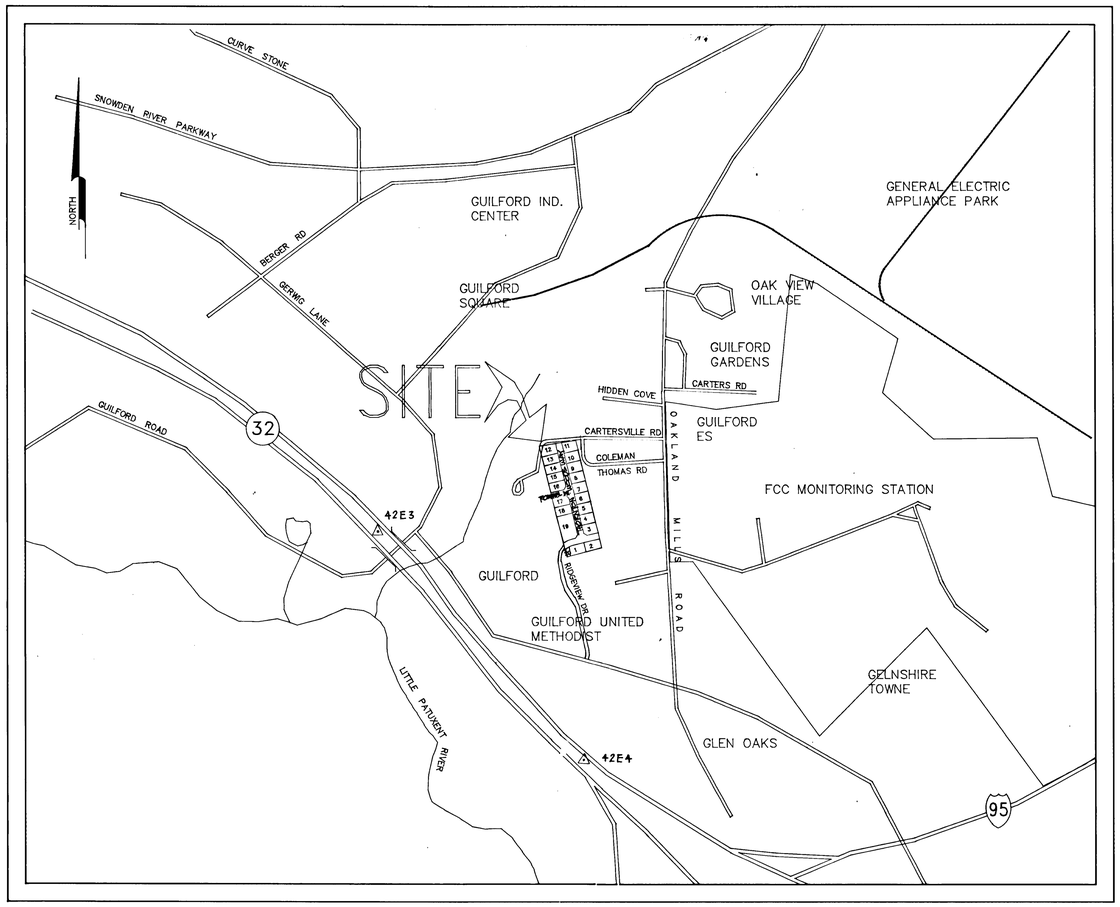
INDEX



LOCATION MAP
SCALE : 1" = 600'

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD AND SPECIFICATION OF THE HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONSTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF CONSTRUCTION INSPECTION AT **410-313-1880** AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORKS.
4. PROJECT BACKGROUND :
   a. TAX MAP 42, PARCEL 49, LIBER **305**, FOLIO **465**
   b. TOTAL AREA OF SUBDIVISION = 6.69 ACRES
   c. NUMBER OF LOTS PROPOSED = 18 BUILDABLE, 2 OPEN SPACE
   d. SKETCH PLAN WAS APPROVED ON SEPTEMBER 4, 1991 UNDER S-92-04.
   e. PRELIMINARY PLAN WAS APPROVED ON OCTOBER 9, 1992 UNDER P-93-02.
   f. THIS PLAN IS SUBJECT TO WP-93-06 APPROVED ON OCTOBER 9. 1992 WHICH ALLOWED GRADING WITHIN THE WETLAND.
5. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES(MUTCD). ALL STREETS AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO PLACEMENT OF ANY ASPHALT.
6. BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED BY JOHN MELLEMA, INC. ON JULY 1992.
7. HORIZONTAL AND VERTICAL DATUM ARE BASED ON MARYLAND STATE COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY CONTROL STA. (NAD 83) 42E3 AND 42E4.
8. LIGHT POLES AND FIXTURES SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III, ROAD AND BRIDGES.
9. PUBLIC WATER AND PUBLIC SEWER WILL BE USED. THE DRAINAGE AREA IS LITTLE PATUXENT.
10. A RETENTION POND IS PROPOSED TO CONTROL ALL LOTS WITH THE EXCEPTION OF LOTS 11-16 AND PART OF LOT 10.
11. WETLANDS DELINATED BY M.I.DIRKS & CO. INC. ON JUNE 15, 1992
12. GEOTECHNICAL REPORT WAS PREPARED BY HILLIS AND CARNES ASSOCIATES ON JULY 10, 1992.
13. EXISTING UTILITIES ARE BASED ON HOWARD COUNTY AS BUILT PLANS AND THE TOPOGRAPHIC SURVEY BY JOHN MELLEMA, INC.
14. **SIDEWALKS AND SIDEWALK HANDICAPPED RAMPS SHALL COMPLY WITH CURRENT A.D.A. REQUIREMENTS.**

THORNTON WOODS
LOTS 1 thru 20
ROAD CONSTRUCTION DRAWING
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 6/16/93

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/5/93

CHIEF, BUREAU OF HIGHWAYS — DATE 3/31/93

CHIEF, BUREAU OF ENGINEERING — DATE 4.6.93

DES : MLL				
DRN : AVG				
CHK : MLL				
DATE : 11-9-92	BY	NO.	REVISION	DATE

Loria Engineering Inc.
CONSULTING ENGINEERS-LAND PLANNERS-SURVEYORS
3230 BETHANY LANE, SUITE 4, ELLICOTT CITY, MD.
410-465-0400

STATE OF MARYLAND — MICHAEL L. LORIA — NO. 7979 — REGISTERED PROFESSIONAL ENGINEER

OWNER :
DAVID B. THORNTON
7240 EDENBROOK DR.
COLUMBIA, MD. 21046

DEVELOPER :
LAND DESIGN & DEVELOPMENT INC.
10850 HICKORY RIDGE ROAD
COLUMBIA, MD. 21045

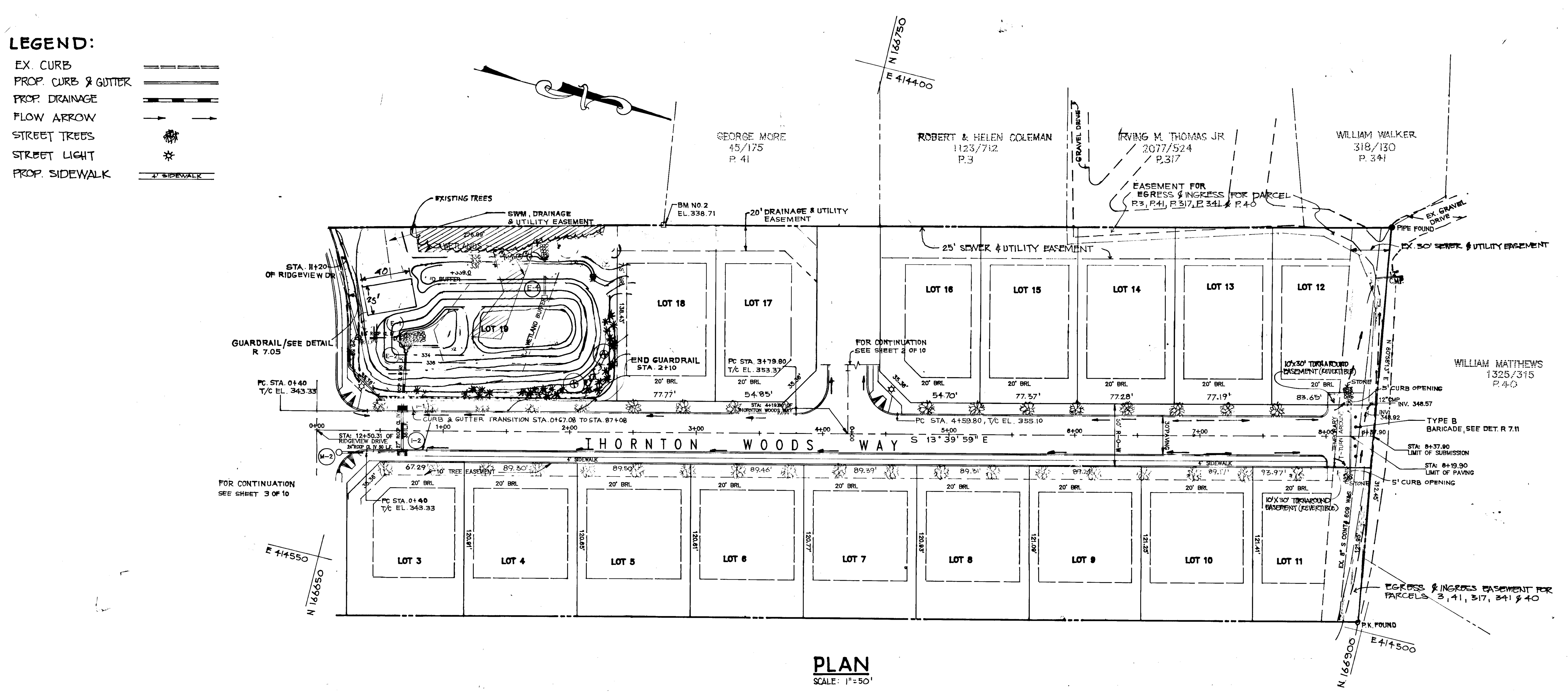
COVER SHEET
THORNTON WOODS
LOTS 1 THRU 20
TAX MAP 42 PARCEL 49
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 10

