND SOME OPPOSITE AREAS IN FUTURE SECTIONS #2 HAVE SPECIFIC FINAL REFORESTATION (BEDDING) REQUIREMENTS. PLEASE REFER TO THE FOREST CONSERVATION PLANS SHEETS 28 THRU 222 OF 224 FOR THE LOCATION OF THESE SPECIALLY SEEDING AREAS.
34. THE LOT DESIGN WILL COMPLY WITH THE USABLE YARD REQUIREMENTS OF SECTION 16.120 (b)(1)(ii) OF THE SUB-DIVISION AND LAND DEVELOPMENT REGULATIONS.
35. WETLANDS DISTURBANCE AS SHOWN ON THESE PLANS TO BE PERFORMED IN ACCORDANCE WITH MARYLAND DEPARTMENT OF NATURAL RESOURCES PERMIT NO. 04-NT-086/1004/0022 WHICH EXPIRES ON APRIL 5, 2000 AND MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER QUALITY CERTIFICATION 06-GWQC-2010. CROCKETT CREEK IS A USF 1 WATERSHED. IN STREAM WORK MAY NOT BE CONDUCTED FROM MARCH 1 THROUGH JUNE 15, INCLUSIVE OF ANY YEAR.



PLAN  
SCALE: 1" = 400'

CURVE LISTINGS		
CURVE	RADIUS	LENGTH
C1	4000.00'	315.58'
C2	4000.00'	174.14'
C3	1519.06'	550.72'

PROPERTY LINE LIST		
LINE	BEARING	DISTANCE
L1	S 27°05'14" E	377.31'
L2	S 27°05'14" E	116.73'
L3	S 40°34'50" E	412.82'
L4	S 25°44'28" E	400.00'
L5	S 44°40'57" W	398.93'
L6	S 20°04'21" E	640.39'
L7	N 40°50'41" W	89.94'
L8	N 52°30'36" E	612.22'
L9	S 37°10'27" E	586.47'
L10	N 19°19'32" E	90.00'
L11	N 85°37'26" E	1290.16'
L12	N 85°37'26" E	433.57'
L13	N 85°37'26" E	735.60'
L14	S 49°47'59" E	187.07'
L15	S 48°13'22" E	726.20'
L16	N 46°56'20" W	63.58'
L17	S 43°03'40" W	50.00'
L18	N 46°56'20" W	50.00'
L19	N 43°03'40" E	50.00'
L20	N 46°56'20" W	50.00'
L21	N 46°56'20" W	410.78'
L22	S 41°33'05" W	555.24'
L23	S 41°33'05" W	103.27'
L24	S 19°50'08" W	234.93'
L25	S 19°50'08" W	1048.15'
L26	S 18°50'31" W	213.98'
L27	S 21°49'30" W	92.68'
L28	S 21°13'51" W	139.35'
L29	S 11°41'17" W	528.00'
L30	S 02°18'43" E	240.00'
L31	S 80°30'43" W	182.86'
L32	S 55°26'00" W	415.25'

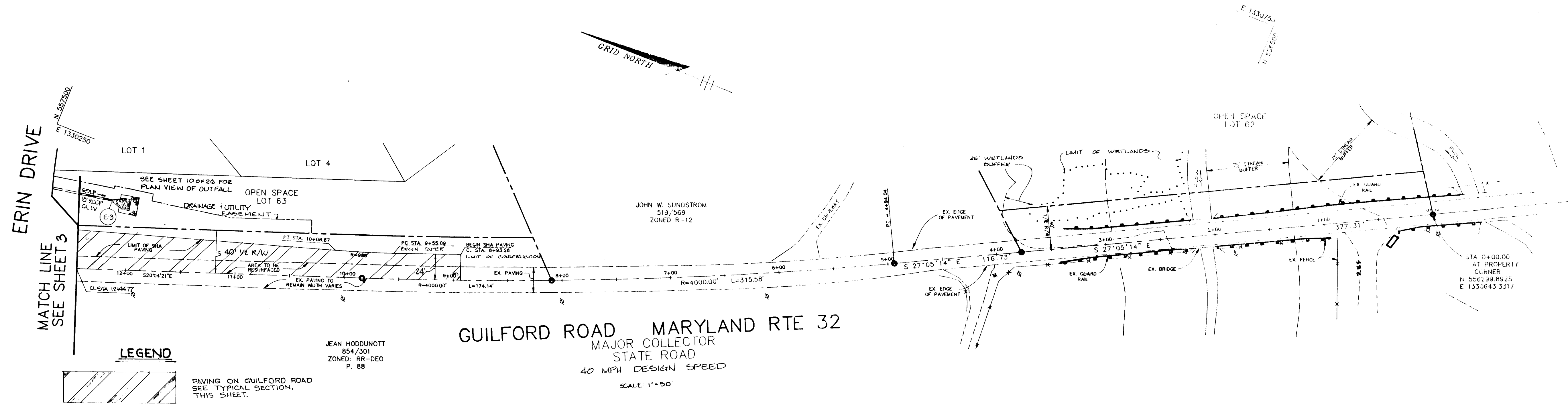
COORDINATE LIST		
NO.	NORTHING	EASTING
100	586239.892	1330643.332
101	586635.817	1330471.526
102	586949.351	1330740.072
103	587309.657	1330568.350
104	587026.083	1330285.902
105	586739.746	1330418.372
106	587188.295	1330222.594
107	587789.789	1330000.806
108	588261.915	1329725.163
109	588328.438	1329667.652
110	588701.048	1330153.452
111	589168.546	1329788.054
112	589253.278	1329828.836
113	589351.720	1331115.236
114	589320.971	1331258.122
115	588728.543	1331782.467
116	588384.603	1331547.538
117	589341.393	1331593.990
118	589377.924	1331628.199
119	589343.785	1331664.660
120	589307.254	1331630.521
121	589026.782	1331930.648
122	589442.374	1331288.939
123	588949.539	1331862.186
124	587742.548	1331426.795
125	587840.054	1331357.695
126	587454.031	1331323.245
127	587324.140	1331272.783
128	586807.098	1331165.819
129	586567.284	1331175.501
130	586535.492	1330985.279

THESE PLANS HAVE BEEN MODIFIED TO DELETE ALL STORMWATER MANAGEMENT & SEDIMENT BASIN DESIGN. THESE ITEMS HAVE BEEN PLACED UNDER A SEPARATE F-NO. F-96-11

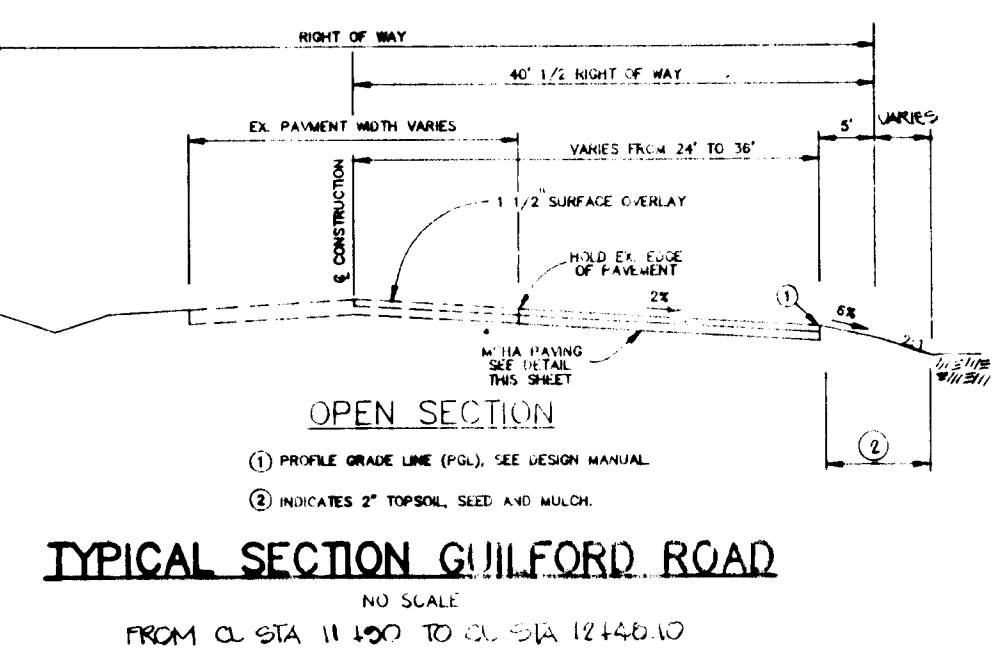
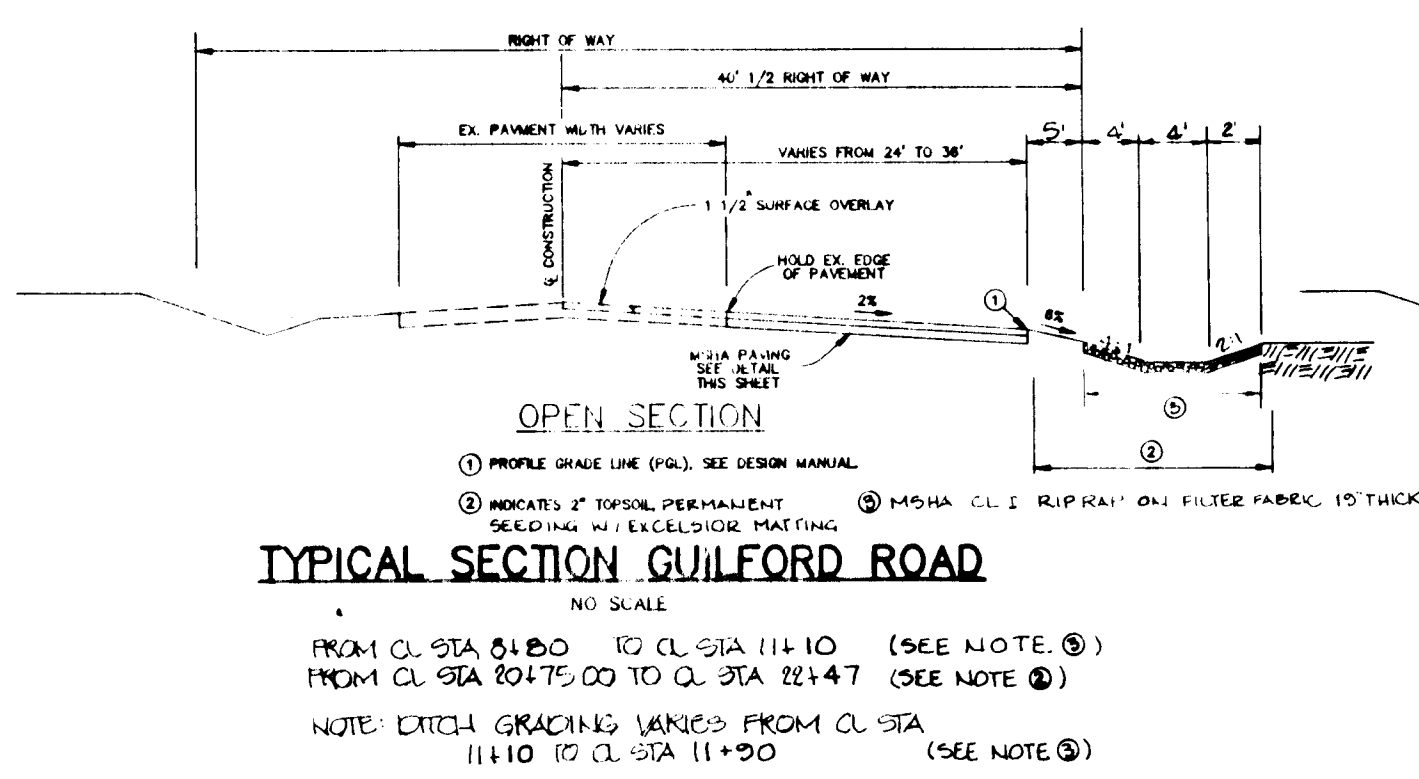
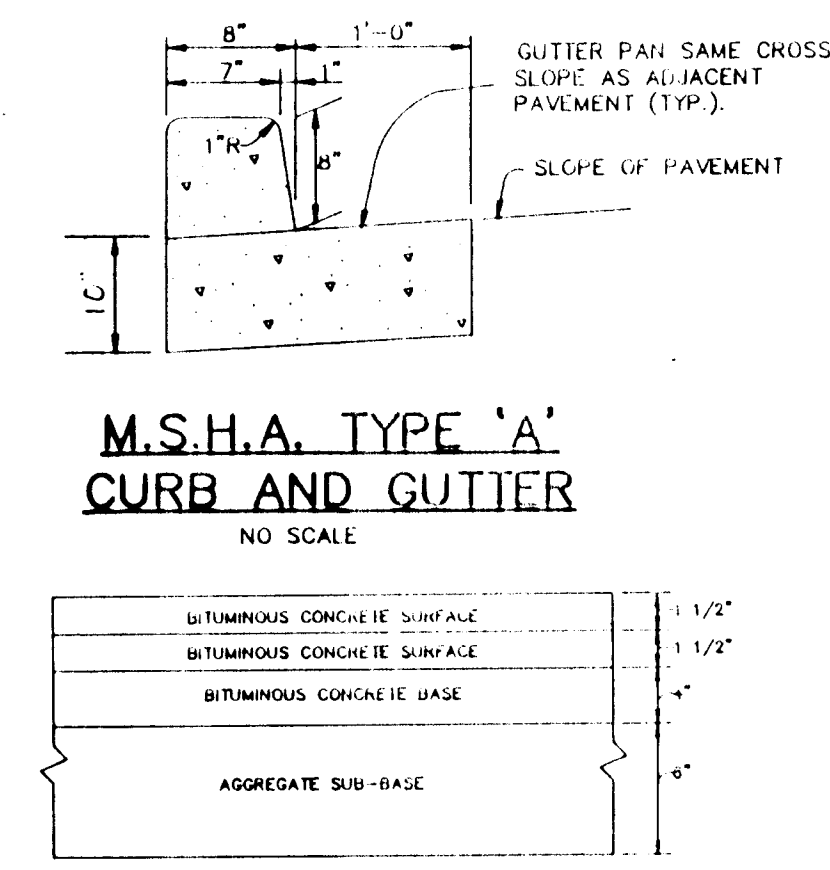
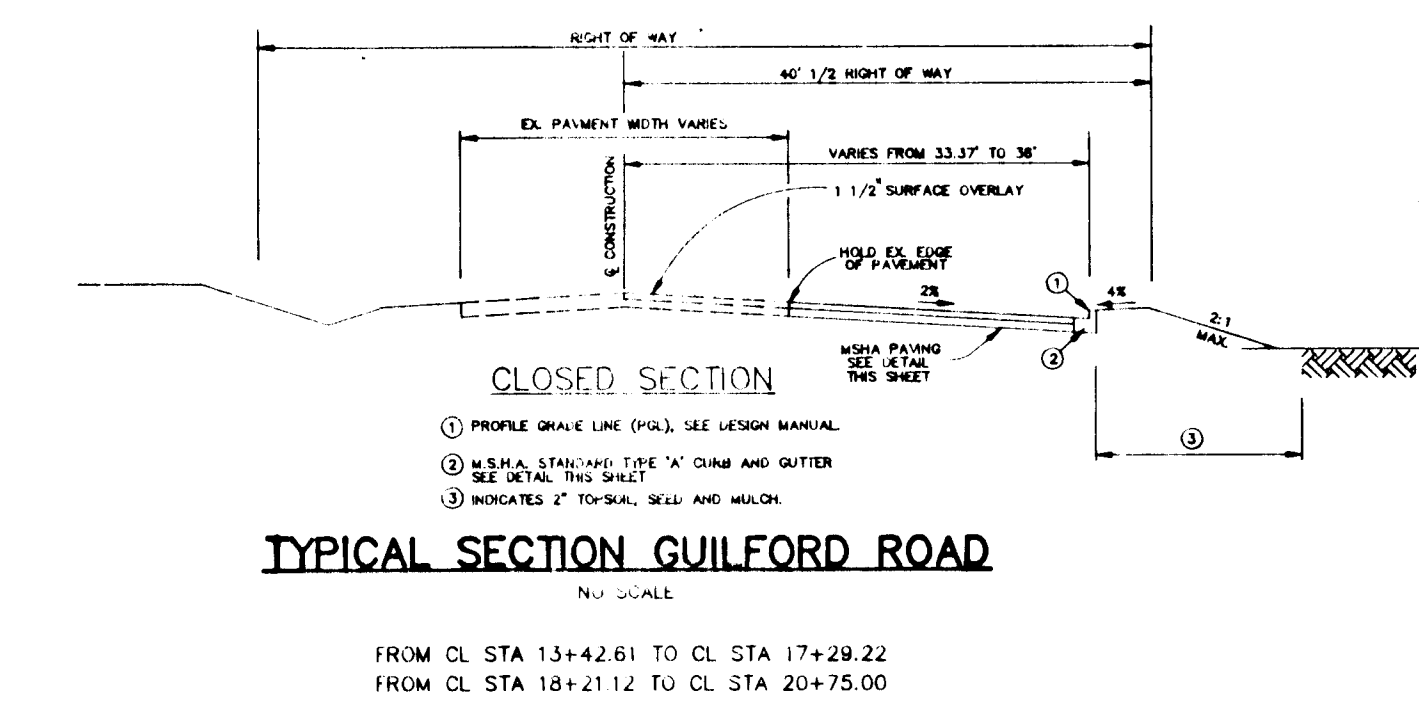
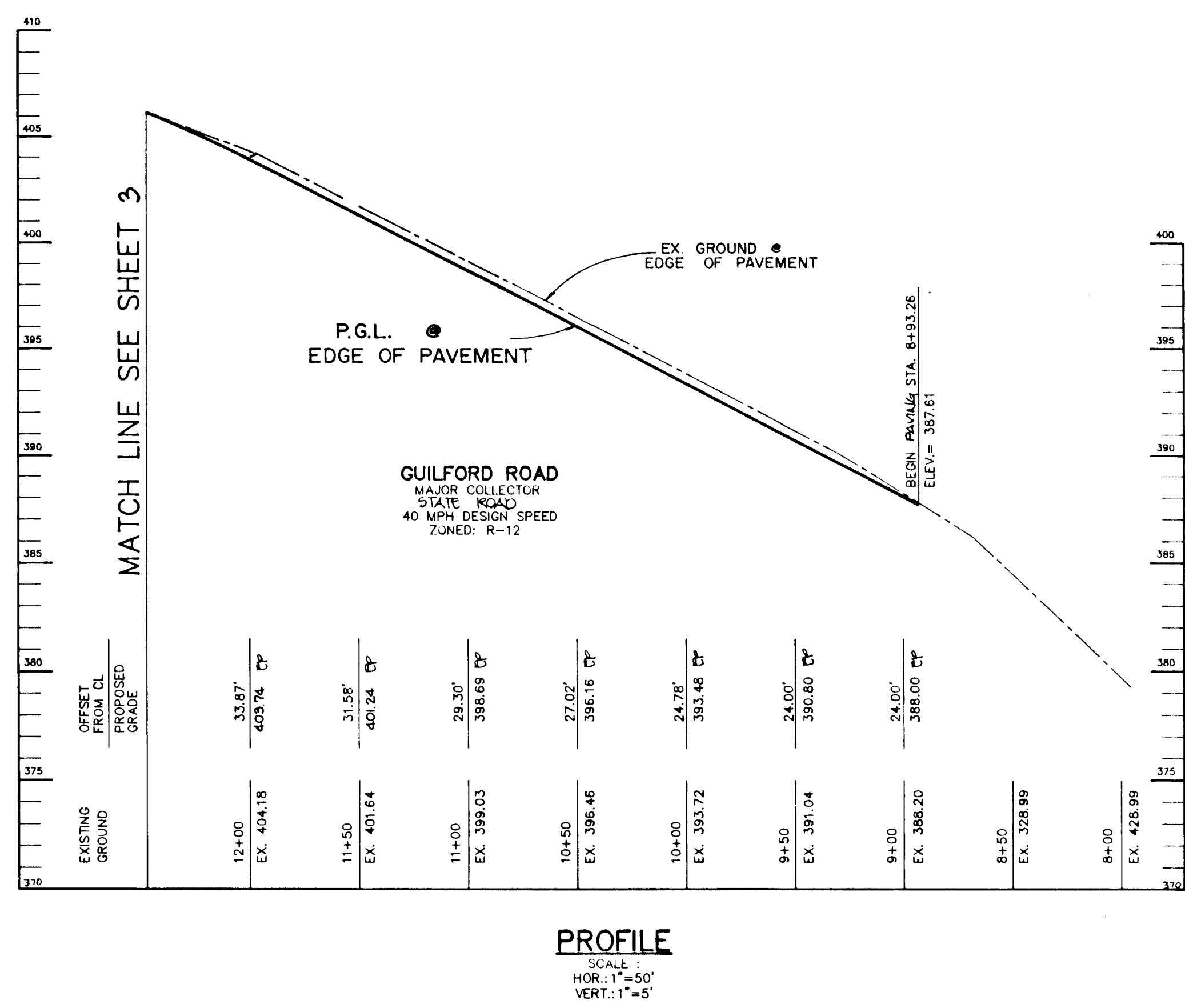
A PART OF THE EXISTING FOREST CONSERVATION EASEMENT ABANDONED BY PLAT NOS. 24144 AND 24145 (F-17-009) WILL BE MITIGATED BY REPLACING THE FORESTED AREA IN THE PUBLIC FOREST CONSERVATION EASEMENT ON A PLAT ENTITLED "ENCLOSURE AT TIERNEY FARM, PHASE 1 (F-15-110)

8/95	ADDED BOXED NOTE
DATE	REVISION
AS BUILT CERTIFICATE CHRISTOPHER J. REID # 19949 DATE 7-19-99	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
APPROVED: <i>James Surinomy</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE 6/22/95	
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
APPROVED: <i>William M. Decker</i> CHIEF, LAND DEVELOPMENT DIVISION DATE 6/15/95	
APPROVED: <i>Andrew M. Decker</i> CHIEF, BUREAU OF HIGHWAYS DATE 6-19-95	
APPROVED: <i>Robert J. Ryan</i> CHIEF, BUREAU OF ENGINEERING DATE 6/16/95	
8/11/96	ADDED TO WARE PUBLIC POWER EASEMENT ON OPEN SPACE LOT 02 AND ADJUST OPEN SPACE LOT 02 BOUNDARY.
DATE	REVISION
OWNERS / DEVELOPER	
WILBEN LIMITED PARTNERSHIP C/O ANDREW L. ISAACSON 5450 WHITLEY PARK TERRACE # 410 BETHESDA, MD 20814 301-530-1123	
PROJECT	
CLARKS GLEN SECTION 1 AREA 1	
AREA	
TAX MAP NO. 35 PARCEL 205 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
TITLE SHEET	
RIEMER MUEGGE & ASSOCIATES, INC.	
Planners • Engineers • Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045 410-997-8900 FAX: 410-997-9282	
6-22-95 DATE	
DESIGNED BY: A.A.P. DRAWN BY: J.C.O. PROJECT NO: 93211 DATE: MAY 19, 1995 SCALE: AS SHOWN DRAWING NO. 1 OF 26	

17399



ALL WORK ON THIS PLAN WAS COMPLETED UNDER MSHA ACCESS PERMIT. WORK IS ACCEPTED AND BOND IS RELEASED.



AS BUILT CERTIFICATE

STATE OF MARYLAND  
 REGISTERED PROFESSIONAL ENGINEER  
 Christopher J. Reid  
 7-19-99 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
 Gina Summerson 6/22/95 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 [Signature] 6/15/95 DATE  
 CHIEF, LAND DEVELOPMENT DIVISION

[Signature] 6-19-95 DATE  
 CHIEF, BUREAU OF HIGHWAYS

[Signature] 6/16/95 DATE  
 CHIEF, BUREAU OF ENGINEERING

DATE NO. REVISION

OWNER / DEVELOPER  
 WILBEN LIMITED PARTNERSHIP  
 C/O ANDREW L. ISAACSON  
 5450 WHITELEY PARK  
 TENNACE # 410  
 BETHESDA, MD 20814  
 301-530-1123

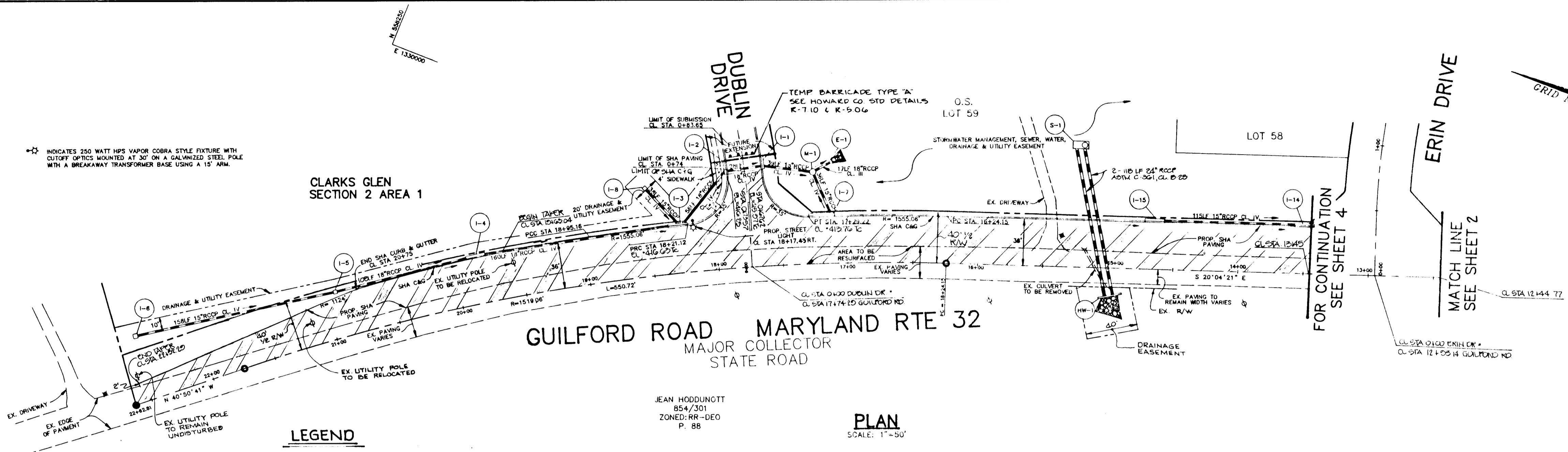
PROJECT  
**CLARKS GLEN SECTION 1 AREA 1**

AREA  
 TAX MAP 35 PARCEL 205  
 5th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

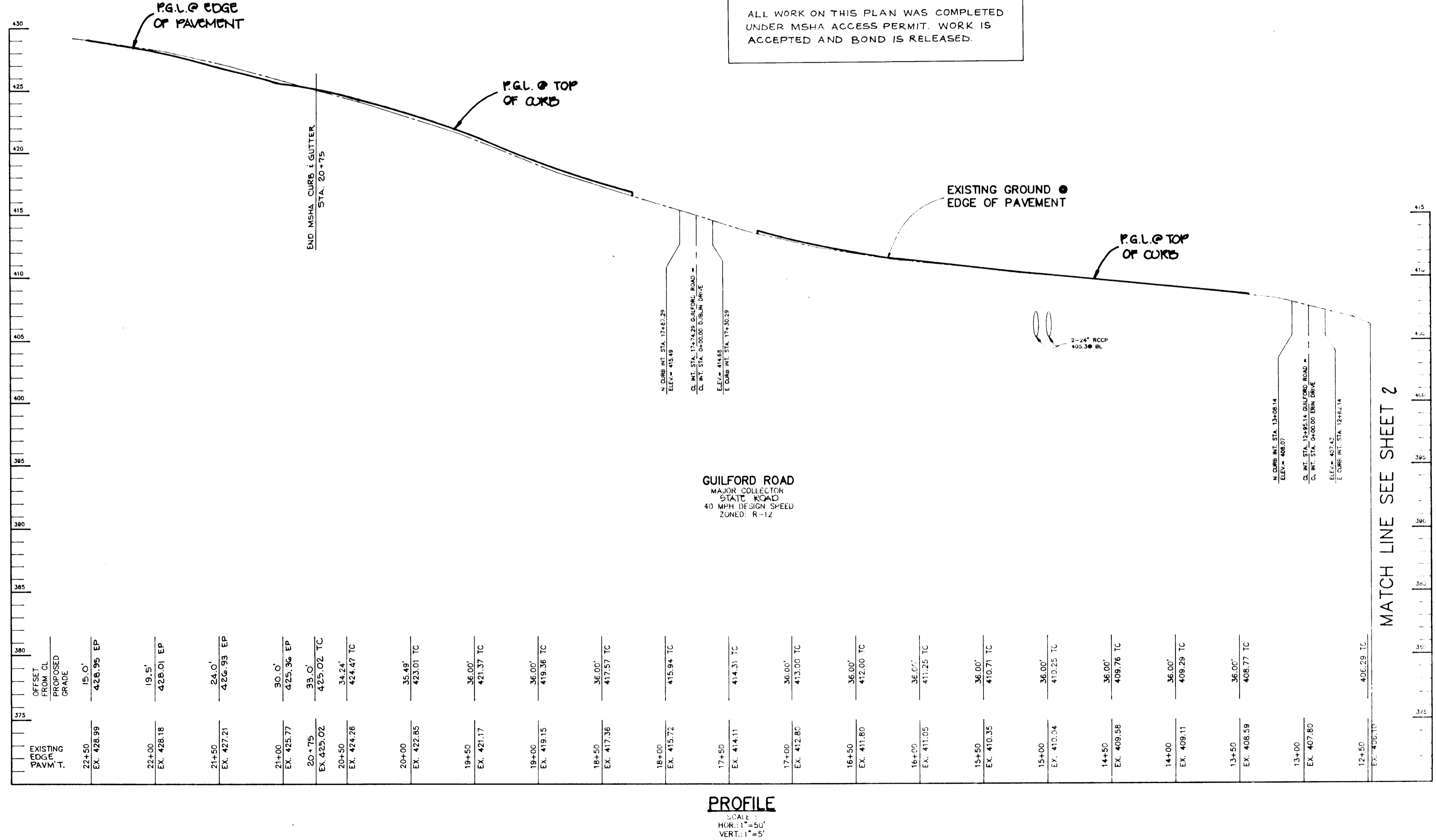
TITLE  
**PLAN & PROFILE GUILFORD ROAD**

**RIEMER MUEGGE & ASSOCIATES, INC.**  
 Planners Engineers Surveyors  
 8818 Centre Park Drive - Suite 200 • Columbia, Maryland 21045  
 410-997-8900 FAX: 410-997-9282

5-22-95 DATE  
 DESIGNED BY: J.T.D.  
 DRAWN BY: J.C.G.  
 PROJECT NO.: 93211  
 DATE: MAY 19, 1995  
 SCALE: AS SHOWN  
 DRAWING NO. 2 OF 26



ALL WORK ON THIS PLAN WAS COMPLETED UNDER MSHA ACCESS PERMIT. WORK IS ACCEPTED AND BOND IS RELEASED.



EXISTING EDGE PAVM T.	OFFSET FROM CL PROPOSED GRADE	EXISTING GROUND	PROPOSED GRADE	VERTICAL CURVE DATA
22+00	15.0'	428.99	428.95 EP	
22+50	19.5'	428.18	428.01 EP	
21+50	24.0'	427.21	426.99 EP	
21+00	30.0'	425.77	425.36 EP	
20+75	33.0'	425.02	425.02 TC	
20+50	34.2'	424.26	424.47 TC	
20+00	35.45'	423.85	423.01 TC	
19+50	36.00'	421.17	421.37 TC	
19+00	36.00'	419.15	419.36 TC	
18+50	36.00'	417.36	417.57 TC	
18+00	36.00'	415.72	415.94 TC	
17+50	36.00'	414.11	414.31 TC	
17+00	36.00'	412.86	413.00 TC	
16+50	36.00'	411.80	412.00 TC	
16+00	36.00'	411.05	411.25 TC	
15+50	36.00'	410.35	410.71 TC	
15+00	36.00'	410.34	410.25 TC	
14+50	36.00'	409.56	409.76 TC	
14+00	36.00'	409.11	409.29 TC	
13+50	36.00'	408.59	408.77 TC	
13+00	36.00'	407.80	408.00 TC	
12+50	36.00'	406.70	406.29 TC	

PROFILE  
SCALE: HOR: 1"=50'  
VERT: 1"=5'

**AS BUILT CERTIFICATE**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

OWNER / DEVELOPER: WILBEN LIMITED PARTNERSHIP, C/O ANDREW L. ISAACSON, 5450 WHITELEY PARK TERRACE # 410, BETHESDA, MD 20814, 301-530-1123

PROJECT: CLARKS GLEN SECTION 1 AREA 1

AREA: TAX MAP 35, PARCEL 205, 5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: PLAN & PROFILE, GUILFORD ROAD

RIEMER MUEGGE & ASSOCIATES, INC., Planners, Engineers, Surveyors, 8818 Centre Park Drive - Suite 200 - Columbia, Maryland 21045, 410-997-8900, FAX: 410-997-9282

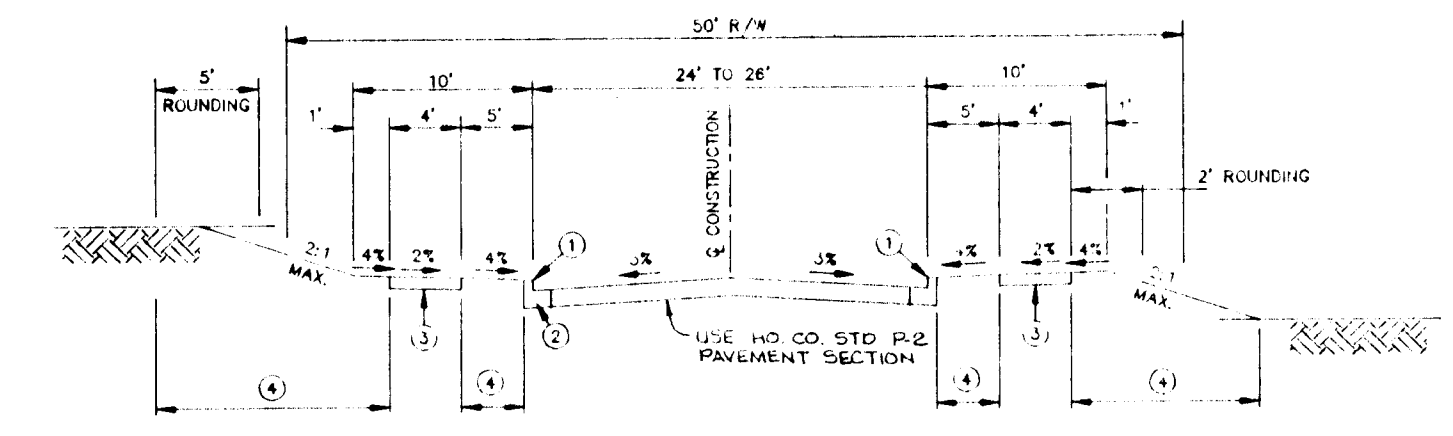
DATE: 5.22.95  
 DESIGNED BY: J.C.D.  
 DRAWN BY: J.C.D.  
 PROJECT NO: 33211  
 DATE: MAY 19, 1995  
 SCALE: AS SHOWN  
 DRAWING NO. 5 OF 26

17339

SEE SHEET 9 OF 26 FOR PLAN VIEW AT OUTFALL

INDICATES 250 WATT HPS VAPOR COBRA STYLE FIXTURE WITH CUTOFF OPTICS MOUNTED AT 30' ON A GALVANIZED STEEL POLE WITH A BREAKAWAY TRANSFORMER BASE USING A 15' ARM.

INDICATES 100 WATT HPS VAPOR TRADITIONARE POST TOP MOUNTED ON A 14' BLACK FIBERGLASS EMBEDDED POLE.



**CUL-DE-SAC ROAD & TYPICAL SECTION LOCAL ROAD**  
NO SCALE

- 1) PROFILE GRADE LINE (P.G.L.) - SEE DESIGN MANUAL
- 2) TYPE OF CURB VARIES (BITUMINOUS CURB OR MILD CORR. CURB & GUTTER OR STANDARD CORR. CURB & GUTTER - SEE DESIGN MANUAL)
- 3) 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS
- 4) INDICATES 2" TOPSOIL, SEED AND MULCH
- 5) GUARDRAIL WHERE REQUIRED BY THE DESIGN MANUAL

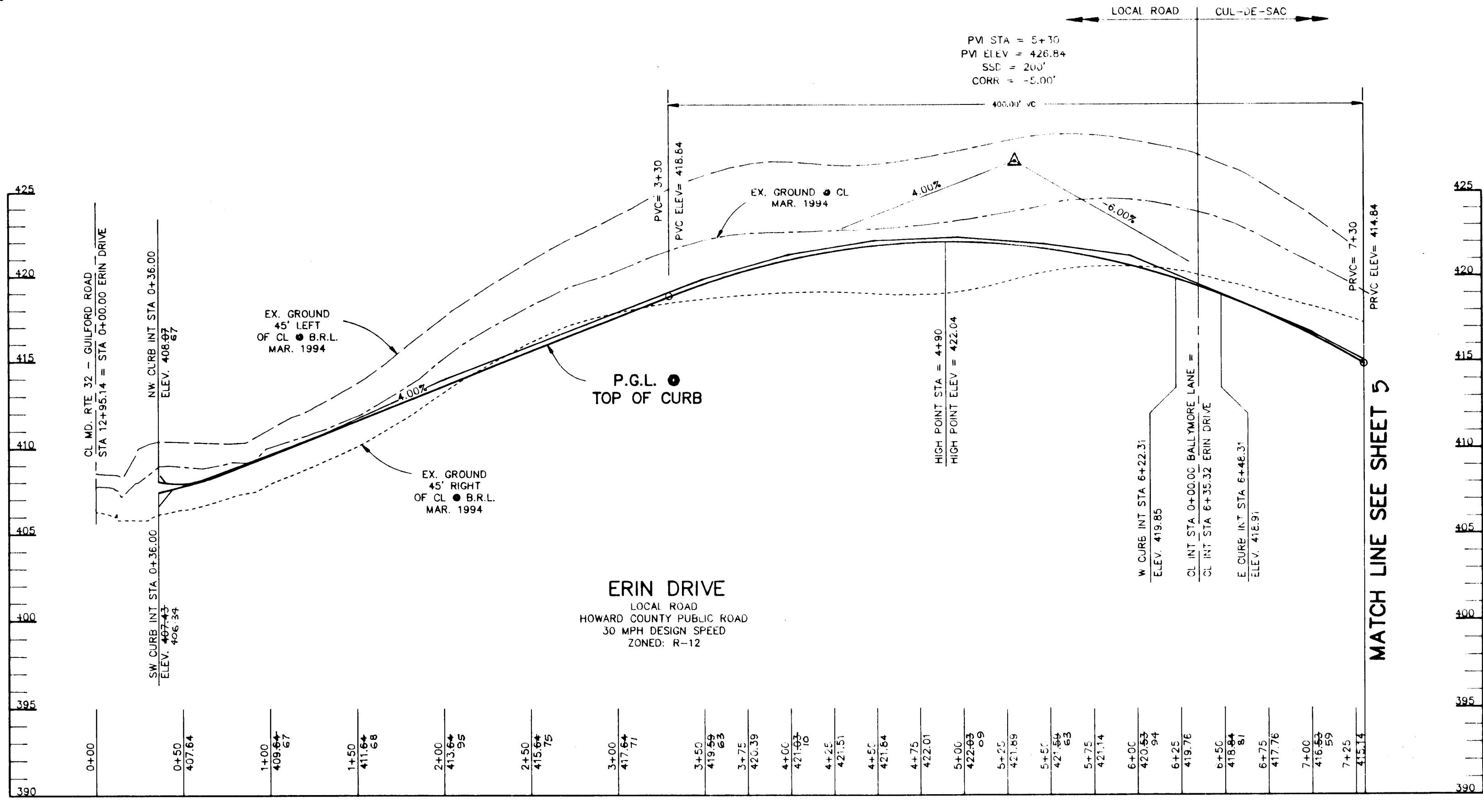
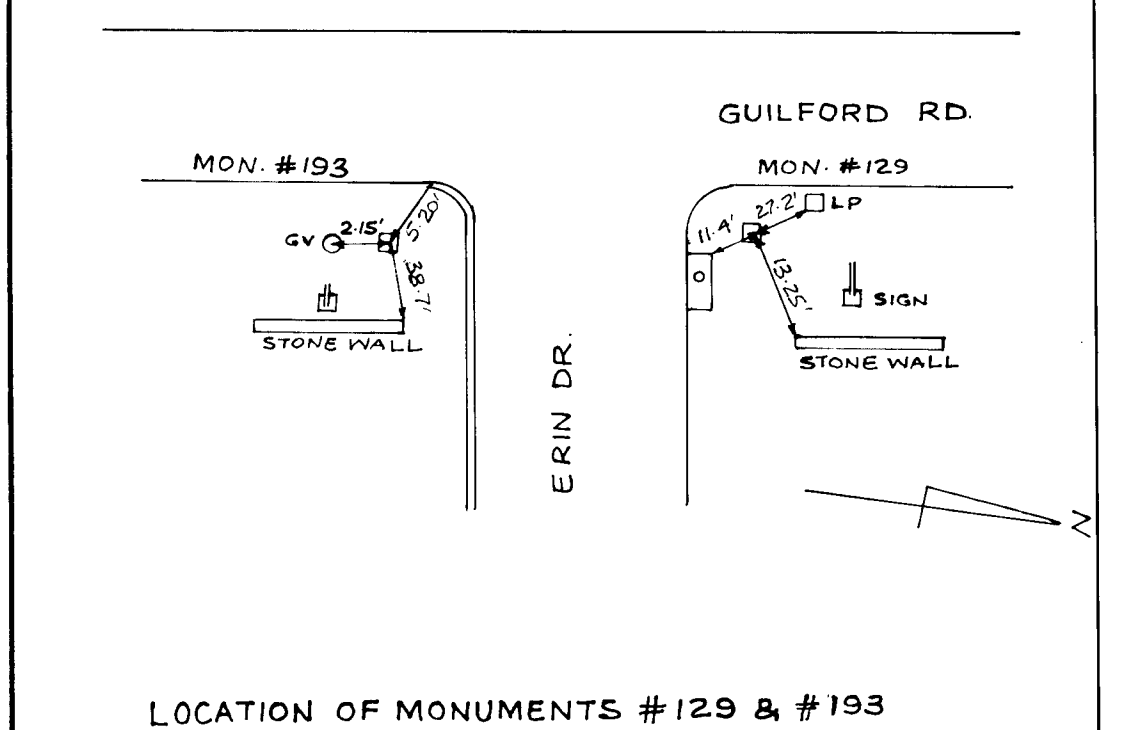
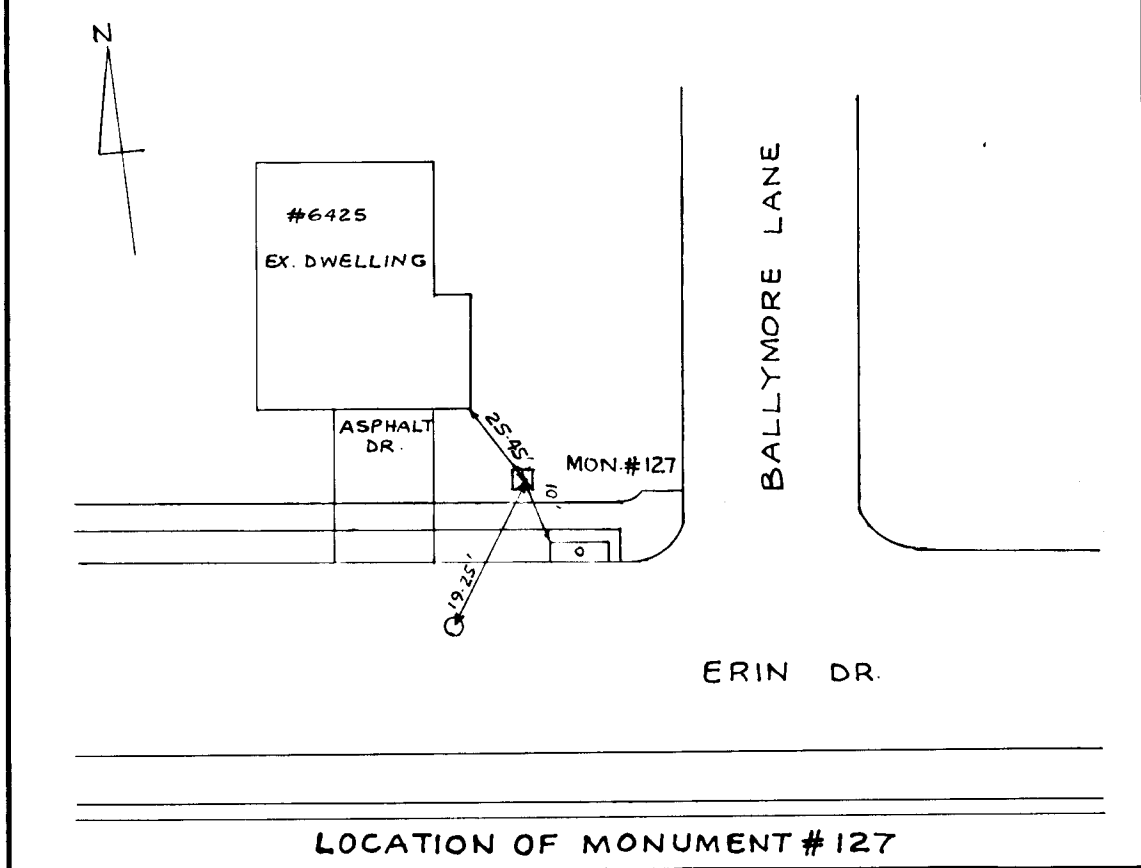
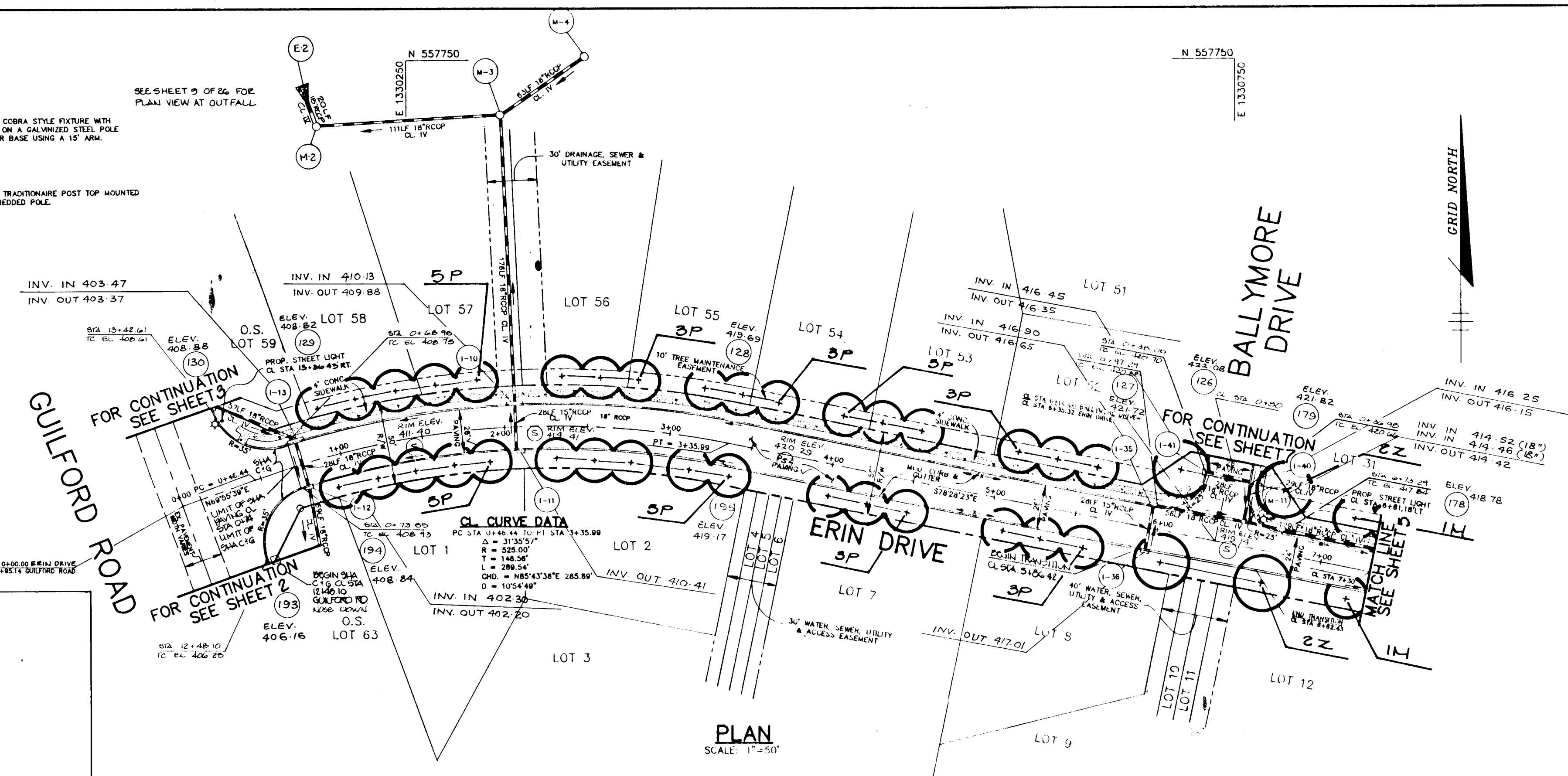
DETAIL CROSS SECTION SLOPE MAY BE FLATTENED TO PROVIDE A SHADE AT OR NEAR THE CHEST OF VERTICAL CURVES WHERE QUANTITY OF SHADE FLOW IS SMALL AS APPROVED BY L.P.W.

STREET	STATION	OFFSET	TYPE	REMARKS
Guilford Road	13 + 30	43' RT	250 WATT HPS	SEE SHEET 3 OF 26
Guilford Road	18 + 17	43' RT	250 WATT HPS	SEE SHEET 3 OF 26
Erin Drive	10 + 48	21' RT	100 WATT HPS	SEE SHEET 5 OF 26
Erin Drive	10 + 11	3' LT	100 WATT HPS	SEE SHEET 5 OF 26
Cashel Court	T.P. 0+50	3' LT	100 WATT HPS	SEE SHEET 5 OF 26
Ballymore Lane	3 + 77	23' LT	100 WATT HPS	SEE SHEET 5 OF 26

NOTE: 250 WATT = 250 WATT HPS VAPOR COBRA STYLE FIXTURE WITH CUTOFF OPTICS MOUNTED AT 30' ON A GALVANIZED STEEL POLE WITH A BREAKAWAY TRANSFORMER BASE USING A 15' ARM.

100 WATT = 100 WATT HPS VAPOR TRADITIONARE POST TOP MOUNTED ON A 14' BLACK FIBERGLASS EMBEDDED POLE.

NOTE: SEE SHEET 8 FOR PLANTING SCHEDULE AND DETAIL



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

AS BUILT CERTIFICATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. DATE: 7-19-99

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. DATE: 6/15/95

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. DATE: 6-14-95

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. DATE: 6/16/95

OWNER / DEVELOPER: WILBER, LIMITED PARTNERSHIP, C/O ANDREW L. ISAACSON, 3450 WHITEY PARK, TERRELL, MD 20784, 301-556-1123

PROJECT: CLARKS GLEN SECTION 1 AREA 1

AREA: TAX MAP 35, PARCEL 305, 5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: PLAN & PROFILE, ERIN DRIVE, CL STA 0+00.00 TO 7+30.00

RIEMER MUEGGE & ASSOCIATES, INC., Planners, Engineers, Surveyors, 8818 Centre Park Drive, Suite 200, Columbia, Maryland 21045, 410-997-8900, FAX: 410-997-9282

DATE: 5-22-95

DESIGNED BY: J.C.L.

DRAWN BY: J.C.L.

PROJECT NO.: 93204

DATE: MAY 19, 1995

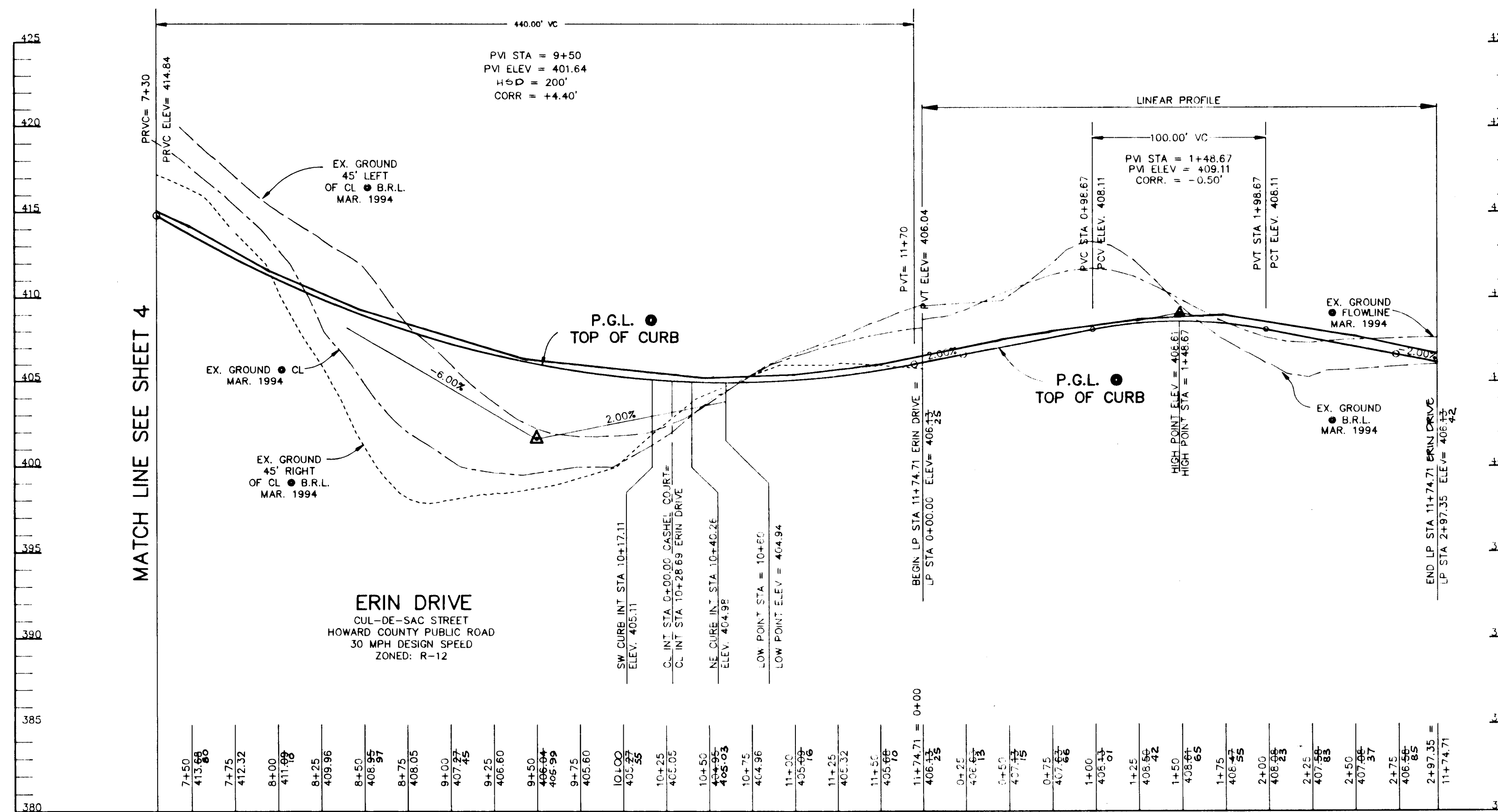
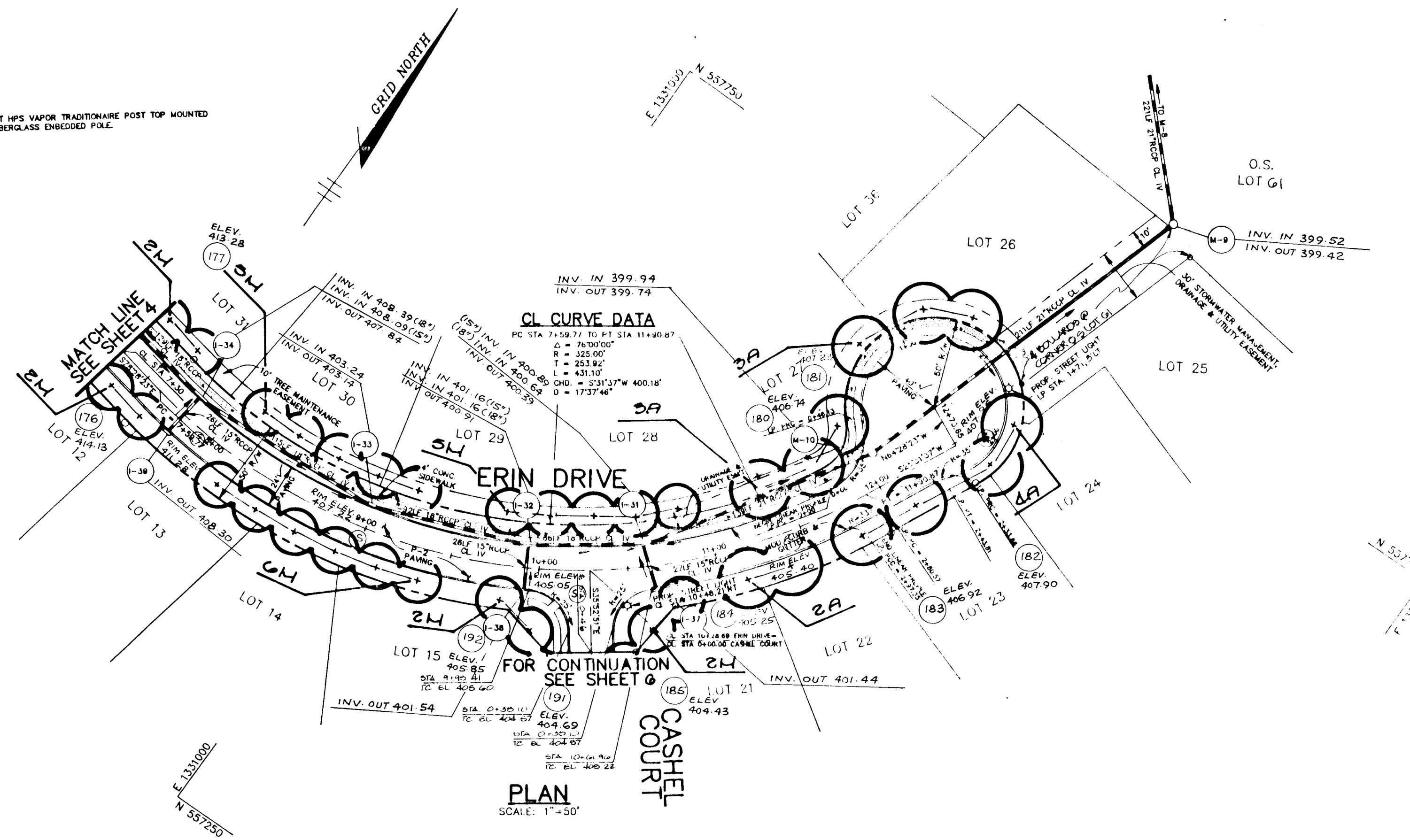
SCALE: AS SHOWN

DRAWING NO.: 4 OF 26

J. Carell, JAYKANT D. PAREKH # 19140

1739

INDICATES 100 WATT VAPOR TRADITIONARE POST TOP MOUNTED ON A 1" BLACK FIBERGLASS EMBEDDED POLE.



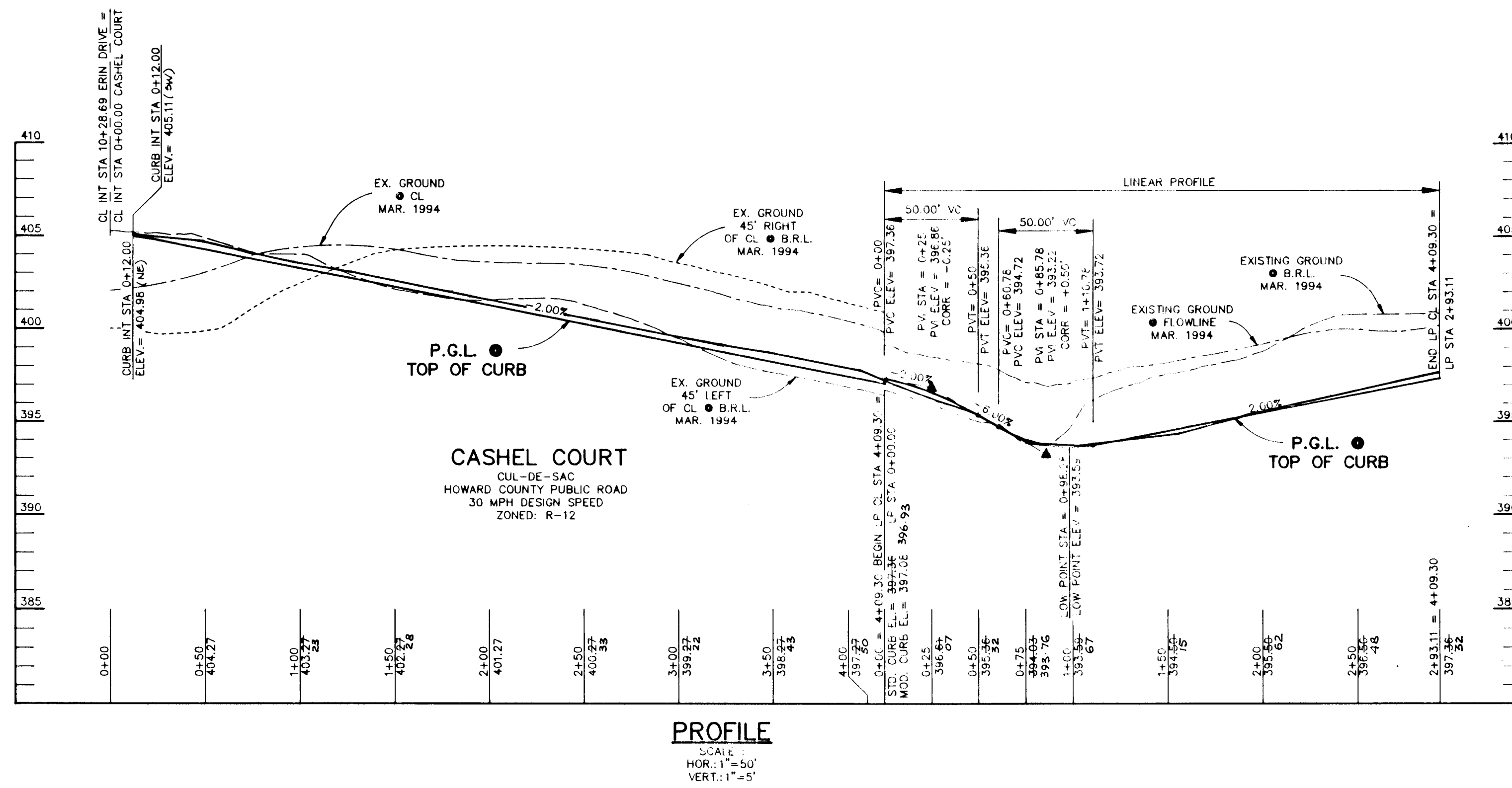
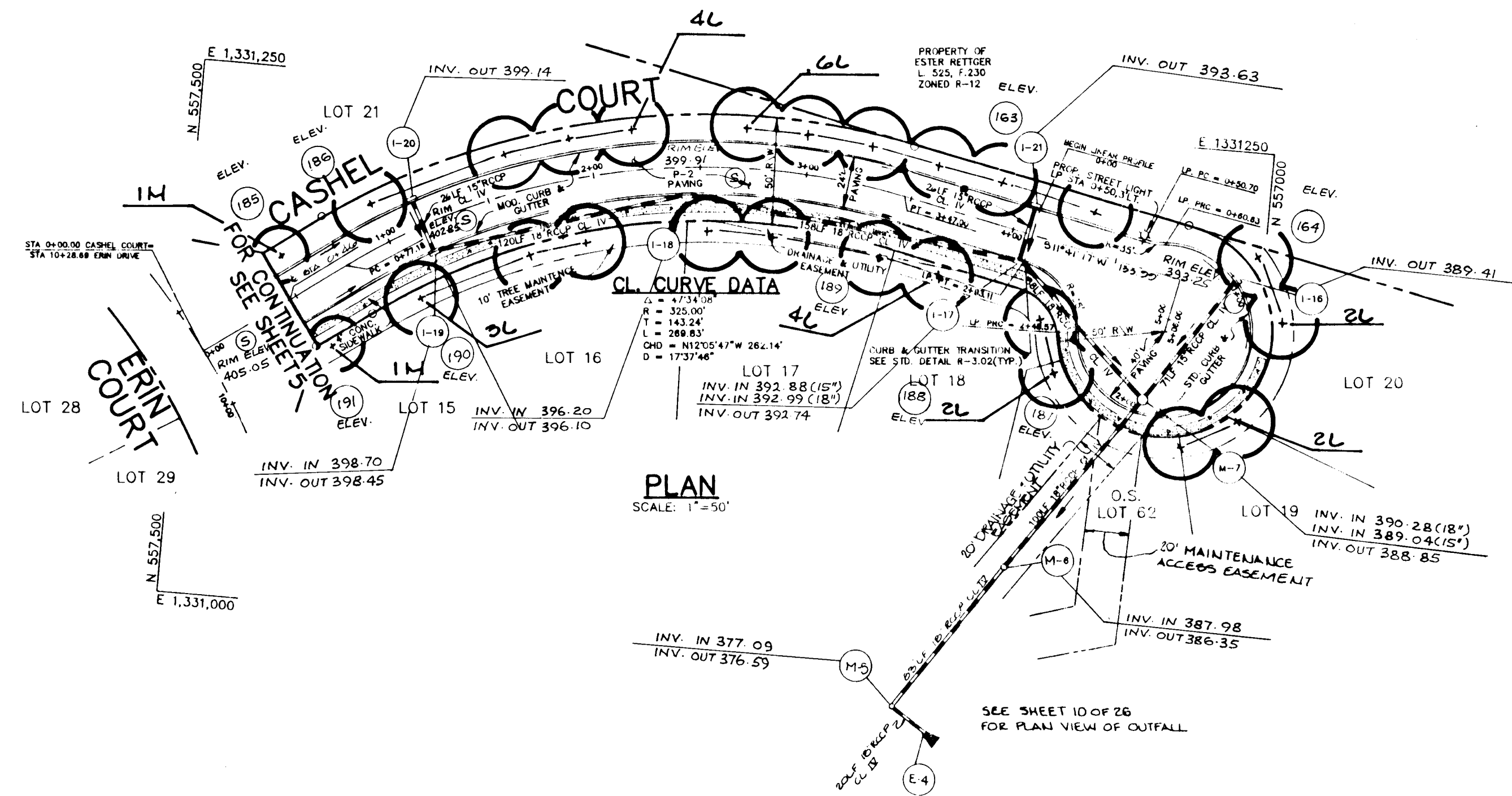
NOTE: SEE SHEET 6 FOR PLANTING SCHEDULE AND DETAIL

Christopher J. Reid CHRISTOPHER J. REID # 19949	7.17.99 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
Gina Summari CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	6/24/95 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	
[Signature] CHIEF, LAND DEVELOPMENT DIVISION	6/15/95 DATE
Andrew M. Davelle CHIEF, BUREAU OF HIGHWAYS	6-14-95 DATE
[Signature] CHIEF, BUREAU OF ENGINEERING	6/16/95 DATE
DATE NO.	REVISION
OWNER / DEVELOPER WILFH LIMITED PARTNERSHIP C/O ANDREW L. DARGON 5450 WHITEY PARK FRINGE # 410 BETHESDA, MD 20814 301-520-1103	
<b>PROJECT</b> CLARKS GLEN SECTION 1 AREA 1	
<b>AREA</b> TAX MAP 35, PAR. PL 205 STA. ELECTRIC DISTRICT HOWARD COUNTY, MARYLAND	
<b>TITLE</b> PLAN & PROFILE ERIN DRIVE CL STA 7+30.00 TO CL STA 12+73.65	
<b>RIEMER MUEGGE &amp; ASSOCIATES, INC.</b> Planners Engineers Surveyors 8818 Centre Park Drive Suite 260 - Columbia, Maryland 21045 410-997-8900 FAX: 410-997-9282	
5.22.95 DATE	DESIGNED BY: J.F.D. DRAWN BY: J.C.C. PROJECT NO: 93211 DATE: MAY 19, 1995 SCALE: AS SHOWN DRAWING NO. 2 OF 26

F-95-83 AS-BUILT

177599

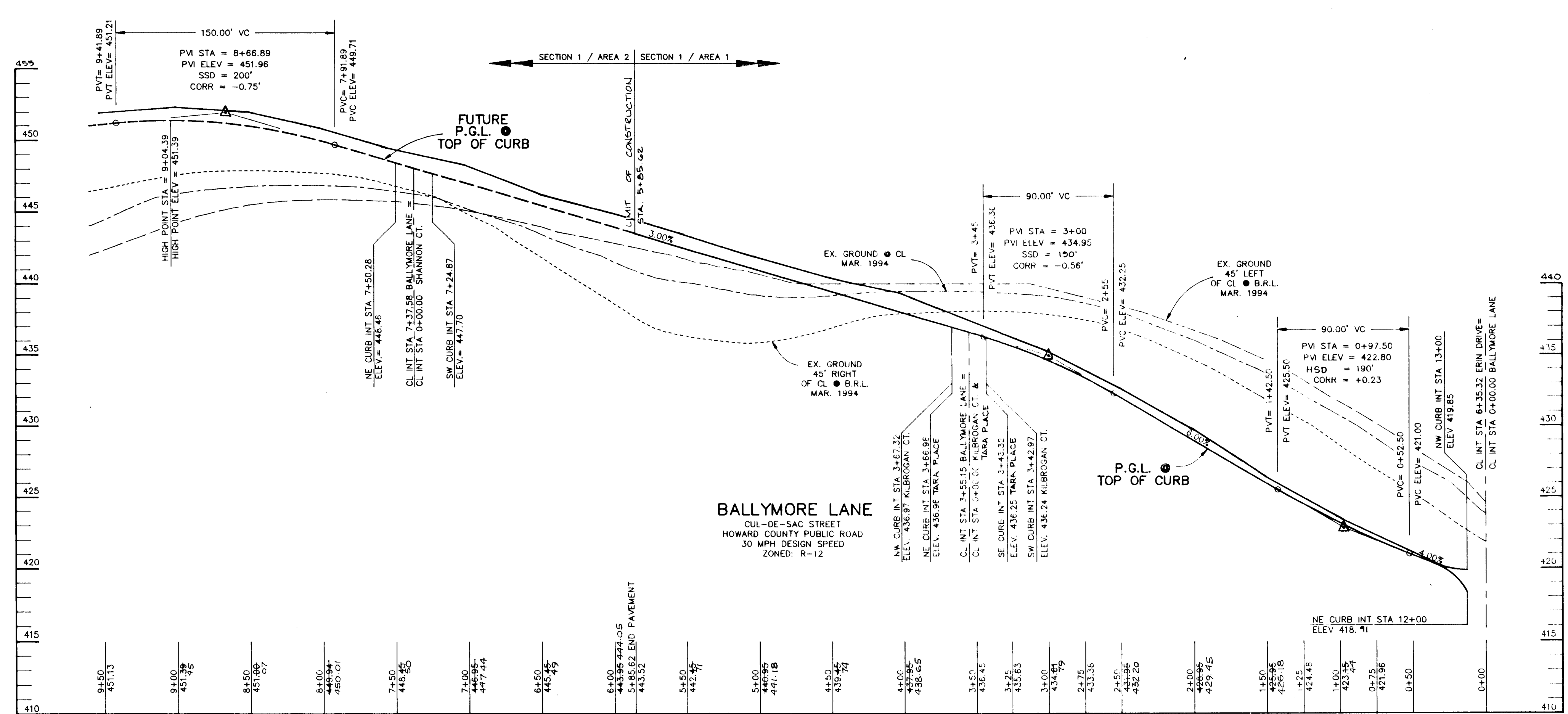
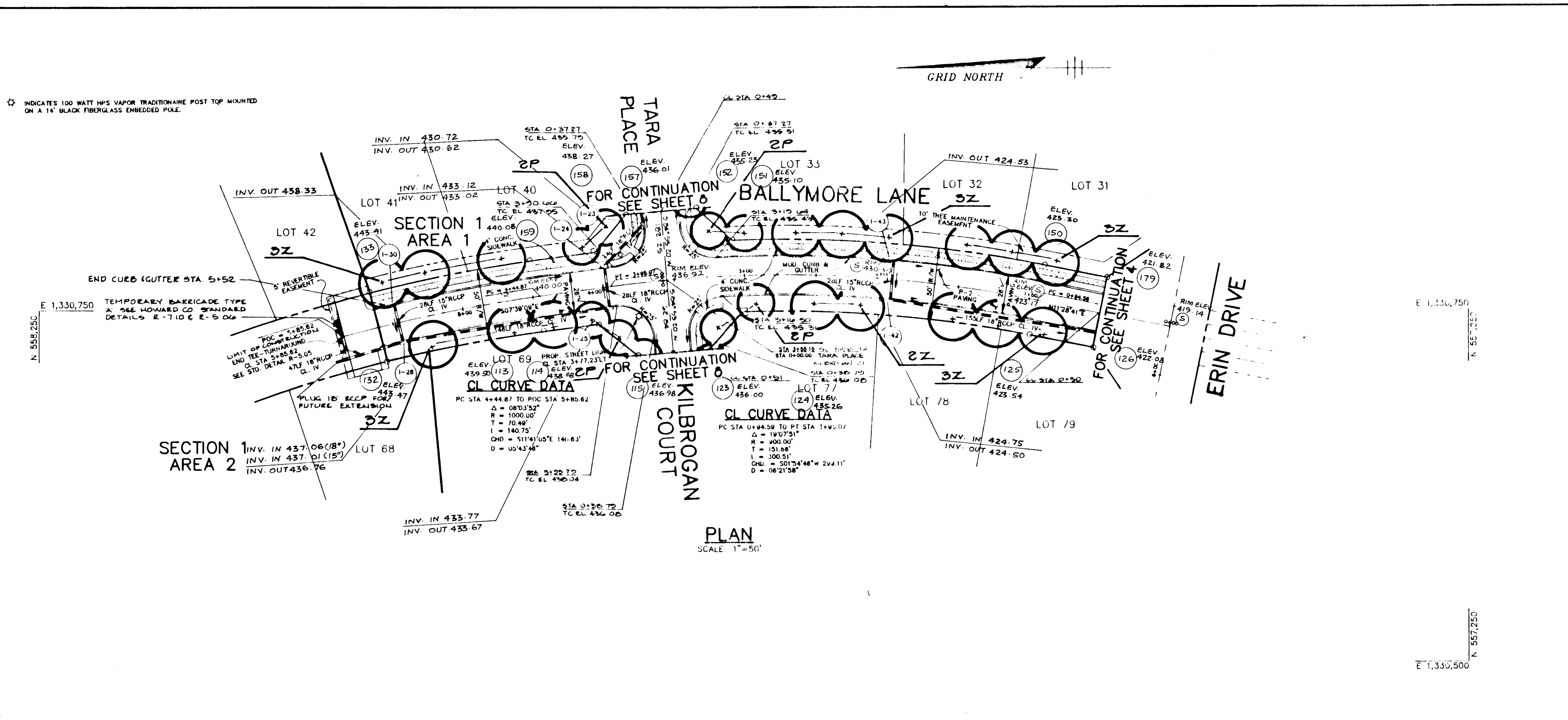
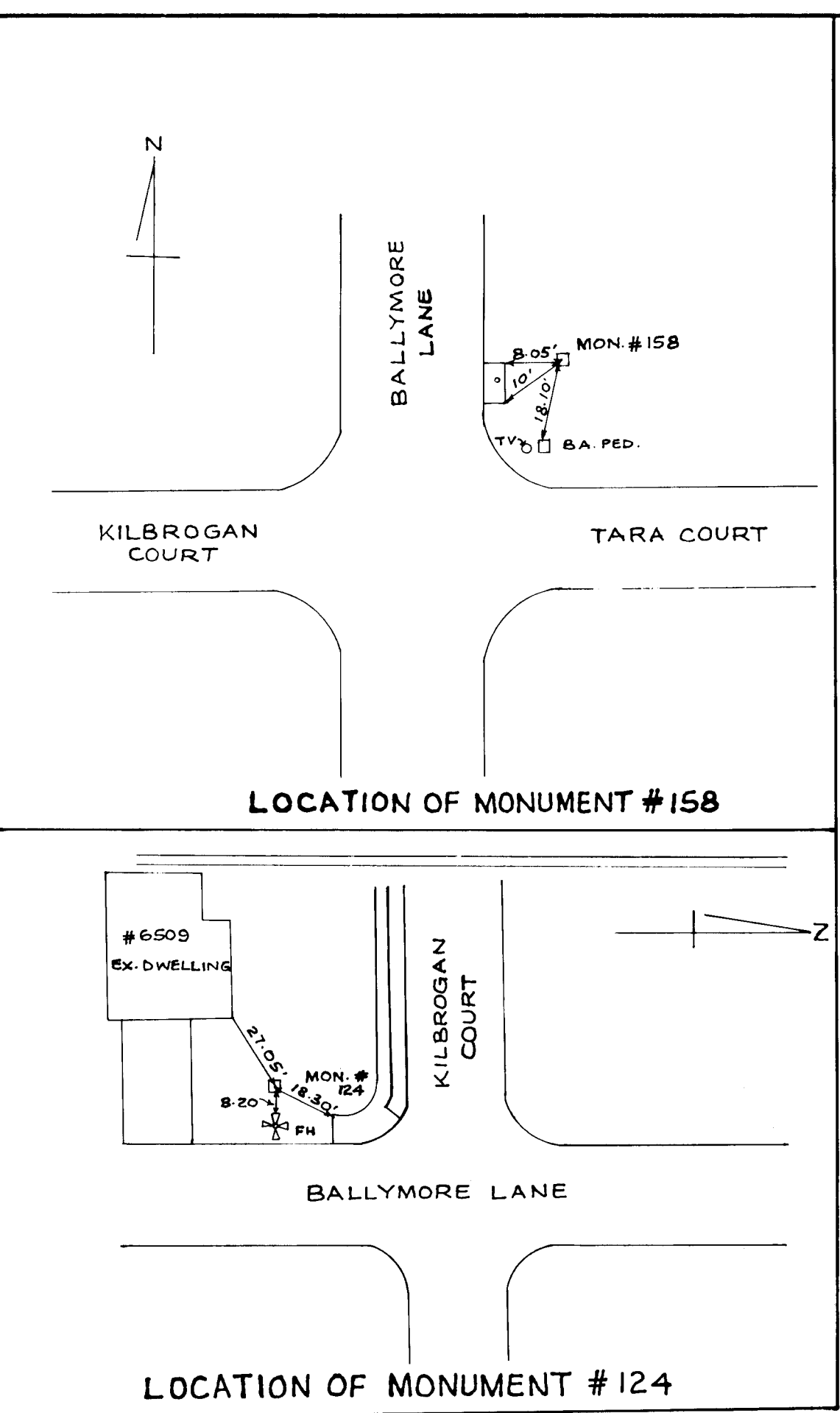
☆ INDICATES 100 WATT HPS VAPOR TRADITIONAL POST TOP MOUNTED ON A 14" BLACK FIBREGLASS ENCASED PIPE.



NOTE: SEE SHEET 8 FOR PLANTING SCHEDULE AND DETAIL

AS BUILT CERTIFICATE	DATE: 7-19-99
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	DATE: 6/22/95
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.	DATE: 6-14-95
DATE: 6/16/95	DATE: 6/16/95
OWNER / DEVELOPER	REVISION
WILBEN LIMITED PARTNERSHIP C/O ANDREW L. ISAACSON 5450 WHITELY PARK TERRALE # 410 BETHESDA, MD 20814 301-550-1123	
PROJECT	
CLARKS GLEN SECTION 1 AREA 1	
AREA	
TAX MAP 35 PANEL 205 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
PLAN & PROFILE CASHEL COURT	
RIEMER MUEGGEL & ASSOCIATES, INC. Planners Engineers Surveyors 8818 Centre Park Drive, Suite 200 • Columbia, Maryland 21045 410-997-8900 FAX: 410-997-0282	
DATE: 5-22-95	DESIGNED BY: J.C.U.
DATE: MAY 19, 1995	DRAWN BY: J.C.U.
SCALE: AS SHOWN	PROJECT NO: 93211
DRAWING NO. 6 OF 26	

17739



**PROFILE**  
SCALE  
HOR.: 1"=50'  
VERT.: 1"=5'

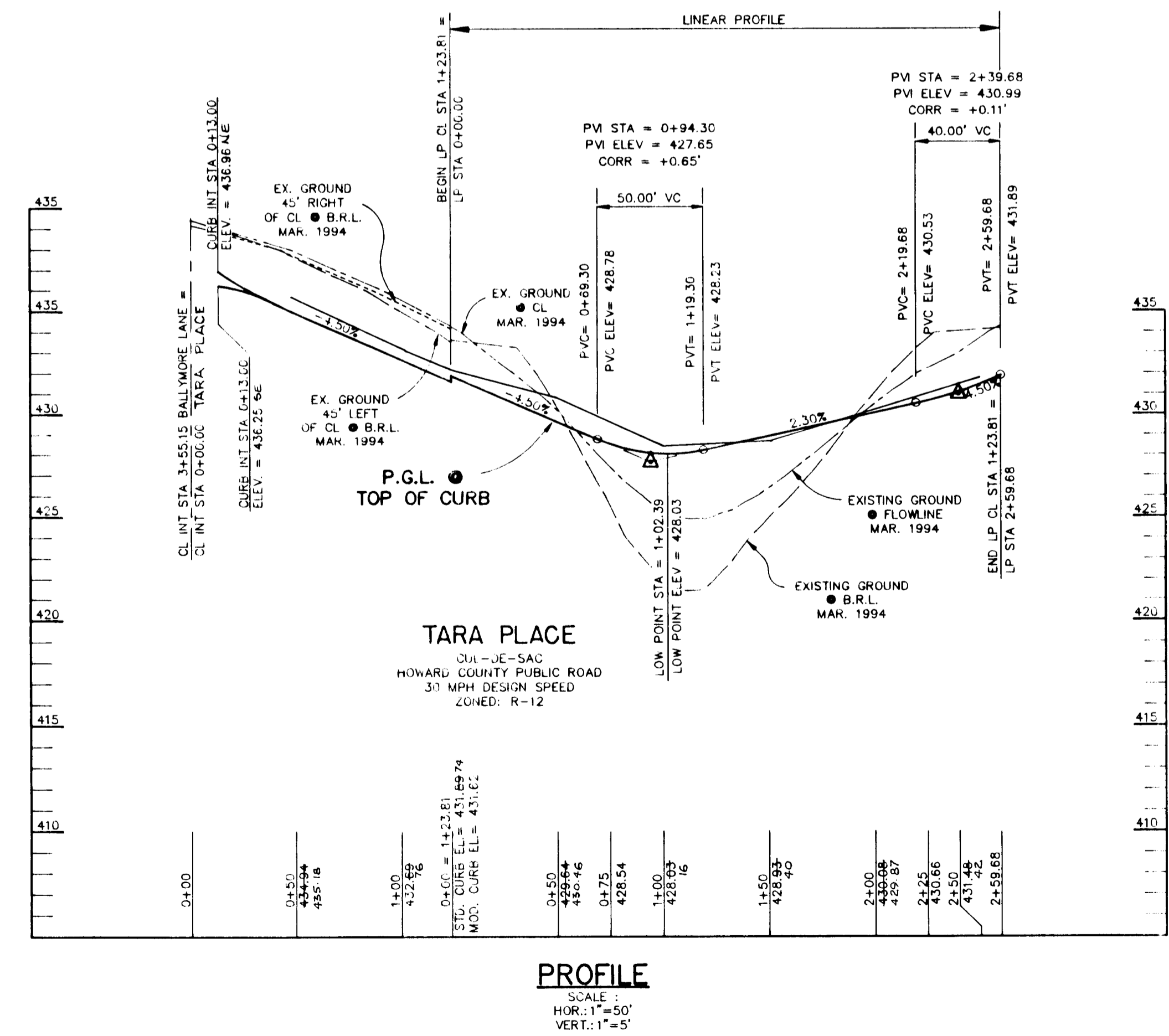
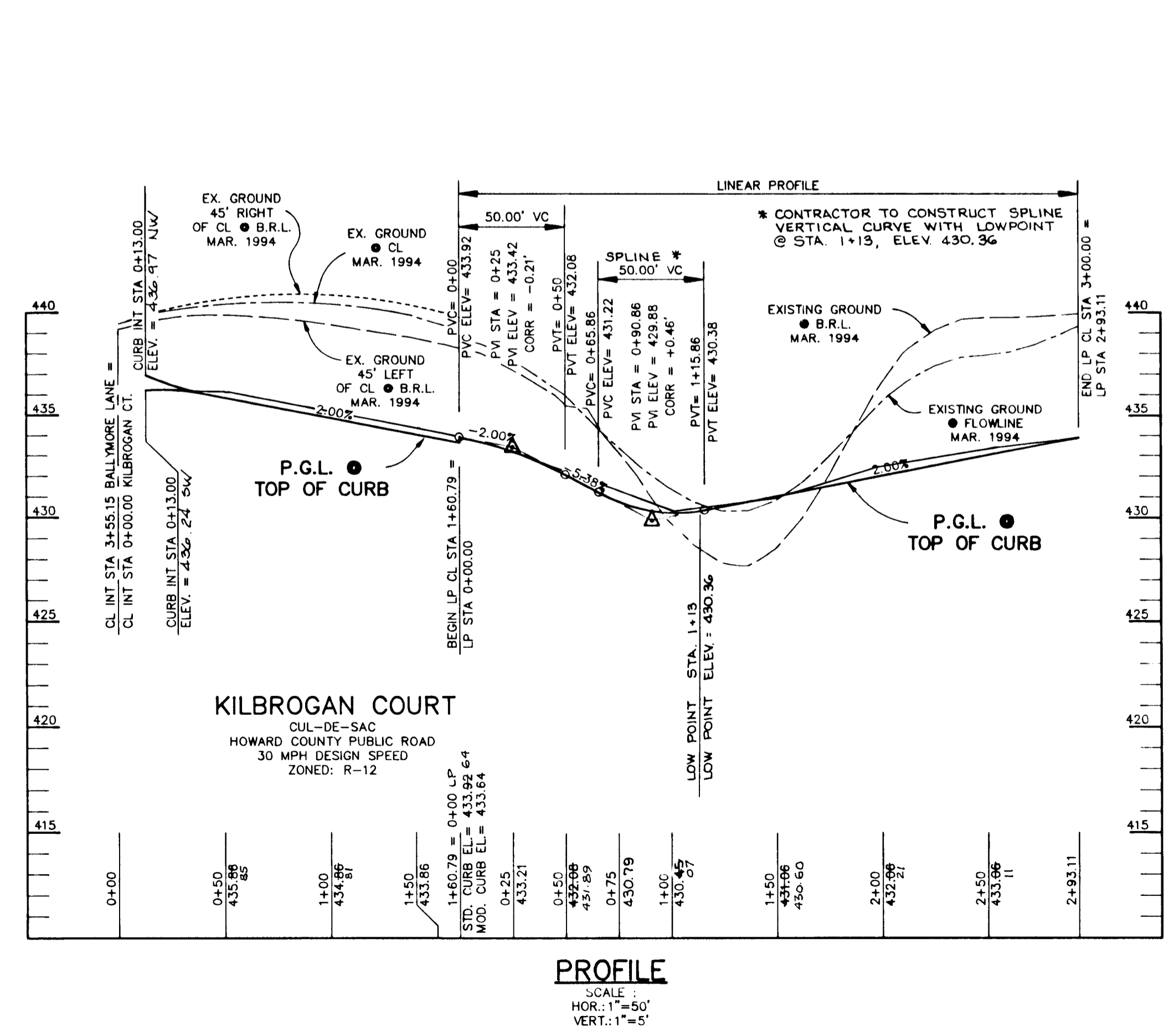
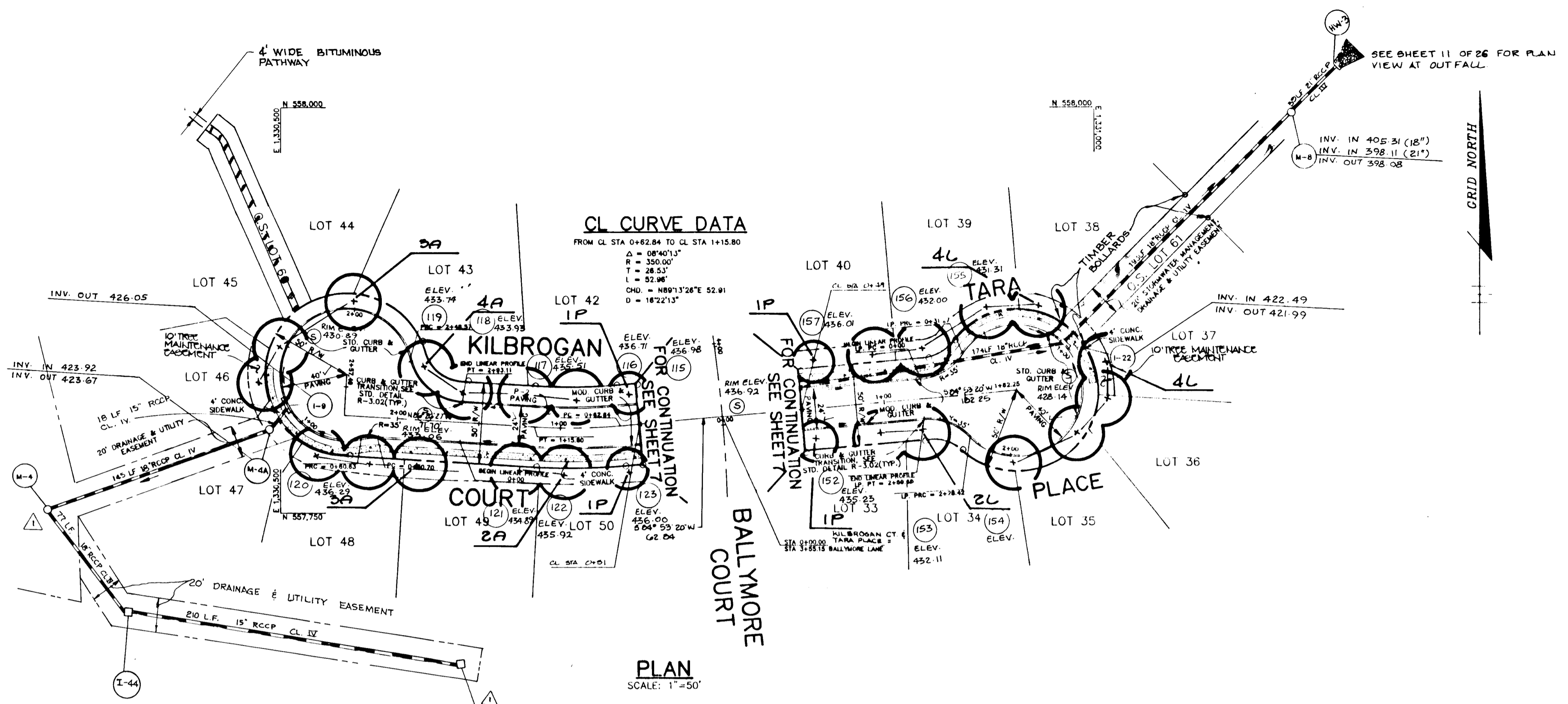
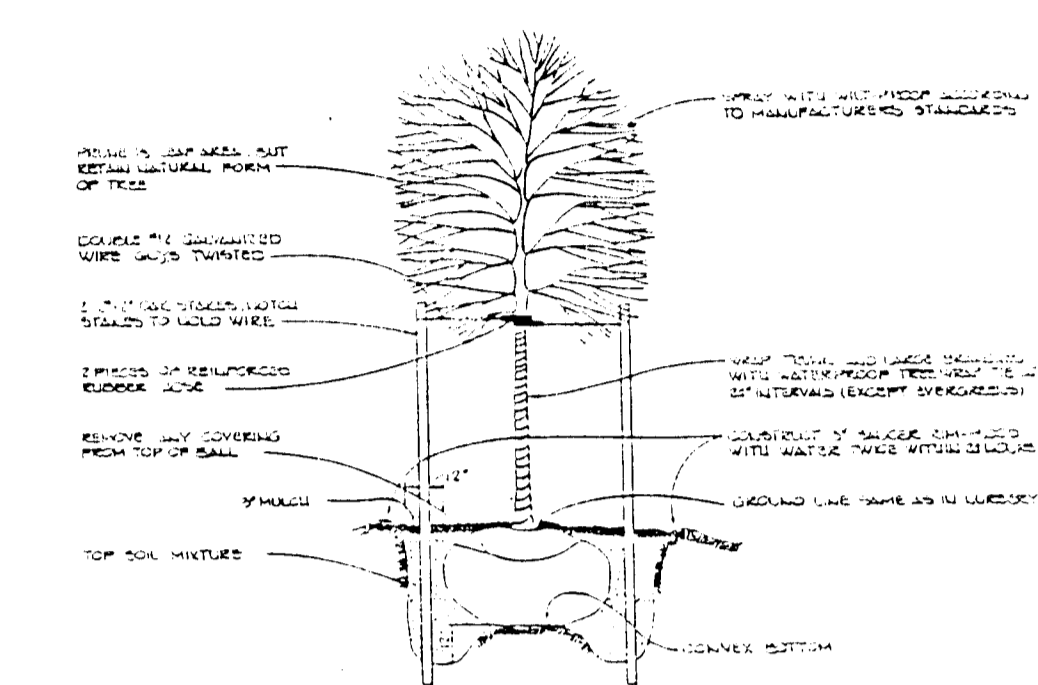
NOTE: SEE SHEET 8 FOR PLANTING SCHEDULE AND DETAIL