1660

F 93-58

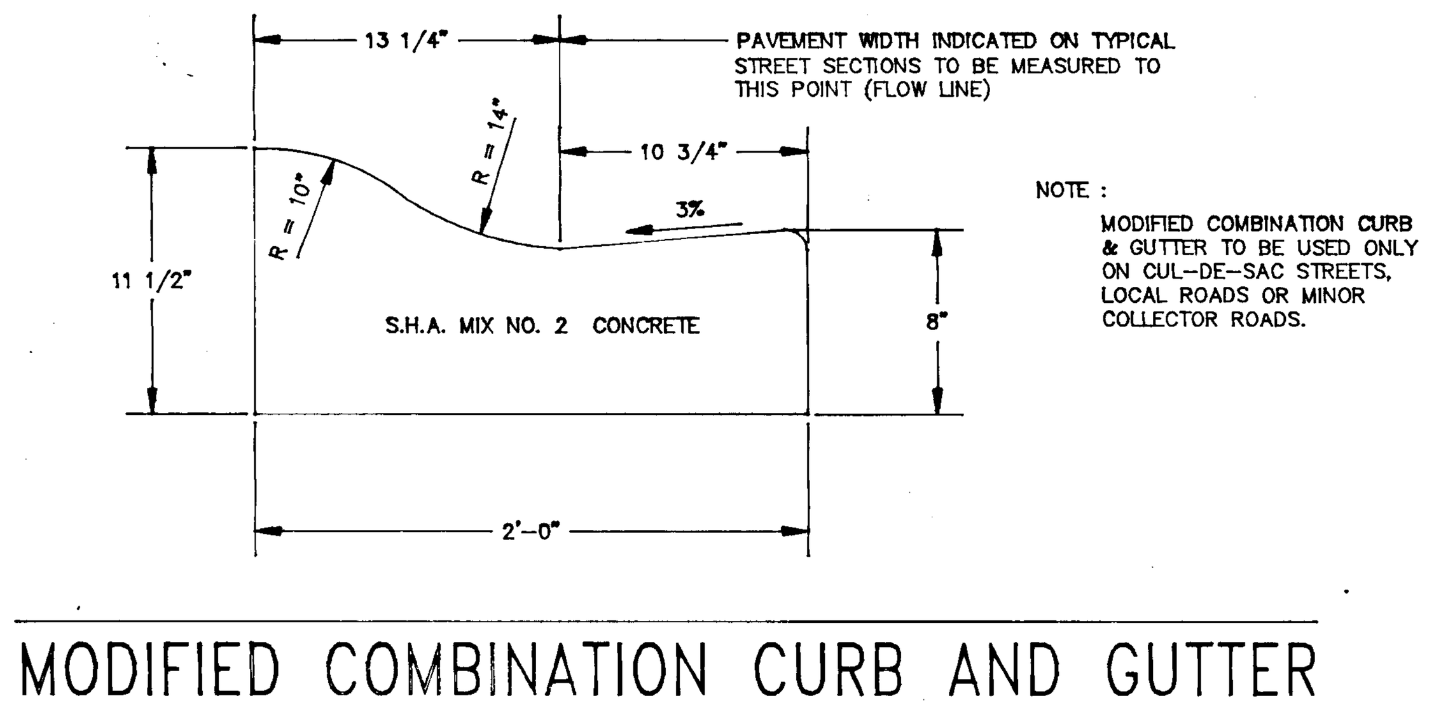


PLAN

SCALE: 1"=50'

PLANT SCHEDULE

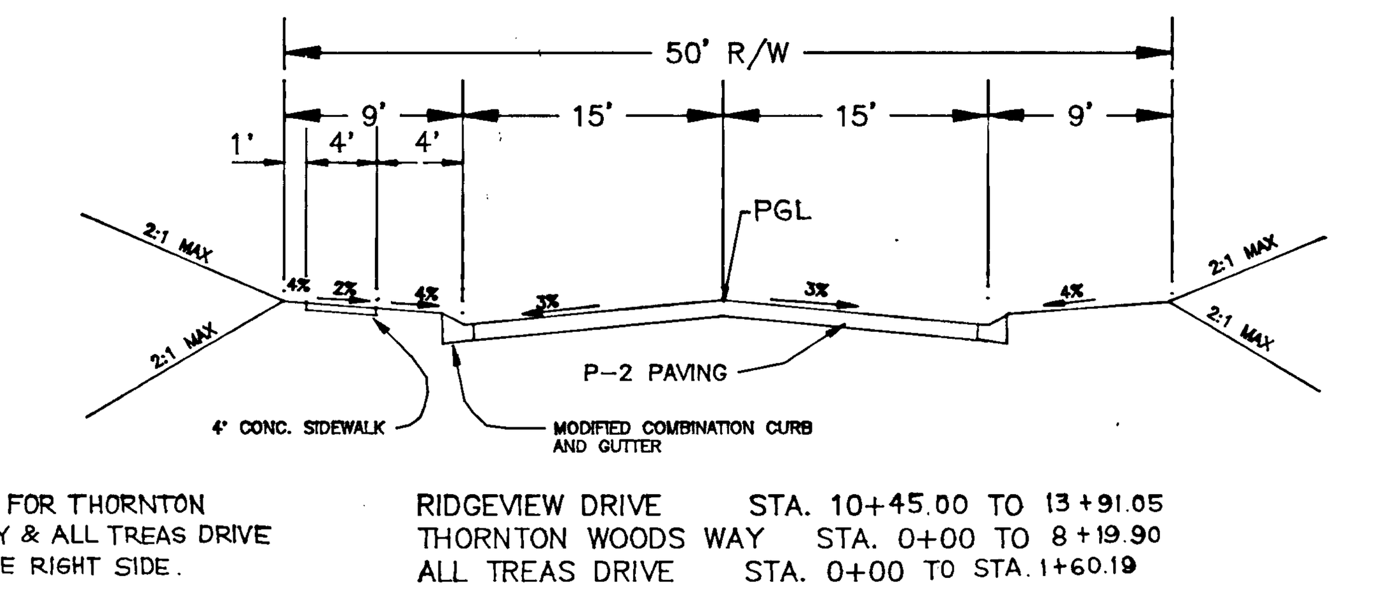
SYMBOL	QUANTITY	SCIENTIFIC NAME	COMMON NAME	REMARKS
	36	PYRUS CALLERYANA	RANCHO PEAR	2..5 MIN. CAL. B&B
	40	PINUS STRUBUS	WHITE PINE	5'-6'
	1	ACER RUBRUM	RED SUNSET	1 3/4"-2" CAL.
	5	CORNUS FLORIDA	FLOWERING DOGWOOD	6'-8' HT
	0	HAMAMELLS VIRGINIANA	WITCH HAZEL	2'-3' HT
	6	CORNUS ALBA SIBENECA	SHRUB DOGWOOD	2'-3' HT
	72	LIQUIDAMBEA STYRACIFLUA	SWEETGUM	1 3/4"-2" CAL



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

MODIFIED COMBINATION CURB AND GUTTER

NOT TO SCALE



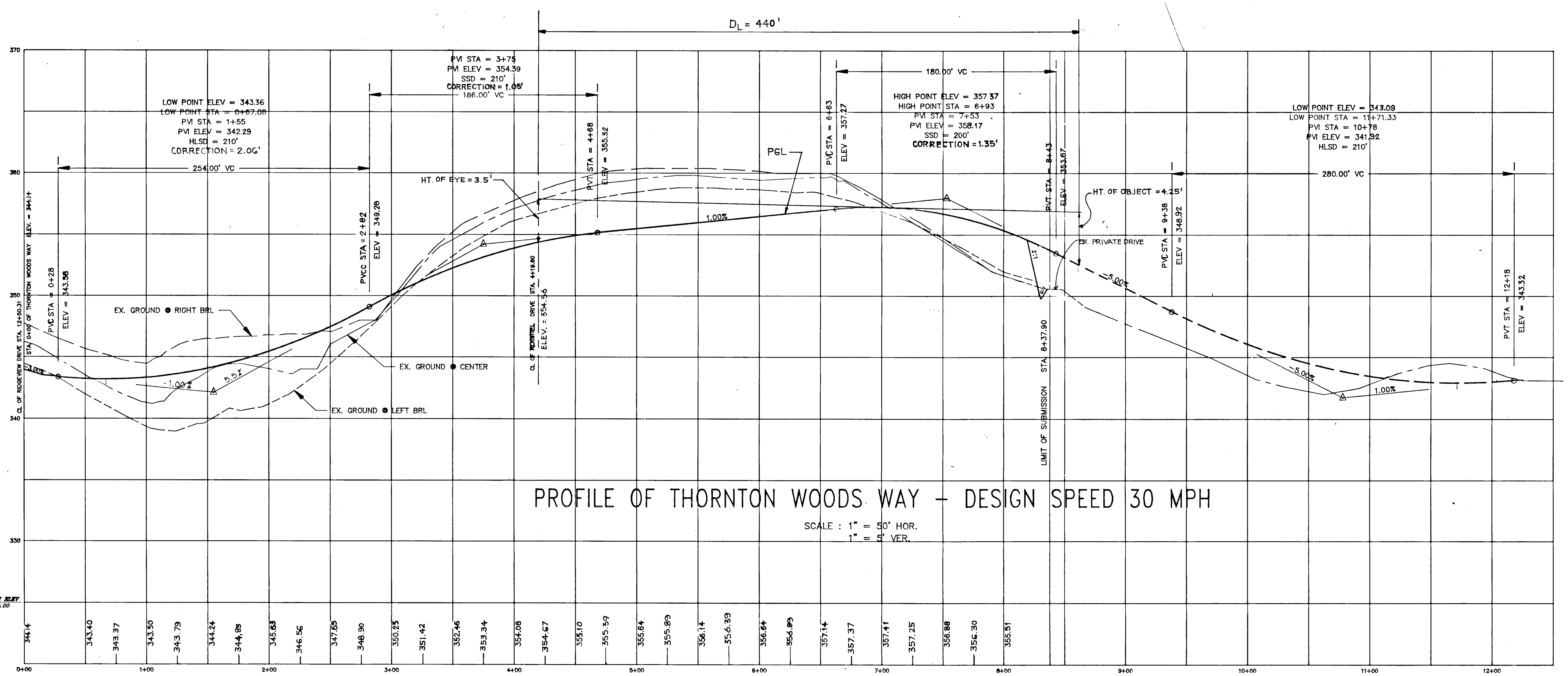
NOTE: SIDEWALK FOR THORNTON WOODS WAY & ALL TREAS DRIVE ARE ON THE RIGHT SIDE.

RIDGEVIEW DRIVE STA. 10+45.00 TO 13+91.05
THORNTON WOODS WAY STA. 0+00 TO 8+19.90
ALL TREAS DRIVE STA. 0+00 TO STA. 1+60.19

CLASSIFICATION LOCAL ROAD
DESIGN SPEED : 30 MPH

TYPICAL SECTION

NOT TO SCALE



PROFILE OF THORNTON WOODS WAY - DESIGN SPEED 30 MPH

SCALE : 1" = 50' HOR.
1" = 5' VER.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 6/18/93

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/5/93

CHIEF, BUREAU OF HIGHWAYS — DATE 3/30/93

CHIEF, BUREAU OF ENGINEERING — DATE 4.6.93

THORNTON WOODS LOTS 1-20

TAX MAP 42-PARCEL 49 6th ELECTION DISTRICT HOWARD CO.

PLAN & PROFILE

THORNTON WOODS WAY

DESIGNED BY : MLL	CHECKED BY : MLL	SHEET 2 of 10
DRAWN BY : GUS	DATE : 3-12-93	SCALE : AS SHOWN

OWNER:
DAVID B. THORNTON
7240 EDENBROOK DR.
COLUMBIA, MD. 21046

DEVELOPER:
LAND DESIGN & DEVELOPMENT INC.
10850 HICKORY RIDGE ROAD
COLUMBIA, MD. 21045

Loria Engineering Inc.
CONSULTING ENGINEERS-LAND PLANNERS-SURVEYORS
3230 BETHANY LANE, SUITE 4, ELLICOTT CITY, MD.
TEL. 410-465-0400 FAX 410-465-0089

F-93-58

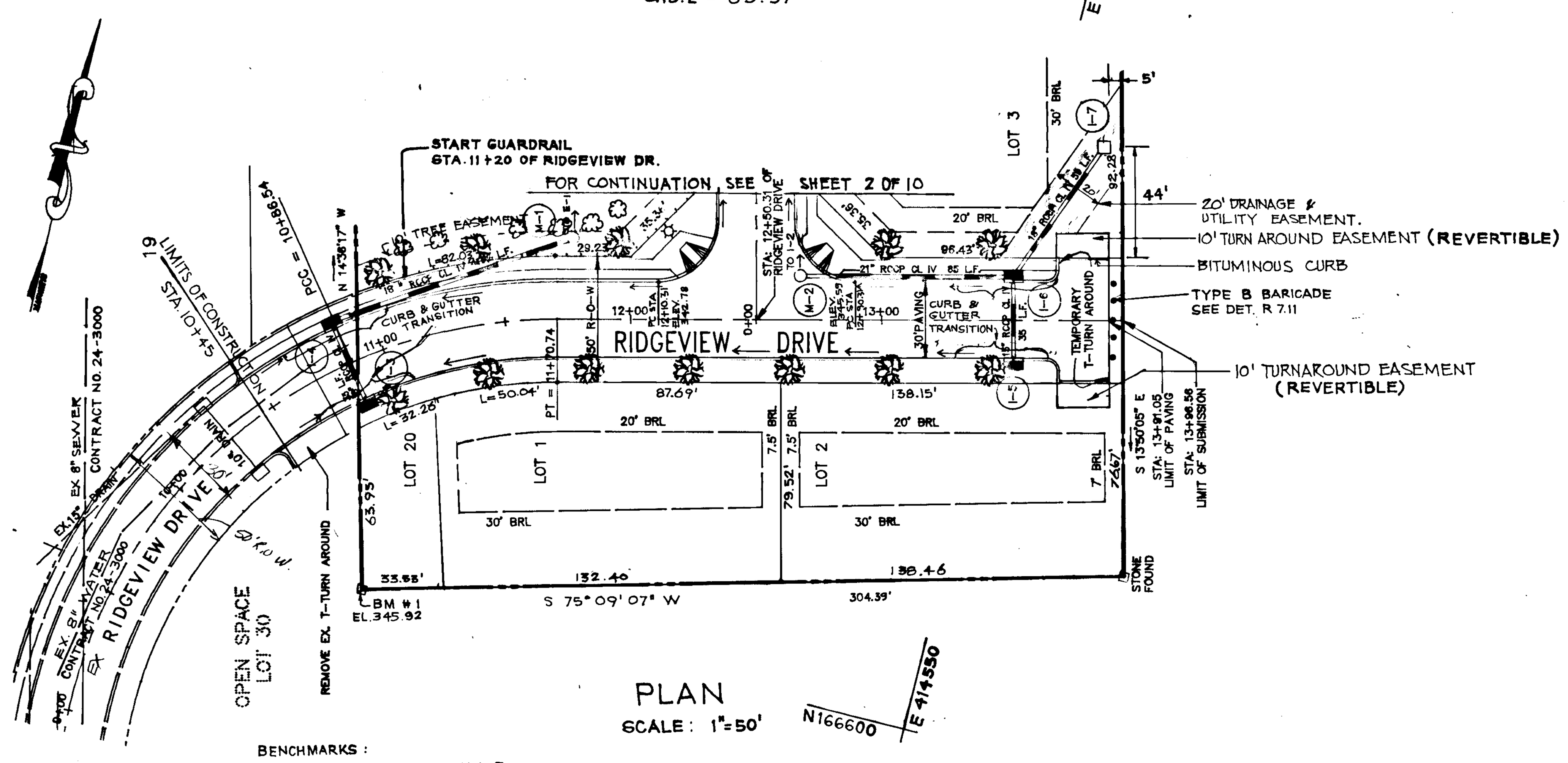
1660

PLANT SCHEDULE

SYMBOL	QUANTITY	SCIENTIFIC NAME	COMMON NAME	REMARKS
	18	PYRUS CALLERYANA	RANCHO PEAR	2.5 MIN. CAL
	6	PINUS STRUBUS	WHITE PINE	

℄ CURVE DATA

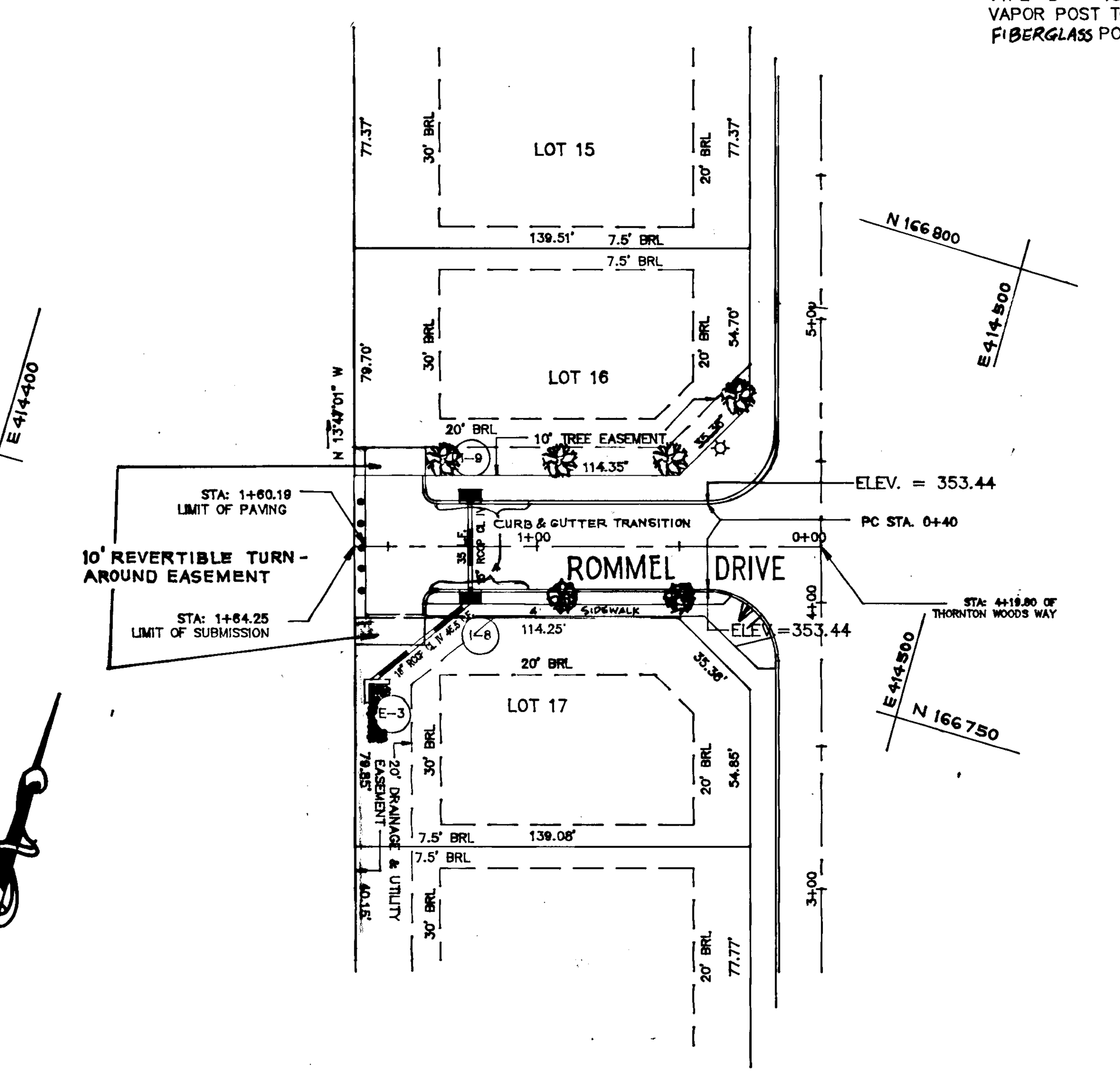
PCC STA. 10+86.54 TO STA 11+70.74
Δ = 24°07'05"
R = 200'
T = 42.73'
L = 84.19'
CHD.L = 83.57'