		AS BUILT CERTIFICATE DATE: 7.19.99 CHRISTOPHER J. REID #19949
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. GINA SIMMONS CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH		DATE: 4/22/95
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. Andrew M. Daniels CHIEF, BUREAU OF HIGHWAYS		DATE: 6-14-95
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. Paul J. Ryan CHIEF, BUREAU OF ENGINEERING		DATE: 6/16/95
DATE NO.	REVISION	
OWNER / DEVELOPER WILBEN LIMITED PARTNERSHIP C/O ANDREW L. ISAACSON 5450 WHITELEY PARK TERRACE # 410 BETHESDA, MD 20814 301-530-1123		
PROJECT <b>CLARKS GLEN SECTION 1 AREA 1</b>		
AREA TAX MAP 35 PARCEL 205 5th ELECTRIC DISTRICT HOWARD COUNTY, MARYLAND		
TITLE <b>PLAN &amp; PROFILE BALLYMORE LANE</b>		
<b>RIEMER MUEGGE &amp; ASSOCIATES, INC.</b> Planners Engineers Surveyors 8818 Centre Park Drive - Suite 200 - Columbia, Maryland 21045 410-997-8900 FAX: 410-997-9282		
DATE: 5.22.95 	DESIGNED BY: J.T.D. DRAWN BY: J.C.O. PROJECT NO.: 93211 DATE: MAY 19, 1995 SCALE: AS SHOWN DRAWING NO.: 7 OF 26	

1730

**PLANT SCHEDULE**

KEY	QTY	NAME	SIZE	REMARKS
A	24	ACER SACCHARUM 'LEGACY' LEGACY SUGAR MAPLE	2 1/2"-3" CAL. 12'-14' HT.	B & B
L	33	LIQUIDAMBAR STYRACIFLUA SHRETTGUM	2 1/2"-3" CAL. 12'-14' HT.	B & B
M	28	MAIUS FLORIBUNDA 'SNOWDRIFT' SNOWDRIFT FLOWERING CRABAPPLE	2 1/2"-3" CAL. 12'-14' HT.	B & B White Flowers
P	45	PRUNUS YEDOENSIS YOSHINO CHERRY	2 1/2"-3" CAL. 12'-14' HT.	B & B
Z	21	ZELKOVA BERNATA 'VILLAGE GREEN' VILLAGE GREEN ZELKOVA	2 1/2"-3" CAL. 12'-14' HT.	B & B



**AS BUILT CERTIFICATE**

DATE: 7.19.99  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 OWNER / DEVELOPER: WILBEN LIMITED PARTNERSHIP, C/O ANDREW L. ISAACSON, 5450 WHITELEY PARK TERRACE # 410, BETHESDA, MD 20814, 301-530-1123.  
 PROJECT: CLARKS GLEN SECTION 1 AREA 1  
 TITLE: PLAN & PROFILE KILBROGAN COURT & TARA PLACE  
 RIEMER MUEGGEL & ASSOCIATES, INC. Planners, Engineers, Surveyors, 8818 Centre Park Drive - Suite 200 - Columbia, Maryland 21045, 410-997-8900, FAX: 410-997-9282.  
 DATE: 5-22-95  
 DESIGNED BY: J.T.D.  
 DRAWN BY: J.C.O.  
 PROJECT NO.: 93211  
 DATE: MAY 19, 1995  
 SCALE: AS SHOWN  
 JAYKANT D. PAREKH # 19146, DRAWING NO. 0 OF 20

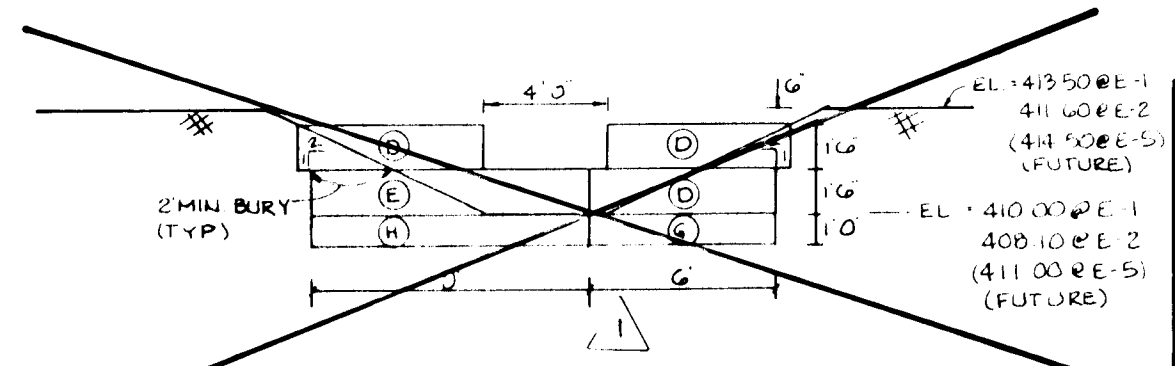
17739



GABION SCHEDULE S.W.M.F. #1

LETTER CODE	LENGTH	WIDTH	HEIGHT	NO. CELLS	CAPACITY (C.Y.)	COLOR CODE
D	6'	3'	1'6"	2	1.0	RED
E	5'	3'	1'6"	3	1.5	GREEN
G	6'	3'	1'	2	0.66	BLUE/RED
H	9'	3'	1'	3	1.0	BLUE/YELLOW

NOTE: 1) GABIONS ARE TO BE MANUFACTURED BY MANGAPERRI, INC. OR APPROVED EQUAL.  
2) ALL GABION SURFACES TO COME IN CONTACT WITH SOIL SHALL BE COVERED WITH FILTER FABRIC (MIRAF) TRENCHES OR APPROVED EQUAL.

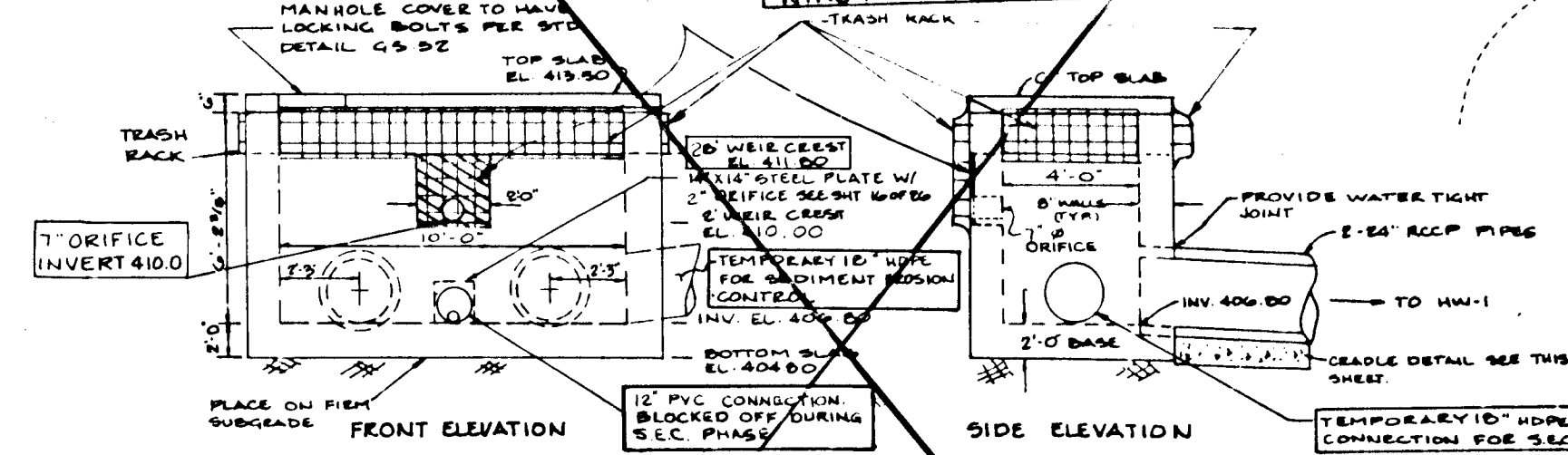


AS BUILT CERTIFICATE  
 CHRISTOPHER J. REID #19949  
 DATE 7.19.99

- NOTES
- FOR CONSTRUCTION DETAILS NOT SHOWN FOR STRUCTURES S-1 & S-2, SEE SHEET 15 OF 26
  - THE RISER STRUCTURE DETAILS BELOW ARE FOR THE SEDIMENT EROSION BASINS AND PRIOR TO CONVERSION TO PERMANENT SWM FACILITIES.
  - ALL SEDIMENT EROSION CONTROL MODIFICATIONS ARE ENCLOSED IN BOXES BELOW.

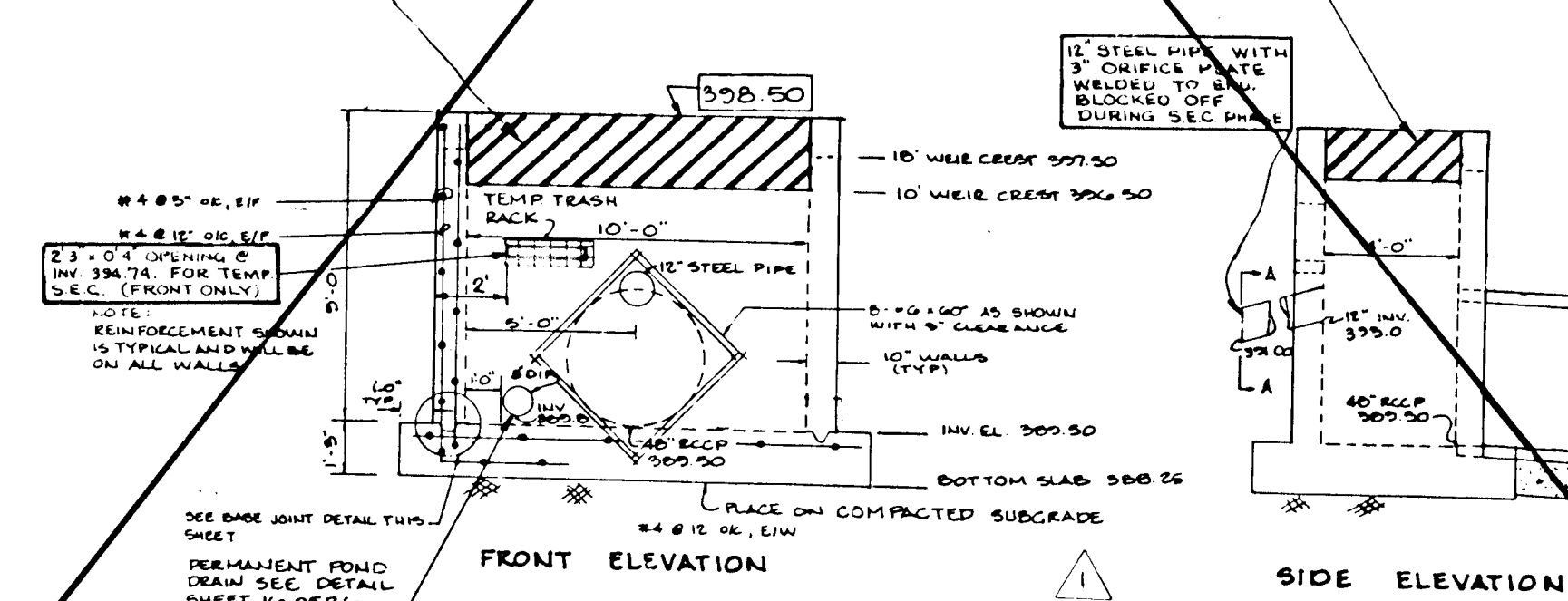
TEMPORARY TRASH RACK DETAIL FOR S-2 N.T.S.

CLOSE OFF 2 WEIR (UP TO EL. 411.8) WITH WATER-PROOFED, BRACED PLYWOOD. INSTALL 7" Ø ORIFICE @ INV. EL. 410.00 IN PLYWOOD WALL. ADD INSTALL #4x4 WELDED WIRE FABRIC TO EXTERIOR OF 2 TRASH RACK.



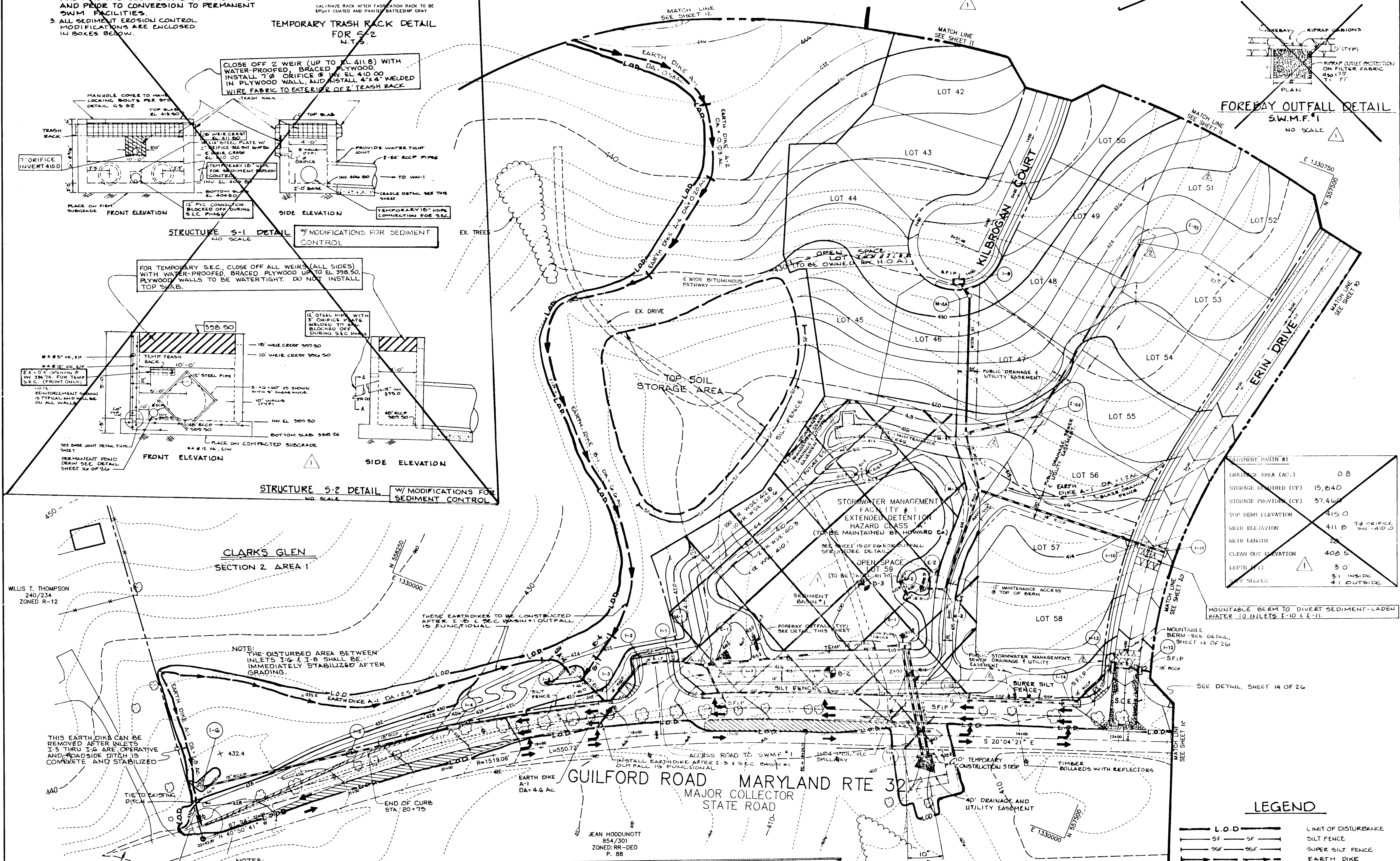
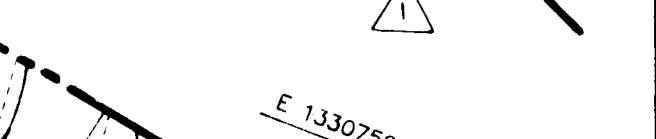
STRUCTURE S-1 DETAIL W/ MODIFICATIONS FOR SEDIMENT CONTROL

FOR TEMPORARY S.E.C. CLOSE OFF ALL WEIRS (ALL SIDES) WITH WATER-PROOFED, BRACED PLYWOOD UP TO EL. 398.90. PLYWOOD WALLS TO BE WATERTIGHT. DO NOT INSTALL TOP SLAB.



STRUCTURE S-2 DETAIL W/ MODIFICATIONS FOR SEDIMENT CONTROL

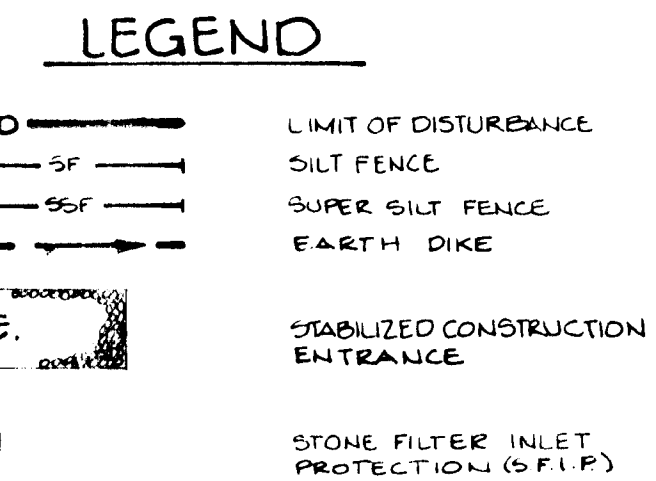
FOREBAY OUTFALL DETAIL S.W.M.F. #1 NO SCALE



SEDIMENT BASIN #1

DRAINAGE AREA (AC.)	0.8
STORAGE REQUIRED (CF)	15,840
STORAGE PROVIDED (CF)	37,460
TOP BERM ELEVATION	415.0
WEIR ELEVATION	411.0 12" ORIFICE INV. 410.0
WEIR LENGTH	28'
CLEAN OUT ELEVATION	408.5
DEPTH (FT)	3.0
TOP SHOULDER	3:1 INSIDE 4:1 OUTSIDE

MOUNTABLE BERM TO DIVERT SEDIMENT-LOADED WATER TO INLETS 1-10 & 1-11.



- NOTES:
- DITCH ADJACENT TO ROUTE 32 TO BE CONSTRUCTED SUCH THAT EACH DAILY SEGMENT IS COMPLETED & STABILIZED AT THE END OF EACH WORKING DAY.
  - DITCH FROM STA. 21+75 TO 22+60 HAS BEEN MOVED SLIGHTLY TO AVOID THE UTILITY POLE AND DOES NOT FOLLOW STANDARD SECTION.

STORMWATER MANAGEMENT FACILITY DESIGN SUMMARY - SWME#1

DESIGN STORM (YR)	ALLOWABLE RELEASE (cfs)	FACILITY INFLOW (cfs)	FACILITY DISCHARGE (cfs)	ROUTED * DISCHARGE (cfs)	WATER SURFACE ELEV. (ft)	STORAGE VOLUME (acre-ft)	REMARKS
2	34.8	27.1	1.7	34.4	410.3	1.11	ORAINAGE AREA = 23.0 ACRES.
10	156.3	65.2	14.0	156.0	411.6	1.68	
100	N/A	111.7	67.7	408.2	412.8	3.22	CLASS A DITCH

\* AT DESIGN POINT - WHERE CRICKETT CREEK INTERSECTS PROPOSED ROUTE 32.

BY THE DEVELOPER:  
 M. J. Reid  
 DEVELOPER 5/19/95 DATE

BY THE ENGINEER:  
 J. Sarell  
 ENGINEER 5.22.95 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.

Amie Engle 6/3/95  
 NATURAL RESOURCES CONSERVATION DISTRICT DATE

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

Robert Zichner 6/7/95  
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Qina Jummamy 6/22/95  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

6/15/95  
 CHIEF, LAND DEVELOPMENT DIVISION DATE

6/17/95  
 CHIEF, BUREAU OF HIGHWAYS DATE

6/16/95  
 CHIEF, BUREAU OF ENGINEERING DATE

4-26-96  
 DELETED CTRUC S-2 DETAIL, SEE BARRS #1 DATA; SWME #1 & DESIGN SUMMARY FOR SWME #1 DATE NO REVISION

OWNER / DEVELOPER  
 WILBEN LIMITED PARTNERSHIP  
 C/O ANDREW L. ISAACSON  
 5450 WHITELY PARK  
 TERRACE # 410  
 BETHESDA, MD 20814  
 301-530-1123

PROJECT  
 CLARKS GLEN  
 SECTION 1 / AREA 1

AREA  
 TAX MAP 35 PARCEL 205  
 5th ELECTION DISTRICT  
 HOWARD COUNTY, MD.

TITLE  
 GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.  
 Planners • Engineers • Surveyors  
 8818 Centre Park Drive • Suite 200 • Columbia, Maryland 21045  
 410-997-8900 FAX: 410-997-9282

DATE 5.22.95  
 DESIGNED BY: J.T.D.  
 DRAWN BY: R.J.C.  
 PROJECT NO: 93211  
 DATE: MAY 19, 1995  
 SCALE: 1" = 50'  
 JAYKANT D. PAREKH # 19148 DRAWING NO. 2 OF 26

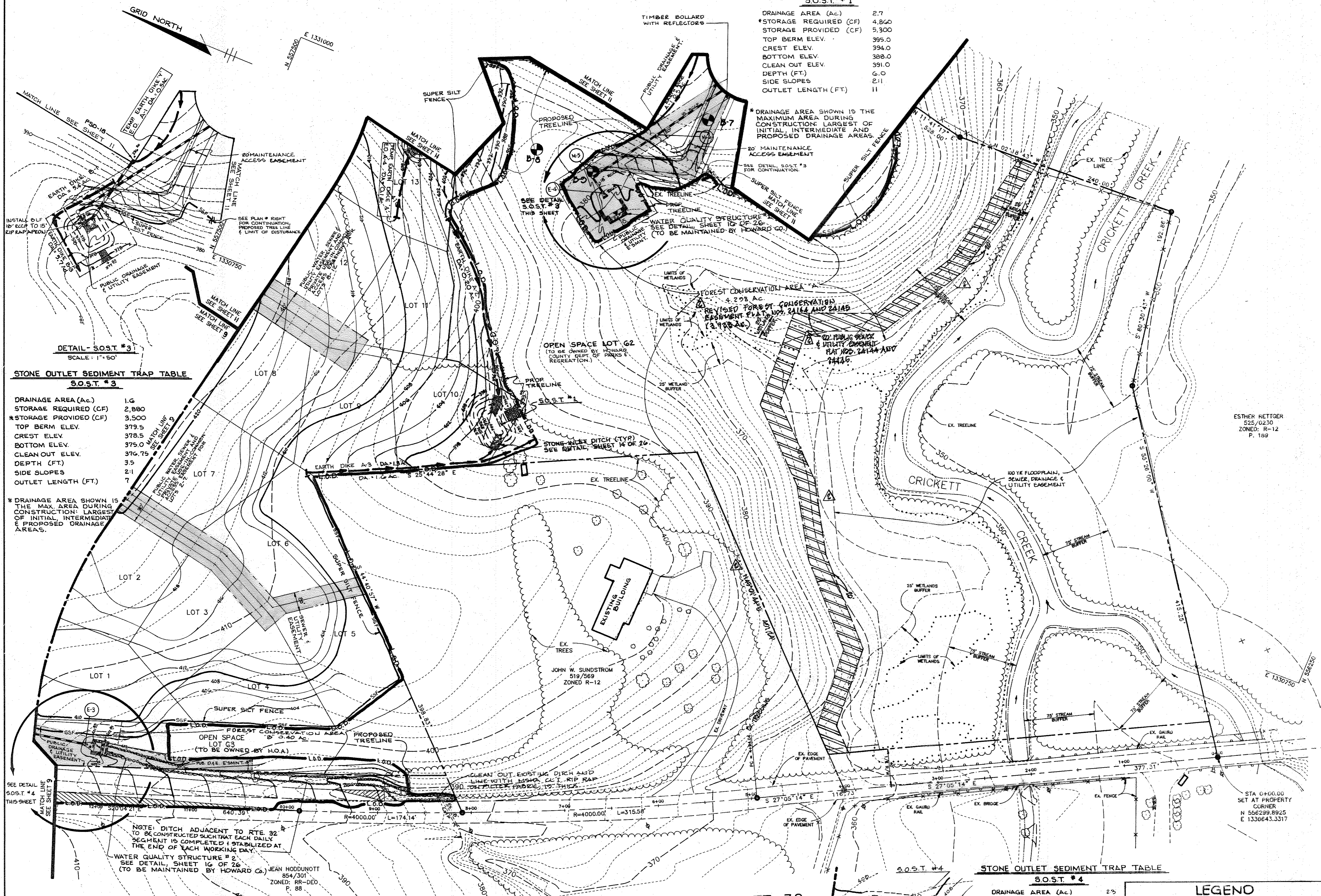
1733

1739

STONE OUTLET SEDIMENT TRAP TABLE

S.O.S.T. #1	
DRAINAGE AREA (Ac.)	2.7
*STORAGE REQUIRED (CF)	4,800
STORAGE PROVIDED (CF)	5,300
TOP BERM ELEV.	395.0
CREST ELEV.	394.0
BOTTOM ELEV.	388.0
CLEAN OUT ELEV.	391.0
DEPTH (FT.)	6.0
SIDE SLOPES	2:1
OUTLET LENGTH (FT.)	11

\* DRAINAGE AREA SHOWN IS THE MAXIMUM AREA DURING CONSTRUCTION. LARGEST OF INITIAL, INTERMEDIATE AND PROPOSED DRAINAGE AREAS.



DETAIL-S.O.S.T. #3

STONE OUTLET SEDIMENT TRAP TABLE

S.O.S.T. #3

DRAINAGE AREA (Ac.)	1.6
STORAGE REQUIRED (CF)	2,880
*STORAGE PROVIDED (CF)	3,500
TOP BERM ELEV.	379.5
CREST ELEV.	378.5
BOTTOM ELEV.	375.0
CLEAN OUT ELEV.	376.75
DEPTH (FT.)	3.5
SIDE SLOPES	2:1
OUTLET LENGTH (FT.)	7

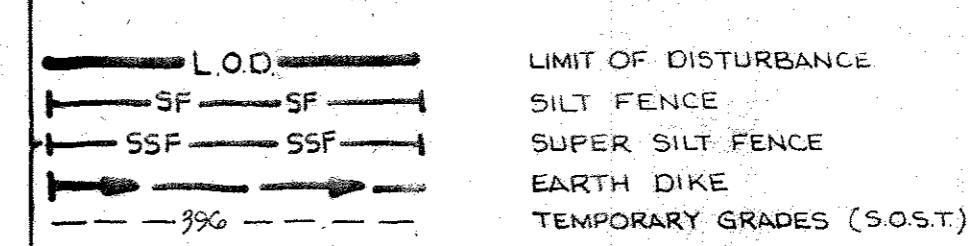
\* DRAINAGE AREA SHOWN IS THE MAX. AREA DURING CONSTRUCTION. LARGEST OF INITIAL, INTERMEDIATE & PROPOSED DRAINAGE AREAS.

STONE OUTLET SEDIMENT TRAP TABLE

S.O.S.T. #4	
DRAINAGE AREA (Ac.)	2.3
*STORAGE REQUIRED (CF)	4,140
STORAGE PROVIDED (CF)	4,620
TOP BERM ELEV.	402.0
CREST ELEV.	401.0
BOTTOM ELEV.	397.0
CLEAN OUT ELEV.	399.0
DEPTH (FT.)	4.0
SIDE SLOPES	2:1
OUTLET LENGTH (FT.)	9'

\* DRAINAGE AREA SHOWN IS THE MAXIMUM AREA DURING CONSTRUCTION. LARGEST OF INITIAL, INTERMEDIATE AND PROPOSED DRAINAGE AREAS.

LEGEND



GUILFORD ROAD MARYLAND RTE 32 MAJOR COLLECTOR

TRAPEZOIDAL DITCH (3' BOTTOM, 2:1 SIDE SLOPES) DEEPLY LINED W/ MSHA CL I RIP RAP ON FILTER FABRIC, 12" THICK.

STATE OF MARYLAND AS BUILT CERTIFICATE

CHRISTOPHER J. REID #19949 DATE 7.19.99

BY THE DEVELOPER: M. J. ... 5/19/95

BY THE ENGINEER: J. Farrell 5.22.95

ESTHER NETTGER ZONED: R-12 P. 189

Patricia Engle 4/1/95

Robert W. Ziehm 6/19/95

Approved: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Jim Stummans 6/22/95

Approved: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. Chief, Land Development Division 6/15/95

Chief, Bureau of Highways 6-14-95

Chief, Bureau of Engineering 6/16/95

OWNER / DEVELOPER: WILBEN LIMITED PARTNERSHIP C/O ANDREW L. ISAACSON 5450 WHITELY PARK TERRACE # 410 BETHESDA, MD 20814 301-530-1123

PROJECT: CLARKS GLEN SECTION 1 / AREA 1

AREA: TAX MAP 35 PARCEL 205 5TH ELECTION DISTRICT HOWARD COUNTY, MD.

TITLE: GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC. Planners Engineers Surveyors 8818 Centre Park Drive Suite 200 Columbia, Maryland 21045 410-997-8900 FAX: 410-997-9282

DATE: 5.22.95 DESIGNED BY: J.T.D.

DRAWN BY: R.J.C.

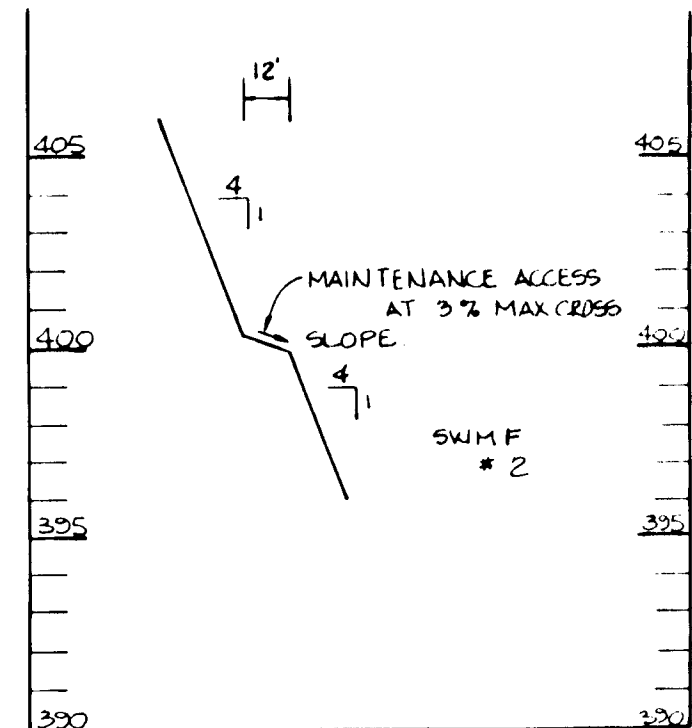
PROJECT NO: 93211

DATE: MAY 19, 1995

SCALE: 1" = 50'

JAYKANT D. PAREKH # 19148 DRAWING NO. 10 OF 26

SEDIMENT BASIN #2	
DRAINAGE AREA (AC.)	16.5
STORAGE REQUIRED (CF)	29,700
STORAGE PROVIDED (CF)	30,950
TOP BERM ELEVATION	400.3
WEIR ELEVATION	394.74 & 398.50
WEIR LENGTH	2'5" & 2'0"
CLEAN OUT ELEVATION	398.2
DEPTH (FT)	4.24
SIDE SLOPES	2:1



HOWARD RESEARCH AND DEVELOPMENT CORP.  
406/114  
ZONED NT-OPEN SPACE  
P. 59

SECTION A-A  
SCALE HORIZ. 1" = 5'  
VERT. 1" = 5'

STONE OUTLET SEDIMENT TRAP TABLE  
S.O.S.T. #2

DRAINAGE AREA (AC.)	4.9
STORAGE REQUIRED (CF)	8,800
STORAGE PROVIDED (CF)	9,600
TOP BERM ELEV.	399.0
CREST ELEV.	399.5
BOTTOM ELEV.	382.0
CLEAN OUT ELEV.	385.5
DEPTH (FT)	1.0
SIDE SLOPES	2:1
OUTLET LENGTH (FT)	20

\* DRAINAGE AREA SHOWN IS THE MAXIMUM AREA DURING CONSTRUCTION. LARGEST OF INITIAL, INTERMEDIATE AND PROPOSED DRAINAGE AREAS.

DETAIL - S.O.S.T. #2  
SCALE: 1" = 50'

STORM WATER MANAGEMENT FACILITY (S.W.M.F. #2)  
NET POND  
HAZARD CLASS 'A'  
(TO BE MAINTAINED BY HOWARD CO.)  
OPEN SPACE LOT #1  
TO BE OWNED BY HOWARD CO. DEPT. OF PARKS & RECREATION  
TEMPORARY SLOPE WITH 5' FLAT BOTTOM, 1' DEEP, 2:1 SIDE SLOPES, LINED WITH POLYETHYLENE RIP RAP OR FILTER FABRIC, 19" THICK  
SEE SHEET 15 OF 26 FOR OUTFALL STRUCTURE DETAIL

AS BUILT CERTIFICATE  
7.19.99  
DATE  
CHRISTOPHER J. REID #19945  
DEVELOPER

BY THE DEVELOPER:  
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.  
Michael J. Reid  
5/19/95  
DATE

BY THE ENGINEER:  
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.  
J. Saell  
5.22.95  
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.  
Patricia E. Lee  
4/3/95  
DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
Robert Z. Zielinski  
6/7/95  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
Gina Summons  
6/22/95  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
Chief, Land Development Division  
6/15/95  
DATE  
Chief, Bureau of Highways  
6-19-95  
DATE  
Chief, Bureau of Engineering  
6/16/95  
DATE

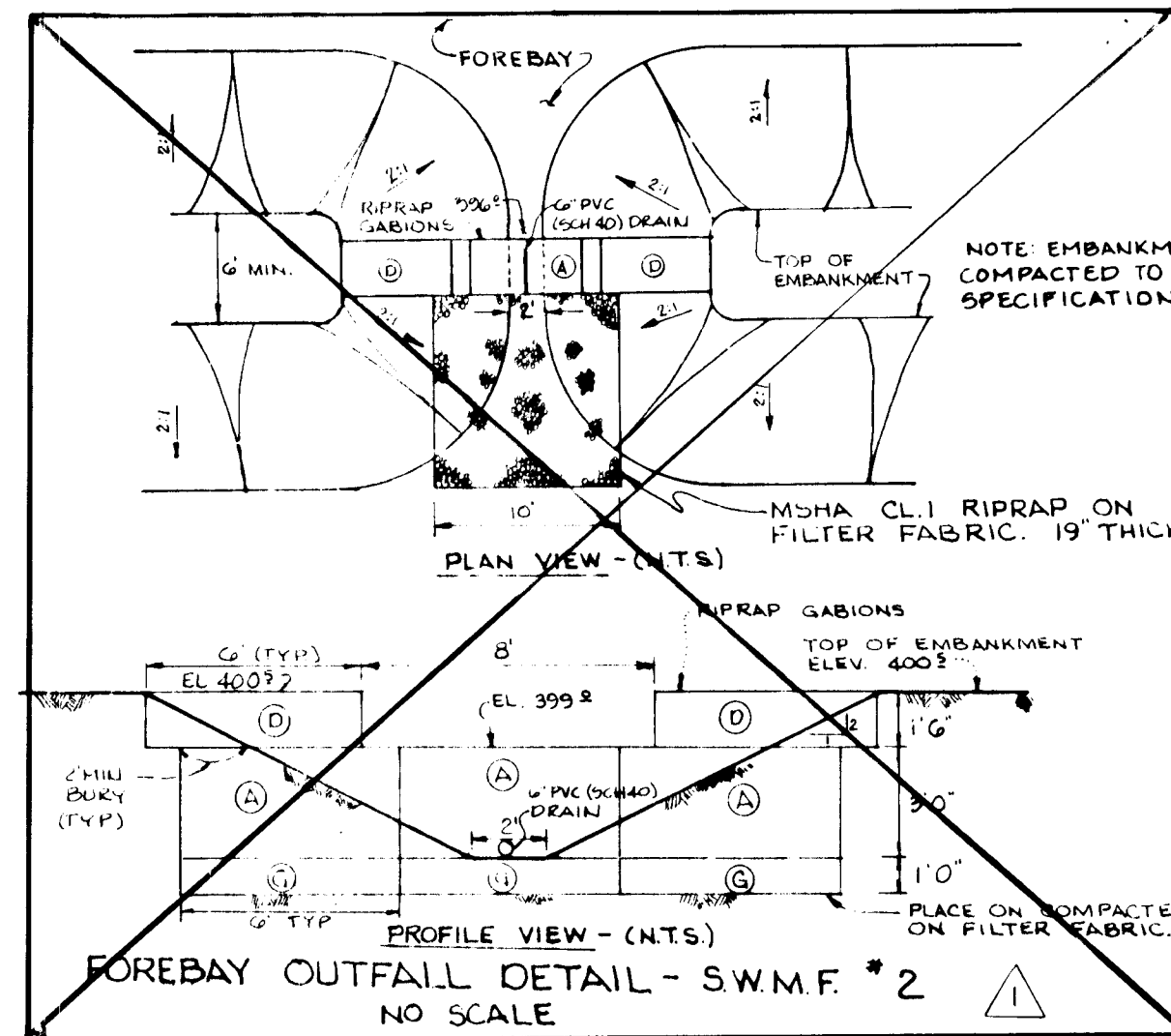
8/95 DELETED SWM DETAILS & DATA.  
DATE NO. REVISION  
OWNER / DEVELOPER  
WILBEN LIMITED PARTNERSHIP  
C/O ANDREW L. ISAACSON  
5450 WHITELY PARK  
TERRACE # 410  
BETHESDA, MD 20814  
301-530-1123

PROJECT  
CLARKS GLEN  
SECTION 1 / AREA 1  
AREA  
TAX MAP 35 PARCEL 205  
5th ELECTION DISTRICT  
HOWARD COUNTY, MD.

TITLE  
GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.  
Engineers, Surveyors  
8818 Centre Park Drive - Suite 200 - Columbia, Maryland 21045  
410-997-8900 FAX: 410-997-9282

DATE  
5.22.95  
DESIGNED BY: J.T.D.  
DRAWN BY: R.J.C.  
PROJECT NO.: 93211  
DATE: MAY 19, 1995  
SCALE: 1" = 50'  
JAYKANT D. PAREKH # 19148  
DRAWING NO. 11 OF 26



LEGEND

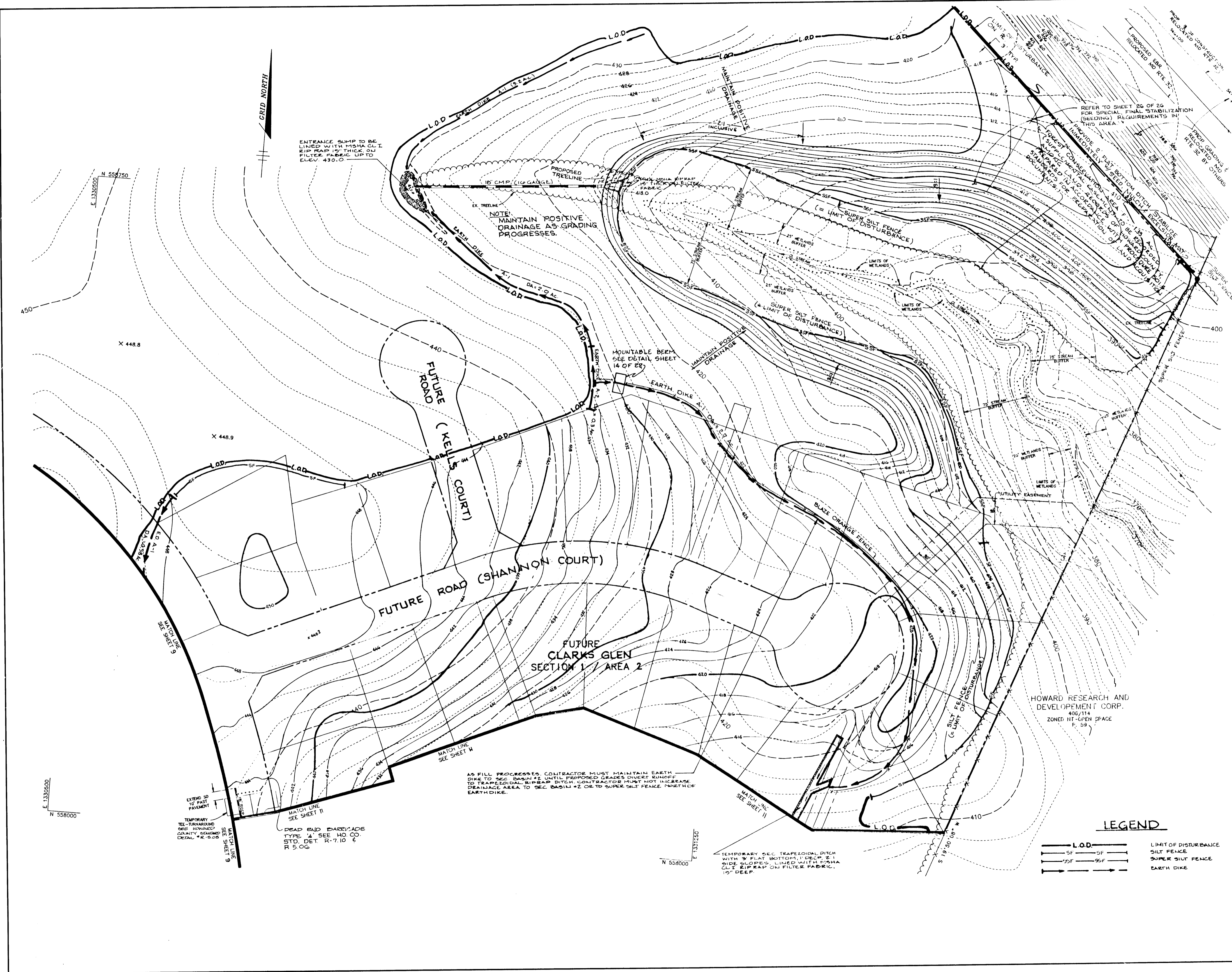
---	L.O.D.	LIMIT OF DISTURBANCE
---	SF	SILT FENCE
---	SSF	SUPER SILT FENCE
---	---	EARTH DIKE
---	---	TEMPORARY GRADES (S.O.S.T.)
---	---	STONE FENCE INLET PROTECTION (S.F.I.P.)