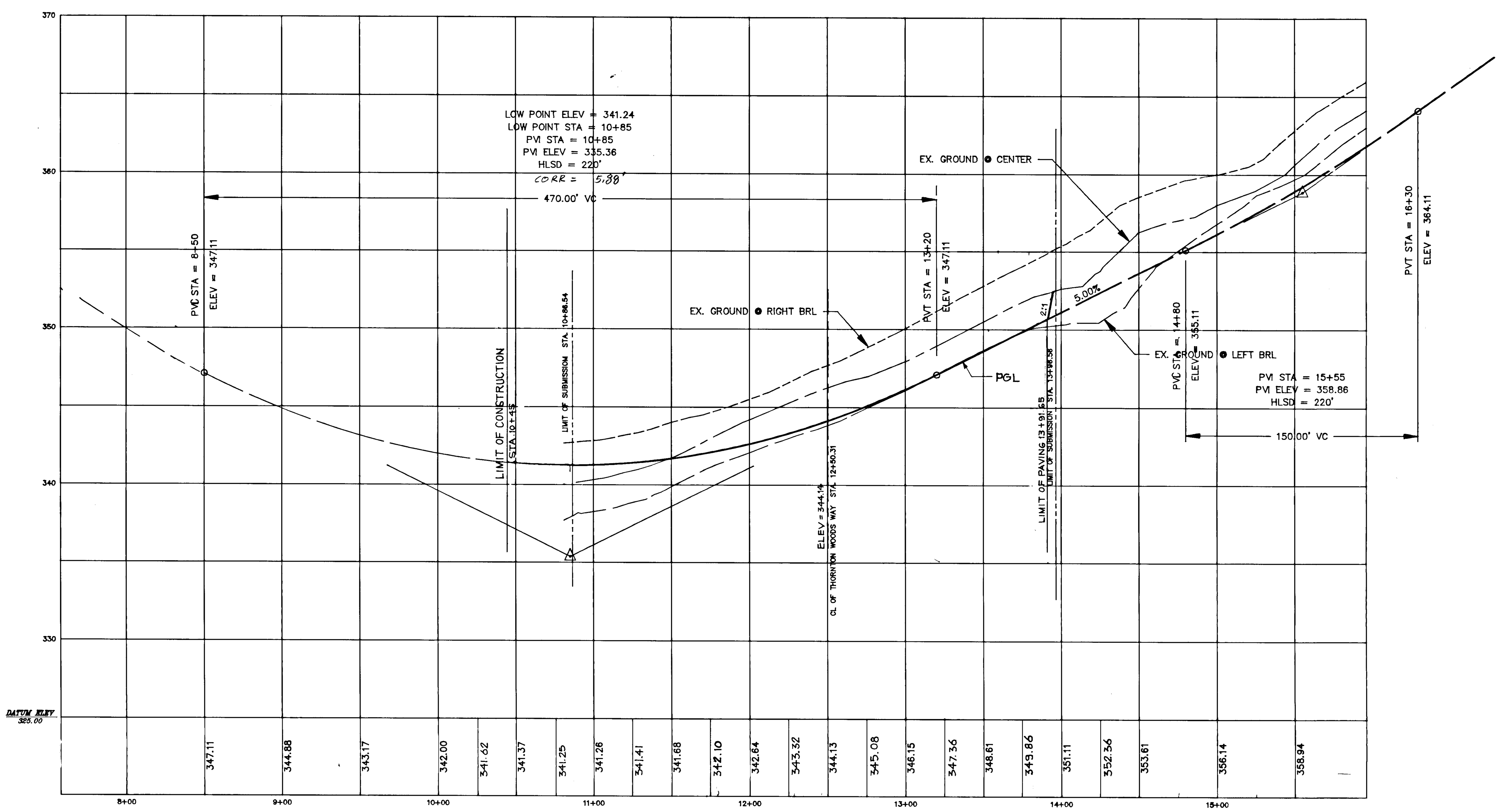
PLAN
SCALE: 1"=50'

BENCHMARKS :
BM # 1 - HIGH POINT ON STONE EL. 345.92
BM # 2 - HIGH POINT ON STONE EL. 338.71

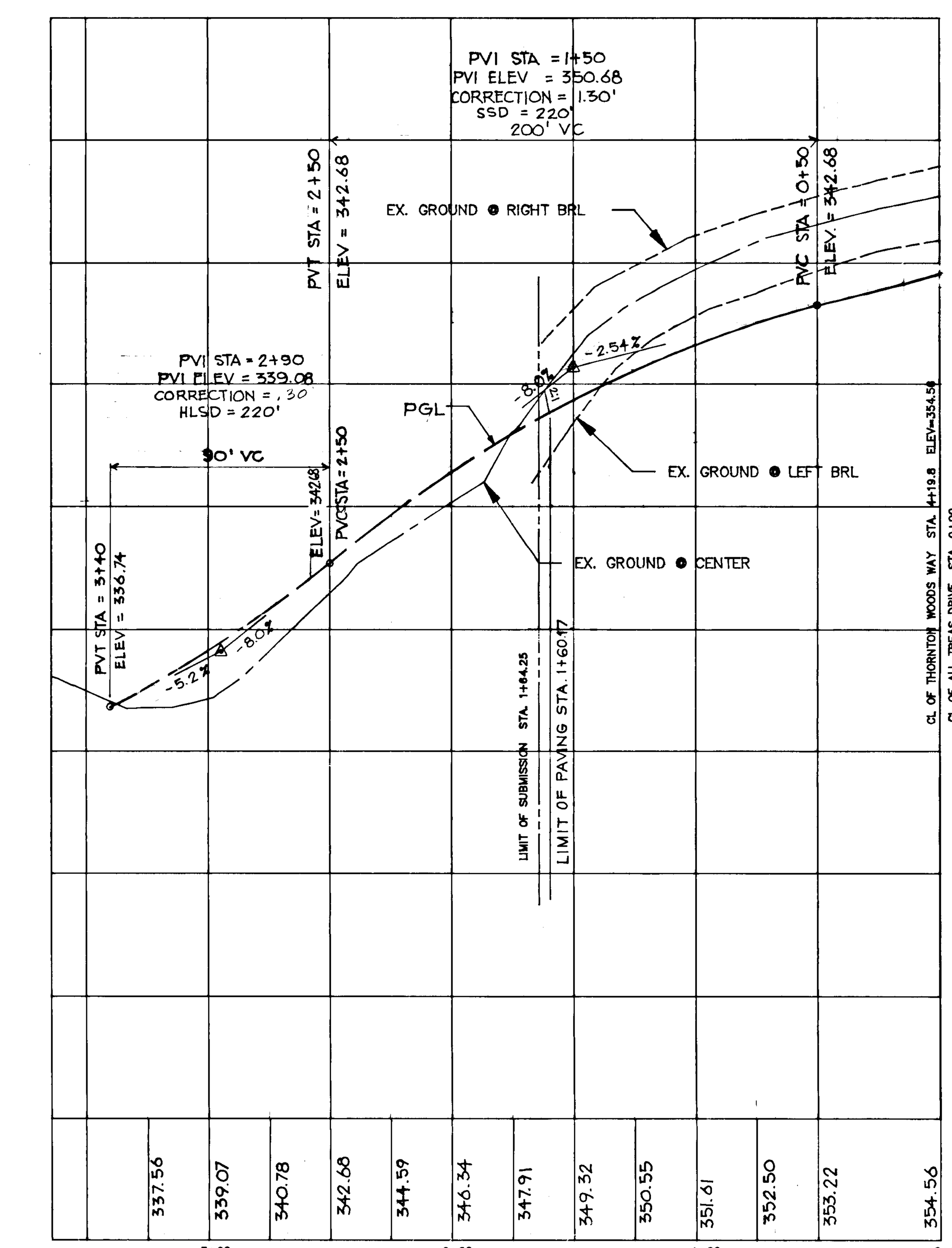
LIGHTING LEGEND :
TYPE "B" - 100 WATT 'TRADITIONAIRE' SODIUM VAPOR POST TOP MOUNTED ON 14 FOOT BLACK FIBERGLASS POLE.



PLAN
SCALE : 1" = 50'



PROFILE OF RIDGEVIEW DRIVE - DESIGN SPEED 30 MPH
SCALE : 1" = 50' HOR.
1" = 5' VER.



PROFILE OF ROMMEL DRIVE - DESIGN SPEED 30 MPH
SCALE : 1" = 50' HOR.
1" = 5' VER.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 6/8/93

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/5/93
CHIEF, BUREAU OF HIGHWAYS — DATE 3/30/93
CHIEF, BUREAU OF ENGINEERING — DATE 4-6-93

THORNTON WOODS LOTS 1-20

TAX MAP 42-PARCEL 49 6th ELECTION DISTRICT HOWARD CO.

PLAN AND PROFILES

RIDGEVIEW DRIVE
ALL TREAS DRIVE

DESIGNED BY : MLL	CHECKED BY : MLL	SHEET 3 of 10
DRAWN BY : GUS	DATE : 10-27-92	SCALE : AS SHOWN

OWNER:
DAVID B. THORNTON
7240 EDENBROOK DR.
COLUMBIA, MD. 21046

DEVELOPER:
LAND DESIGN & DEVELOPMENT INC.
10850 HICKORY RIDGE ROAD
COLUMBIA, MD. 21045

Loria Engineering Inc.
CONSULTING ENGINEERS-LAND PLANNERS-SURVEYORS
3230 BETHANY LANE, SUITE 4, ELLICOTT CITY, MD.
TEL. 410-465-0400 FAX 410-465-0089

REVISIONS

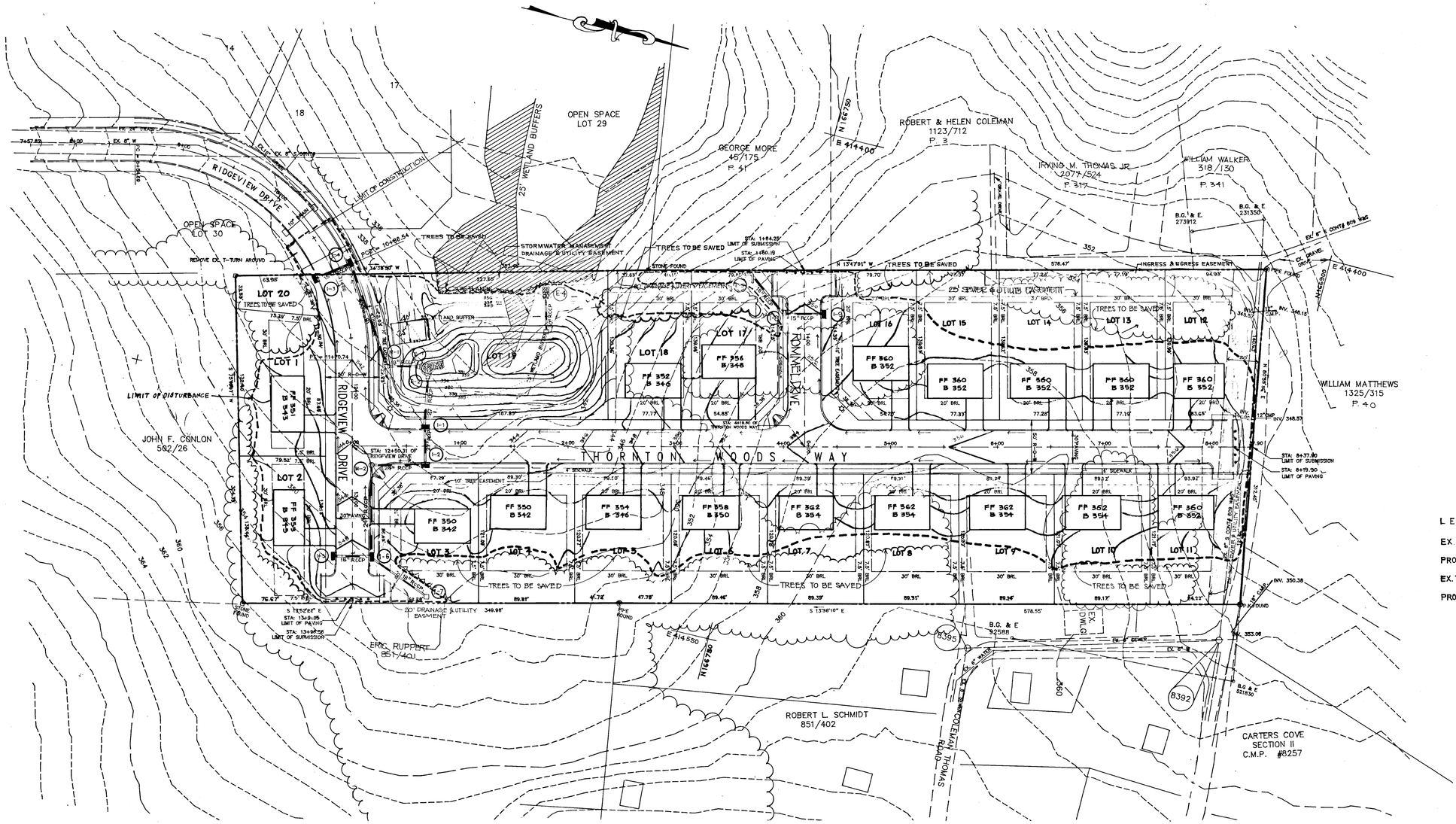
NO.	DATE	BY	REMARKS
1.	5/7/97	SHANA/LANE	REMOVE T-URN FROM N. SIDE ROMMEL DR. & ADD TO S. SIDE

FOR REVISION NO. 1
G. SCOTT SHANABERGER
PROF. L.S. #10849 — DATE 5/7/97

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 114
ELLICOTT CITY, MARYLAND 21043

1660

F93-58



APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 6/8/93

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/5/93

CHIEF, BUREAU OF HIGHWAYS — DATE 3/30/93

CHIEF, BUREAU OF ENGINEERING — DATE 4-6-93

FOR REVISION NO. 2

STATE OF MARYLAND — HAROLD SCOTT SHANABERGER — No. 10849 — REGISTERED PROFESSIONAL LAND SURVEYOR

G. SCOTT SHANABERGER
PROF. L.S. # 10849

DATE

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 104
ELLICOTT CITY, MARYLAND 21043

	BY	NO.	REVISION	DATE
DES : MLL	JBR SHANA / LANE	0	ENLARGE SWM POND	4-26-94
DRN : AVG		1	REMOVE WALK FROM N. SIDE ROMMEL DR. ADD TO S. SIDE	5-27-93
CHK : MLL				
DATE : 11-9-92				

Doria Engineering Inc.
CONSULTING ENGINEERS–LAND PLANNERS–SURVEYORS
3230 BETHANY LANE, SUITE 4, ELLICOTT CITY, MD.
410–465–0400

OWNER :
DAVID B. THORNTON
7240 EDENBROOK DR.
COLUMBIA, MD. 21046

DEVELOPER :
LAND DESIGN & DEVELOPMENT INC.
10850 HICKORY RIDGE ROAD
COLUMBIA, MD. 21045

PRELIMINARY SITE PLAN AND GRADING PLAN

THORNTON WOODS

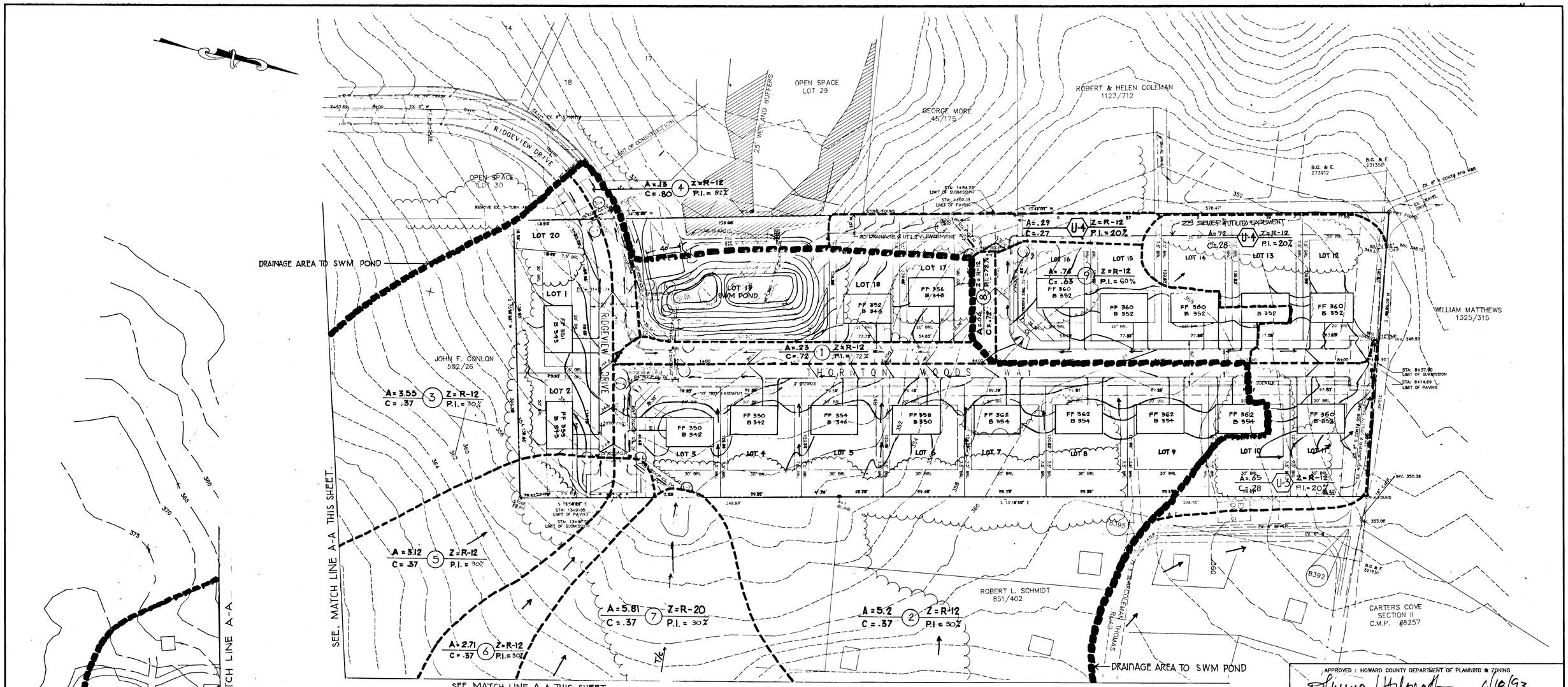
LOTS 1 THRU 20
TAX MAP 42 PARCEL 49
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE 1"=50'

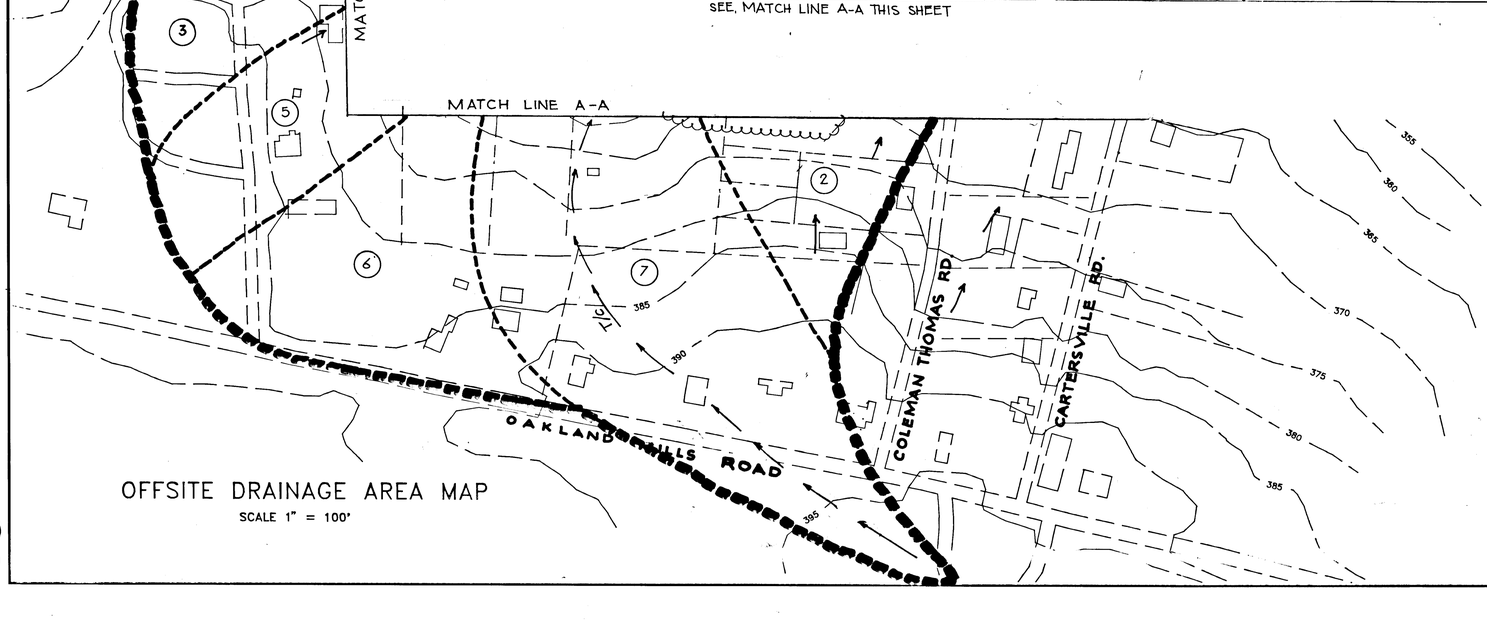
SHEET 4 OF 10

1660

F 93-58



DRAINAGE AREA MAP
SCALE 1" = 50'



OFFSITE DRAINAGE AREA MAP
SCALE 1" = 100'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 6/8/93

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/5/93

CHIEF, BUREAU OF HIGHWAYS — DATE 3/30/93

CHIEF, BUREAU OF ENGINEERING — DATE 4.6.93

NO.	DATE	REVISION
1	4-26-94	ENLARGE SWM POND

PROJECT : THORNTON WOODS
LOTS 1 – 20
TAX MAP 42 PARCEL 49 6th ELCTION DISTRICT HOWARD COUNTY , MD.