STORMWATER MANAGEMENT FACILITY DESIGN SUMMARY - SWMF#2

DESIGN STORM (YR)	ALLOWABLE RELEASE (cfs)	FACILITY INFLOW (cfs)	FACILITY DISCHARGE (cfs)	ROUTED # DISCHARGE (cfs)	WATER SURFACE ELEV. (ft)	STORAGE VOLUME (acre-ft)	REMARKS
2	34.8	25.9	37.0	34.4	394.6	1.12	DRAINAGE AREA = 24.7 ACRES.
10	156.3	63.2	43.3	156.0	397.7	1.55	
100	N/A	100.0	103.2	400.2	398.2	1.73	CLASS 'A' DAM

\* AT DESIGN POINT - WHERE CRICKET CREEK INTERSECTS PROPOSED ROUTE 32.

1739



AS BUILT CERTIFICATE  
 7-19-99  
 DATE  
 CHRISTOPHER J. REID #19949

BY THE DEVELOPER:  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Melba [Signature] 5/19/95  
 DEVELOPER DATE

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

J. Gareth 5.22.95  
 ENGINEER 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.

Raimon Egan [Signature] 6/7/95  
 US NATURAL RESOURCES CONSERVATION DISTRICT DATE

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

Robert W. Zichner 6/7/95  
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Jim Swannick 6/22/95  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Chris [Signature] 6/15/95  
 CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. [Signature] 6-19-95  
 CHIEF, BUREAU OF HIGHWAYS DATE

Paul [Signature] 6/16/95  
 CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER / DEVELOPER  
 WILBEN LIMITED PARTNERSHIP  
 C/O ANDREW L. TSAACSON  
 5450 WILFELY PARK  
 TERRACE # 410  
 BETHESDA, MD 20814  
 301-520-1123

PROJECT: CLARKS GLEN SECTION 1 / AREA 1

AREA: TAX MAP 30 PARCEL 205  
 5th ELECTION DISTRICT  
 HOWARD COUNTY, MD.

TITLE: GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.  
 Planners • Engineers • Surveyors  
 8818 Centre Park Drive • Suite 200 • Columbia, Maryland 21045  
 410-997-8900 FAX: 410-997-9282

5.22.95  
 DATE

DESIGNED BY: J.T.D.  
 DRAWN BY: R.J.C.  
 PROJECT NO: 93211  
 DATE: MAY 19, 1995  
 SCALE: 1" = 50'  
 JAYKANT D. PAREKH # 19148 DRAWING NO. 12 OF 26

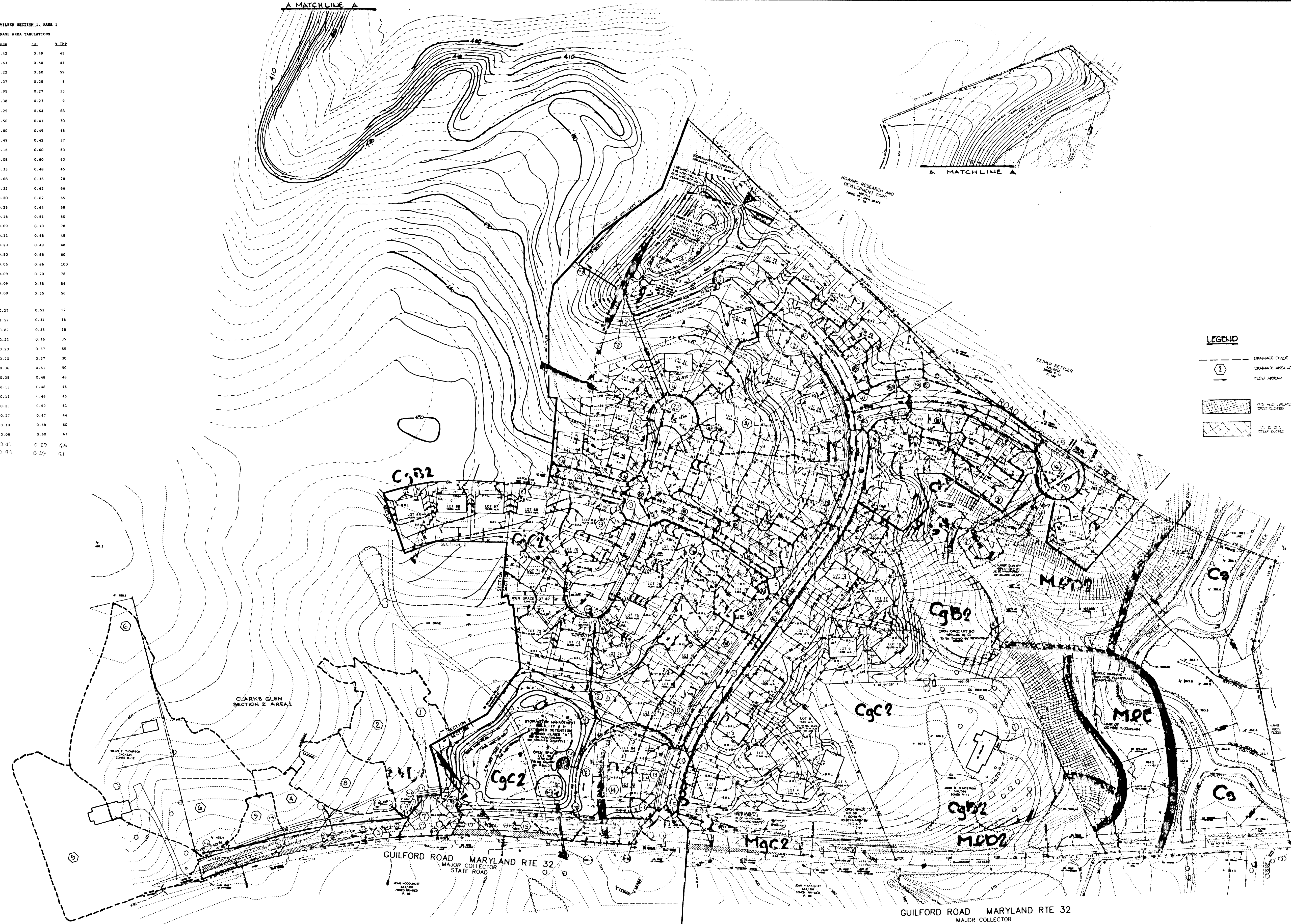
LEGEND

— L.O.D. —	LIMIT OF DISTURBANCE
— SF — SF —	SILT FENCE
— SF — SF —	SUPER SILT FENCE
— E.D. —	EARTH DIKE

1739

VILBEN SECTION 1, AREA 1  
DRAINAGE AREA TABULATIONS

AREA	AREA	AREA
1	0.42	0.49
2	0.43	0.50
3	0.23	0.60
4	0.37	0.25
5	1.74	0.27
6	2.38	0.27
7	0.25	0.64
8	0.50	0.41
9	0.80	0.49
10	0.49	0.42
11	0.16	0.60
12	0.08	0.60
13	0.33	0.48
14	0.48	0.36
15	0.32	0.62
16	0.20	0.62
17	0.25	0.64
18	0.16	0.51
19	0.09	0.70
20	0.11	0.48
21	0.23	0.49
22	0.50	0.58
23	0.05	0.66
24	0.09	0.70
25	0.09	0.51
26	0.09	0.55
30	0.37	0.52
31	1.17	0.34
32	0.87	0.35
33	0.23	0.46
34	0.20	0.57
35	0.20	0.37
36	0.06	0.51
37	0.35	0.48
38	0.11	1.48
39	0.11	1.48
40	0.23	0.59
41	0.27	0.47
42	0.10	0.58
43	0.08	0.60
44	0.47	0.29
45	0.80	0.29



**LEGEND**

- DRAINAGE DITCH
- DRAINAGE AREA
- FLOW ARROW
- [Symbol] ---
- [Symbol] ---
- [Symbol] ---

AS BUILT CERTIFICATE

*Christopher J. Reid* 7-19-99  
CHRISTOPHER J. REID #19949 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
*Ann Simononi* 6/22/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
*Abel Ammons* 6/15/95  
CHIEF, LAND DEVELOPMENT DIVISION DATE

*William M. Quaker* 6-14-95  
CHIEF, BUREAU OF HIGHWAYS DATE

*Richard E. Eason* 6/16/95  
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER / DEVELOPER  
WILBEN LIMITED PARTNERSHIP  
C/O ANDREW L. ISAACSON  
5450 WHITELY PARK  
TERRACE # 410  
BETHESDA, MD 20814  
301-530-1123

PROJECT  
**CLARKS GLEN SECTION 1 AREA 1**

AREA  
TAX MAP 35 PARCEL 205  
5TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE  
**DRAINAGE AREA MAP**

**RIEMER MUEGGE & ASSOCIATES, INC.**  
Planners • Engineers • Surveyors  
8810 Centre Park Drive • Suite 200 • Columbia, Maryland 21045  
410-997-8900 FAX: 410-997-9282

5-22-95  
DATE

DESIGNED BY: JTD/AAP  
DRAWN BY: R.J.C.  
PROJECT NO: 93211  
DATE: MAY 19, 1995  
SCALE: 1"=100'  
DRAWING NO. 13 OF 26

*J. Larell*  
JAYKANT D. PAREKH # 19148

1739

**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be redistributed 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. per 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. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 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. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

**PERMANENT SEEDING NOTES**

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived 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:** In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 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. per 1000 sq.ft.).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

**Seeding:** For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:

- 1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
- 2) Use sod.
- 3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

**Mulching:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

**Maintenance:** Inspect all seeded areas and make needed repairs, replacements and reseedings.

**SEDIMENT CONTROL NOTES**

A minimum of 10 hours notice must be given to the Howard County Department of Inspections Licenses and Permits, Sediment Control Division prior to the start of any construction, (313-1855).

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 AND EROSION CONTROL.

Following initial soil disturbance or redistribution, 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 for any other disturbed or graded areas on the project site.

All sediment traps/basins shown must be fenced and warning signs posted around the perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION 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.

All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

Site Analysis:

Total Area of Site: 40.96 acres  
Area Disturbed: 20.00 acres  
Area to be roofed or paved: 6.00 acres  
Area to be vegetatively stabilized: 20.70 acres  
Total Cut: 100,000 cu. yds.  
Total Fill: 100,000 cu. yds.

Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

Additional sediment controls must be provided, if deemed necessary by the Howard County Department of Public Works Sediment Control Inspector.

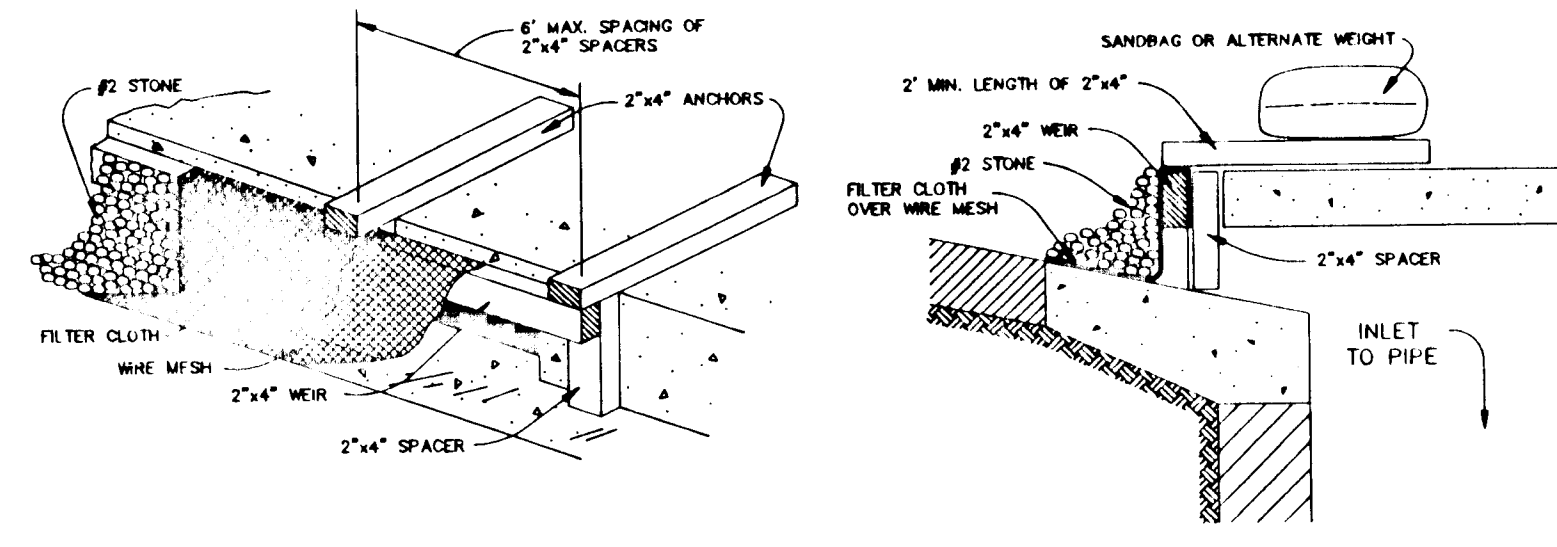
Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.

Sediment will be removed from traps when its depth reaches clean out elevation shown on the plans.

Cut and fill quantities provided under site analysis do not represent bid quantities. These quantities do not distinguish between topsoil, structural fill or embankment material, nor do they reflect consideration of undercutting or removal of unsuitable material. The contractor shall familiarize himself with site conditions which may affect the work.

On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this approval by the inspection agency is made.

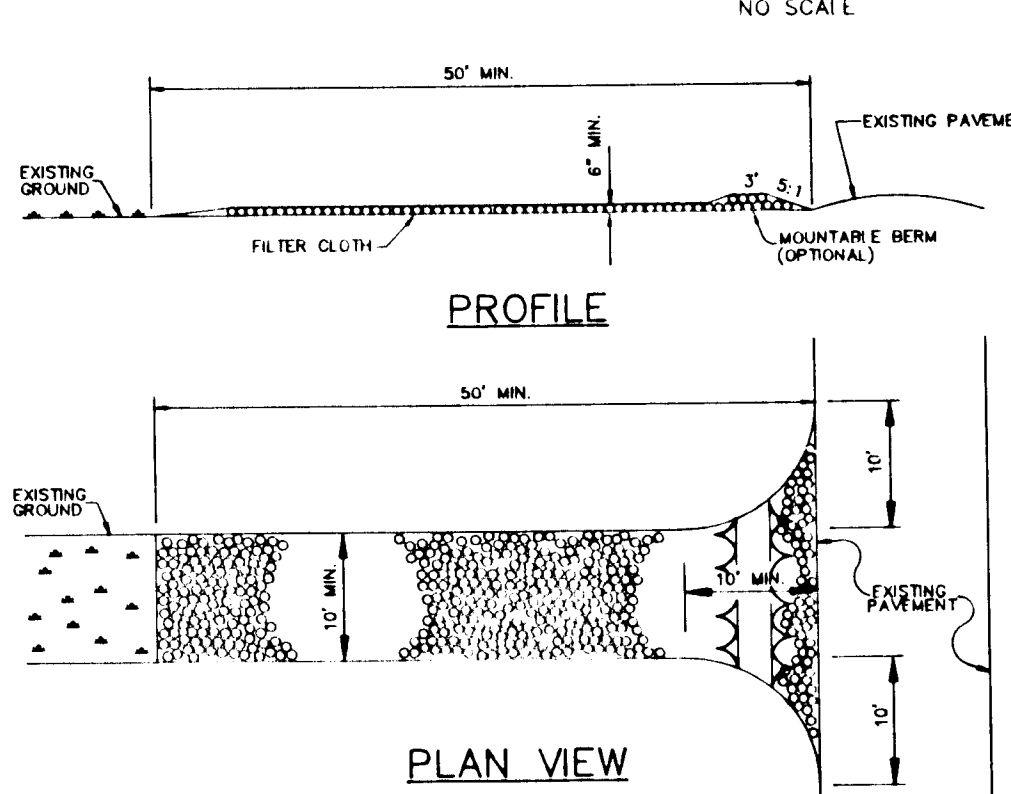
Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.



**CONSTRUCTION SPECIFICATIONS**

1. MATERIALS
  - A. WOODEN FRAME IS TO BE CONSTRUCTED OF 2"x4" CONSTRUCTION GRADE LUMBER.
  - B. WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC, AND FILTER, WITH WATER FULLY IMPONDED AGAINST IT.
  - C. FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE, RESISTANT TO SUNLIGHT WITH A SOLE SIZE FOR 40-85 TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
  - D. STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE CLOTH.
  - E. PROCEDURE (FOR CONJUGATE PROTECTION)
    - A. ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MIN. WIDTH BY THROAT LENGTH PLUS 4") TO THE 2"x4" WIRE (MEASURING THROUGH LENGTH PLUS 2") AS SHOWN ON THE STANDARD DRAWING.
    - B. PLACE A PIECE OF APPROVED FILTER CLOTH (40-85 SEVE) OF THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH TO THE 2"x4" WIRE.
2. SECURELY NAIL THE 2"x4" WIRE TO 8" LONG VERTICAL SPACERS TO BE LOCATED BETWEEN THE WIRE AND INLET FACE (MAX. 4' APART).
3. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2" LENGTHS) OF 2"x4" TO THE TOP OF THE WIRE AT SPACER LOCATIONS. THESE 2"x4" ANCHORS SHALL EXTEND ABOVE THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
4. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1' BEYOND BOTH ENDS OF THE THROAT OPENING.
5. FORM THE WIRE MESH AND FILTER CLOTH TO THE CONCRETE OUTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 2" STONE OVER THE WIRE MESH AND FILTER FABRIC IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND FILTER CLOTH.
6. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
7. ASSURE THAT STORM FLOW DOES NOT BYPASS INLET BY INSTALLING TEMPORARY EARTH OR ASPHALT DIKES DIRECTING FLOW INTO INLET.

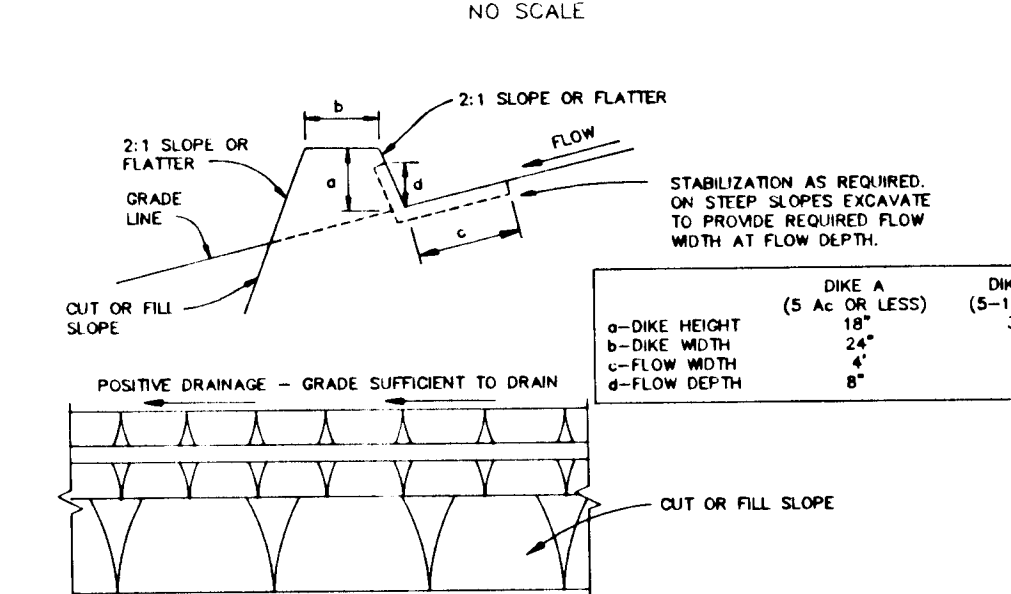
**STONE FILTER INLET PROTECTION**



**CONSTRUCTION SPECIFICATIONS**

1. STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 30 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM WOULD APPLY).
3. THICKNESS - NOT LESS THAN 18" (8" INCHES).
4. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. FILTER CLOTH WILL BE FASTENED ON A SINGLE RESIDENCE LOT.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PERMITTED.
7. A MOUNTAIN BERM 5' HIGH SHOULD BE PROVIDED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONES.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE INTO PUBLIC RIGHTS-OF-WAY. WHEELS WHICH ARE NOT CLEANED SHALL BE WASHED ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

**STABILIZED CONSTRUCTION ENTRANCE**

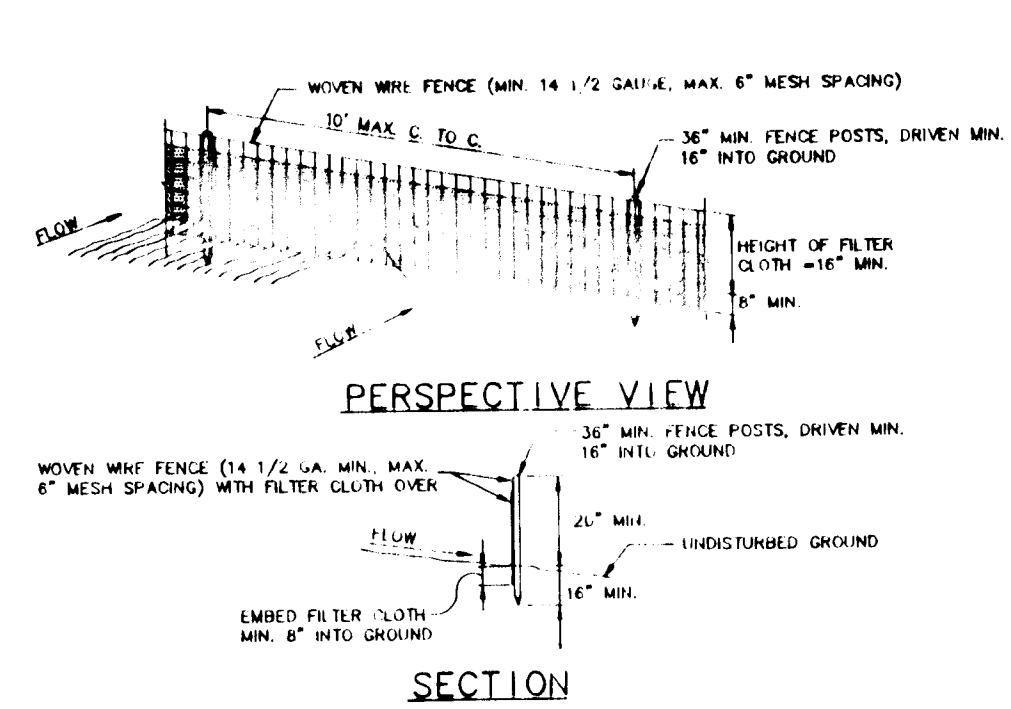


**CONSTRUCTION SPECIFICATIONS**

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF FRICTION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN (WHICH EITHER IS THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED).
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNELS AS PER THE CHART BELOW.

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5-3.0%	SEED & STRAW MULCH	SEED & STRAW MULCH
2	3.1-5.0%	SEED & STRAW MULCH	SEED USING JUTE OR ENGLISH SOG, 2" STONE
3	5.1-8.0%	SEED WITH JUTE OR SOG, 2" STONE	LINED RIPRAP 4"-8"
4	8.1-20%	LINED RIPRAP 4"-8"	ENGINEERED DESIGN

**EARTH DIKE**

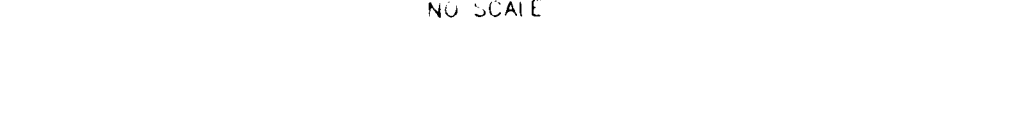


**CONSTRUCTION NOTES FOR FACILITATED SILT FENCE**

1. WHEN WIRE FENCE IS TO BE FASTENED TO FENCE POSTS WITH WIRE TIES AND STAPLES, FILTER CLOTH IS TO BE FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 4' AT TOP AND MID SECTION.
2. EACH TIE SECTION OF FILTER CLOTH AND ON EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES (6") AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REPLACED WHEN "BLINDS" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER 1 OR 2 TYPE OR 2" HAWKWOOD. FENCE: WOVEN WIRE, 14 GA. 2" MAX. SPACING. FILTER CLOTH: FILTER, 40-85 SEVE, STAPLES: GALVANIZED, ENGLISH SOG, OR APPROVED EQUAL. PRE-FABRICATED UNIT: GALVANIZED, ENGLISH SOG, OR APPROVED EQUAL.

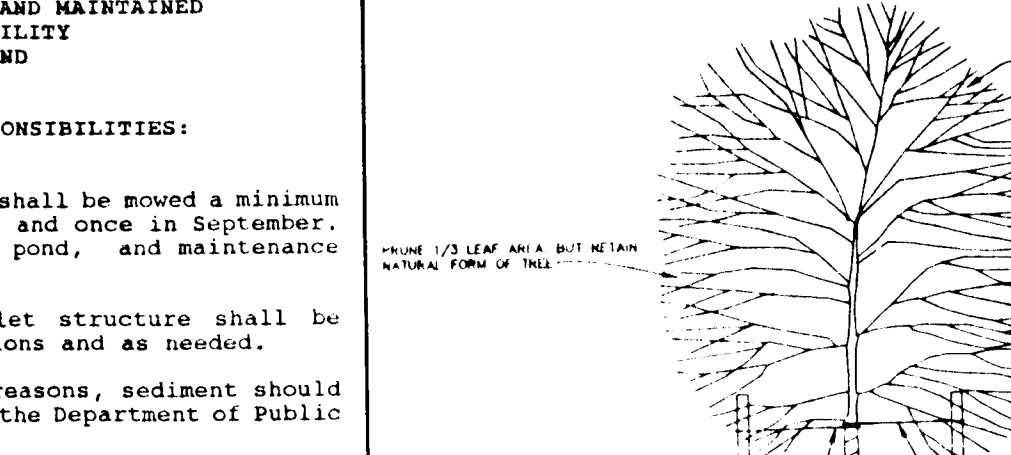
**SILT FENCE DETAIL**



**TREE PRESERVATION PROCEDURES**

1. THE EDGE OF MOWED OR MAINTAINED AREAS SHALL BE MAINTAINED TO THE START OF CONSTRUCTION ACTIVITY.
2. MOWED AREAS SHALL BE MAINTAINED TO THE START OF CONSTRUCTION ACTIVITY.
3. PRESERVATION FENCING SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL MAINTAIN THE FENCING THROUGHOUT THE PROJECT. THE FENCING SHALL BE MAINTAINED TO THE START OF CONSTRUCTION ACTIVITY. THE FENCING SHALL BE MAINTAINED TO THE START OF CONSTRUCTION ACTIVITY.
4. PRESERVATION FENCING SHALL BE MAINTAINED TO THE START OF CONSTRUCTION ACTIVITY.
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9. PRESERVATION FENCING SHALL BE MAINTAINED TO THE START OF CONSTRUCTION ACTIVITY.
10. PRESERVATION FENCING SHALL BE MAINTAINED TO THE START OF CONSTRUCTION ACTIVITY.

**PROTECTIVE TREE FENCING ELEVATION DETAIL**



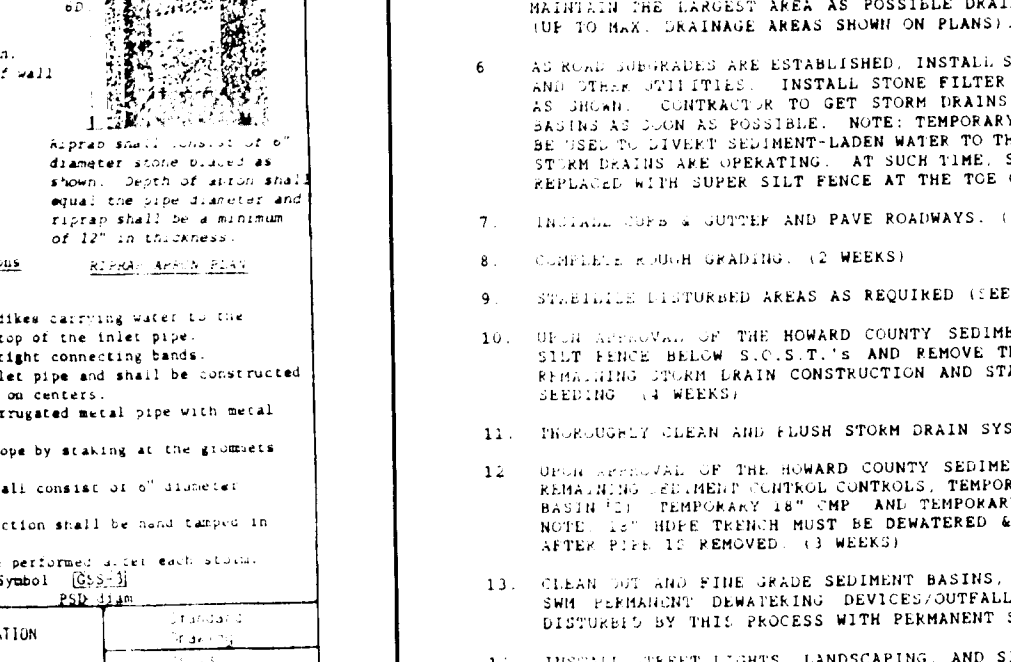
**OPERATION AND MAINTENANCE SCHEDULE OF HOME OWNERS ASSOCIATION OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY EXTENDED DETENTION POND SWMF #1**

1. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
2. Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
3. When deemed necessary for aesthetic reasons, sediment should be removed from the pond. Approval of the Department of Public Works is required.

**OPERATION AND MAINTENANCE SCHEDULE OF HOME OWNERS ASSOCIATION OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY WET POND SWMF #2**

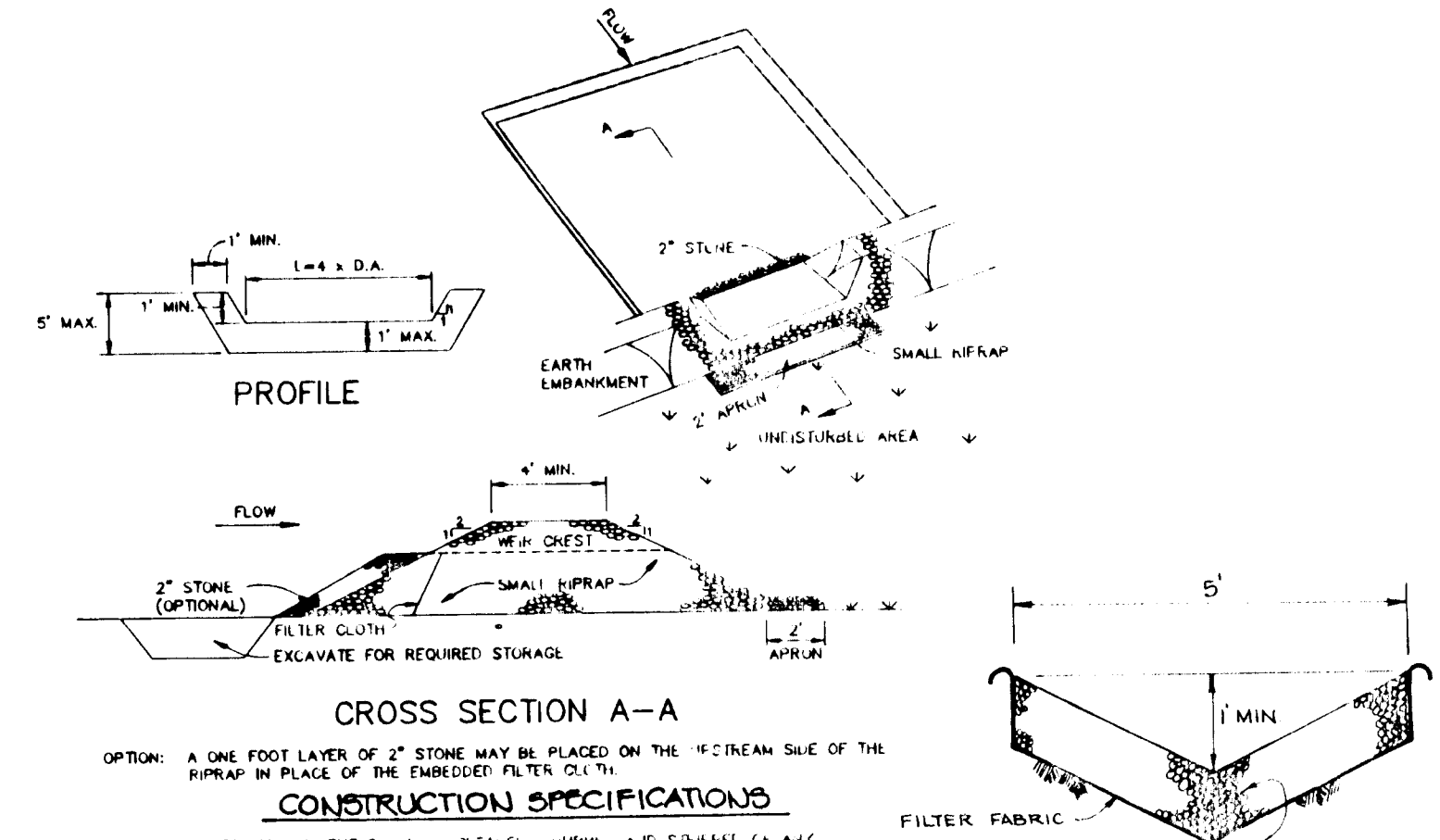
1. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
2. Debris and litter shall be removed during regular mowing operations and as needed.
3. When deemed necessary for aesthetic reasons, sediment should be removed from the pond. Approval of the Department of Public Works is required.

**TREE PLANTING DETAIL**



**SEQUENCE OF CONSTRUCTION**

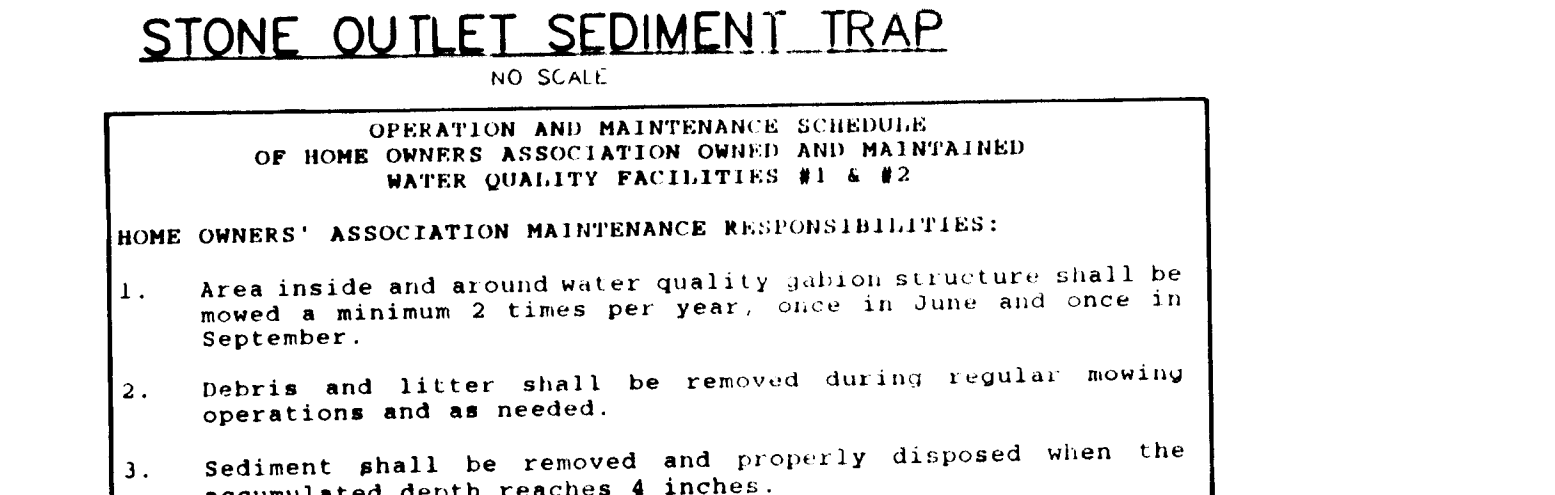
1. OBTAIN ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION. ALL WORK SHALL COMPLY WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ANY OTHER APPLICABLE REGULATIONS.
2. INSTALL PERIMETER CONTROLS - STABILIZED CONSTRUCTION ENTRANCES, PERIMETER SLOPES, SILT FENCE (SOBER & REGULAR), 5.0-8.0% SLOPE, TEMPORARY 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES (EXCEPT AS NOTED ON PLANS). PERIMETER CONTROLS SHALL BE CONSTRUCTED AND STABILIZED AFTER THE DOWNSTREAM DITCH HAS BEEN CONSTRUCTED AND STABILIZED. (13 WEEKS)
3. CONSTRUCT SEDIMENT CONTROL BASINS 1' x 1' AND ASSOCIATED OUTFALLS. (8 WEEKS)
4. INSTALL AND COMBINE INLETS 1'-8" x 1'-8" x 1'-8" AND MANHOLE #1. (13 WEEKS)
5. CONSTRUCT 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES EXCEPT AS NOTED ON PLANS. (13 WEEKS)
6. CONSTRUCT 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES EXCEPT AS NOTED ON PLANS. (13 WEEKS)
7. CONSTRUCT 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES EXCEPT AS NOTED ON PLANS. (13 WEEKS)
8. CONSTRUCT 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES EXCEPT AS NOTED ON PLANS. (13 WEEKS)
9. CONSTRUCT 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES EXCEPT AS NOTED ON PLANS. (13 WEEKS)
10. CONSTRUCT 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES EXCEPT AS NOTED ON PLANS. (13 WEEKS)
11. CONSTRUCT 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES EXCEPT AS NOTED ON PLANS. (13 WEEKS)
12. CONSTRUCT 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES EXCEPT AS NOTED ON PLANS. (13 WEEKS)
13. CONSTRUCT 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES EXCEPT AS NOTED ON PLANS. (13 WEEKS)
14. CONSTRUCT 18" HIGH NORTH OF SUMP #2 AND EARTH DIKES EXCEPT AS NOTED ON PLANS. (13 WEEKS)



**CONSTRUCTION SPECIFICATIONS**

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, UNLESS A 4" STRIP OF ASH VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZE STONES, BRICKS, ORGANIC MATERIAL, OR OTHER OBJECTS. THE EMBANKMENT SHALL BE COMPACTED BY TRAVELING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-6" ALONG WITH A 1" THICKNESS OF 2" AGGREGATE PLACED ON THE UP-SLOPE SIDE ON THE SMALL RIPRAP.
5. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT FRESHEN AND WATER POLLUTION IS MINIMIZED.
7. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE EMBANKMENT AREA HAS BEEN PROPERLY STABILIZED.

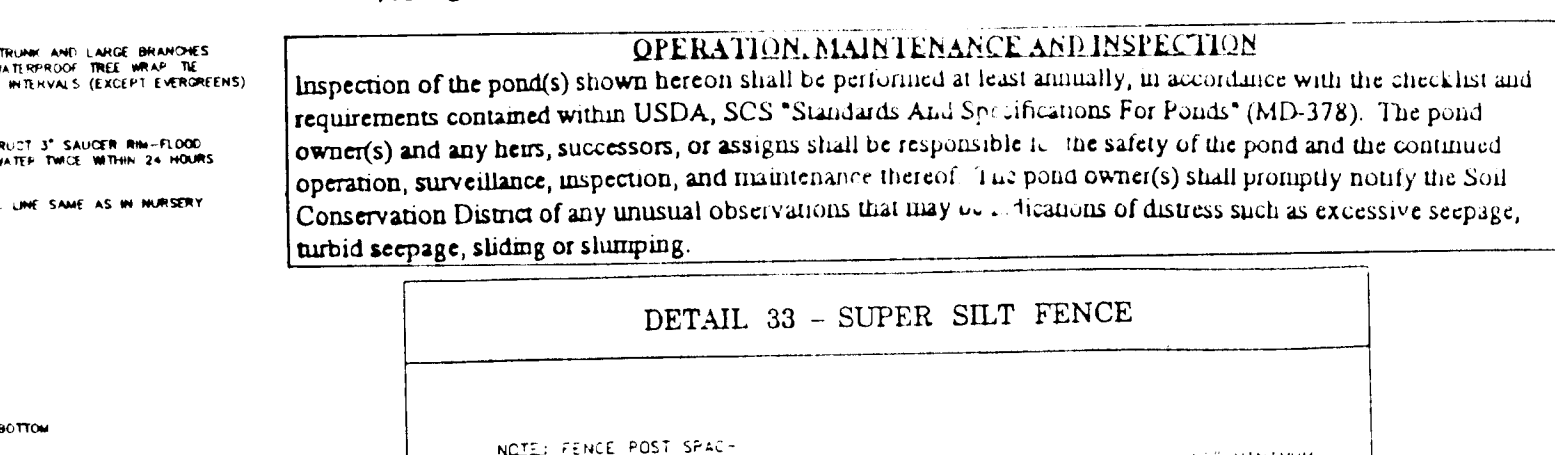
**STONE OUTLET SEDIMENT TRAP**



**OPERATION AND MAINTENANCE SCHEDULE OF HOME OWNERS ASSOCIATION OWNED AND MAINTAINED WATER QUALITY FACILITIES #1 & #2**

1. Area inside and around water quality gabion structure shall be mowed a minimum 2 times per year, once in June and once in September.
2. Debris and litter shall be removed during regular mowing operations and as needed.
3. Sediment shall be removed and properly disposed when the accumulated depth reaches 4 inches.

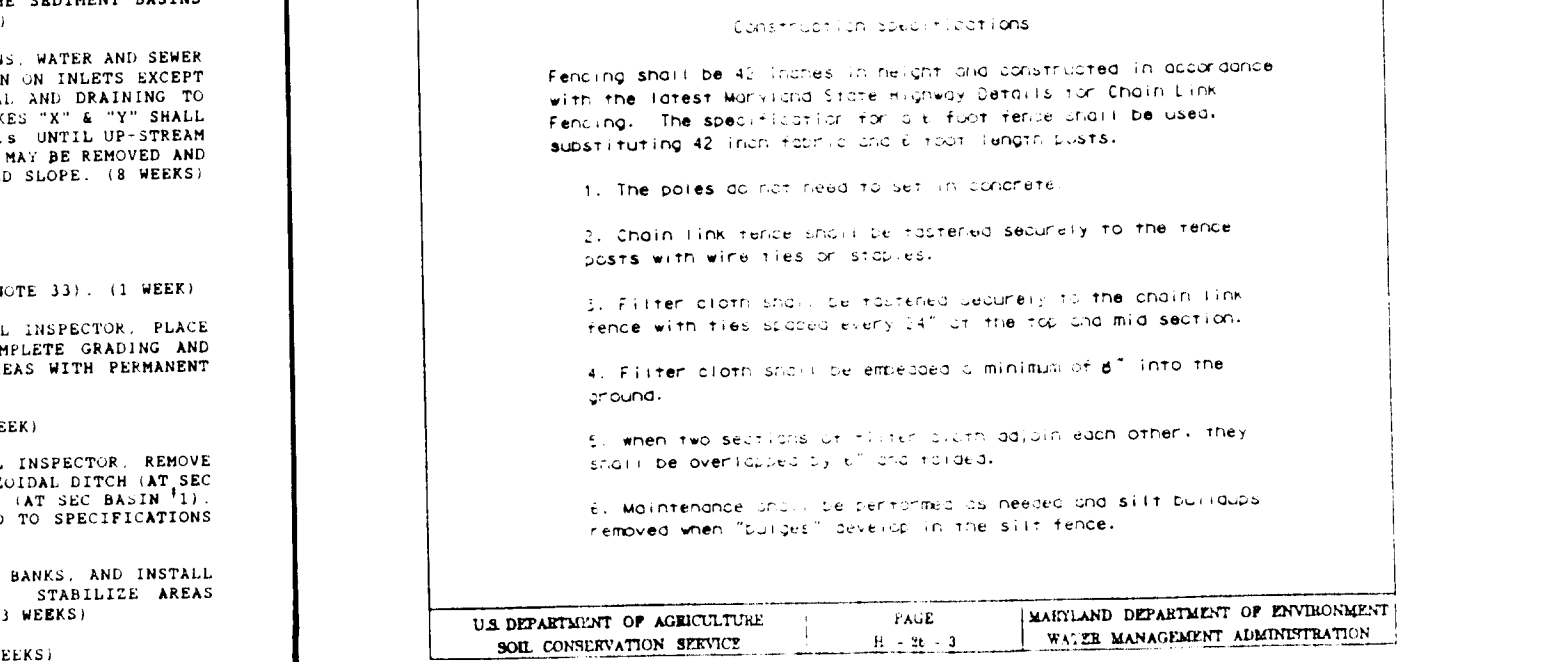
**10' MOUNTABLE BERM**



**OPERATION, MAINTENANCE AND INSPECTION**

Inspection of the pond(s) shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards and Specifications For Ponds" (MD-378). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be a forerunner of distress such as excessive seepage, turbid seepage, sliding or slumping.

**DETAIL 33 - SUPER SILT FENCE**



STATE OF MARYLAND  
AS BUILT CERTIFICATE  
Christopher J. Reid #19949  
7-19-99  
DATE

BY THE DEVELOPER:  
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*Michael Reid* 5/19/95  
DEVELOPER DATE

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

*J. Farkel* 5.22.95  
ENGINEER DATE

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

*Patricia Engle /es* 6/2/95  
US NATURAL RESOURCE CONSERVATION DISTRICT DATE

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

*Robert W. Zielow* 6/7/95  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

*Gina Strummary* 6/24/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

*Mike Deamus* 6/15/95  
CHIEF, LAND DEVELOPMENT DIVISION DATE

*Andrew M. Daveler* 6-14-95  
CHIEF, BUREAU OF HIGHWAYS DATE

*Paul S. Sporn* 6/16/95  
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER / DEVELOPER  
WILLEN LIMITED PARTNERSHIP  
C/O ANDREW L. ISAACSON  
5450 WHITE PLY PARK  
TERKLAKE # 410  
BETHESDA, MD 20814  
301-620-1123

PROJECT  
**CLARKS GLEN SECTION 1 AREA 1**

AREA  
TAX MAP 35, PARCEL 205  
5TH ELECTION DISTRICT  
HOWARD COUNTY, MD

TITLE  
**SEDIMENT CONTROL DETAILS AND NOTES**

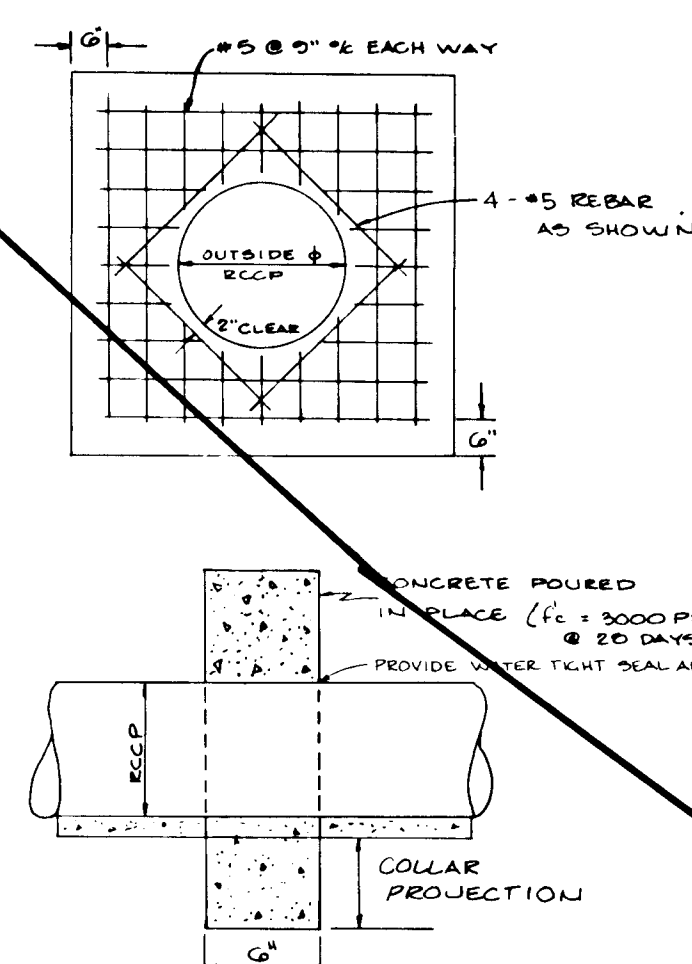
RIEMER MUEGGE & ASSOCIATES, INC.  
Planners - Engineers - Surveyors  
8818 Centre Park Drive - Suite 200 - Columbia, Maryland 21045  
410-997-8000 FAX: 410-997-9282

5.22.95  
DATE  
*J. Farkel*  
JAYKANT D. PARKH # 19145  
DESIGNED BY: J.F.A.P.  
DRAWN BY: J.F.A.P.  
PROJECT NO.: 35211  
DATE: MAY 19, 1995  
SCALE: 1/8" = 1'-0"

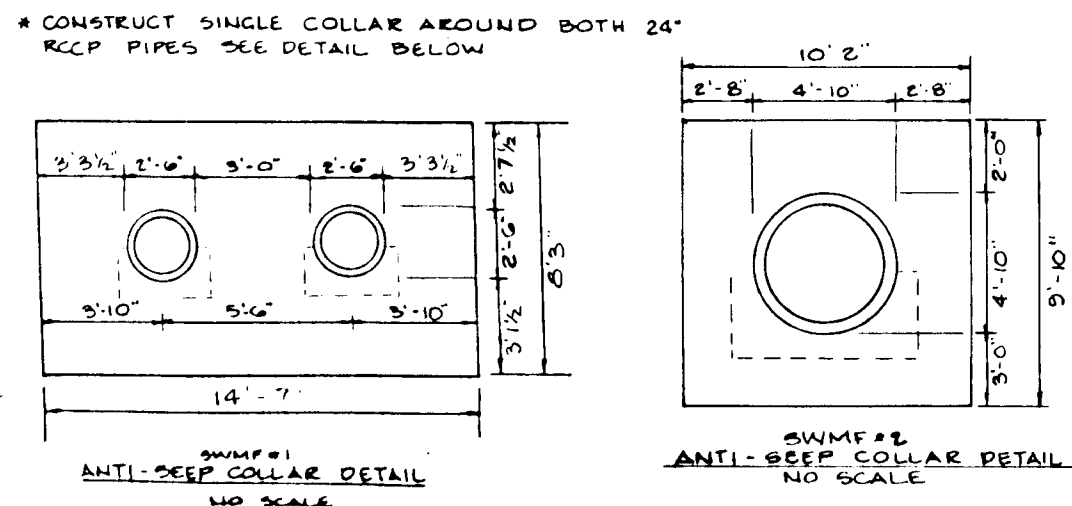
DATE: MAY 19, 1995  
SCALE: 1/8" = 1'-0"  
DRAWING NO. 14 OF 26

1739

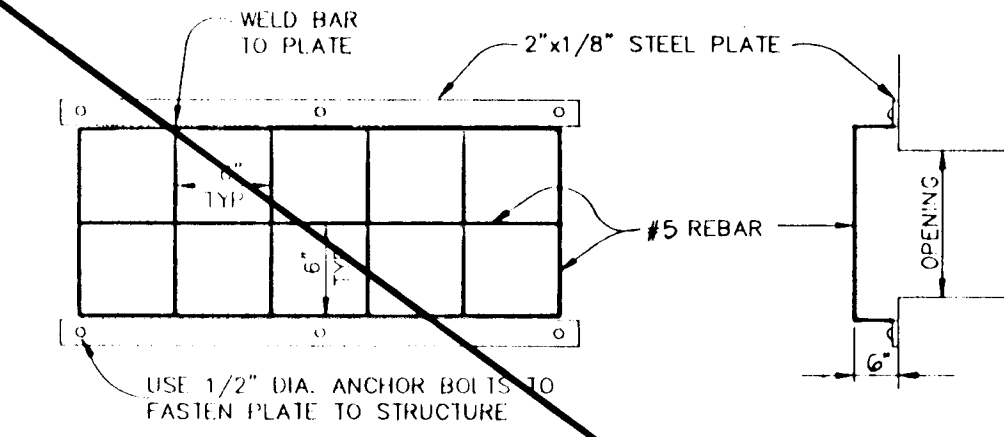
ANTI-SEEP COLLAR TABLE			
SWM FACILITY	NO OF COLLARS	PROJECTION	COLLAR DIMENSION
SWMF #1	1*	2 7/8"	HORIZ. 14" 7" VERT. 0 5"
SWMF #2	2	2'-0"	10'2" x 5'-10"



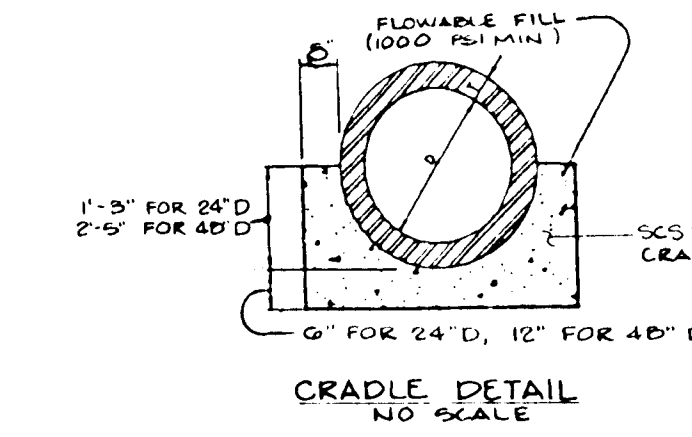
**CONCRETE ANTI-SEEP COLLAR**  
NO SCALE



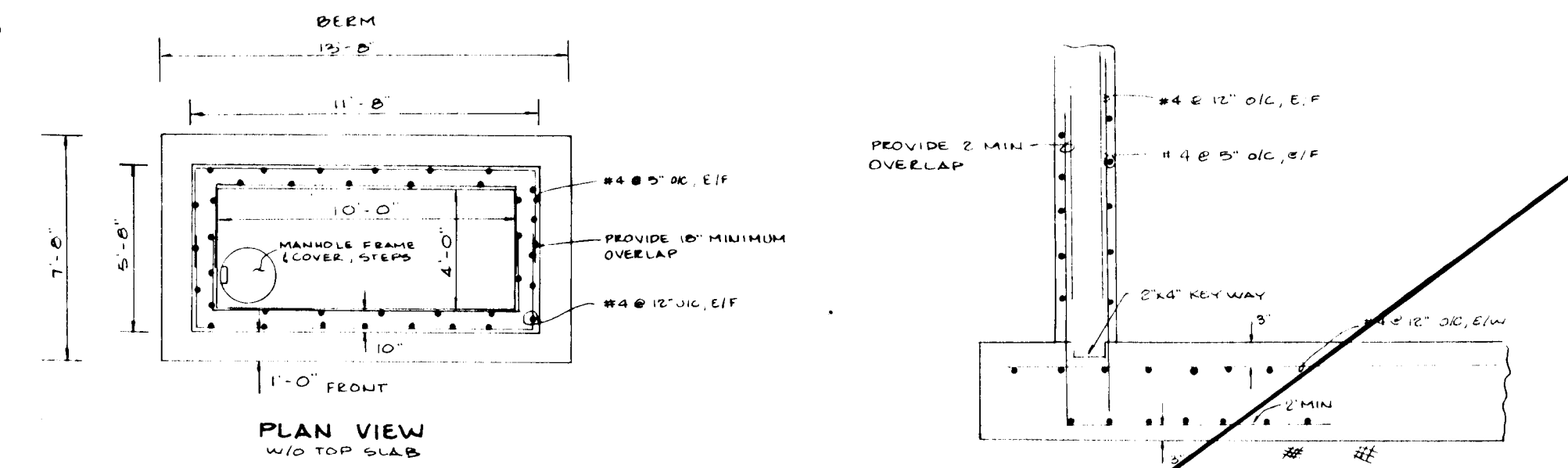
**IMPERVIOUS CORE & CORE TRENCH DETAIL**  
NO SCALE



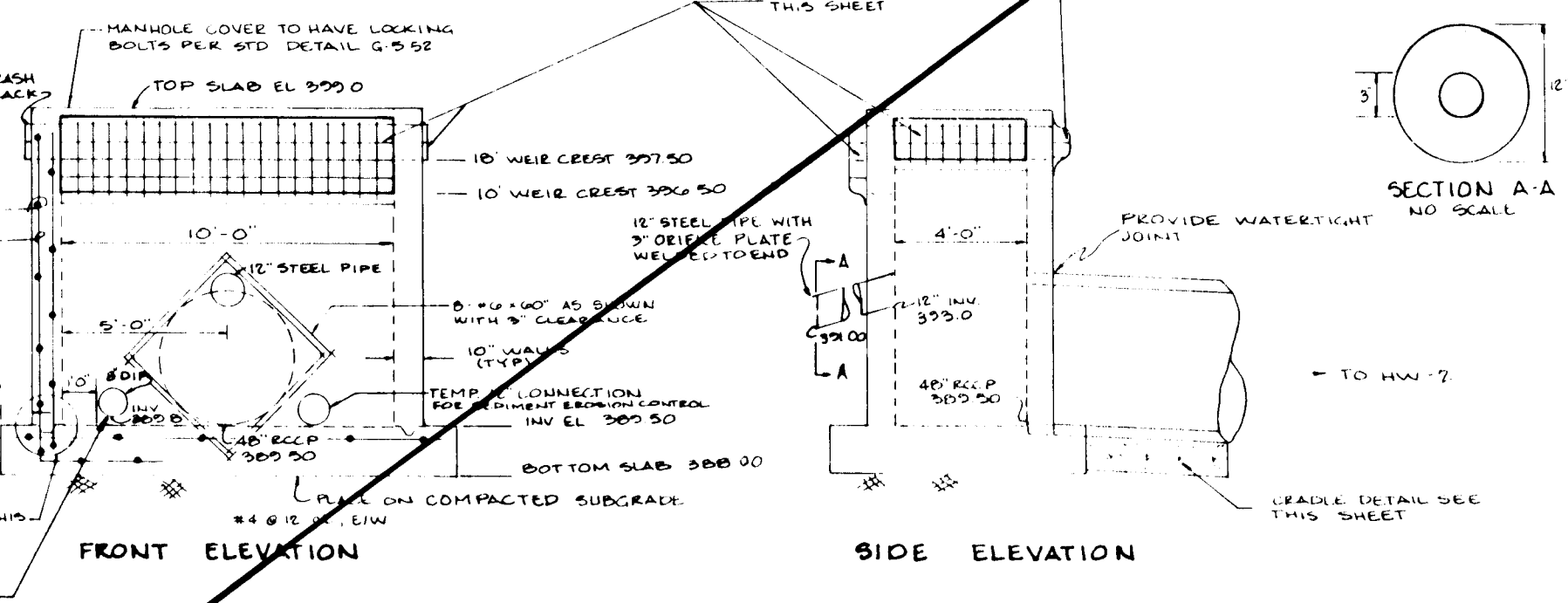
**TRASH RACK DETAIL**  
NO SCALE



**CRADLE DETAIL**  
NO SCALE



**PLAN VIEW**  
W/O TOP SLAB

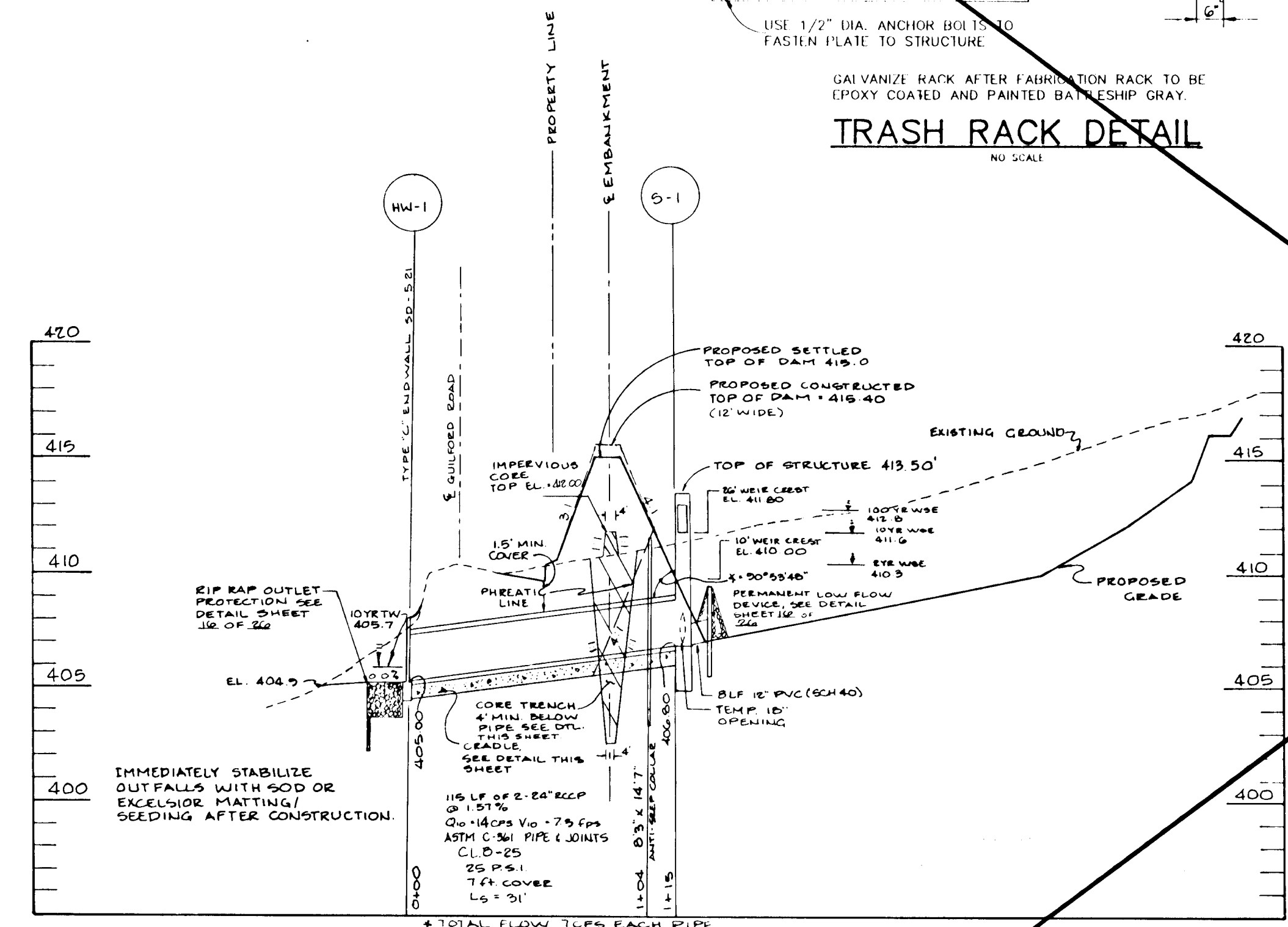


**FRONT ELEVATION**

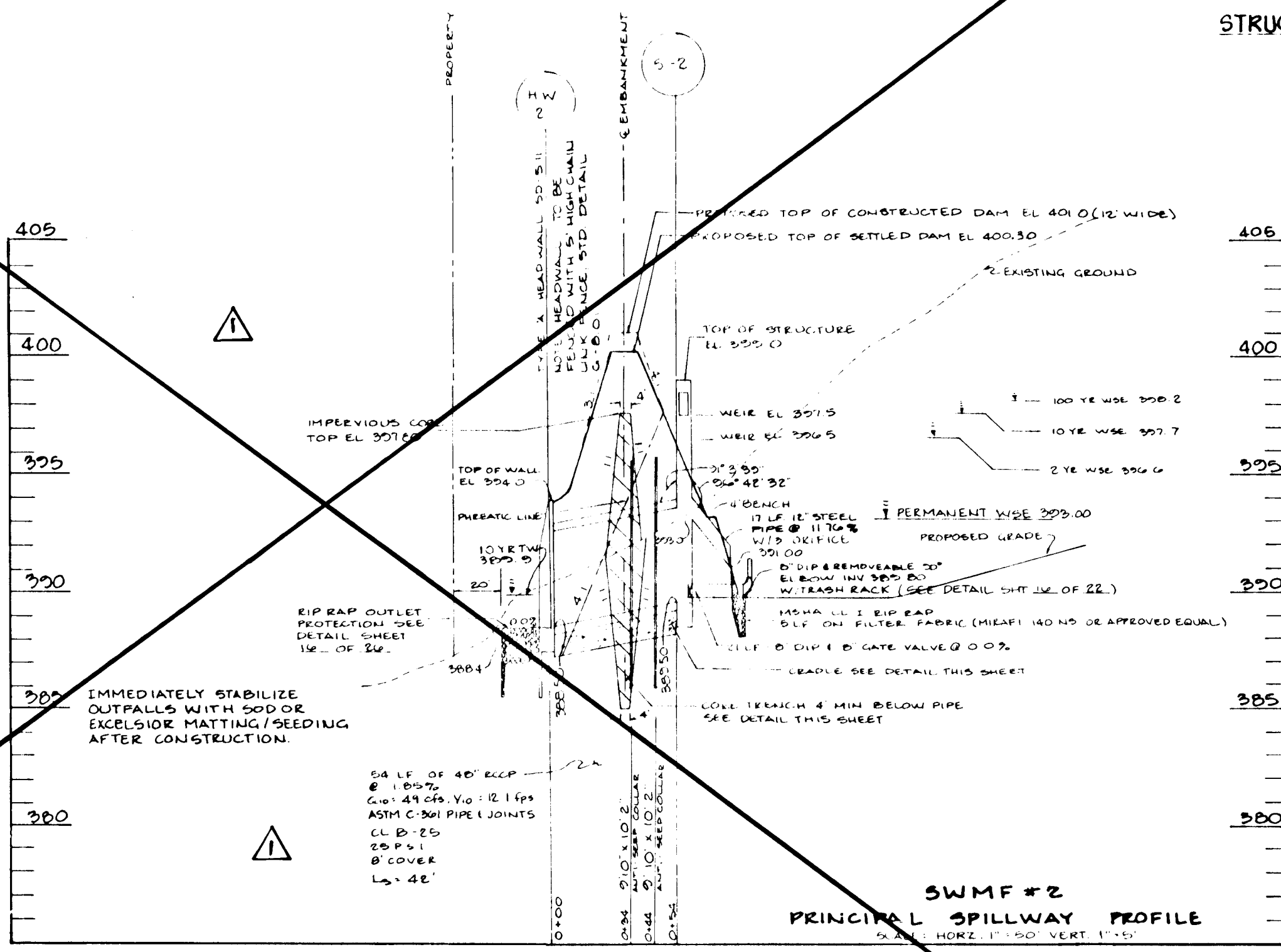
**SIDE ELEVATION**

**STRUCTURE S-2 DETAIL**  
NO SCALE

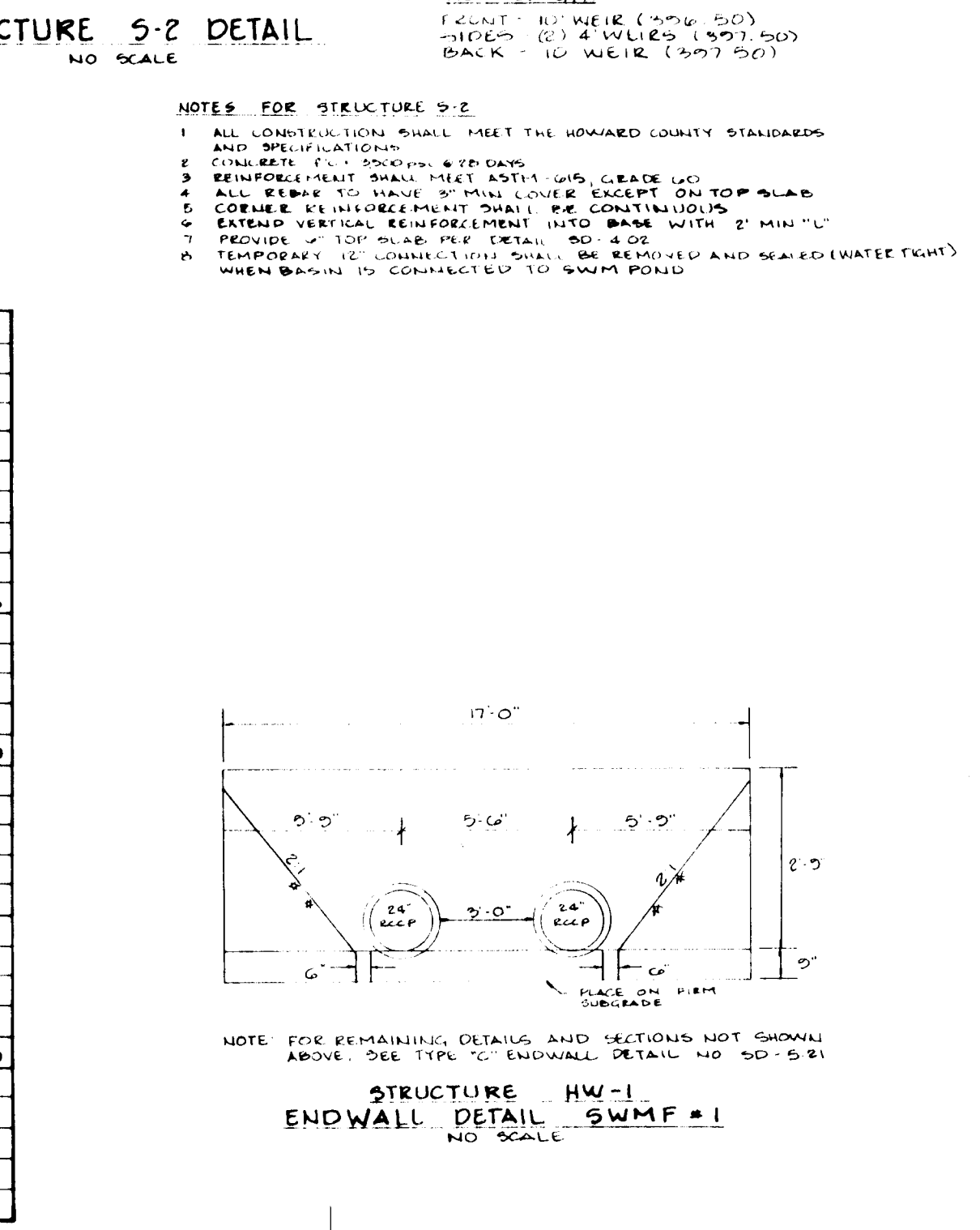
- NOTES FOR STRUCTURE S-2:**
1. ALL CONSTRUCTION SHALL MEET THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
  2. CONCRETE SHALL BE 3000 PSI.
  3. REINFORCEMENT SHALL MEET ASTM A618, GRADE 60.
  4. ALL REBAR TO HAVE 90 DEGREE BENDS EXCEPT ON TOP SLAB.
  5. CORNER REINFORCEMENT SHALL BE CONTINUOUS.
  6. EXCEED VERTICAL REINFORCEMENT INTO BASE WITH 2" MIN.
  7. PROVIDE 2" TOP WIRE PER DETAIL 50-52.
  8. TEMPORARY 10" HOPE CONNECTIONS SHALL BE REMOVED AND SEALED (WATER TIGHT) WHEN BASIN IS CONNECTED TO SWMF POND.



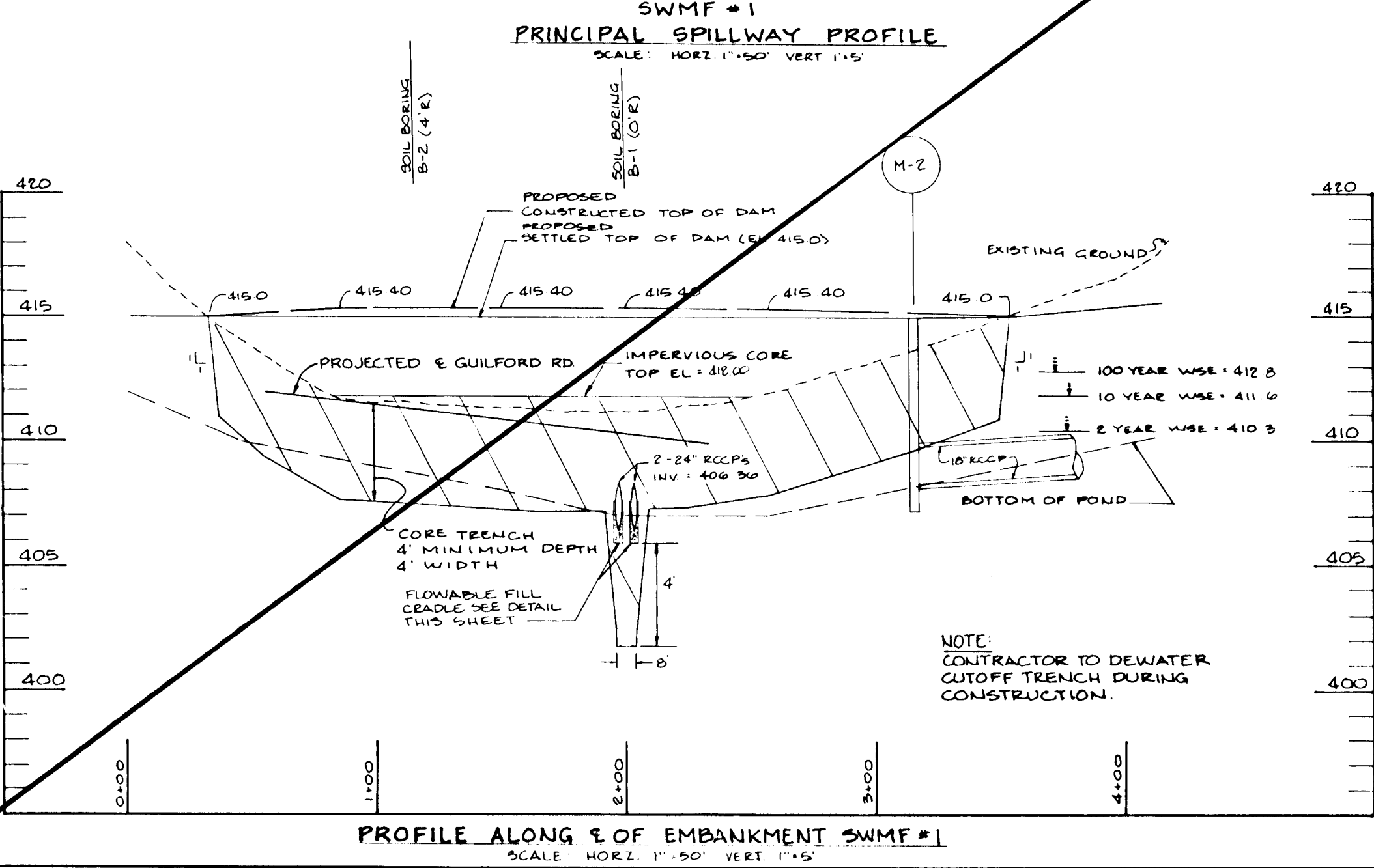
**PRINCIPAL SPILLWAY PROFILE**  
SCALE: HORIZ. 1"=50' VERT. 1"=5'



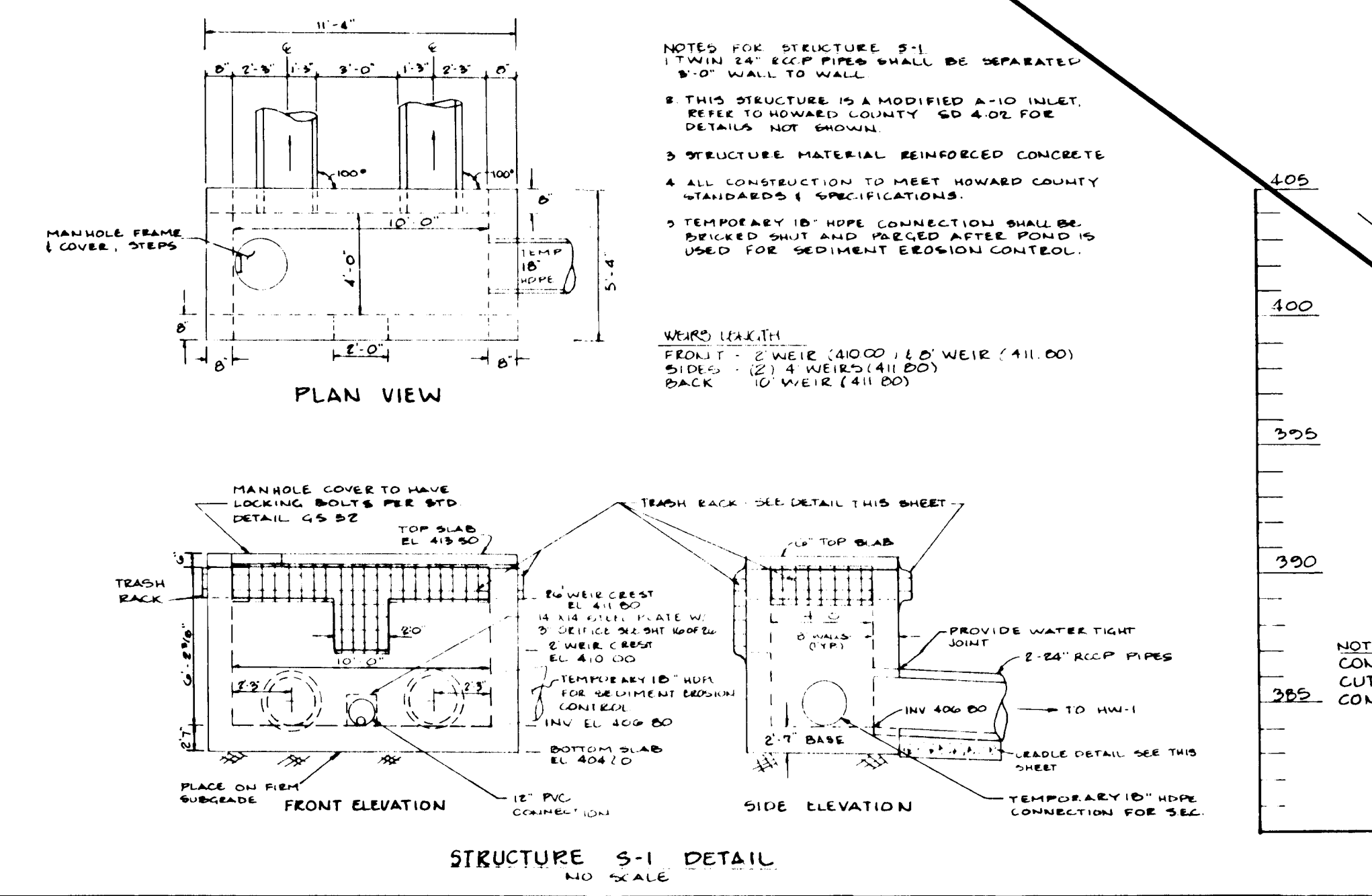
**PRINCIPAL SPILLWAY PROFILE**  
SCALE: HORIZ. 1"=50' VERT. 1"=5'



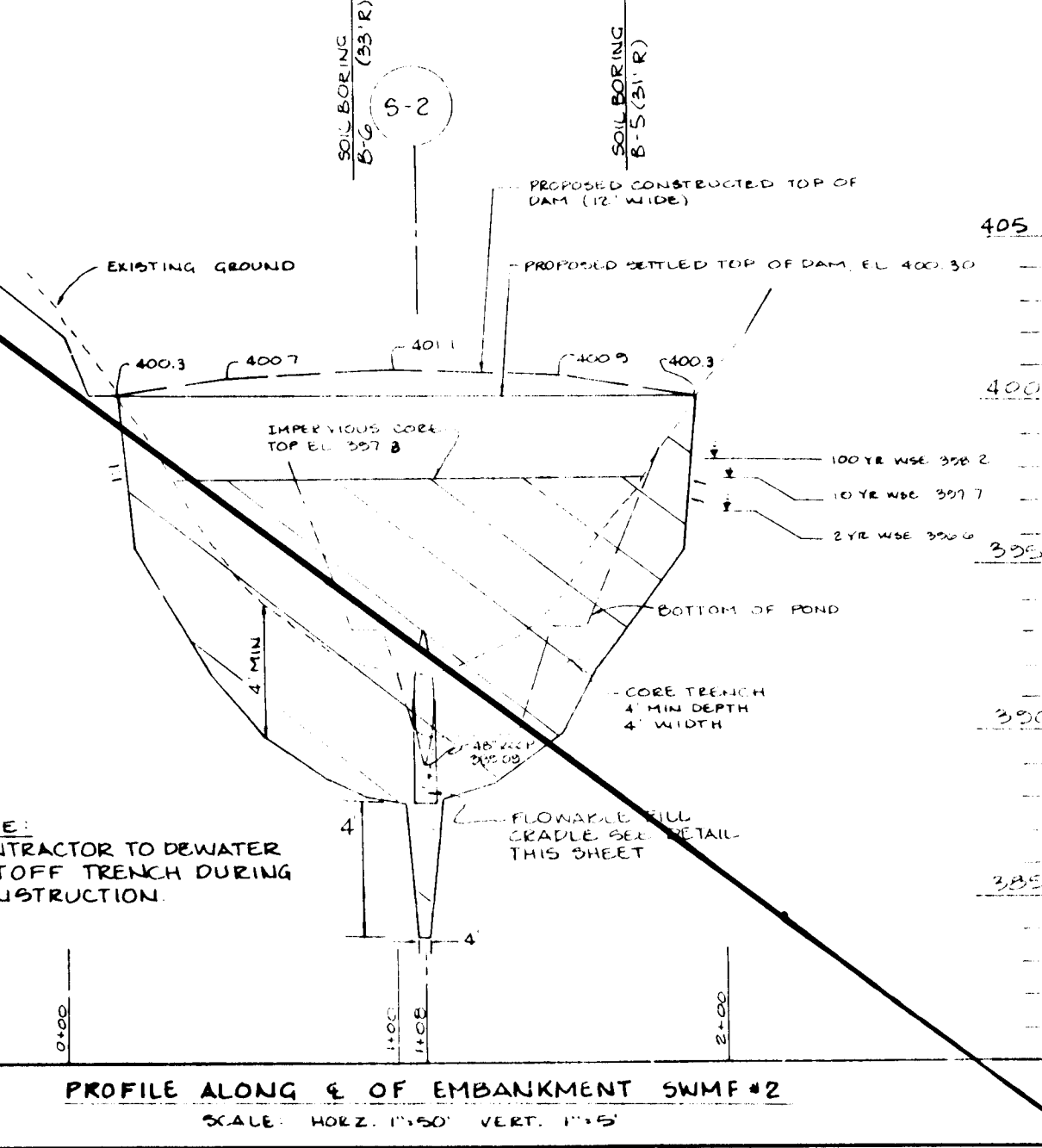
**STRUCTURE HW-1**  
**ENDWALL DETAIL SWMF #1**  
NO SCALE



**PROFILE ALONG E OF EMBANKMENT SWMF #1**  
SCALE: HORIZ. 1"=50' VERT. 1"=5'



**STRUCTURE S-1 DETAIL**  
NO SCALE



**PROFILE ALONG E OF EMBANKMENT SWMF #2**  
SCALE: HORIZ. 1"=50' VERT. 1"=5'

BY THE DEVELOPER:  
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Michael Fitzgibbon 5/19/95  
DEVELOPER DATE  
PRINT NAME BELOW SIGNATURE

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

J. Sarkel 5.22.95  
ENGINEER DATE  
PRINT NAME BELOW SIGNATURE

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

Patricia Engle 6/7/95  
US NATIONAL RESOURCE CONSERVATION DISTRICT DATE

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

Rolando Zichew 6/7/95  
HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE

Christopher J. Reid 7.19.99  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Gina Jaramani 6/22/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Andrew M. Rank 6-15-95  
CHIEF, BUREAU OF HIGHWAYS DATE

Paul J. Jenson 6/16/95  
CHIEF, BUREAU OF ENGINEERING DATE

8/95 SHEET IS DELETED.

OWNER / DEVELOPER  
WILBEN LIMITED PARTNERSHIP  
C/O ANDREW L. BACSON  
5450 WHITELY PARK  
TERRACE # 410  
BETHESDA, MD 20814  
301-530-1123

PROJECT  
CLARKS GLEN  
SECTION I, AREA I

AREA  
TAX MAP 35 PARCEL 205  
5TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE  
STORMWATER MANAGEMENT  
NOTES AND PROFILES

RIEMER MUEGGE & ASSOCIATES, INC.  
Planners Engineers Surveyors  
8818 Centre Park Drive Suite 200 Columbia, Maryland 21045  
410-997-8900 FAX: 410-997-9282

5.22.95  
DATE  
DESIGNED BY: LITD/JAAP  
DRAWN BY: GSK  
PROJECT NO: 93211  
DATE: MAY 19, 1995  
SCALE: AS SHOWN  
DRAWING NO. 15 OF 26  
J. Sarkel  
JAYKANT D. PAREKH #1994E

**STORMWATER MANAGEMENT POND SPECIFICATIONS**

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-376. All references to ASTM and AASHTO specifications apply to the most recent version.

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

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 30 foot radius around the inlet structure shall be cleared.

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

**EARTH FILL**  
Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6" frozen or other objectionable material. Fill material for the center of the embankment and cut-off trench shall conform to Unified Soil Classification C-10, SC, CH, or CL. Construction may be given to the use of other materials in the embankment if design of construction is supervised by a geotechnical engineer.

**Placement** - Areas of back fill to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in layers (before compaction) layers which are to be continuous over the entire length of the fill. The most general borrow material shall be placed in the downstream portions of the embankment. The principal roadway must be installed concurrently with fill placement and not excavated into the embankment.

**Compaction** - The movement of the hauling and spreading equipment over the fill shall be controlled so that the surface of the fill shall be worked by not less than one track of the equipment or compaction shall be achieved by a minimum of four complete passes with a sheepsfoot, rubber tire or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction is obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not so wet that water can be squeezed out.

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

**Cutoff Trench** - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall conform to Unified Soil Classification C-10, SC, CH, or CL. The trench shall be excavated with the minimum width being 18" feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter.

The rock fill shall be compacted with construction equipment, rollers, or hand tampers to ensure maximum density and minimum permeability.

**STRUCTURE BACKFILL**  
Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely of spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

**PIPE CONDUITS**  
All pipes shall be circular in cross section.

**Reinforced Concrete Pipe** - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have ball and spigot joints with rubber gaskets and shall equal or exceed ASTM designation C-361. An approved equivalent is ANWA Specification C-302.
2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of a 4" thick concrete bedding under the pipe and up the side of the pipe and shall extend 100% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
3. Laying pipe - Ball and spigot pipe shall be placed with the ball end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire length, bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.
4. Backfilling shall conform to Structure Backfill.
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

**Polyvinyl Chloride (PVC) Pipe** - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1120 or ASTM D-2241.
2. Joints and connections to anti-seep collars shall be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Backfilling shall conform to Structure Backfill.
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

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

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

The rock shall have the following properties:

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

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.

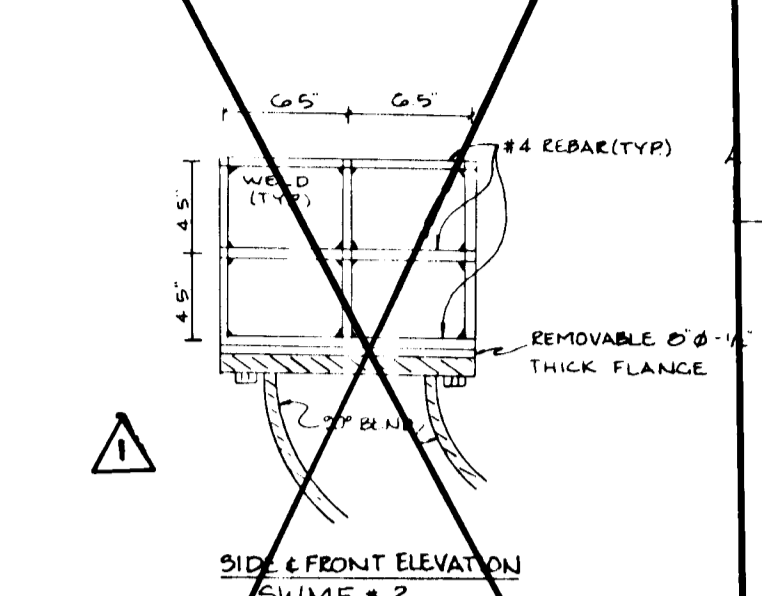
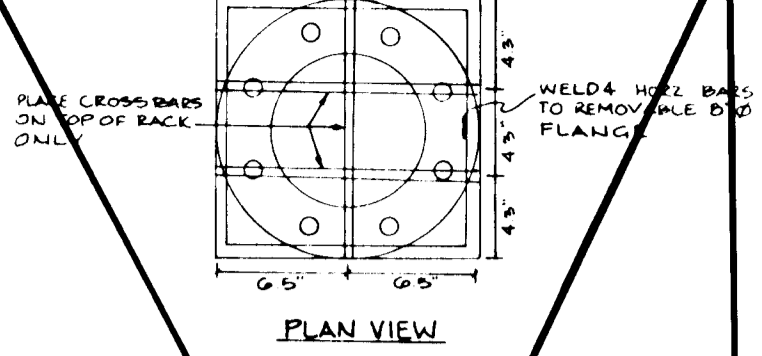
The riprap shall be placed in the required thickness in one operation. The rock shall be delivered and placed in a manner that will ensure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Riprap shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 618.12.