LOCATION :

TITLE : DRAINAGE AREA MAP

OWNER :
DAVID THORNTON
7240 EDENBROOK DR.
COLUMBIA, MD. 21046

DEVELOPER :
LAND DESIGN & DEVELOPMENT INC.
10850 HICKORY RIDGE ROAD
COLUMBIA , MD. 21045

Doria Engineering Inc.
CONSULTING ENGINEERS–LAND PLANNERS–SURVEYORS
3230 BETHANY LANE, SUITE 4, ELLICOTT CITY, MD. 21042
410-465-0400

DESIGN	MLL	CHECKED	MLL	DATE 11-5-92	PROJ. NO.
DRAWN	AVG	APPROVED	MLL	SCALE AS SHOWN	SHEET 5 OF 10

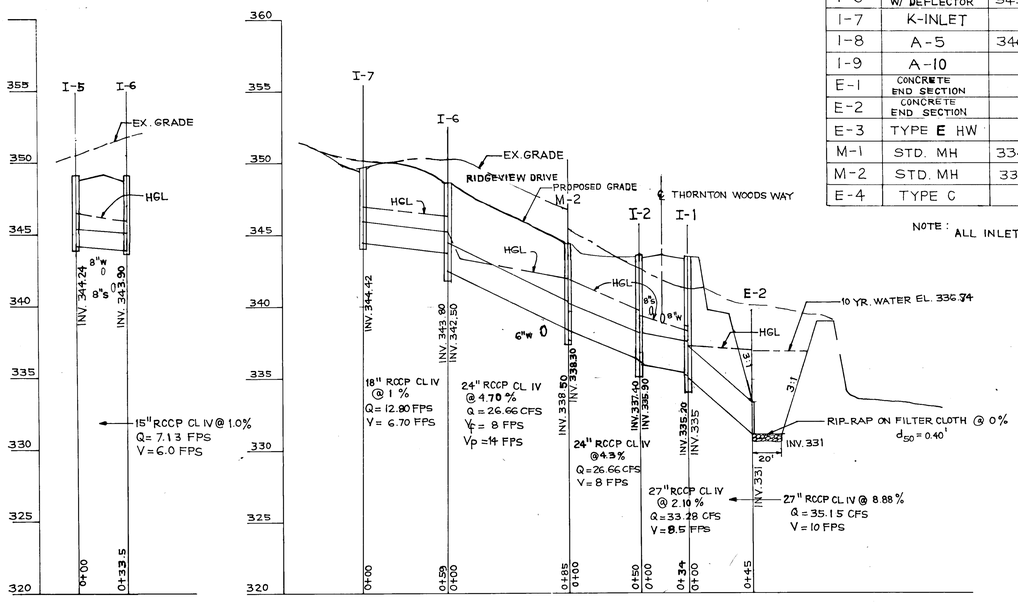
1660

F 93-58

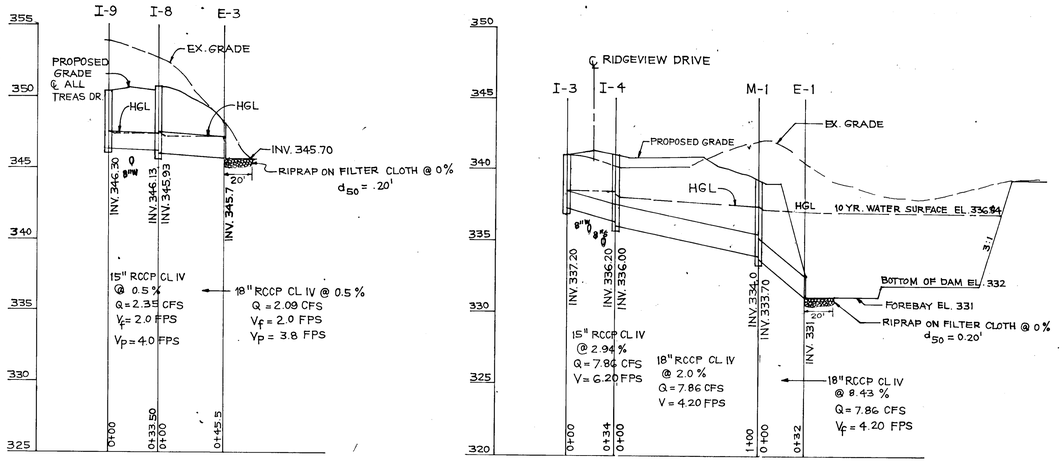
STRUCTURE SCHEDULE

NO.	TYPE	INVERT IN	INVERT OUT	TOP EL.	REMARKS	LOCATION
I-1	A-5	336.50	335.00	343.46	HOWARD COUNTY SD. 4.01 W=2'6"	0+67.08 THORNTON WOODS WAY 16.92 L
I-2	A-10	337.40	337.20	343.46	HOWARD COUNTY SD. 4.02 W=3'	0+67.08 THORNTON WOODS WAY 17.17 R.
I-3	A-5		337.20	341.34	HOWARD COUNTY SD. 4.02 W=2'6"	STA. 10+85 RIDGEVIEW DR. 16.92 L
I-4	A-5	336.20	336.00	341.34	HOWARD COUNTY SD. 4.02 W=2'6"	STA. 10+85 RIDGEVIEW DR. 16.92 R
I-5	A-10 W/ DEFLECTOR		344.24	348.86	HOWARD COUNTY SD. 4.02 & 4.13 W=2'6"	STA. 13+53.06 RIDGEVIEW DR. 16.92 L
I-6	A-10 W/ DEFLECTOR	343.90		348.86	HOWARD COUNTY SD. 4.02 & 4.03 W=2'6"	STA. 13+53.06 RIDGEVIEW DR. 16.92 R
I-7	K-INLET		344.42	348.50	HOWARD COUNTY SD. 4.13	SEE PLAN
I-8	A-5	346.13	345.93	350.78	HOWARD COUNTY SD. 4.01 W=2'6"	STA. 1+23.48 ALL TREAS DR. 16.92 L
I-9	A-10		346.30	350.78	HOWARD COUNTY SD. 4.02 W=2'6"	1+23.48 ALL TREAS DR. 16.92 R
E-1	CONCRETE END SECTION		331.00	333.50	HOWARD COUNTY SD. 5.51	SEE PLAN
E-2	CONCRETE END SECTION		331.00	333.50	HOWARD COUNTY SD. 5.51	SEE PLAN
E-3	TYPE E HW		345.70	347.95	HOWARD COUNTY SD. 5.31	SEE PLAN
M-1	STD. MH	334.00	333.70	340.50	HOWARD COUNTY SD. G. 5.01	STA. 11+77.17 OF RIDGEVIEW DR. 32.24
M-2	STD. MH	338.50	338.30	344.31	HOWARD COUNTY SD. G. 5.01	0+17.61 THORNTON WOODS WAY 17.47 R
E-4	TYPE C		333.83	337.83	HOWARD COUNTY SD. 5.21	SEE PLAN

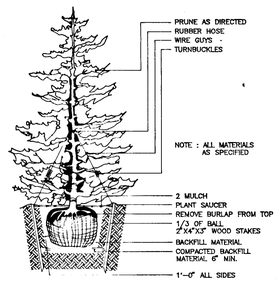
NOTE : ALL INLET LOCATIONS ARE FROM ROAD ℄ TO INLET CENTERLINES.



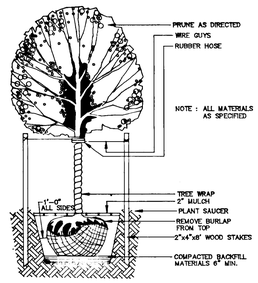
DRAINAGE PROFILE
SCALE 1"=50' HOR.
1"= 5' VER.



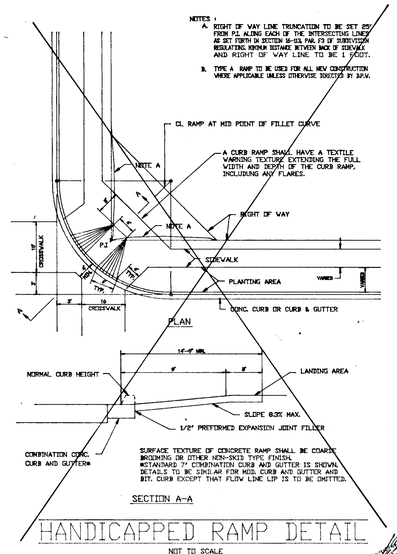
DRAINAGE PROFILE
SCALE 1"=50' HOR.
1"= 5' VER.



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



TYPICAL DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



HANDICAPPED RAMP DETAIL
NOT TO SCALE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANING AND LAND DEVELOPMENT — DATE 6/18/93

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/5/93

CHIEF, BUREAU OF HIGHWAYS — DATE 3/30/93

CHIEF, BUREAU OF ENGINEERING — DATE 4-6-93

NO.	DATE	REVISION

PROJECT : **THORNTON WOODS**
LOTS 1 – 20
TAX MAP 42 PARCEL 49 6th ELCTION DISTRICT HOWARD COUNTY , MD.