**CARE OF WATER DURING CONSTRUCTION**  
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and other diversions necessary to protect the area to be occupied by the permanent works. The Contractor shall also furnish, install, operate, and maintain all other equipment and other diversions required for removal of water from the work areas. The Contractor shall be responsible for maintaining the excavations, foundations, and other parts of the work free from water as required or directed by the Engineer. The Contractor shall be responsible for constructing each part of the work. After having secured the proposed, all temporary protective works shall be removed or lowered and graded to the water table and the water shall be removed in any degree whatsoever of the flow of water to the spillway or outlet works and so on as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the temporary works. The removal of water from the required excavations and the foundations shall be accomplished by means of pumps to the extent that will maintain the stability of the excavated areas and bottom of required excavations and allow satisfactory performance of all construction operations. During the placing and compacting of materials in required excavations, the water level at the locations being worked shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

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

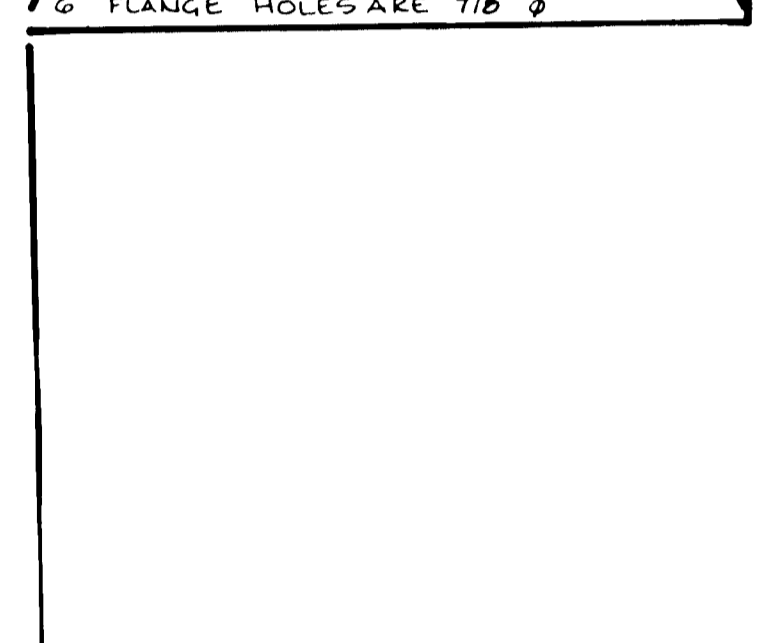
**EROSION AND SEDIMENT CONTROL**  
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction site stabilization, detail erosion and sediment control measures to be employed during the construction process.

CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT PREPARED BY GEO-TECHNOLOGY ASSOCIATES, INC. FOR FURTHER CONSTRUCTION REQUIREMENTS.



**POND DRAIN TRASH RACK DETAIL**

- NOTES:
1. ALL REBAR TO BE #4
  2. FABRICATOR SHALL VERIFY 6" 90° BEND FLANGE DIMENSIONS
  3. AFTER FABRICATION TRASH RACK TO BE NOT-DIPPED GALVANIZED
  4. TRASH RACK TO BE INSTALLED WITH 4 BOLTS
  5. WELD AT SUFFICIENT NUMBER OF COENRES TO PROVIDE STEADY STRUCTURE
  6. FLANGE HOLES ARE 7/8" Ø



**WATER QUALITY FACILITY # 1**

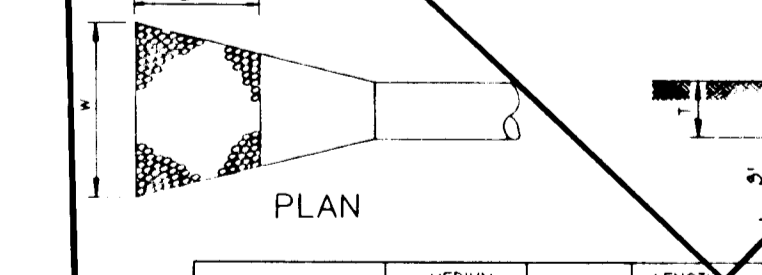
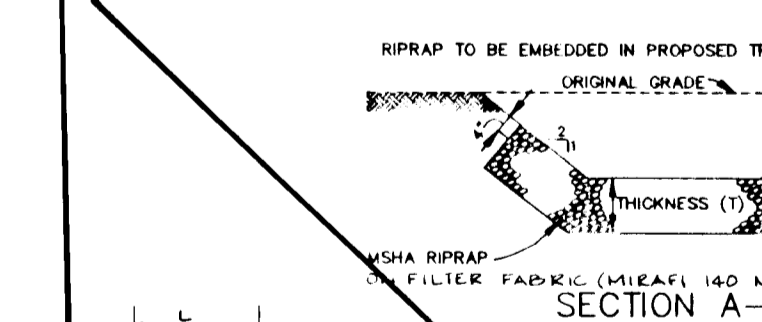
NO SCALE

**GABION SCHEDULE W.Q.F. #1 & W.Q.F. #2**

LETTER CODE	LENGTH	WIDTH	HEIGHT	NO. OF CELLS	CAP. L.V.D.	COLOR CODE
(B)	7'	3'	3'	3	30	WHITE
(C)	12'	3'	3'	4	40	BLACK

NOTE: GABIONS TO BE MANUFACTURED BY MACCAFERRI, INC. OR APPROVED EQUAL.

**ALL END SECTION OUTFALLS WILL BE AS-BUILT UNDER F-96-II**



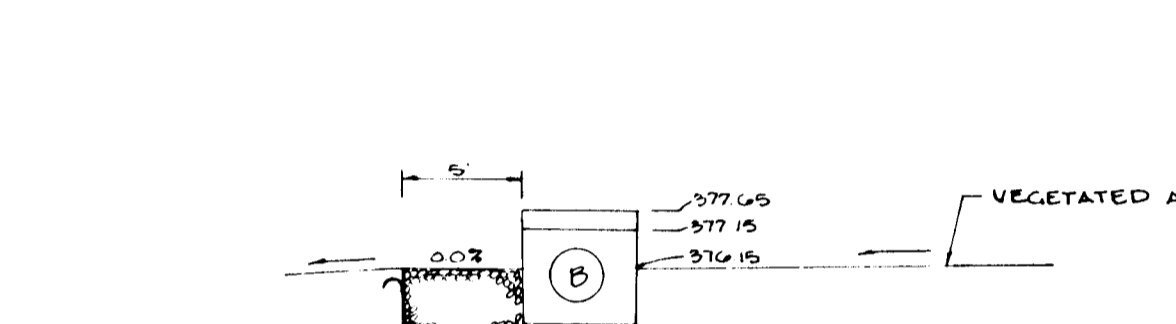
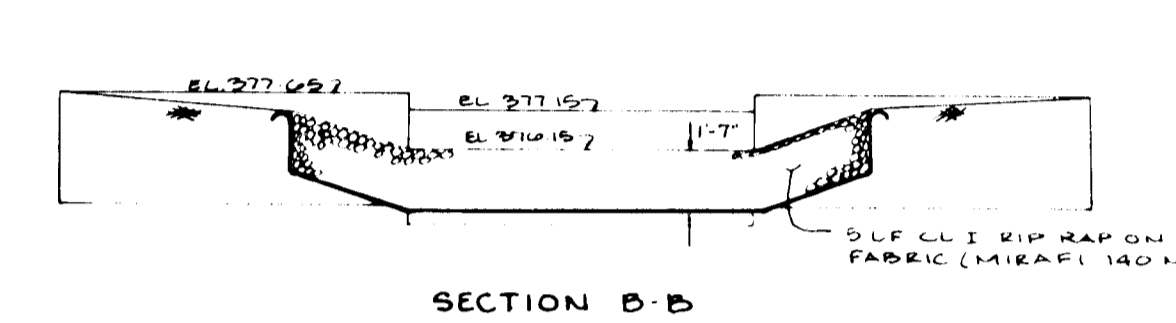
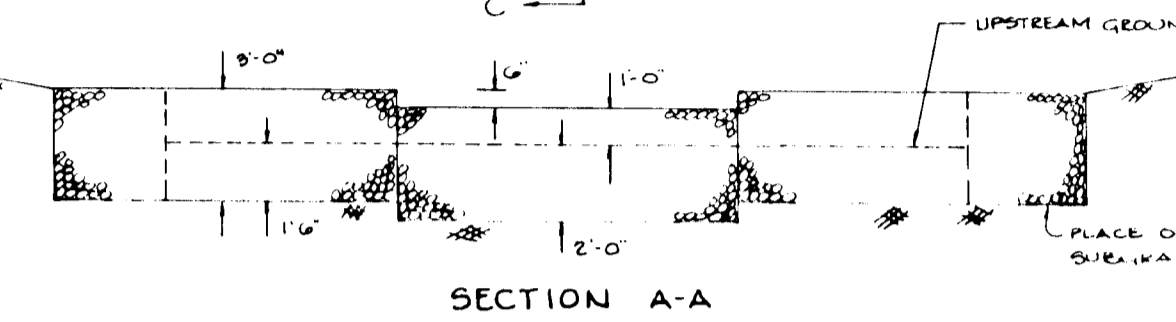
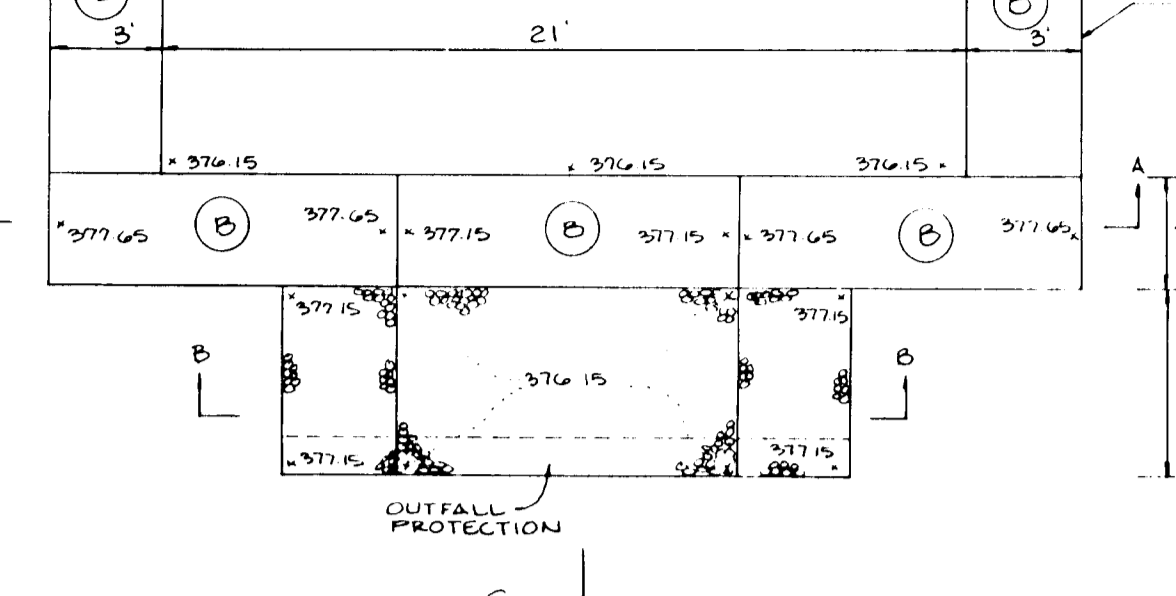
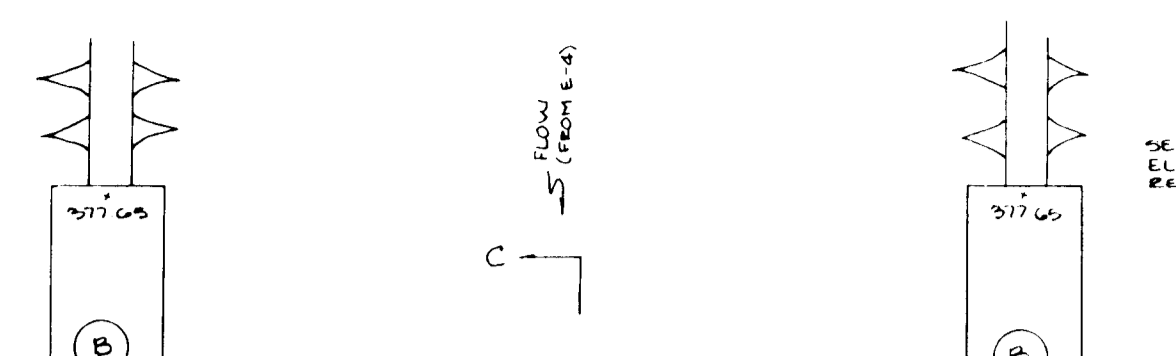
**SECTION**

STRUCTURE	MEDIUM STONE DIA.	CLASS	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	9.5	I	10	10	1.7
E-2	9.5	I	10	10	1.7
E-3	9.5	I	10	10	1.7
E-4	9.5	I	9	7	1.7
HW-1	9.5	I	15	15	1.7
HW-2	9.5	I	15	22	1.7
HW-3	9.5	I	15	17	1.7
HW-4	9.5	I	20	28	1.7
E-5	9.5	I	15	15	1.7

\* FUTURE (SECTION 2)

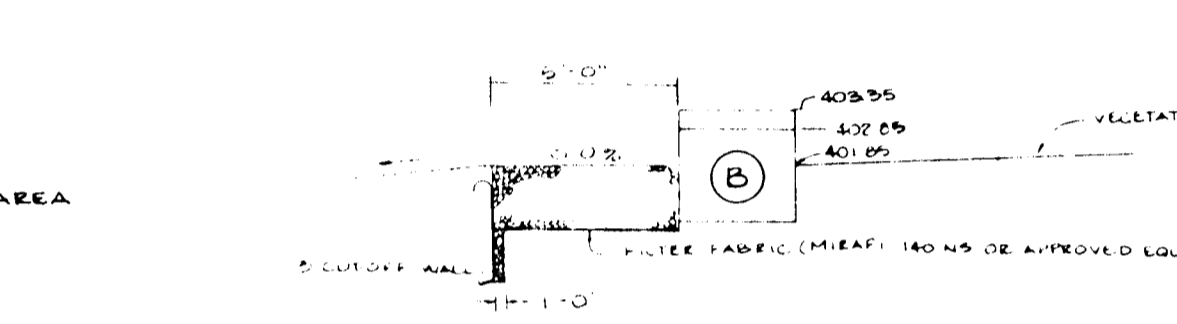
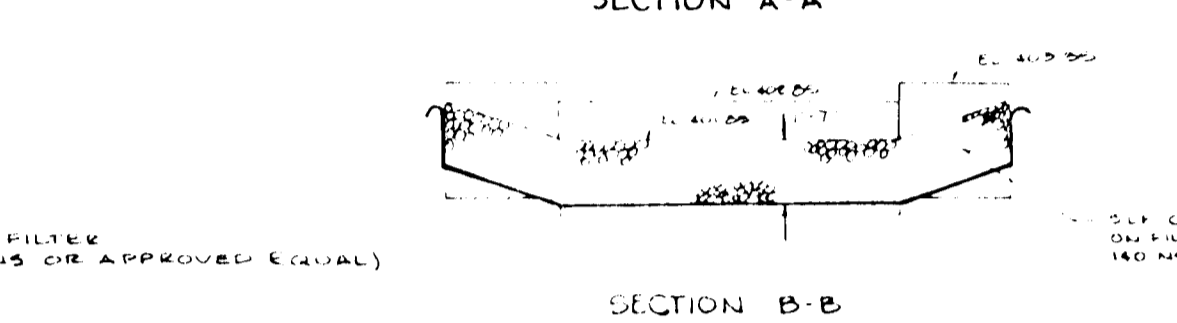
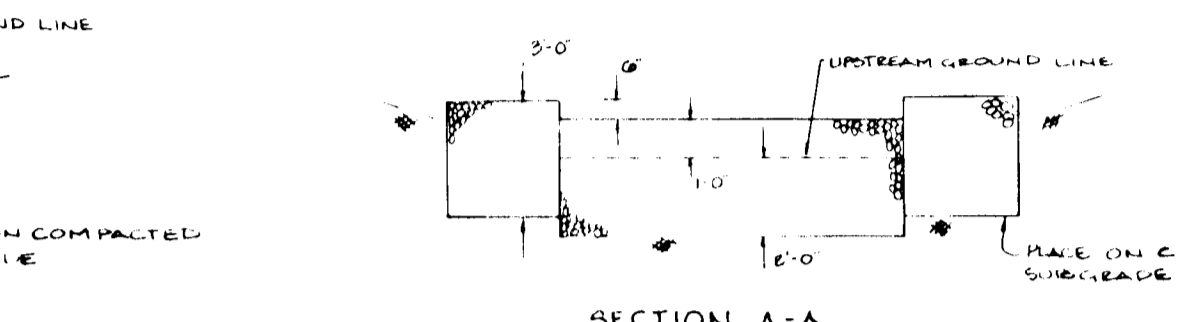
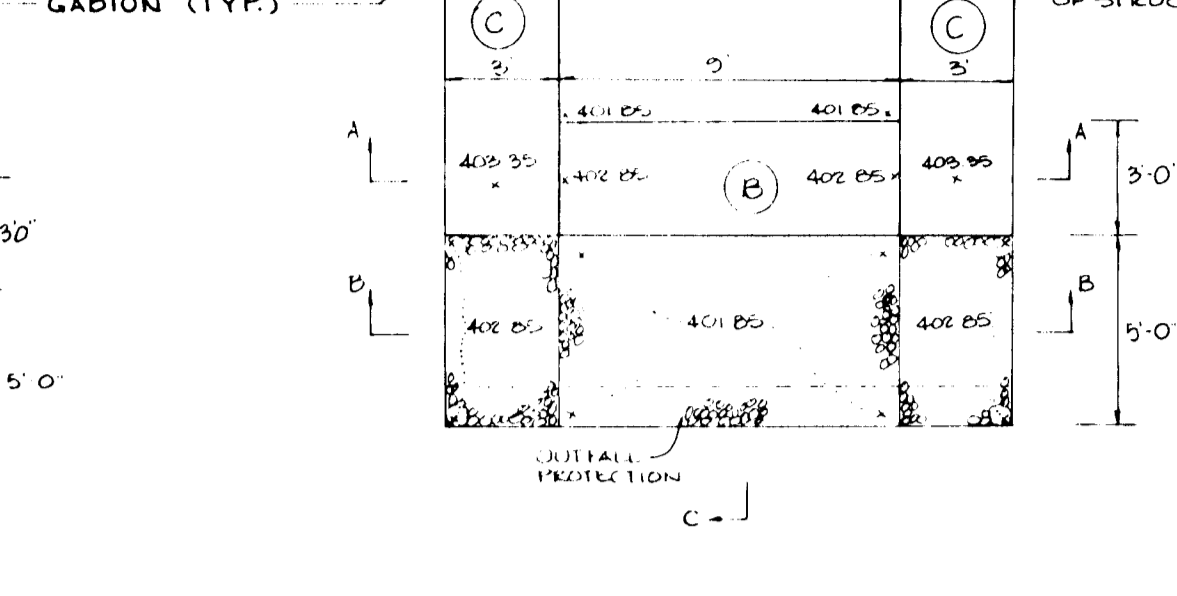
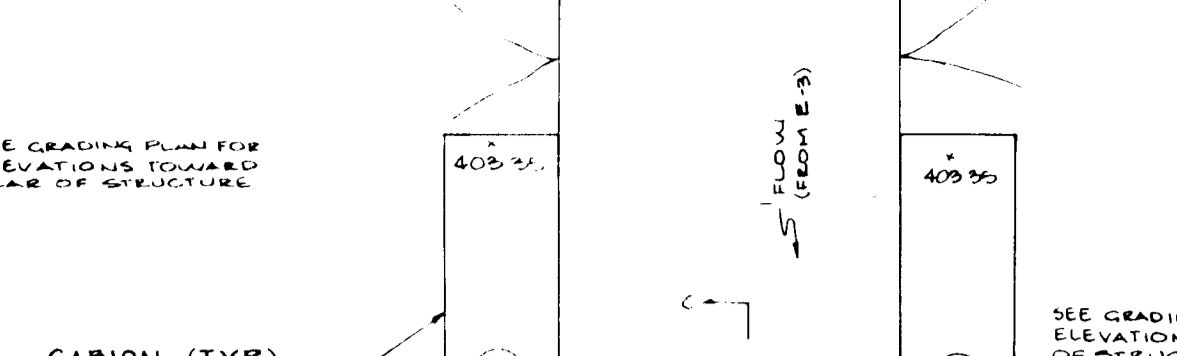
**RIPRAP OUTLET PROTECTION DETAIL**

NO SCALE



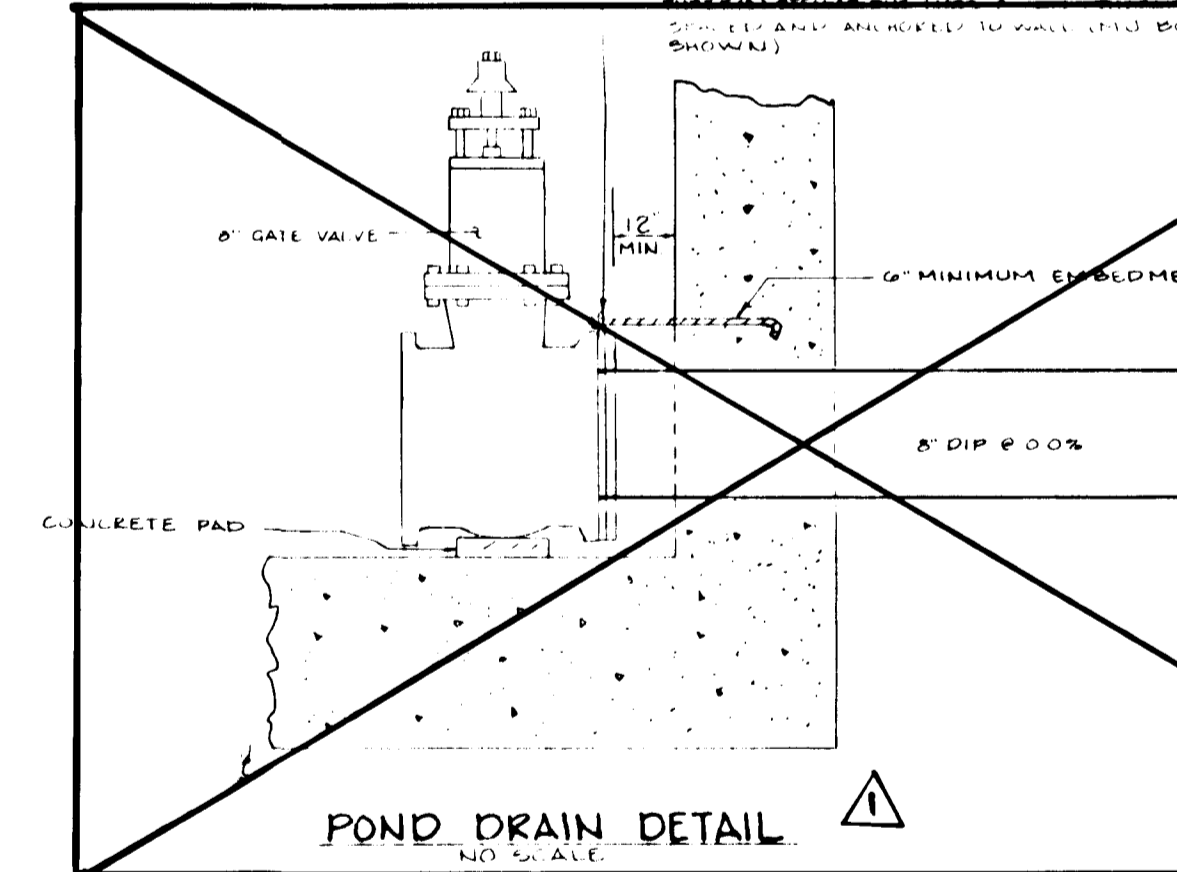
**WATER QUALITY FACILITY # 2**

NO SCALE



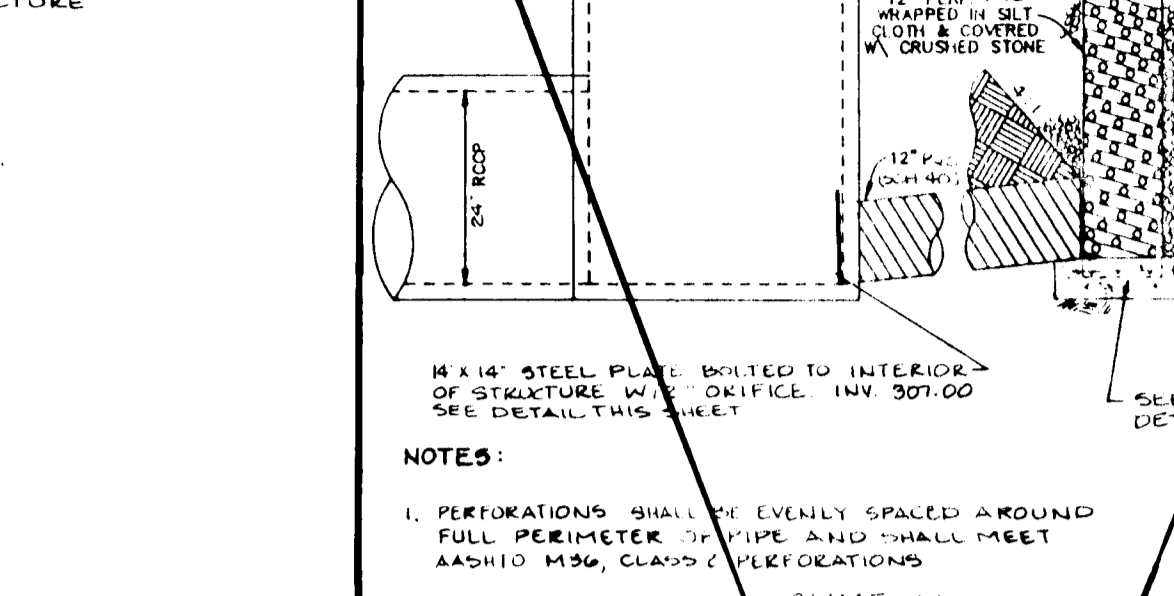
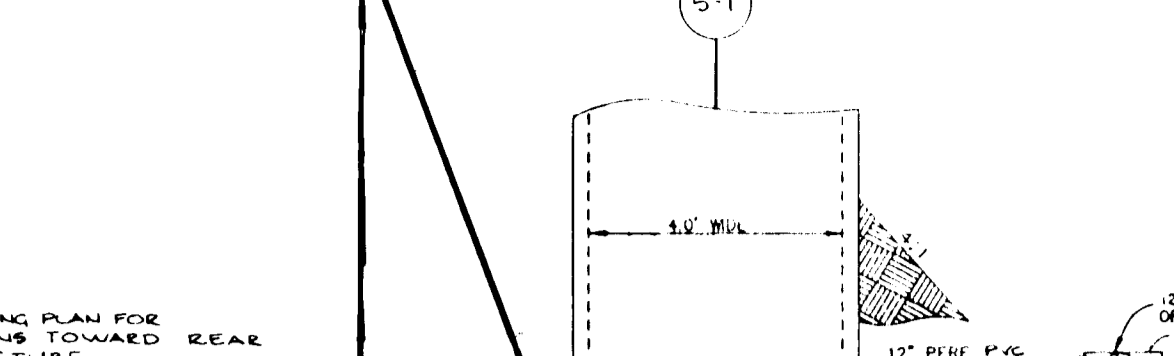
**WATER QUALITY FACILITY # 2**

NO SCALE



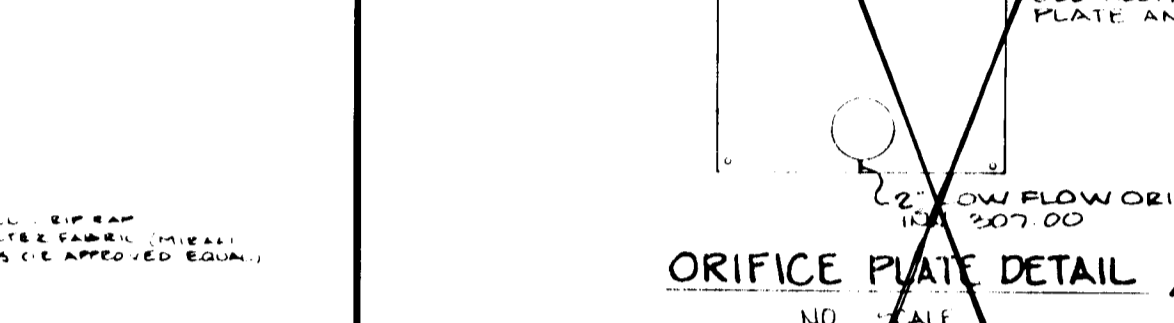
**POND DRAIN DETAIL**

NO SCALE



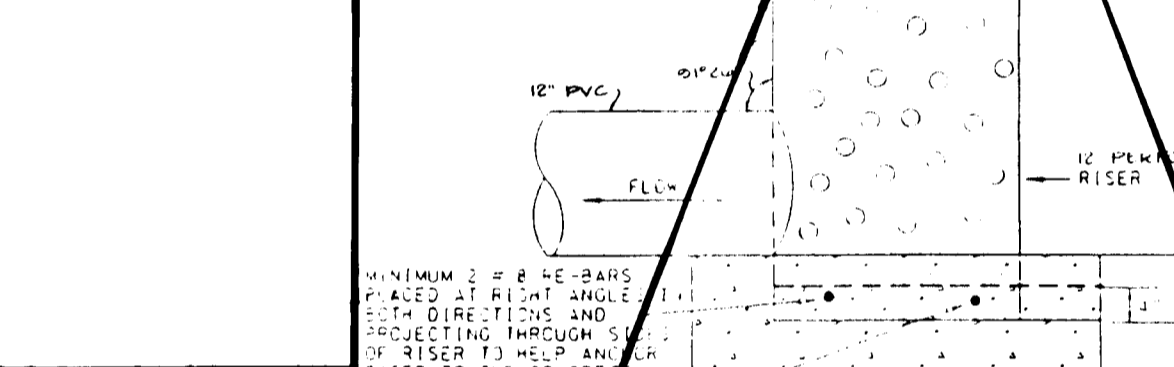
**PERMANENT LOW FLOW DEVICE**

NO SCALE



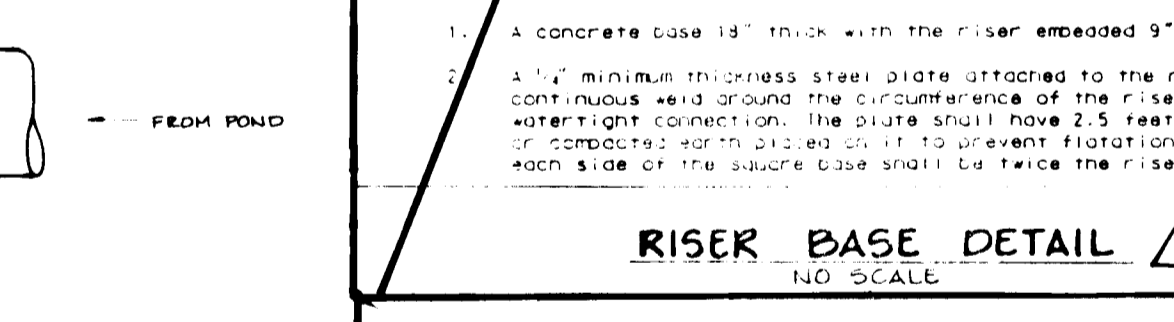
**ORIFICE PLATE DETAIL**

NO SCALE



**RISER BASE DETAIL**

NO SCALE



**RISER BASE DETAIL**

NO SCALE

**BORING LOGS**

NO SCALE

BORING	TOPSOIL	DESCRIPTION
B-1	14"	BROWN MOIST, VERY LOOSE, SILTY FINE SAND, TRACE CLAY (SM) USDA: SILT LOAM
B-2	16"	BROWN MOIST, VERY LOOSE, SILTY FINE SAND, TRACE CLAY (SM) USDA: SILT LOAM
B-3	14"	BROWN, VERY MOIST, VERY LOOSE TO MEDIUM DENSE, SILTY, SOME FINE SAND, LITTLE CLAY (SM) USDA: SILT LOAM
B-4	6"	BROWN, VERY MOIST, MEDIUM DENSE TO MEDIUM DENSE SILTY, SOME FINE SAND, LITTLE CLAY (SM) USDA: SILT LOAM
B-5	4"	RED BROWN, VERY MOIST, VERY LOOSE, FINE SAND, SILT, SOME CLAY (SC) US: SILT GRAVELLY SILT LOAM
B-6	2"	BROWN, VERY MOIST TO WET, LOOSE, SILT, SOME SAND (ML) USDA: SILT LOAM
B-7	2"	RED BROWN, VERY MOIST, MEDIUM DENSE, MICACEOUS SILTY SAND (SM) USDA: SANDY LOAM
B-8	2"	GRAY, MOIST, VERY DENSE, MICACEOUS SILTY SAND (SM) USDA: SANDY LOAM
B-9	2"	GRAY, WET, VERY DENSE, WEATHERED ROCK FRAGMENTS, AND SILT (LM) USDA: GRAVELLY SANDY LOAM
B-10	2"	GRAY, WET, VERY DENSE, WEATHERED ROCK FRAGMENTS, AND SILT (LM) USDA: GRAVELLY SANDY LOAM
B-11	2"	GREENISH WHITE, MOIST, VERY DENSE, FINE TO MEDIUM SAND AND WEATHERED ROCK FRAGMENTS (SM) USDA: LEAN SANDY LOAM

**BORING LOGS**

NO SCALE

BY THE DEVELOPER:  
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Michael J. Farrell 5/19/95  
DEVELOPER DATE  
PRINT NAME BELOW SIGNATURE Michael J. Farrell

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

J. Farrell 5.22.95  
ENGINEER DATE  
PRINT NAME BELOW SIGNATURE J. Farrell

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

Patricia Engler 6/1/95  
US NATURAL RESOURCES CONSERVATION DISTRICT DATE

Roberto Zichner 6/7/95  
HOWARD SOIL CONSERVATION DISTRICT DATE

AS BUILT CERTIFICATE  
STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER

Christopher J. Reid 7.19.99  
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DATE

Gina Skurman 6/22/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Andrew M. Daniels 6-14-95  
CHIEF, BUREAU OF HIGHWAYS DATE

Paul J. Ryan 6/16/95  
CHIEF, BUREAU OF ENGINEERING DATE

8/95  
DATE NO. REVISION

OWNER / DEVELOPER  
WILBEN LIMITED PARTNERSHIP  
50 ANDREW L. ISAACSON  
5450 WHITELY PARK  
TERRACE # 410  
BETHESDA, MD 20814  
301-530-1123

PROJECT  
CLARK'S GLEN  
SECTION I, AREA I

AREA  
TAX MAP 35, PARCEL 200  
SITE ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE  
STORMWATER MANAGEMENT  
NOTES AND DETAILS

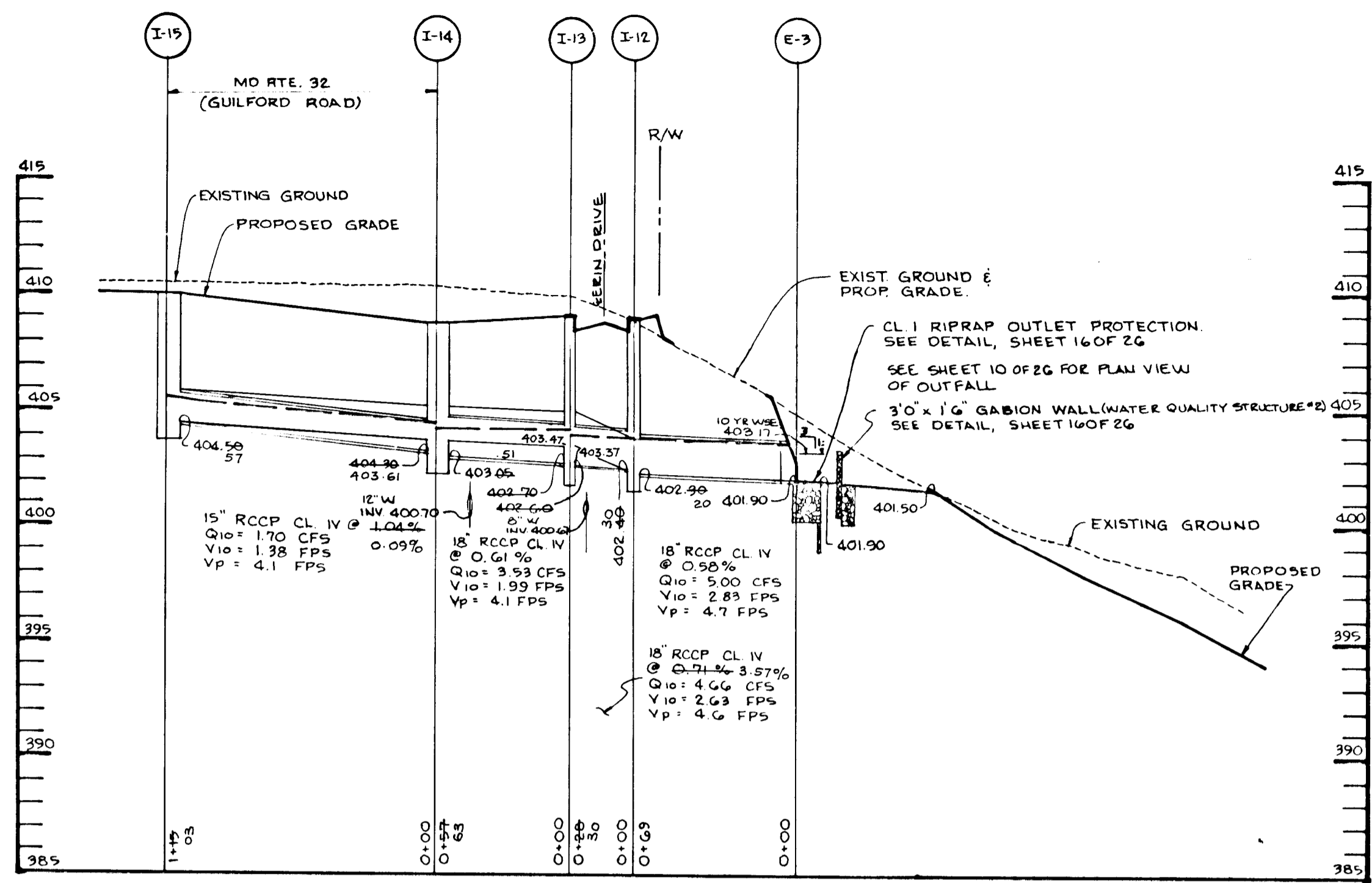
RIEMER MUEGGE & ASSOCIATES, INC.  
Planners Engineers Surveyors  
8818 Centre Park Drive - Suite 200 - Columbia, Maryland 21045  
410-997-8800 FAX: 410-997-9282

5.22.95  
DESIGNED BY: AAF  
DRAWN BY: BRD  
PROJECT NO.: 33211  
DATE: MAY 19, 1995  
SCALE: AS SHOWN  
DRAWING NO. 16 OF 26

J. Farrell  
JAYKAT E. PARKER # 19146  
F-95-83

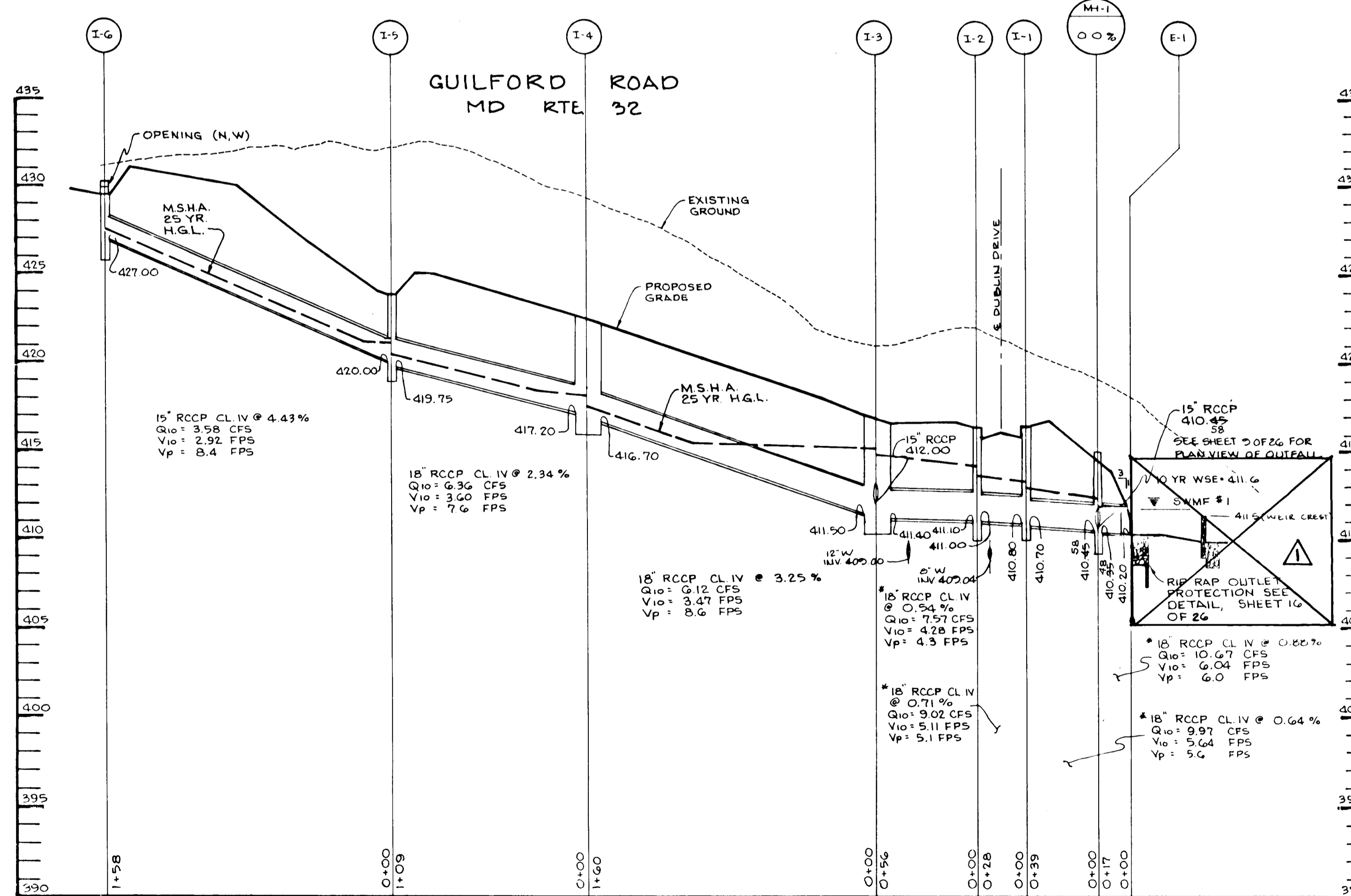
6611





STORM DRAIN PROFILE

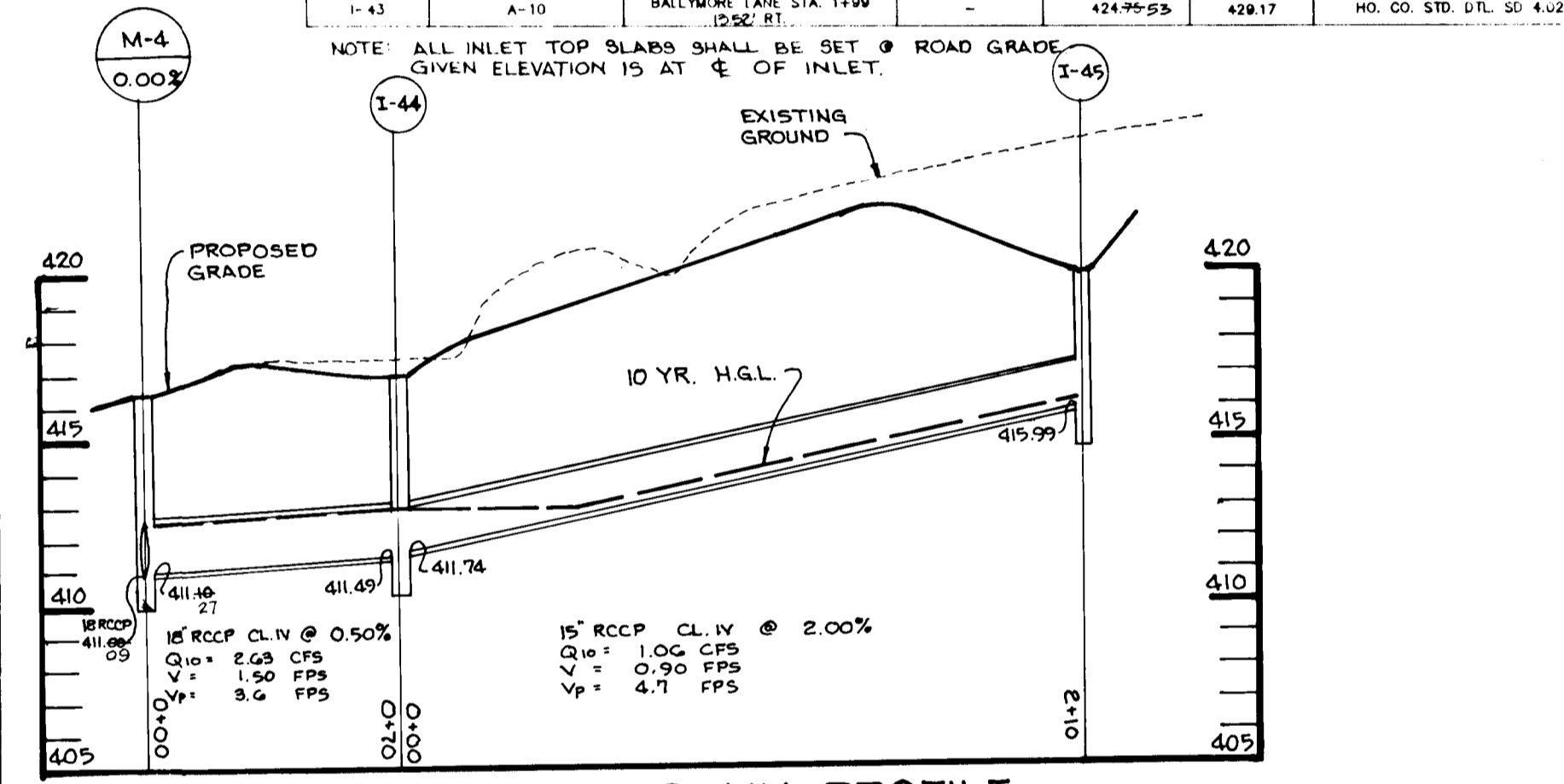
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VERT 1"=5'



STORM DRAIN PROFILE

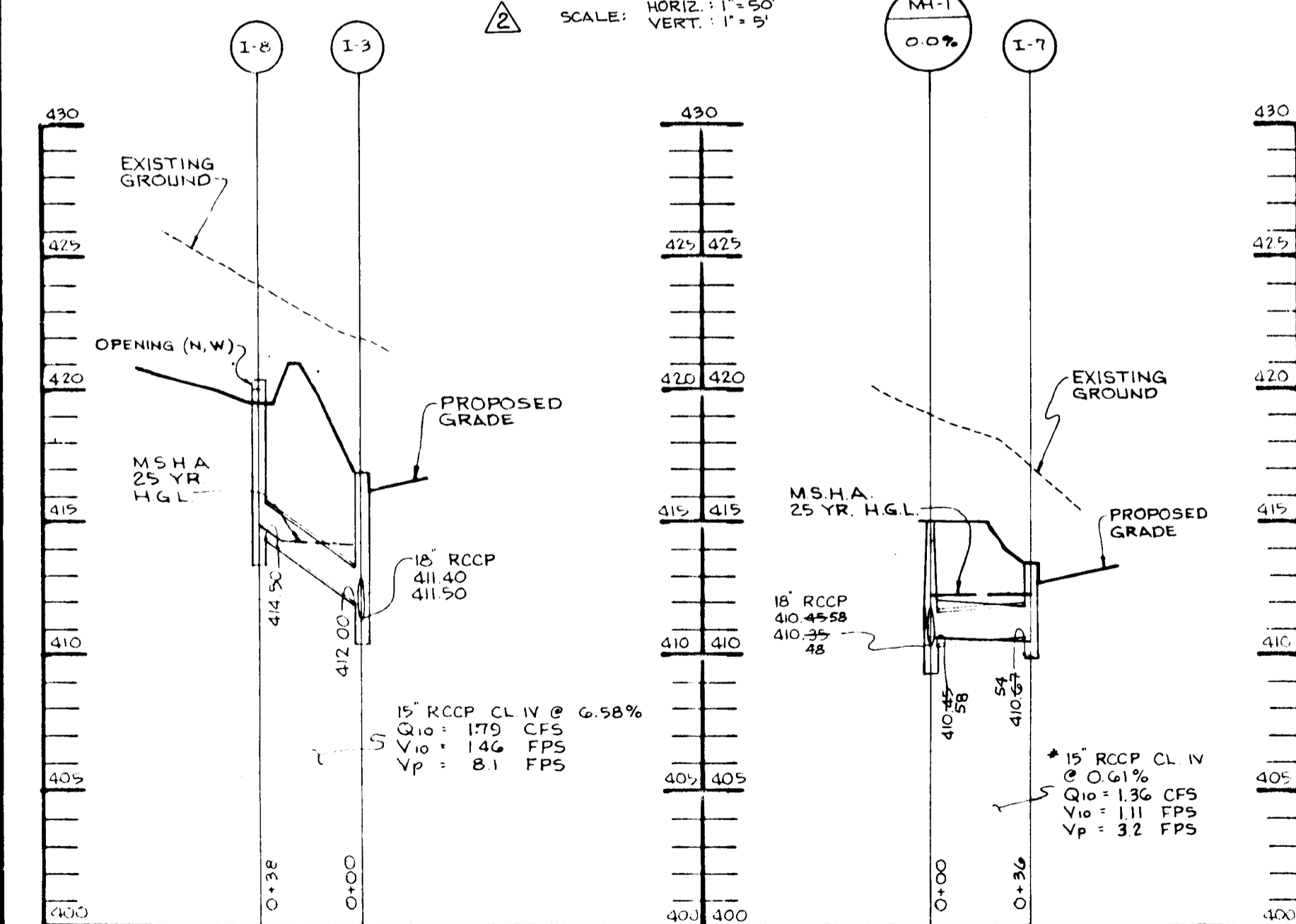
SCALE: HORIZ 1"=50'  
VERT 1"=5'

\*PIPE TO HAVE ASTM C443 O-RING GASKET JOINTS\*



STORM DRAIN PROFILE

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



STORM DRAIN PROFILE

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

NUMBER	TYPE	LOCATION	INV. IN	INV. OUT	TOP OF CURB / H.M. ELEV.	REMARKS
1-1	A-10	SPRING DRIVE STA 0+80	410.85	410.70	416.45	HO. CO. STD. DTL. SH 4.02
1-2	A-10	JERRY DRIVE STA 0+80	411.10	411.0	416.45	HO. CO. STD. DTL. SH 4.02
1-3	ODG 15	MARYLAND ROUTE 32 STA 18+30	412.20	411.40	416.92	MSHA STD. DTL. MD 374.31
1-4	ODG 15	MARYLAND ROUTE 32 STA 19+85	417.20	416.70	422.45	MSHA STD. DTL. MD 374.31
1-5	K-INLET	MARYLAND ROUTE 32 STA 20+90	420.00	418.75	423.79	MSHA STD. DTL. MD 376.05
1-6	U-INLET	MARYLAND ROUTE 32 STA 22+46	429.50	427.00	429.50	HO. CO. STD. DTL. SH 4.39 THROAT EL. = 429.20
1-7	ODG 20	MARYLAND ROUTE 32 STA 17+18	-	410.67	413.43	MSHA STD. DTL. MD 374.31 THROAT EL. = 419.20
1-8	U-INLET	MARYLAND ROUTE 32 STA 18+50	419.50	414.50	419.50	HO. CO. STD. DTL. SH 4.39 THROAT EL. = 419.20
1-9	A-10	KIEBRIGAN COURT STA 1+15	-	425.80	426.85	HO. CO. STD. DTL. SH 4.02
1-10	A-10	ERN DRIVE STA 2+07	410.16-13	409.60-55	414.20	HO. CO. STD. DTL. SH 4.02
1-11	A-10	ERN DRIVE STA 2+07	-	410.29-41	414.20	HO. CO. STD. DTL. SH 4.02
1-12	A-5	ERN DRIVE STA 0+76	407.40-30	407.30	408.86	HO. CO. STD. DTL. SH 4.02
1-13	A-10	ERN DRIVE STA 0+76	409.76	403.47	408.86	HO. CO. STD. DTL. SH 4.02
1-14	ODG 15	MARYLAND ROUTE 32 STA 13+50	403.86-61	403.66-51	408.77	MSHA STD. DTL. MD 374.31
1-15	ODG 15	MARYLAND ROUTE 32 STA 14+55	-	404.86-57	409.91	MSHA STD. DTL. MD 374.31
1-16	A-5	CASHEE COURT STA 4+08	399.28	399.40-41	393.59	HO. CO. STD. DTL. SH 4.01
1-17	A-5	CASHEE COURT STA 4+08	399.28	397.43	397.43	HO. CO. STD. DTL. SH 4.01
1-18	A-5	CASHEE COURT STA 2+43	396.30-20	396.99-10	400.89	HO. CO. STD. DTL. SH 4.01
1-19	A-5	CASHEE COURT STA 1+18	398.85-70	398.44-45	403.19	HO. CO. STD. DTL. SH 4.01
1-20	A-5	CASHEE COURT STA 1+18	-	399.34-14	403.19	HO. CO. STD. DTL. SH 4.01
1-21	A-5	CASHEE COURT STA 4+08	-	393.40-63	397.43	HO. CO. STD. DTL. SH 4.01
1-22	A-10	TARA PLACE STA 1+02-40	423.50	422.95	428.03	HO. CO. STD. DTL. SH 4.02
1-23	A-5	TARA PLACE STA 0+41	430.00	430.00-62	435.83	HO. CO. STD. DTL. SH 4.01
1-24	A-5	BALLYMORE LANE STA 4+00	433.69-12	433.60-02	438.23	HO. CO. STD. DTL. SH 4.01
1-25	A-5	BALLYMORE LANE STA 4+00	433.64-77	433.84-67	438.23	HO. CO. STD. DTL. SH 4.01
1-26	A-5	BALLYMORE LANE STA 3+46	434.00	434.00	442.61	HO. CO. STD. DTL. SH 4.01
1-27	A-10	BALLYMORE LANE STA 3+46	434.00	434.00-35	442.61	HO. CO. STD. DTL. SH 4.02
1-28	A-10	ERN DRIVE STA 10+80	400.86-89	400.86-39	405.17	HO. CO. STD. DTL. SH 4.02
1-29	A-10	ERN DRIVE STA 9+82	401.00-16	400.86-91	405.66	HO. CO. STD. DTL. SH 4.02
1-30	A-5	ERN DRIVE STA 8+88	403.86-24	403.86-14	407.61	HO. CO. STD. DTL. SH 4.01
1-31	A-10	ERN DRIVE STA 7+79	407.80-59	407.80-51	412.40	HO. CO. STD. DTL. SH 4.02
1-32	A-5	ERN DRIVE STA 5+94	403.86-09	403.86-09	416.46-65	HO. CO. STD. DTL. SH 4.01
1-33	A-5	ERN DRIVE STA 5+94	416.76-90	416.76-90	420.86	HO. CO. STD. DTL. SH 4.01
1-34	A-5	ERN DRIVE STA 10+80	400.86-89	400.86-89	405.17	HO. CO. STD. DTL. SH 4.01
1-35	A-5	ERN DRIVE STA 10+80	401.00-16	400.86-91	405.66	HO. CO. STD. DTL. SH 4.01
1-36	A-5	ERN DRIVE STA 8+88	403.86-24	403.86-14	407.61	HO. CO. STD. DTL. SH 4.01
1-37	A-5	ERN DRIVE STA 7+79	407.80-59	407.80-51	412.40	HO. CO. STD. DTL. SH 4.01
1-38	A-5	ERN DRIVE STA 5+94	403.86-09	403.86-09	416.46-65	HO. CO. STD. DTL. SH 4.01
1-39	A-5	ERN DRIVE STA 5+94	416.76-90	416.76-90	420.86	HO. CO. STD. DTL. SH 4.01
1-40	A-10	BALLYMORE LANE STA 0+43	416.40-25	416.00-15	420.80	HO. CO. STD. DTL. SH 4.02
1-41	A-10	BALLYMORE LANE STA 0+43	416.40-25	416.00-15	420.80	HO. CO. STD. DTL. SH 4.02
1-42	A-10	BALLYMORE LANE STA 1+99	424.56-75	424.56-70	429.17	HO. CO. STD. DTL. SH 4.02
1-43	A-10	BALLYMORE LANE STA 1+99	424.56-75	424.56-70	429.17	HO. CO. STD. DTL. SH 4.02

NUMBER	TYPE	LOCATION	INV. IN	INV. OUT	TOP OF CURB / H.M. ELEV.	REMARKS
M-1	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-2	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-3	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-4	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-5	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-6	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-7	SHALLOW MANHOLE	CASHEE COURT STA 1+91 LINEAR PROFILE 0' BT	409.86-85	409.86-85	417.00	HO. CO. STD. DTL. SH 5.12
M-8	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-9	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-10	SHALLOW MANHOLE	ERN DRIVE STA 0+30 LINEAR PROFILE 0' BT	409.86-85	409.86-85	417.00	HO. CO. STD. DTL. SH 5.12
M-11	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-12	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-13	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
M-14	SHALLOW MANHOLE	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
I-44	D-INLET	N 557913 E 130420	411.44-36	411.44-36	417.00	HO. CO. STD. DTL. SH 5.12 THROAT EL. 417.00
I-45	D-INLET	N 557913 E 130420	411.44-36	411.44-36	420.00	HO. CO. STD. DTL. SH 5.12 THROAT EL. 420.00
E-1	END SECTION	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
E-2	END SECTION	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
E-3	END SECTION	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
E-4	END SECTION	N 557913 E 130420	411.44-36	411.44-36	415.00	HO. CO. STD. DTL. SH 5.12
HW-3	END WALL	N 557913 E 130420	411.44-36	411.44-36	396.50	HO. CO. STD. DTL. SH 5.21

TO BE AS-BUILT UNDER F-96-II

STATE OF MARYLAND  
ENGINEER  
AS BUILT CERTIFICATE

7.19.99  
DATE

CHRISTOPHER J. REID #19949

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

6/22/95  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

6/15/95  
DATE

6-12-95  
DATE

6/16/95  
DATE

4-20-96  
DATE

8/95  
DATE

REVISION

OWNER / DEVELOPER  
WILBEEN LIMITED PARTNERSHIP  
C/O ANDREW L. ISAACSON  
5450 WHITELY PARK  
TERRACE # 410  
BETHESDA, MD 20814  
301-530-1125

PROJECT  
CLARKS GLEN  
SECTION I, AREA I

AREA  
TAX MAP NO. 20-1  
CORNER 12  
PARCEL 250  
DIST. ELECTING DISTRICT HOWARD COUNTY, MARYLAND

TITLE  
STORMDRAIN PROFILES

RIEMER MUEGGEL & ASSOCIATES, INC.  
Planners • Engineers • Surveyors  
8818 Centre Park Drive • Suite 200 • Columbia, MD 21045  
410-997-8900 FAX: 410-997-9282

5.22.95  
DATE

DESIGNED BY: A.A.P.

DRAWN BY: R.J.C.

PROJECT NO.: 93211

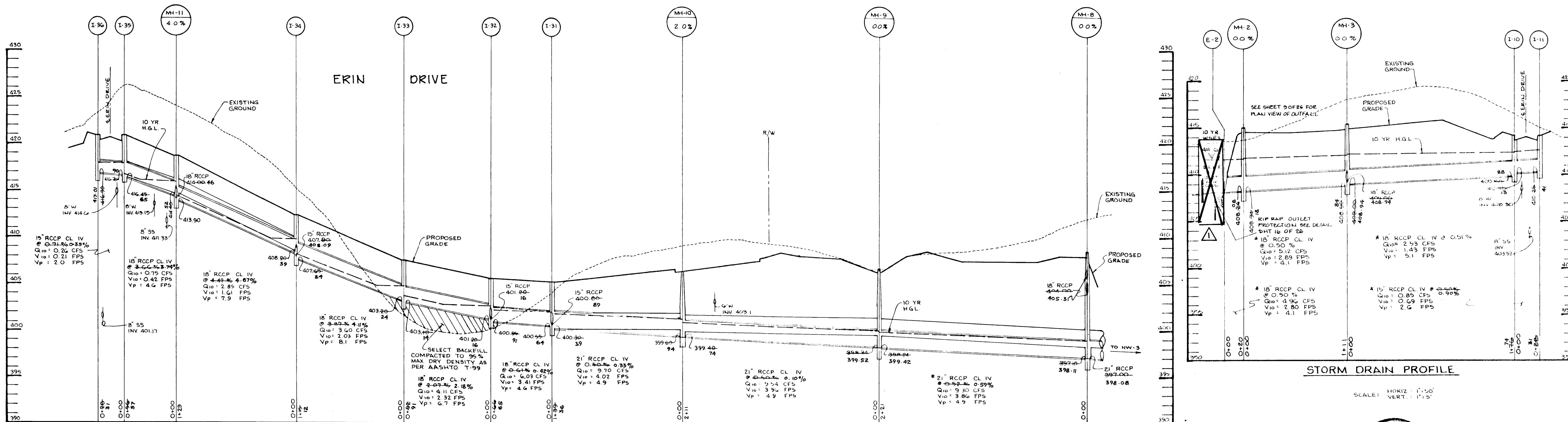
DATE: MAY 19, 1995

SCALE: AS SHOWN

JAYKANT D. PAREKH # 19145  
DRAWING NO. 17 OF 26

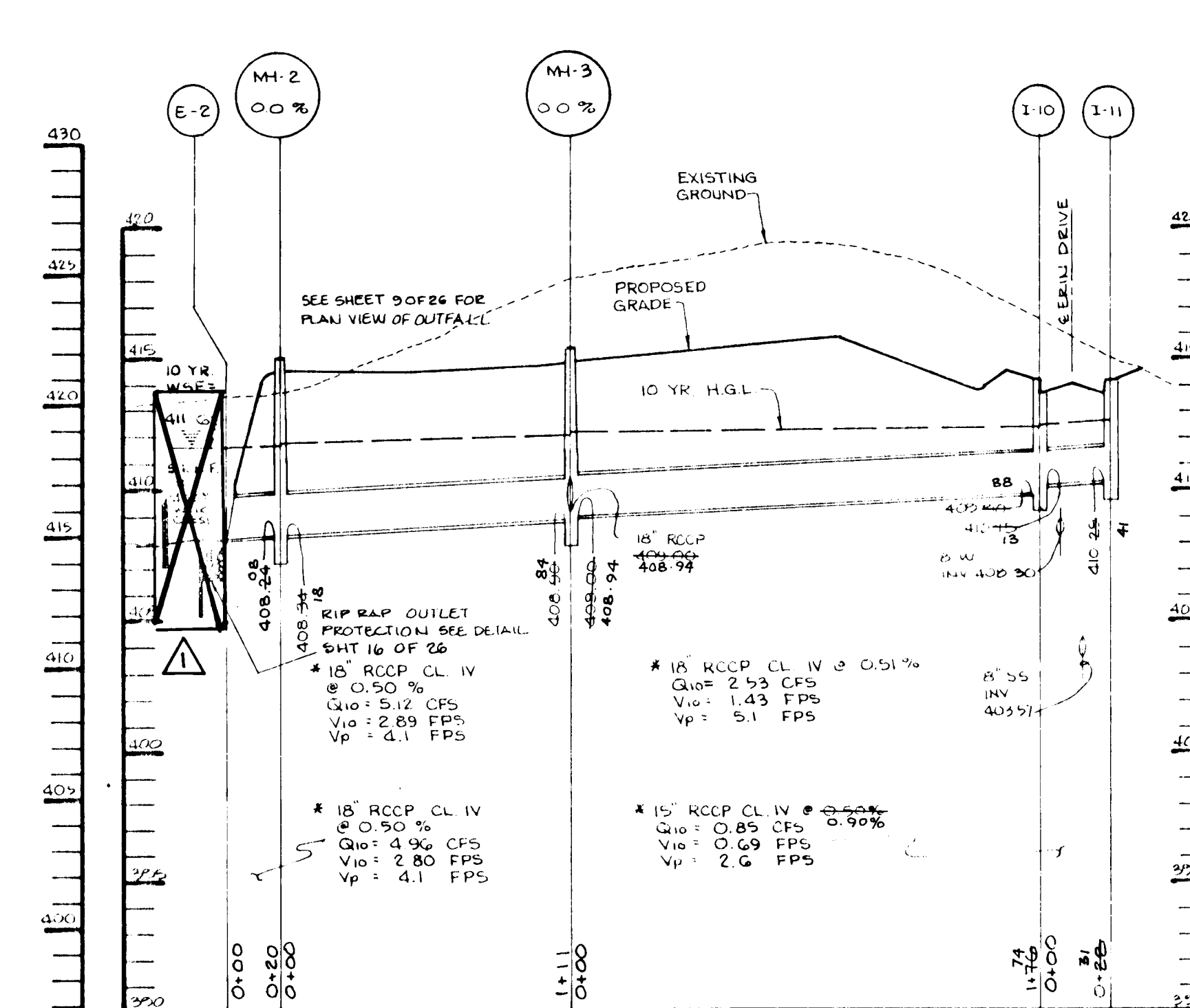
F-95-83 AS-BUILT

1739



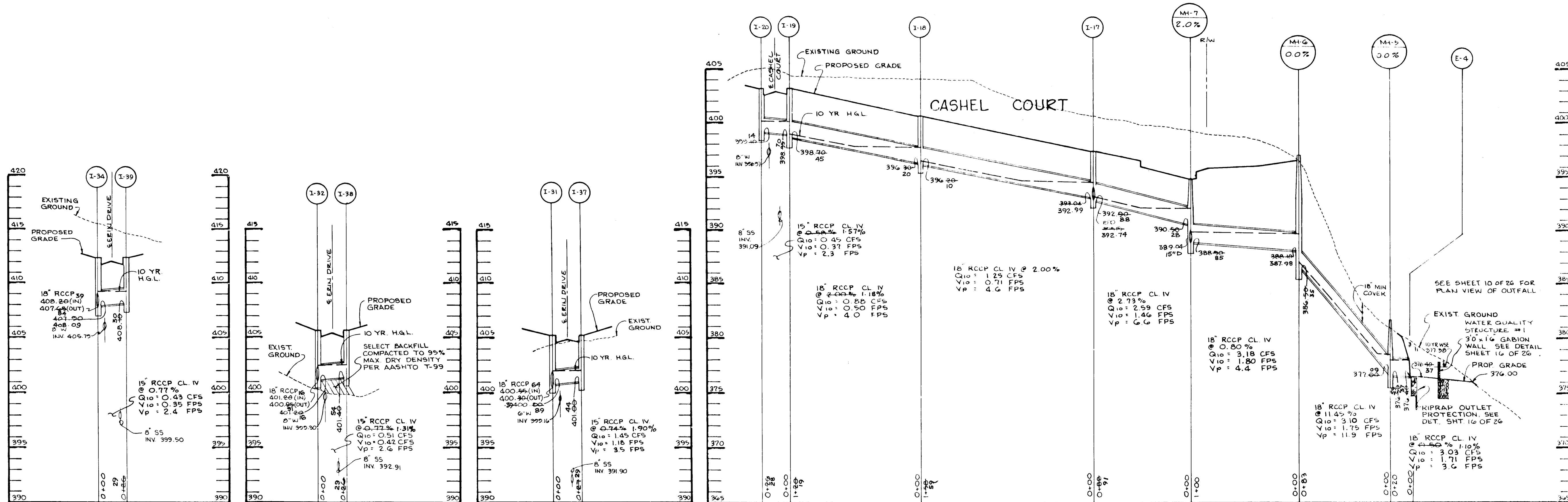
STORM DRAIN PROFILE

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



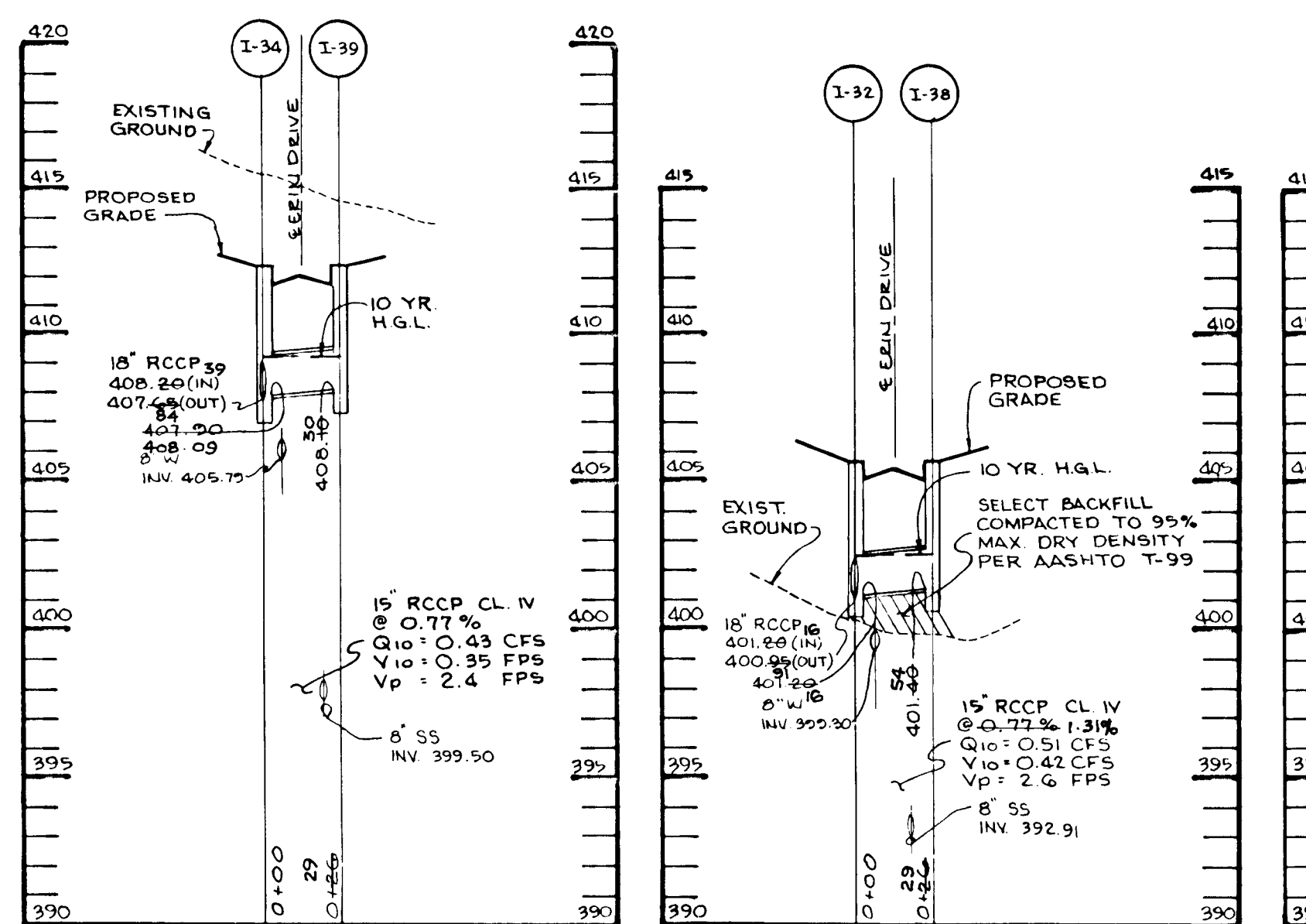
STORM DRAIN PROFILE

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



STORM DRAIN PROFILE

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



STORM DRAIN PROFILES

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

STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER

AS BUILT CERTIFICATE

7-19-99 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

OWNER / DEVELOPER: WILLEN LIMITED PARTNERSHIP, C/O ANDREW L. ISAACSON, 5450 WHITELY PARK TERRACE # 410, BETHESDA, MD 20814, 301-530-1123

PROJECT: CLARKS GLEN SECTION I, AREA I

AREA: TAX MAP NO. 30, SHEET R-17, PARCEL 250, 5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: STORMDRAIN PROFILES

RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors, 8818 Centre Park Drive • Suite 200 • Columbia, MD 21045, 410-997-8900, FAX: 410-997-9202

5-22-95 DATE

DESIGNED BY: A.A.P.

DRAWN BY: R.J.C.

PROJECT NO: 93211

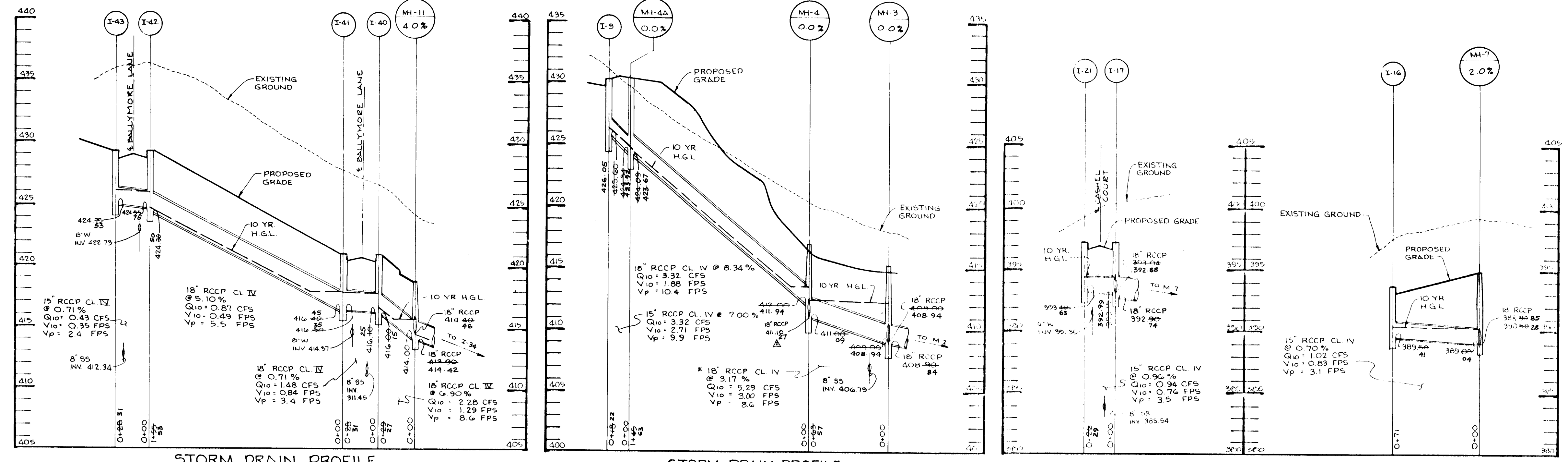
DATE: MAY 19, 1995

SCALE: AS SHOWN

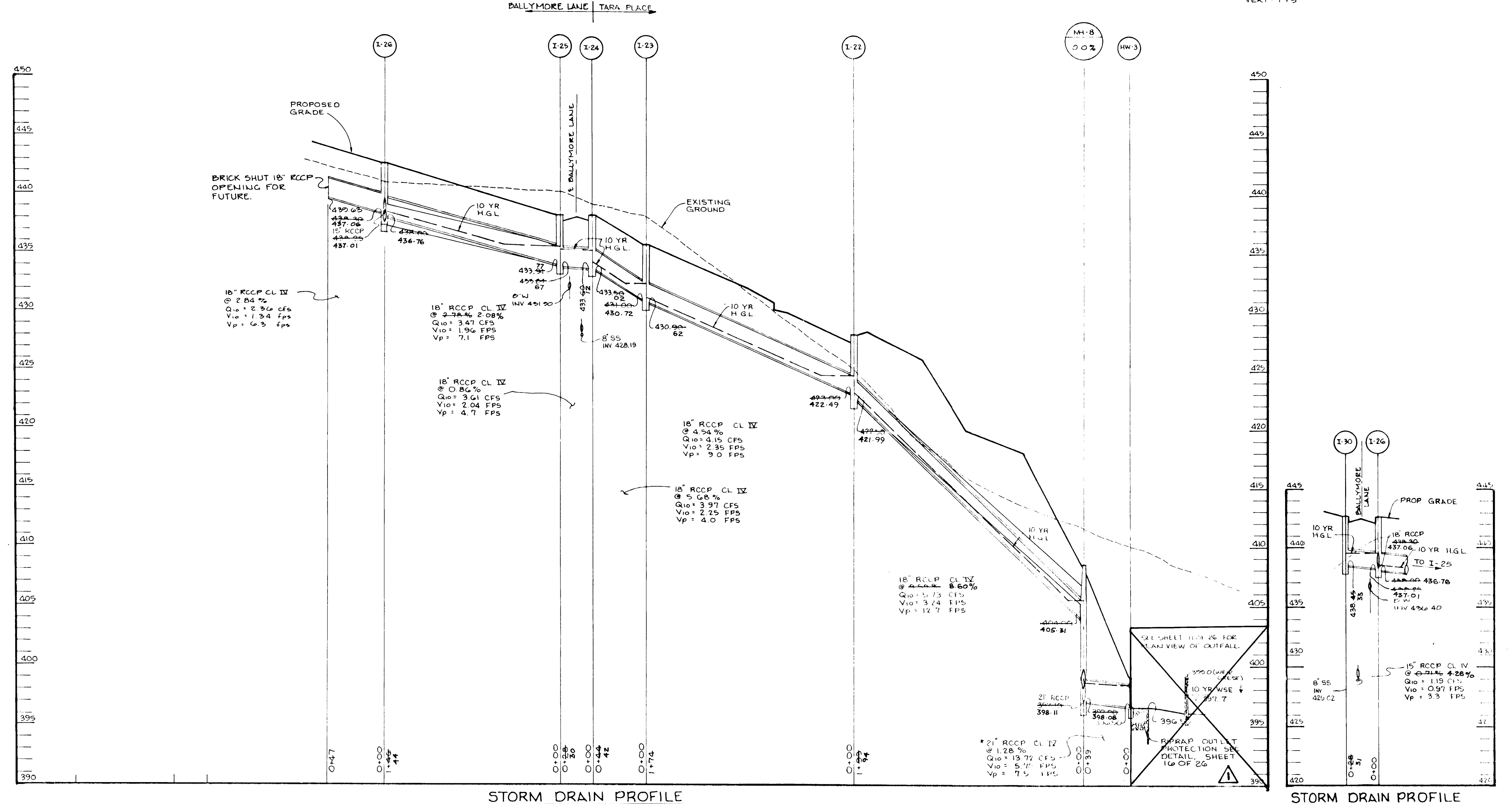
JAYKANT D. PAREKH # 19148 DRAWING NO. 18 OF 26

1739

1739



SCALE: HORIZ: 1"=50'  
 SCALE: HORIZ: 1"=50'  
 SCALE: HORIZ: 1"=50'



SCALE: HORIZ: 1"=50'  
 SCALE: HORIZ: 1"=50'  
 SCALE: HORIZ: 1"=50'

STATE OF MARYLAND AS BUILT CERTIFICATE

Christopher J. Reid 7.19.99

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Gina Spinnery 6/22/95

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Robert M. Conner 6-14-95

Phillip J. Ryan 6/16/95

8/95 DELETED SWM OUTFALL @ MH-3

OWNERS / DEVELOPER: WILBEN LIMITED PARTNERSHIP, C/O ANDREW L. ISAACSON, 5400 WHITELEY PARK TERRACE # 410, BETHESDA, MD 20814, 301-530-1129

PROJECT: CLARKS GLEN SECTION I, AREA

AREA: TAX MAP NO. 35, ZONED R-1D, PARCEL 205, 5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN PROFILES

RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors, 8818 Centre Park Drive • Suite 300 • Columbia, Md 21045, 410-997-8900, FAX: 410-997-8282

DATE: 5.22.95

DESIGNED BY: A.A.P.

DRAWN BY: R.J.C.

PROJECT NO: 93211

DATE: MAY 19, 1995

SCALE: AS SHOWN

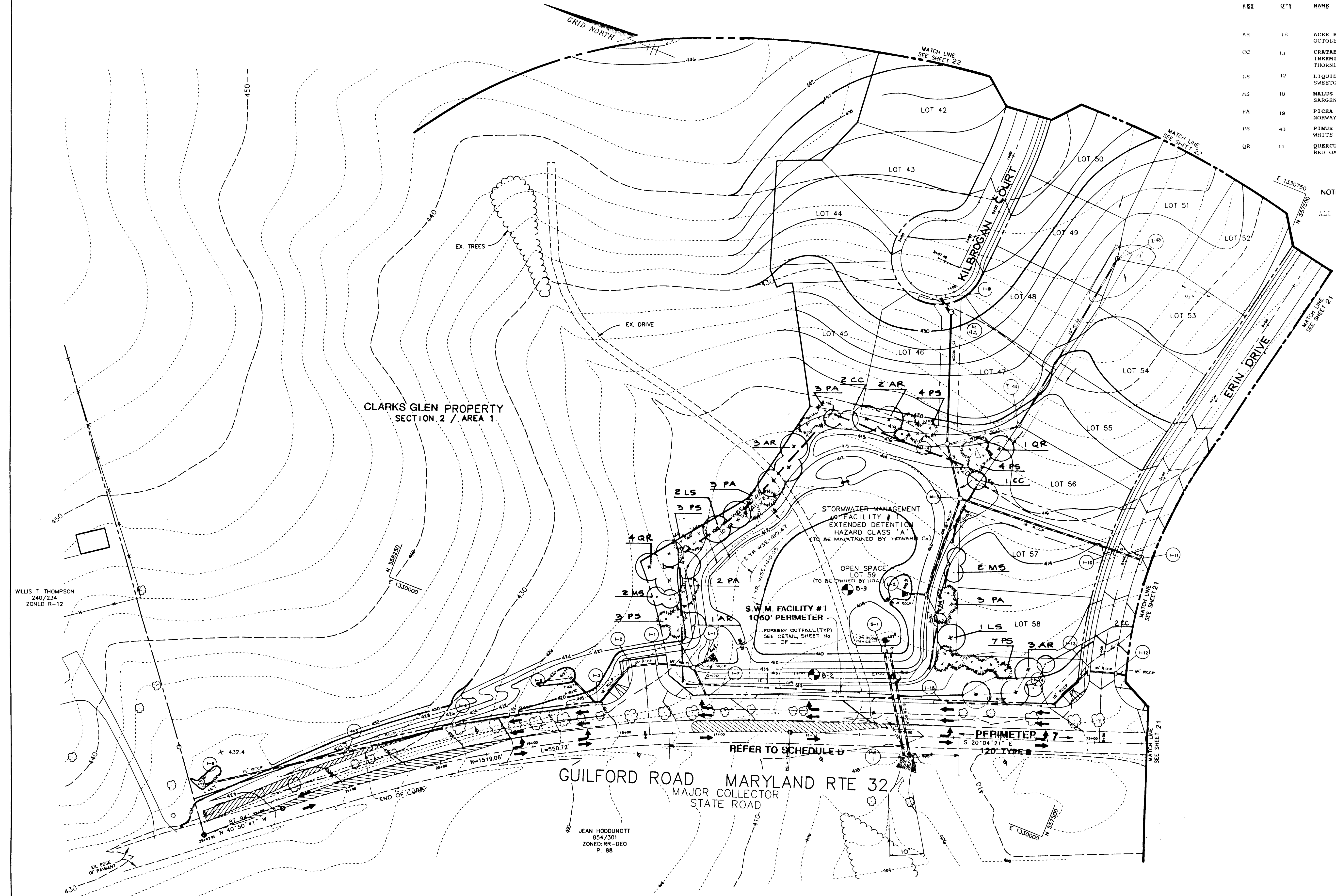
JAYKANT D. PAREKH #19148 DRAWING NO. 15 OF 26

1739


PLANT SCHEDULE (INCLUDES ALL SHEETS)

KEY	QTY	NAME	SIZE	REMARKS
AR	18	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL. 10'-12" HT.	B & B
CC	13	CRATAEGUS CRUSGALLI VAR. INERMIS THORNLESS COCKSPUR HAWTHORN	1 1/2"-2" CAL. 8'-10" HT.	B & B
LS	12	LIQUIDAMBAR STYRACIFLUA SWEETGUM	2 1/2"-3" CAL. 10'-12" HT.	B & B
MS	10	MAIUS SARGENTII SARGENT CHADAPPLE	1 1/2"-2" CAL. 8'-10" HT.	B & B
PA	18	PICEA ABIES NORWAY SPRUCE	6'-8" HT.	B & B
PS	48	PINUS STROBUS WHITE PINE	6'-8" HT.	B & B
QR	11	QUERCUS RUBRA (BOREALIS) RED OAK	2 1/2"-3" CAL. 10'-12" HT.	B & B

NOTE: SEE SHEET 21 FOR LANDSCAPE REQUIREMENT SCHEDULES  
ALL TREES MUST BE LOCATED 20' MINIMUM FROM STREET LIGHTS.



**BUILT CERTIFICATE**


 CHRISTOPHER J. REID #19949  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH  
 DATE: 7.19.99

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHINA J. WILSON  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH  
 DATE: 6/22/95

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

[Signature]  
 CHIEF, LAND DEVELOPMENT DIVISION  
 DATE: 6/15/95

[Signature]  
 CHIEF, BUREAU OF HIGHWAYS  
 DATE: 6-4-95

[Signature]  
 CHIEF, BUREAU OF ENGINEERING  
 DATE: 6/16/95

DATE NO. REVISION

OWNER / DEVELOPER  
 WILBEN LIMITED PARTNERSHIP  
 C/O ANDREW L. ISAACSON  
 5450 WHITELY PARK TERRACE # 410  
 BETHESDA, MD 20814  
 301-530-1123

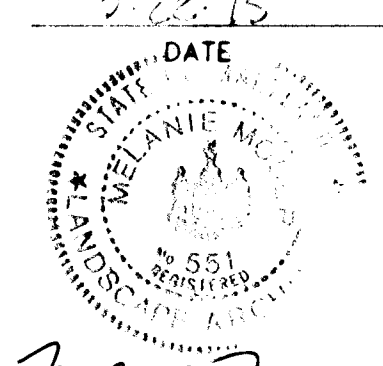
PROJECT  
 CLARKS GLEN SECTION 1 / AREA 1

AREA  
 TAX MAP 35 PARCEL 205  
 5th ELECTION DISTRICT  
 HOWARD COUNTY, MD.

TITLE  
**LANDSCAPE PLAN**

**RIEMER MUEGGE & ASSOCIATES, INC.**  
 Planners • Engineers • Surveyors  
 8818 Centre Park Drive • Suite 200 • Columbia, Maryland 21045  
 410-997-8900 FAX: 410-997-9282

DATE: 5.19.95  
 DESIGNED BY:  
 DRAWN BY:  
 PROJECT NO.:  
 DATE: MAY 19, 1995  
 SCALE: 1" = 50'  
 DRAWING NO. 20 OF 26

  
 MELANIE MOSER

THIS SHEET FOR LANDSCAPING ONLY

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES						
	3	7	1A	1B	2	4	5	5A	6
Perimeter Edge	3	7	1A	1B	2	4	5	5A	6
Landscaping Type	B	B	A	A	A	A	A	A	A
Linear Feet of Roadway Frontage/Perimeter	340	550	740	300	677	180	230	170	360
Credit for Existing Vegetation Yes/No Linear Feet Describe below if needed	Yes 380	Yes 550	No 0	Yes 280	Yes 607	No 0	Yes 360	No 170	No 0
Number of Plants Required Shade Trees Evergreen Trees Shrubs	0	11	12	0	0	0	4	0	6
Number of Plants Provided Shade Trees Evergreen Trees Shrubs	11	14	0	**	**	**	**	**	**
Describe plant substitution credit below if needed									

\* Credit for existing woods to remain  
\*\* Deferred to S.D.P.; builder will provide.

This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING		
Stormwater Management Facility #	1	2
Linear Feet of Perimeter	1060	950
Credit for Existing Vegetation (No, Yes and %)	no	no
Credit for Other Landscaping (No, Yes and %)	no	no
Number of Trees Required Shade Trees Evergreen Trees	21 26	19 24
Number of Trees Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution)	15 29 9*	15 19 13**

\* Three evergreen trees and 9 flowering trees were substituted for 6 shade trees.  
\*\* Eight flowering trees were substituted for 4 shade trees, and 5 flowering trees were substituted for 5 evergreen trees.

This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.

Financial surety for the required landscaping has been posted as part of the DPW development agreement in the amount of \$13,700.

ESTHER RETTGER  
525/0230  
ZONED: R-12  
P. 189

ALL TREES MUST BE LOCATED 20' MINIMUM FROM STREET LIGHTS.