LOCATION :

TITLE : **DRAINAGE PROFILES & DETAILS**

OWNER :
DAVID THORNTON
7240 EDENBROOK DR.
COLUMBIA, MD. 21046

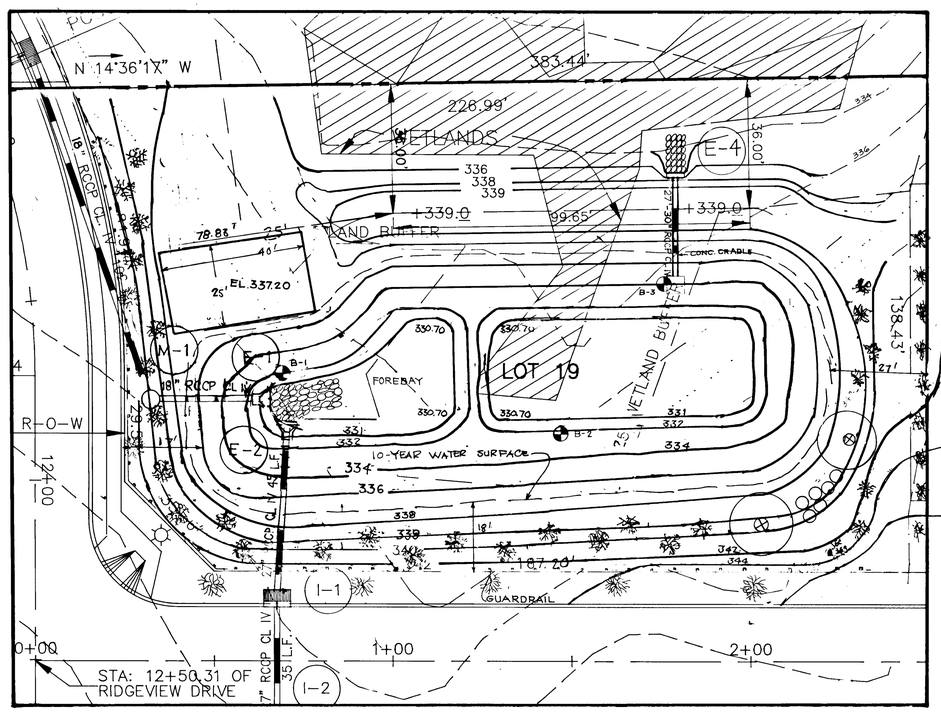
DEVELOPER :
LAND DESIGN & DEVELOPMENT INC.
10850 HICKORY RIDGE ROAD
COLUMBIA , MD. 21045

Loria Engineering Inc.
CONSULTING ENGINEERS–LAND PLANNERS–SURVEYORS
323K BETHANY LANE, SUITE 4, ELLICOTT CITY, MD. 21042
410-465-6400

DESIGN	MLL	CHECKED	MLL	DATE 11-5-92	PROJ. NO.
DRAWN	AVG	APPROVED	MLL	SCALE AS SHOWN	SHEET 6 OF 10

1660

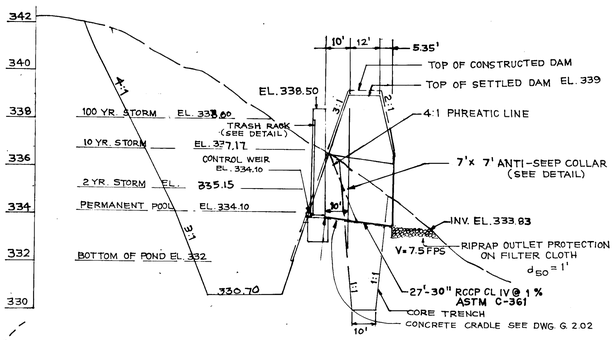
F93.58



POND IS HAZARD CLASS A

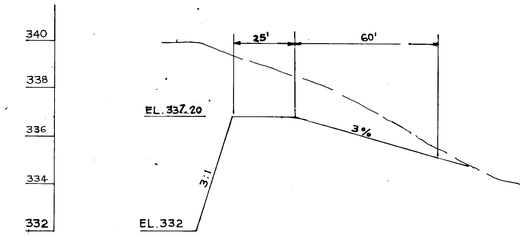
STORM WATER MANAGEMENT PLAN ASTM C361

SCALE : 1" = 20'



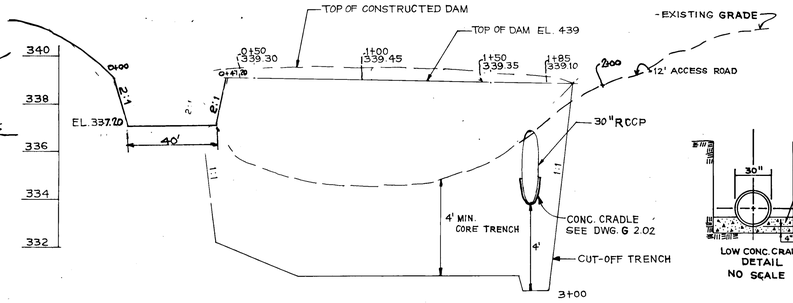
PROFILE THRU DAM

SCALE 1" = 30' HOR.
1" = 3' VER.



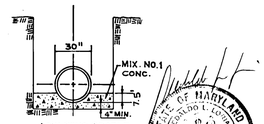
PROFILE OF EMERGENCY SPILLWAY

SCALE 1" = 30' HOR.
1" = 3' VER.



CROSS-SECTION ALONG CENTERLINE OF DAM

SCALE 1" = 30' HOR.
1' = 3' VER.



LOW CONC. CRADLE DETAIL
NO SCALE

NOTES :

1. MATERIAL FOR EMBANKMENT CONSTRUCTION IS TO BE USCS, SM OR SMALLER.
2. ONLY ML, CL, CH, MH OR SC SOILS ARE TO BE USED FOR CORE TRENCH CONSTRUCTION.
3. SHOULD WATER BE ENCOUNTERED DURING CONSTRUCTION IT IS TO BE REMOVED BY PUMPING.

Boring # B-1
Job # 92117A

SAM 1sp

Datum ft Hammer Wt. 140 Lbs. Hole Diameter 8" Foreman W. Stephens
Surf. Elev. ft Hammer Drop 30 In. Rock Core Dia. — Inspector
Date Started 7-10-92 Pipe Size 2.0 In. Boring Method HSA Date Completed 7-10-92

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Plasticity, Size, Proportions	STRATA DEPTH	DEPTH SCALE	SAMPLE			BORING & SAMPLING NOTES
				DIST	Blows/6"	NO. / REC.	
	SURFACE		0.0	I	2-1 3-6	1 16"	6" Topsoil
	Brown moist loose to medium dense silty sand with gravel, cobbles, roots		5	I	7-7 12-14	2 20"	
	(SM-Sand)	7.0					
	Green, gray moist very dense silty sand with trace of mica		10	D	12-28 51/5"	3 14"	Water encountered ● 10.0' on rods
	(SM-Loamy Sand)	13.5					
	Greenish gray, moist very dense sand with traces of silt and rock fragments		15	D	20-40 51/5"	4 14"	
	(SM-Sand)	20.1	20				
	Bottom of Boring at 20.1'			D	51/1"	5 1"	

Boring # B-2
Job # 92117A

SAMPLER

Datum ft Hammer Wt. 140 Lbs. Hole Diameter 8" Foreman W. Stephens
Surf. Elev. ft Hammer Drop 30 In. Rock Core Dia. — Inspector
Date Started 7-10-92 Pipe Size 2.0 In. Boring Method HSA Date Completed 7-10-92

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Plasticity, Size, Proportions	STRATA DEPTH	DEPTH SCALE	SAMPLE			BORING & SAMPLING NOTES
				DIST	Blows/6"	NO. / REC.	
	SURFACE		0.0	D	2-1 4-8	1 19"	12" Topsoil
	Brown moist loose to medium dense fine to coarse silty sand and gravel with cobbles (SM-Sand)		5	D	8-14 18-10	2 20"	
		7.0					
	Brown to gray moist very dense sand with trace to some silt and rock fragments		10	D	51/5"	3 5"	Water encountered ● 10.0' on rods
	(SM-Sand)		15	D	51/5"	4 5"	
		20.1	20				
	Bottom of Boring at 20.1'			D	51/1"	5 1"	

Boring # B-3
Job # 92117A

SAMPLER

Datum ft Hammer Wt. 140 Lbs. Hole Diameter 8" Foreman W. Stephens
Surf. Elev. ft Hammer Drop 30 In. Rock Core Dia. — Inspector
Date Started 7-10-92 Pipe Size 2.0 In. Boring Method HSA Date Completed 7-10-92

ELEV.	SOIL DESCRIPTION Color, Moisture, Density, Plasticity, Size, Proportions	STRATA DEPTH	DEPTH SCALE	SAMPLE			BORING & SAMPLING NOTES
				DIST	Blows/6"	NO. / REC.	
	SURFACE		0.0	D	2-2 5-8	1 16"	9" Topsoil
	Brown moist loose silty sand and gravel with cobbles (SM-Loamy Sand) Brown moist stiff clayey silt with trace of roots (MH-SM)		5	I	7-7 7-10	2 22"	
		8.0					
	Brown to gray moist medium dense to very dense fine to coarse sand with some silt, trace to some rock fragments		10	D	7-18 26-49	3 20"	Water encountered ● 9.5' on rods
	(SM-Loamy Sand)		15	D	51/5"	4 5"	
		20.5	20				
	Bottom of Boring at 20.5'			D	51/6"	5 6"	

SAMPLER TYPE	SAMPLE CONDITIONS	GROUND WATER DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED	D—DISINTEGRATED	AT COMPLETION —Dry— FT.	HSA—HOLLOW STEM AUGERS
PT—PRESSED SHELBY TUBE	I—INTACT	AFTER 48 HRS. 8.0 FT.	CFA—CONTINUOUS FLIGHT AUGERS
CA—CONTINUOUS FLIGHT AUGER	U—UNDISTURBED	AFTER ____ HRS. ____ FT.	DC—DRIVING CASING
RC—ROCK CORE	L—LOST		MD—MUD DRILLING

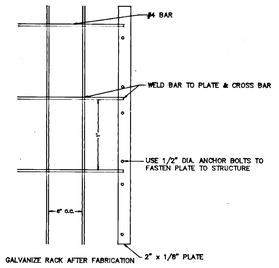
STANDARD PENETRATION TEST—DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

SAMPLER TYPE	SAMPLE CONDITIONS	GROUND WATER DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED	D—DISINTEGRATED	AT COMPLETION 12.5 FT.	HSA—HOLLOW STEM AUGERS
PT—PRESSED SHELBY TUBE	I—INTACT	AFTER 48 HRS. 8.5 FT.	CFA—CONTINUOUS FLIGHT AUGERS
CA—CONTINUOUS FLIGHT AUGER	U—UNDISTURBED	AFTER ____ HRS. ____ FT.	DC—DRIVING CASING
RC—ROCK CORE	L—LOST		MD—MUD DRILLING