NOTE: SEE SHEET 20 FOR PLANT SCHEDULE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

*Gina Surmony* 4/22/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

*John Dammann* 6/15/95  
CHIEF, LAND DEVELOPMENT DIVISION DATE

*Andrew M. Daniels* 6-14-95  
CHIEF, BUREAU OF HIGHWAYS DATE

*Paul E. Spohn* 6/16/95  
CHIEF, BUREAU OF ENGINEERING DATE

8/11/96 12 APPROVED TO MAKE PUBLIC POWER AGREEMENT ON OPEN SPACE LOT 6C AND ADJACENT OPEN SPACE LOT 6C (SEE SHEET 20)

OWNER / DEVELOPER

WILBEN LIMITED PARTNERSHIP  
C/O ANDREW L. ISAACSON  
5450 WHITELY PARK  
TERRACE # 410  
RETHESDA, MD 20814  
301-530-1123

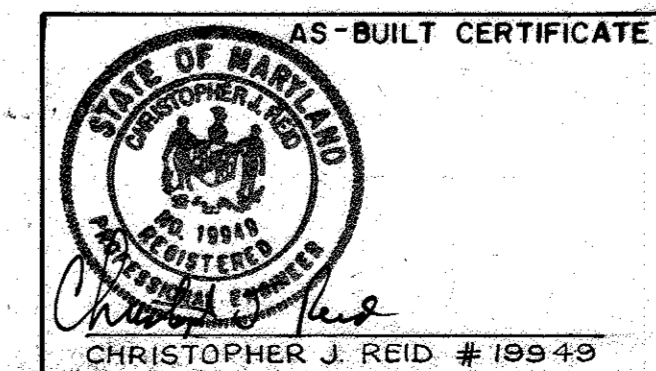
PROJECT **CLARKS GLEN SECTION 1 / AREA 1**

AREA TAX MAP 35 PARCEL 205  
5th ELECTION DISTRICT  
HOWARD COUNTY, MD.

TITLE **LANDSCAPE PLAN**

**RIEMER MUEGGE & ASSOCIATES, INC.**  
Planners • Engineers • Surveyors  
8818 Centre Park Drive • Suite 200 • Columbia, Maryland 21045  
410-997-8900 FAX: 410-997-9282

5.22.95  
DESIGNED BY:  
DRAWN BY:  
PROJECT NO: 93211  
DATE: MAY 19, 1995  
SCALE: 1" = 50'  
DRAWING NO. 21 OF 26



7.11.99 DATE

THIS SHEET FOR LANDSCAPING ONLY

F-95-83



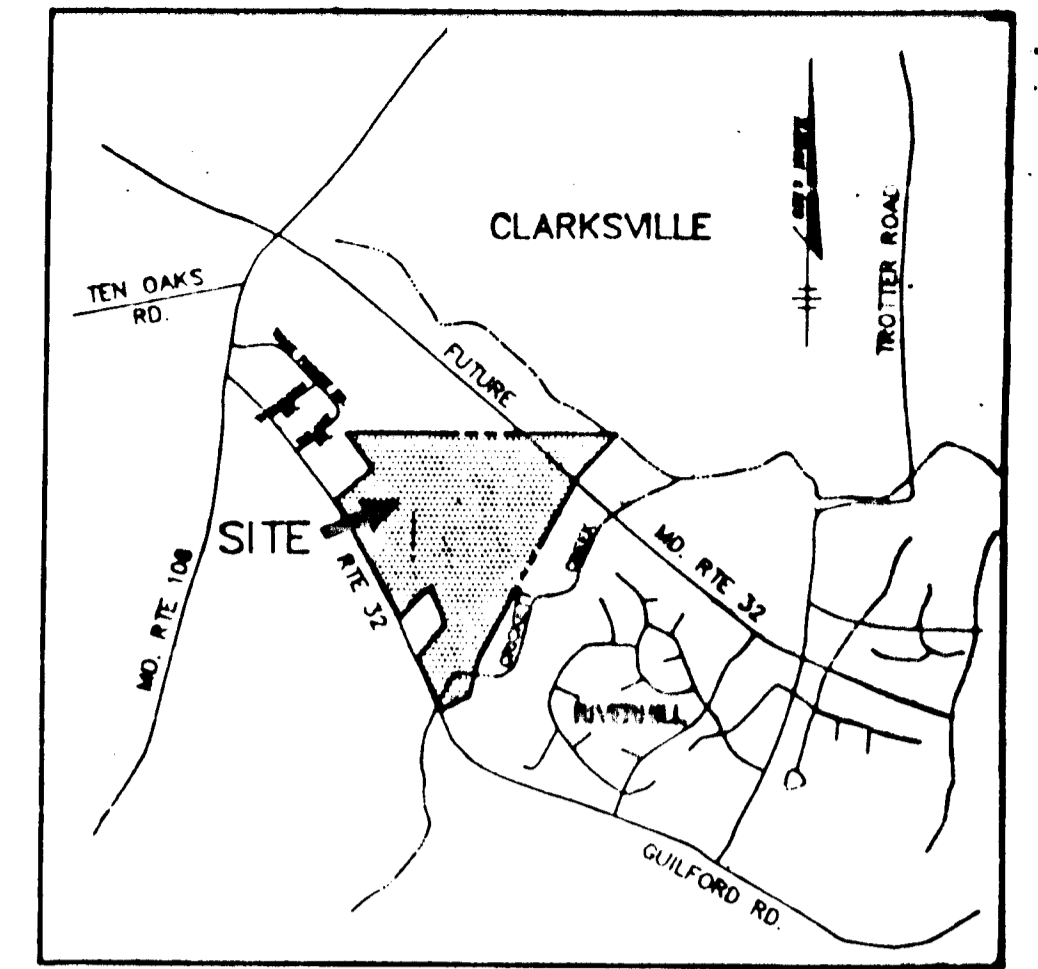
GUILFORD ROAD MARYLAND RTE 32  
MAJOR COLLECTOR

17339



STABILIZATION FOR DISTURBED AFFORESTATION/REFORESTATION AREA

NOTE: Disturbed Areas that are defined as Afforestation/Reforestation must be permanently stabilized with the following:  
 75 lbs. Dry Area Formula @ 150 lbs. per acre:  
 40% Rebel II or Tribute Tall Fescue  
 15% Reliant Hard Fescue  
 10% Weeping Lovegrass  
 10% Jamestown Cheeping Fescue  
 10% Palmer Perennial Ryegrass  
 10% Blackwell Switchgrass  
 5% White Clover  
 Straw mulch should be spread uniformly by hand at the rate of 70 to 90 lbs. per acre.  
 Refer to standard Sediment Erosion Control Seeding notes on Sheet 14 of 26 for all other areas, except as noted.



VICINITY MAP  
SCALE: 1" = 2000'

\* THERE IS NO FOREST RETENTION OR AFFORESTATION ON THIS STREET.

AFFORESTATION REQUIREMENT FOR CLARKS GLEN, SECTION 1 = 3.40 AC.±

ZONE 1: 200 1" CAL. PER ACRE  
 ZONE 2: 350 SEEDLINGS PER ACRE  
 ZONE 3: 350 SEEDLINGS PER ACRE

TREES REQUIRED:	TREES SHOWN:
217 1" CAL. TREES	67 2" CAL. LANDSCAPE TREES
399 SEEDLINGS	169 1" CAL. TREES
	247 SEEDLINGS

CLARKS GLEN, SECTION 1 AFFORESTATION 2 SECTION 21.1.32 AC.±

TREES REQUIRED:	TREES SHOWN:
36 1" CAL. TREES	36 1" CAL. TREES
403 SEEDLINGS	403 SEEDLINGS

SEQUENCE OF CONSTRUCTION

1. Mow or brush hog the site within the limits of the proposed afforestation area. DO NOT REMOVE OR DAMAGE ANY EXISTING TREES OR SAPLINGS. There shall be no staging, storage, or stockpiling of materials within the nontidal wetlands or 25' nontidal wetlands buffer.
2. Remove noxious plant material such as multiflora rose before installing afforestation plants.
3. Install tree protection signage as shown.
4. Install afforestation plant material as per the planting detail.
5. Reestablish afforestation areas according to current sediment and erosion control practices.
6. Maintain afforestation in accordance with the post-construction requirements.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
 DATE: 7.19.99  
 CHRISTOPHER J. REID #19949

APPROVED: DIVISION OF LAND DEVELOPMENT AND RESEARCH.  
 DATE: 4/22/95  
 Chief, Division of Land Development and Research

DATE NO.	REVISION

OWNER / DEVELOPER  
 WILBEN LIMITED PARTNERSHIP  
 C/O ANDREW L. ISAACSON  
 5450 WHITELY PARK TERRACE # 410  
 BETHESDA, MD 20814  
 301-530-1123

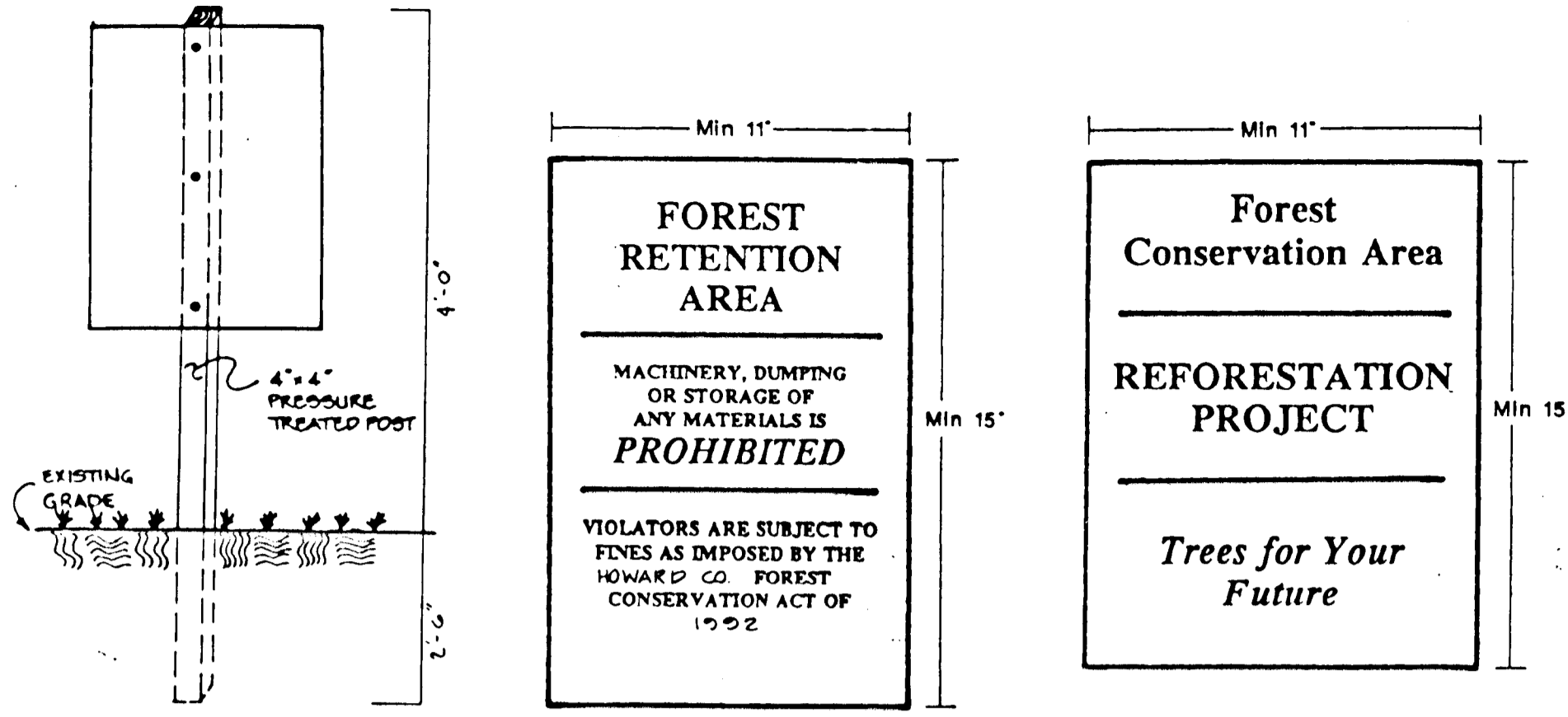
PROJECT  
 CLARKS GLEN SECTION 1 / AREA 1

AREA  
 TAX MAP 35 PARCEL 205  
 5th ELECTION DISTRICT  
 HOWARD COUNTY, MD.

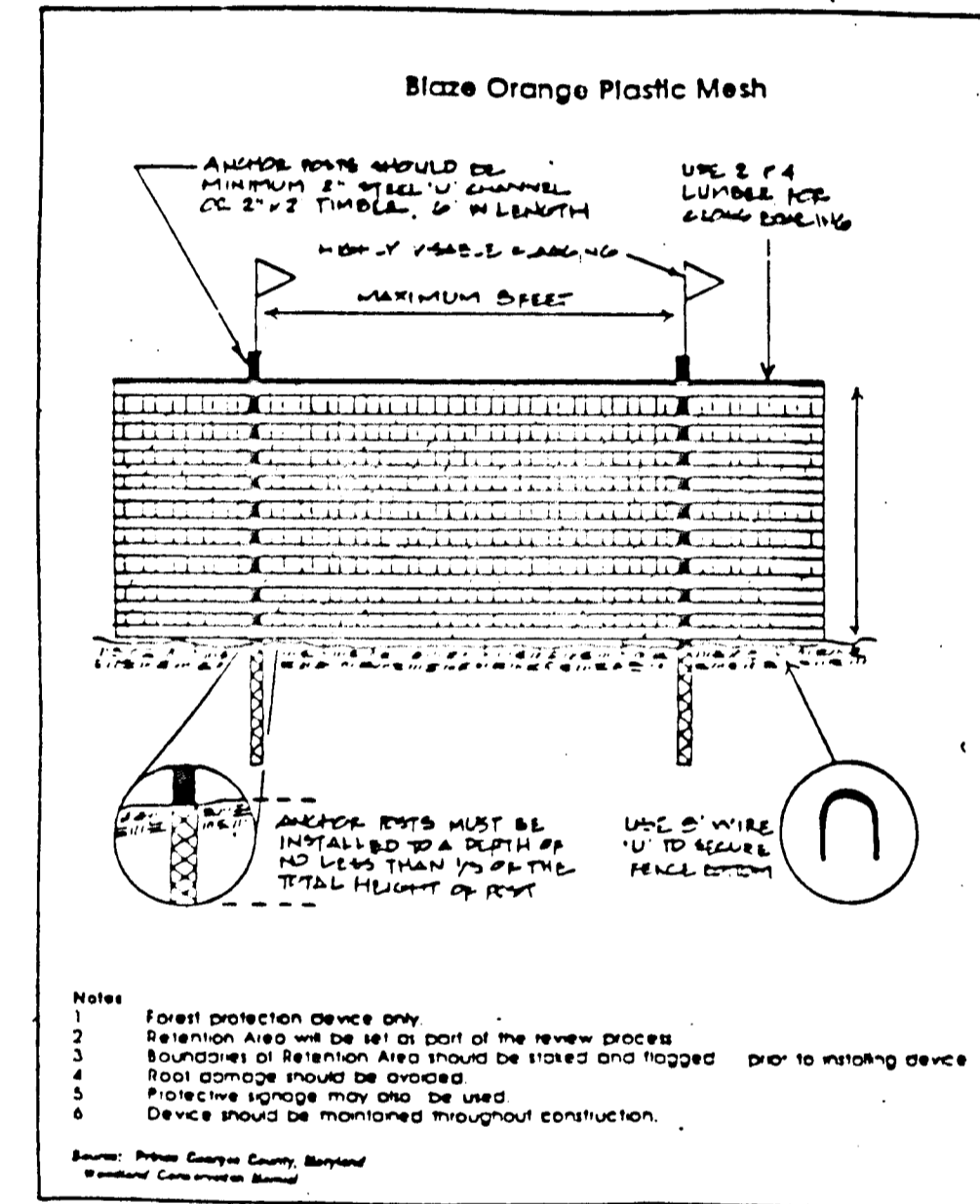
TITLE  
 FOREST CONSERVATION & AFFORESTATION PLAN

RIEMER MUEGGE & ASSOCIATES, INC.  
 Planners Engineers Surveyors  
 8818 Centre Park Drive, Suite 200, Columbia, Maryland 21048  
 410-997-8900 FAX: 410-997-9282

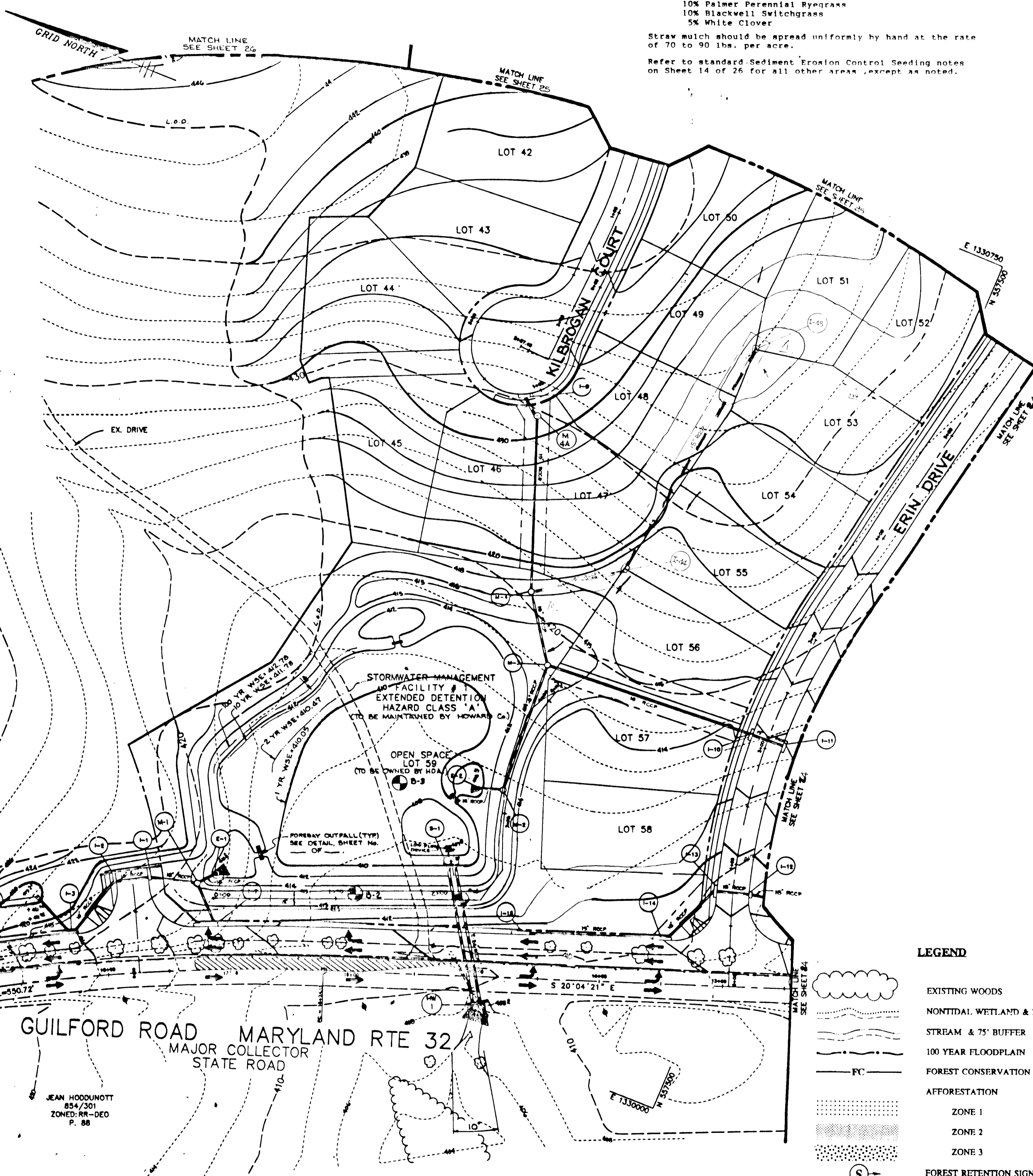
DATE: 3.22.15	5/24/16, P. 34-35, WP. 94-31
DESIGNED BY: DK	
DRAWN BY: RR	
PROJECT NO: 93210	
DATE: MAY 19, 1995	
SCALE: 1" = 50'	
DRAWING NO. 25 OF 26	



FOREST RETENTION & AFFORESTATION SIGN DETAIL N.T.S.



PROTECTIVE TREE FENCING N.T.S.



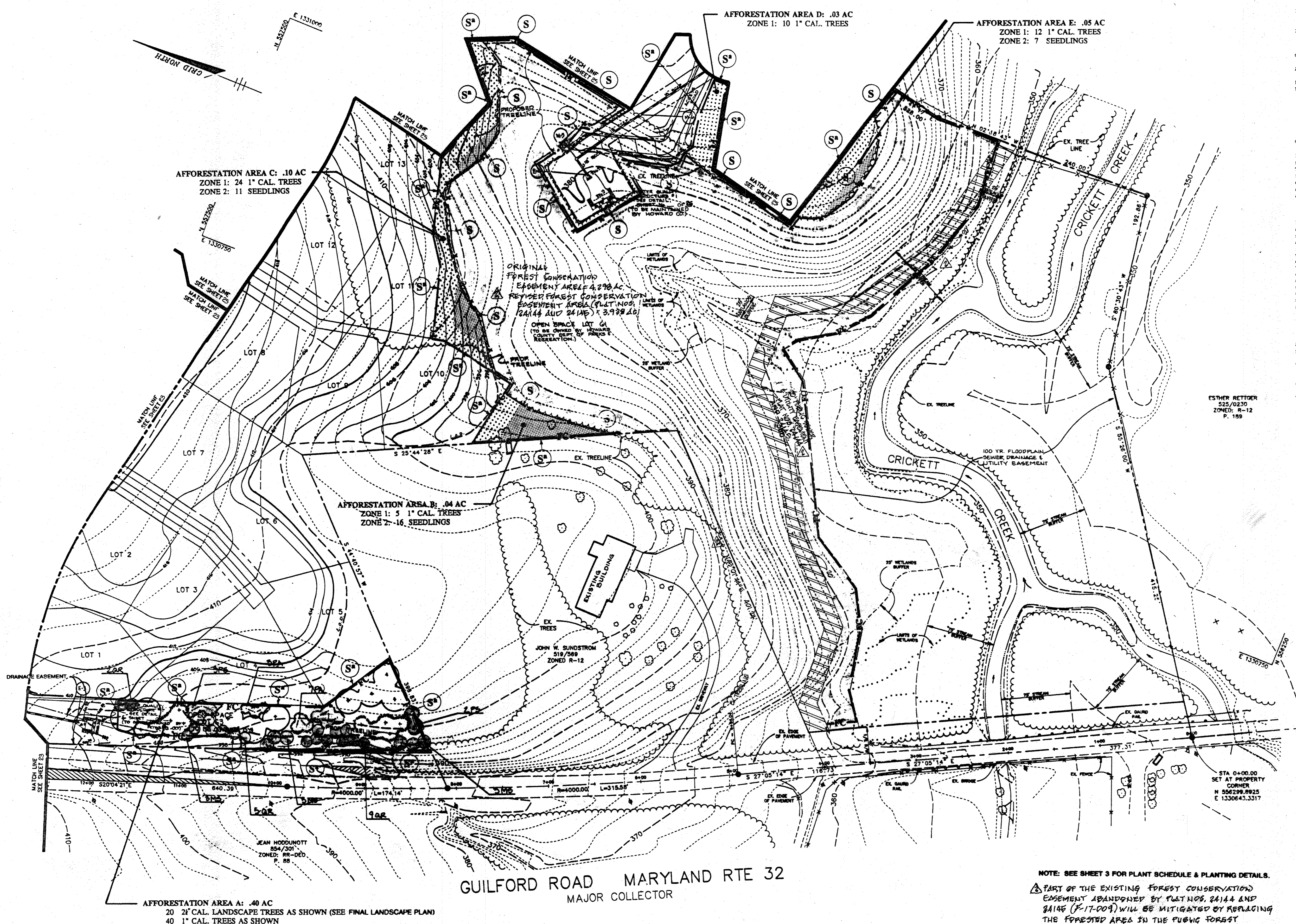
LEGEND

	EXISTING WOODS
	NONTIDAL WETLAND & 25' BUFFER
	STREAM & 75' BUFFER
	100 YEAR FLOODPLAIN
	FOREST CONSERVATION AREA
	AFFORESTATION
	ZONE 1
	ZONE 2
	ZONE 3
	FOREST RETENTION SIGNAGE
	AFFORESTATION SIGNAGE
	PROTECTIVE TREE FENCING
	24 TOTAL FOREST RETENTION SIGNAGE
	50 TOTAL AFFORESTATION SIGNAGE

THIS PLAN FOR FOREST CONSERVATION PURPOSES ONLY

1739

1739



- GENERAL NOTES:
1. Randomly space trees so that no more than 5 (1" caliper) or 7 (tree whip) of any particular species are planted in succession.
  2. There will be no staging or storing of equipment within the limit of the nontidal wetlands, 25' buffer, and/or 75' stream buffer.

**GARANTEE & REPLACEMENT WARRANTY**  
 A two (2) year replacement warranty is required as follows:  
 End of first growing season, 90% survival required.  
 End of second growing season, 75% survival required.

**FOREST CONSERVATION PROGRAM**  
**POST CONSTRUCTION MANAGEMENT PRACTICE:**  
**OBJECTIVE:**


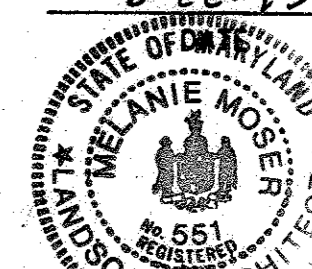
It is the objective of the Clarke Glen Forest Conservation Easement areas to retain environmental integrity by preserving and increasing forested areas. Three (3) areas of particular concern are: Specific forest stands are designated for preservation and afforestation to protect wildlife corridors by providing contiguous tracts of forest. Bottom land areas are to improve naturally with the aid of afforestation plantings, within the 75' stream buffer, and afforestation along existing forested areas to increase forest corridors.

**MANAGEMENT PRACTICE SCHEDULE:**  
 It is the intent of the Forest Conservation Program for Clarke Glen to protect areas stated in the objective. The following management practices are recommended: 1) Trail systems through forested areas which will remain as acceptable in the Forest Conservation Easement. However, if a trail system is implemented, it should disturb as little vegetation as possible. A trail system through an afforestation area is not acceptable until the forest becomes established as determined by a registered forester or landscape architect. 2) Tree cutting is allowed for safety and routine maintenance of existing forested areas. 3) Sensitive areas such as steep slopes, wetlands, streams and their associated buffers, and wildlife corridors are considered inaccessible for selective timber harvesting and should be left to continue natural forest succession. 4) The forest conservation areas should be reassessed by a registered forester or landscape architect to determine its condition and make recommendations for continual structural forest growth.

A two (2) year post-construction protection and management program to ensure probability of a high survival rate includes the following:

- 0 Maintenance of signs, fences and tree protection devices to prevent unwarranted intrusions and damage.
- 0 Careful removal of all temporary structures after construction.
- 0 Routine inspections of forest conservation easements:
- 0 Provide suitable thinning, watering and fertilizing to ensure proper growth and survival.
- 0 Removal and replacement of dead or damaged reforestation material.
- 0 Certification that the required survival rates have been met.

ESTHER REITGER  
 525/0230  
 ZONED: R-12  
 P. 189

<b>AS-BUILT CERTIFICATE</b>	
	DATE
<i>Christopher J. Reid</i> CHRISTOPHER J. REID #19949	7.19.99
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Gina Summerville</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	6/22/95
DATE NO. REVISION	
OWNER / DEVELOPER	
WILBEN LIMITED PARTNERSHIP, C/O ANDREW L. ISAACSON 5450 WHITELEY PARK TERRACE # 410 BETHESDA, MD 20814 301-530-1123	
PROJECT	
CLARKS GLEN SECTION 1 / AREA 1	
AREA	
TAX MAP 35 PARCEL 205 5th ELECTION DISTRICT HOWARD COUNTY, MD.	
TITLE	
FOREST CONSERVATION & AFFORESTATION PLAN	
RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors 8618 Centre Park Drive • Suite 200 • Columbia, Maryland 21048 410-997-8800 FAX: 410-997-9282	
6-22-95	S-94-16, P-94-25, WP-94-31
	DESIGNED BY: DK
<i>Nelma P. Reed</i>	DRAWN BY: RR
DATE: MAY 19, 1995	PROJECT NO: 93210
SCALE: 1" = 50'	DRAWING NO. 24 OF 25

NOTE: SEE SHEET 3 FOR PLANT SCHEDULE & PLANTING DETAILS.  
 PART OF THE EXISTING FOREST CONSERVATION EASEMENT ABANDONED BY PLOT NOS. 24144 AND 24146 (F-17-009) WILL BE MITIGATED BY REPLACING THE FORESTED AREA IN THE PUBLIC FOREST CONSERVATION EASEMENT ON A PLOT ENTITLED "ENCLOSURE AT TIERNEY FARM, PHASE 1 (F-19-110).

THIS PLAN FOR FOREST CONSERVATION PURPOSES ONLY



PLANT SCHEDULE

AFFOR. AREA	QTY	BOTANICAL NAME COMMON NAME	REMARKS
<b>AREA A</b>			
2" CAL. LANDSCAPE TREES AS SHOWN (SEE FINAL LANDSCAPE PLAN)			
1" CAL. TREES 6'-8'			
KEI	8	CARPINUS CAROLINIANA HORNWOOD	CONTAINER
PA	10	PICEA ABIES NORWAY SPRUCE	CONTAINER
PS	5	PINUS STROBUS WHITE PINE	CONTAINER
QR	17	QUERCUS RUBRA RED OAK	CONTAINER
<b>AREA B</b>			
ZONE 1: 1" CAL. TREES 6'-8'			
	2	AMELANCHIER LAEVIS SERVICEBERRY	CONTAINER
	3	LIRIODENDRON TULIPIFERA TULIPTREE	CONTAINER
ZONE 2: SEEDLINGS 3'-5'			
	8	LIRIODENDRON TULIPIFERA TULIPTREE	CONTAINER
	8	PRUNUS SEROTINA BLACK CHERRY	CONTAINER
<b>AREA C</b>			
ZONE 1: 1" CAL. TREES 6'-8'			
	5	AMELANCHIER LAEVIS SERVICEBERRY	CONTAINER
	5	FRAXINUS PENNSYLVANICA GREEN ASH	CONTAINER
	8	LIRIODENDRON TULIPIFERA TULIPTREE	CONTAINER
	6	PRUNUS SEROTINA BLACK CHERRY	CONTAINER
ZONE 2: SEEDLINGS 3'-5'			
	6	FRAXINUS PENNSYLVANICA GREEN ASH	CONTAINER
	5	LIRIODENDRON TULIPIFERA TULIPTREE	CONTAINER
<b>AREA D</b>			
ZONE 1: 1" CAL. TREES 6'-8'			
	6	FRAXINUS PENNSYLVANICA GREEN ASH	CONTAINER
	4	LIRIODENDRON TULIPIFERA TULIPTREE	CONTAINER
<b>AREA E</b>			
ZONE 1: 1" CAL. TREES 6'-8'			
	4	FRAXINUS PENNSYLVANICA GREEN ASH	CONTAINER
	8	LIRIODENDRON TULIPIFERA TULIPTREE	CONTAINER
ZONE 2: SEEDLINGS 3'-5'			
	7	LIRIODENDRON TULIPIFERA TULIPTREE	CONTAINER
<b>AREA F</b>			
ZONE 1: 1" CAL. TREES 6'-8'			
	6	CELTIS OCCIDENTALIS HACKBERRY	CONTAINER
	3	CARPINUS CAROLINIANA HORNWOOD	CONTAINER
	5	PRUNUS SEROTINA BLACK CHERRY	CONTAINER
<b>AREA G</b>			
ZONE 1: 1" CAL. TREES 6'-8'			
	15	CELTIS OCCIDENTALIS HACKBERRY	CONTAINER
	15	CARPINUS CAROLINIANA HORNWOOD	CONTAINER
	14	PRUNUS SEROTINA BLACK CHERRY	CONTAINER
ZONE 2: SEEDLINGS 3'-5'			
	60	CELTIS OCCIDENTALIS HACKBERRY	CONTAINER
	38	CARPINUS CAROLINIANA HORNWOOD	CONTAINER
	35	PRUNUS SEROTINA BLACK CHERRY	CONTAINER
<b>AREA H</b>			
ZONE 1: 1" CAL. TREES 6'-8'			
	8	CARPINUS CAROLINIANA HORNWOOD	CONTAINER
	12	PRUNUS SEROTINA BLACK CHERRY	CONTAINER
ZONE 2: SEEDLINGS 3'-5'			
	16	CELTIS OCCIDENTALIS HACKBERRY	CONTAINER
	16	CARPINUS CAROLINIANA HORNWOOD	CONTAINER
	20	FRAXINUS PENNSYLVANICA GREEN ASH	CONTAINER
	28	PRUNUS SEROTINA BLACK CHERRY	CONTAINER
<b>AREA I</b>			
ZONE 1: 1" CAL. TREES 6'-8'			
	16	AMELANCHIER LAEVIS SERVICEBERRY	CONTAINER
	20	LIRIODENDRON TULIPIFERA TULIPTREE	CONTAINER
ZONE 2: SEEDLINGS 3'-5'			
	120	CELTIS OCCIDENTALIS HACKBERRY	CONTAINER
	100	PRUNUS SEROTINA BLACK CHERRY	CONTAINER
	102	PINUS TAEDA LOBLOLLY PINE	CONTAINER
ZONE 3: SEEDLINGS 3'-5'			
	25	ACER RUBRUM RED MAPLE	CONTAINER
	20	LIQUIDAMBAR STRYCIPLUA SWEETGUM	CONTAINER
	36	PINUS TAEDA LOBLOLLY PINE	CONTAINER

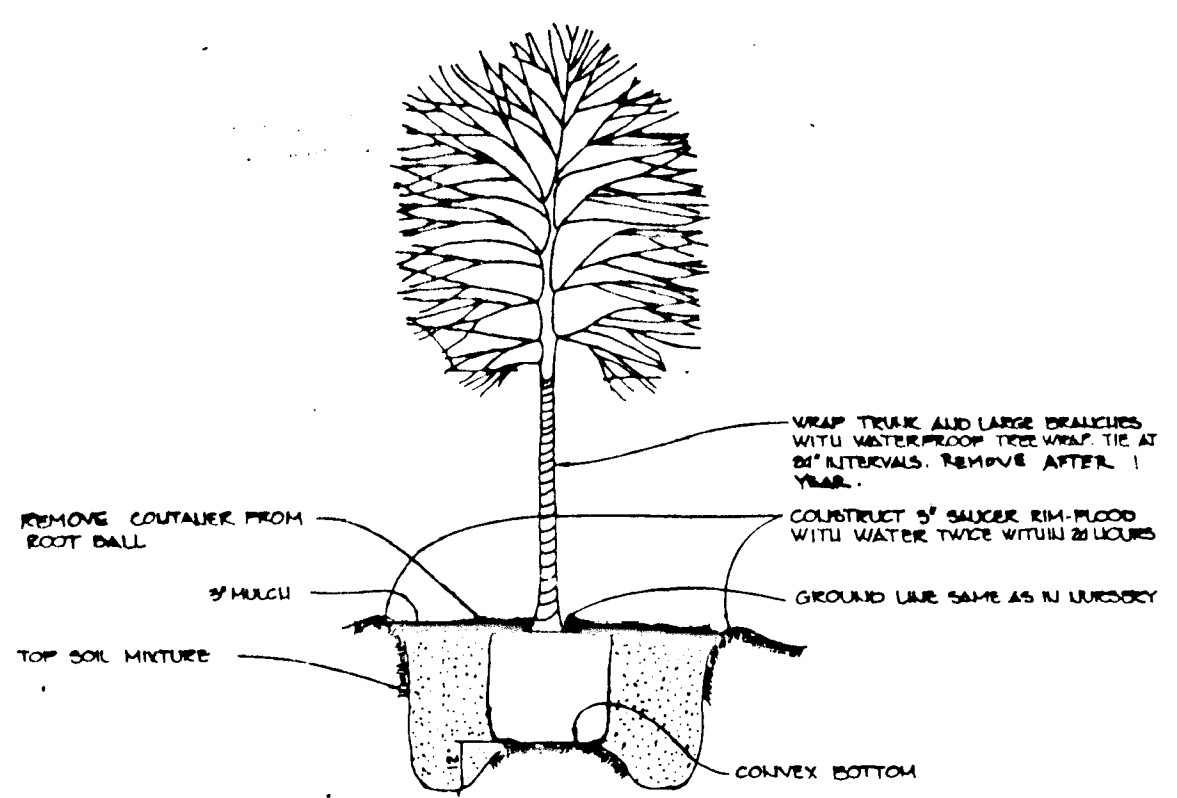
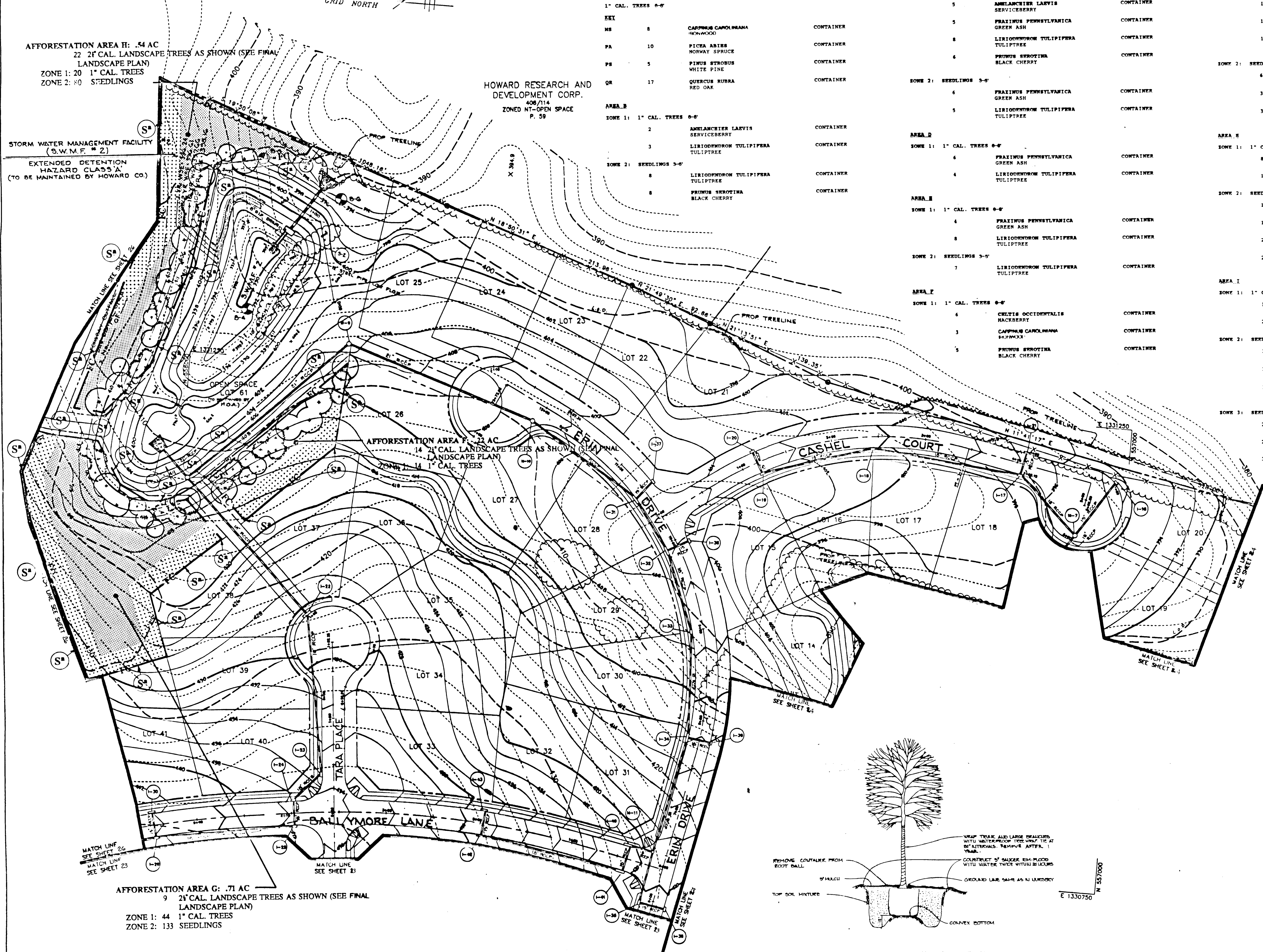
AFFORESTATION AREA H: .54 AC  
22 2" CAL. LANDSCAPE TREES AS SHOWN (SEE FINAL LANDSCAPE PLAN)  
ZONE 1: 20 1" CAL. TREES  
ZONE 2: 80 SEEDLINGS

STORM WATER MANAGEMENT FACILITY (S.W.M.F. # 2)  
EXTENDED DETENTION HAZARD CLASS 'A' (TO BE MAINTAINED BY HOWARD CO.)

HOWARD RESEARCH AND DEVELOPMENT CORP.  
408/714  
ZONED NT-OPEN SPACE  
P. 59

AFFORESTATION AREA F: .22 AC  
14 2" CAL. LANDSCAPE TREES AS SHOWN (SEE FINAL LANDSCAPE PLAN)  
ZONE 1: 14 1" CAL. TREES

AFFORESTATION AREA G: .71 AC  
9 2" CAL. LANDSCAPE TREES AS SHOWN (SEE FINAL LANDSCAPE PLAN)  
ZONE 1: 44 1" CAL. TREES  
ZONE 2: 133 SEEDLINGS



1" CAL. TREE PLANTING DETAIL

THIS PLAN FOR FOREST CONSERVATION PURPOSES ONLY

AS-BUILT CERTIFICATE

*Christopher J. Reid* 7-19-99  
CHRISTOPHER J. REID #19949 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.  
*Carol Swannomy* 6/22/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

DATE	NO.	REVISION

OWNER / DEVELOPER  
WILBEN LIMITED PARTNERSHIP  
C/O ANDREW L. ISAACSON  
5450 WHITELY PARK  
TERRACE # 410  
BETHESDA, MD 20814  
301-530-1123

PROJECT **CLARKS GLEN SECTION 1 / AREA 1**

AREA TAX MAP 35 PARCEL 205  
5th ELECTION DISTRICT  
HOWARD COUNTY, MD.

TITLE **FOREST CONSERVATION & AFFORESTATION PLAN**

**RIEMER MUEGGE & ASSOCIATES, INC.**  
Planners • Engineers • Surveyors  
8818 Centre Park Drive • Suite 200 • Columbia, Maryland 21045  
410-997-8900 FAX: 410-997-9282

DATE 5/22/95  
DESIGNED BY: DK  
DRAWN BY: RR  
PROJECT NO: 93210  
DATE: MAY 19, 1995  
SCALE: 1" = 50'  
DRAWING NO. 22 OF 24



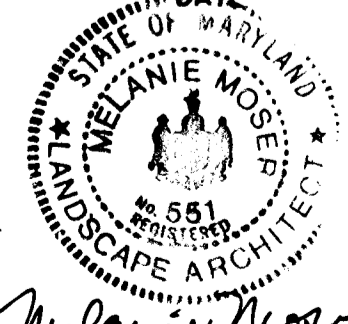
*Melanie Moran*

1730

THIS AREA (SECTION 2 BELOW PROPOSED ELEV. 420. TO BE SEEDED ACCORDING TO STABILIZATION FOR DISTURBED AFFORESTATION/ REFORESTATION AREA. NOTE ON SHT. 25 OF 26

AFFORESTATION AREA I: 1.33 AC  
 ZONE 1: 36 1" CAL. TREES  
 ZONE 2: 322 SEEDLINGS  
 ZONE 3: 81 SEEDLINGS

FUTURE FOREST RETENTION AREA FOR CLARKS GLEN SECTION 2

AS-BUILT CERTIFICATE	
	DATE: 7.19.99
CHRISTOPHER J. REID #19949	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
	DATE: 6/22/95
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH	
DATE NO.	REVISION
OWNER / DEVELOPER WILBEN LIMITED PARTNERSHIP C/O ANDREW L. ISAACSON 5450 WHITELY PARK TERRACE # 410 BETHESDA, MD 20814 301-550-1123	
PROJECT CLARKS GLEN SECTION 1 / AREA 2	
AREA TAX MAP 35 PARCEL 205 5th ELECTION DISTRICT HOWARD COUNTY, MD.	
TITLE FOREST CONSERVATION & AFFORESTATION PLAN	
RIEMER MUEGGE & ASSOCIATES, INC. Planners, Engineers, Surveyors 8818 Centre Park Drive • Suite 200 • Columbia, Maryland 21046 410-907-8900 FAX: 410-907-9288	
DATE: 5-22-95	3-94-16, P-94-25, WP 94-34
	DESIGNED BY: DM
	DRAWN BY: RM
	PROJECT NO: 93210
	DATE: MAY 19, 1995
	SCALE: 1" = 50'
	DRAWING NO. 26 OF 26

NOTE: SEE SHEET 3 FOR PLANT SCHEDULE & PLANTING DETAILS.

THIS PLAN FOR FOREST CONSERVATION PURPOSES ONLY

F-95-83

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