STANDARD PENETRATION TEST—DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

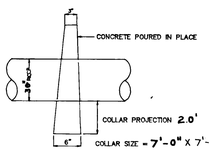
SAMPLER TYPE	SAMPLE CONDITIONS	GROUND WATER DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED	D—DISINTEGRATED	AT COMPLETION 10.5 FT.	HSA—HOLLOW STEM AUGERS
PT—PRESSED SHELBY TUBE	I—INTACT	AFTER 48 HRS. 7.0 FT.	CFA—CONTINUOUS FLIGHT AUGERS
CA—CONTINUOUS FLIGHT AUGER	U—UNDISTURBED	AFTER ____ HRS. ____ FT.	DC—DRIVING CASING
RC—ROCK CORE	L—LOST		MD—MUD DRILLING

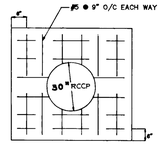
STANDARD PENETRATION TEST—DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS



TRASH RACK DETAIL

NO SCALE

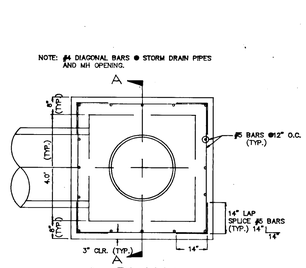




CONC. ANTI-SEEP COLLAR

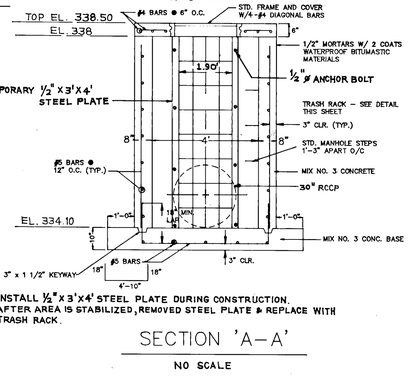
NO SCALE

COLLAR IS TO BE LOCATED A MINIMUM OF 2' FROM PIPE JOINT.



PLAN

NO SCALE



NOTE : 1. INSTALL 1/2" X 3' X 4' STEEL PLATE DURING CONSTRUCTION.
2. AFTER AREA IS STABILIZED, REMOVED STEEL PLATE & REPLACE WITH TRASH RACK.

SECTION 'A-A'

NO SCALE

CONTROL STRUCTURE

These plans have been reviewed for the Howard Soil Conservation district and meet the technical requirements for the small pond construction, Soil & Sediment Control.

James M. Hellard 3/22/93
U.S. Soil Conservation Service Date

These plans for Soil and Sediment Control meet the requirements of the Howard County Soil Conservation District.

Robert W. Zirkus 3/22/93
Howard Soil Conservation District Date

DEVELOPER'S CERTIFICATE

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

ENGINEER'S SIGNATURE 11-18-92 DATE

ENGINEER'S CERTIFICATE

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

DEVELOPER'S SIGNATURE 11-17-92 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT 6/8/93 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION 4/5/93 DATE

CHIEF, BUREAU OF HIGHWAYS 3/30/93 DATE

CHIEF, BUREAU OF ENGINEERING 4-6-93 DATE

NO.	DATE	REVISION
1	4-26-94	RED-LINED REVISION (ENLARGEMENT OF SWM POND)

PROJECT : THORNTON WOODS
LOTS 1 - 20
TAX MAP 42 PARCEL 49 6th ELCTION DISTRICT HOWARD COUNTY , MD.

LOCATION :

TITLE : STORMWATER MANAGEMENT PLAN & DETAIL

OWNER :
DAVID THORNTON
7240 EDENBROOK DR.
COLUMBIA, MD. 21046

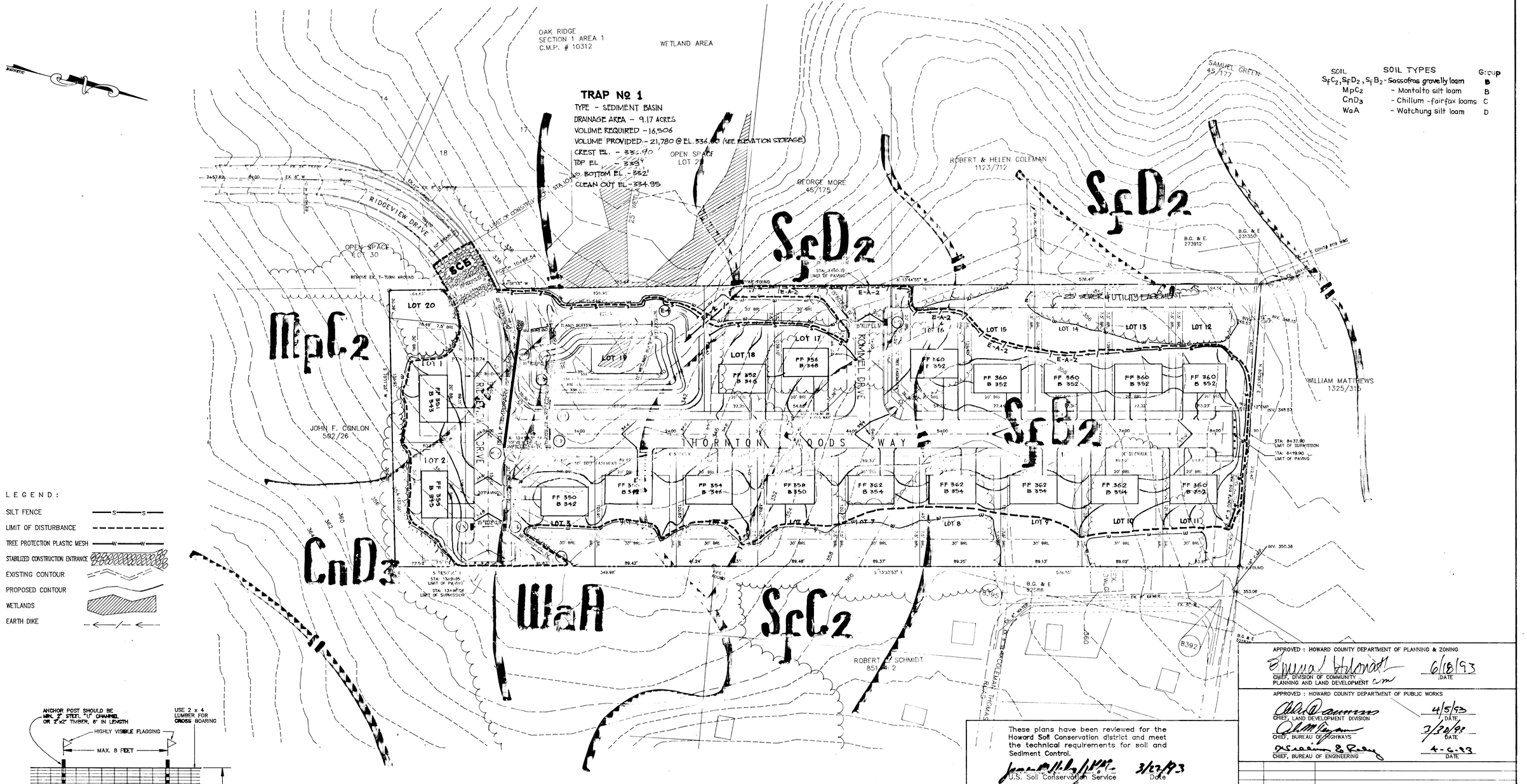
DEVELOPER :
LAND DESIGN & DEVELOPMENT INC.
10850 HICKORY RIDGE ROAD
COLUMBIA , MD. 21045

Loria Engineering Inc.
CONSULTING ENGINEERS-LAND PLANNERS-SURVEYORS
3230 BETHANY LANE, SUITE 4, ELLICOTT CITY, MD. 21042
410-465-0400

DESIGN	MLL	CHECKED	MLL	DATE 11-5-92	PROJ. NO.
DRAWN	AVG	APPROVED	MLL	SCALE AS SHOWN	SHEET 7 OF 10

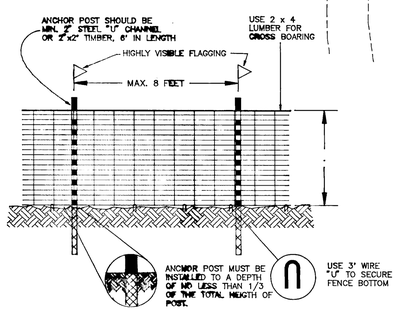
1660

F93-58



LEGEND:

- SILT FENCE —S—S—
- LIMIT OF DISTURBANCE - - - - - -
- TREE PROTECTION PLASTIC MESH —W—W—
- STABILIZED CONSTRUCTION ENTRANCE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- WETLANDS
- EARTH DIKE



NOTES:

1. FOREST PROTECTION DEVICE ONLY
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKE AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

BLAZE ORANGE PLASTIC MESH

NOT TO SCALE

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. INSTALL ALL SEDIMENT CONTROL MEASURES SHOWN ON THIS PLAN SUCH AS STONE CONSTRUCTION ENTRANCE AND SILT FENCE.
3. INSTALL BLAZE ORANGE PLASTIC WIRE MESH TREE PROTECTION.
4. CONSTRUCT STORMWATER MANAGEMENT POND. BLOCK WEIR WITH 1/2" STEEL PLATE.
5. CONSTRUCT TEMPORARY CMP SHOWN ON THIS PLAN AND BLOCK PIPE FROM M-2 TO I-2.
6. GRADE THE AREA AS SHOWN AND CONSTRUCT UTILITIES * AND ROADS.
7. STABILIZED ALL DISTURBED AREAS.
8. REMOVE SILT FENCE FROM STORMWATER MANAGEMENT POND AND THE STEEL PLATE BLOCKING THE WEIR.
9. PERMANENTLY BLOCK THE TEMPORARY 15" CMP WITH CONCRETE AND REMOVE THE BLOCK AT M-2 TO I-2.
10. REMOVE ALL SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH HOWARD COUNTY SOIL CONSERVATION SERVICE REQUIREMENTS.

* PLS. NOTE " THE CONDITIONS & MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS " SHOWN ON SHEET 10 OF 10 APPLY FOR IMPACTS ASSOCIATED WITH THE CONSTRUCTION OF THE ROAD.

See MDE permit # 93-NT 0074/199362671 Effective 5-25-93.

These plans have been reviewed for the Howard Soil Conservation district and meet the technical requirements for soil and Sediment Control.

U.S. Soil Conservation Service — Date 3/22/93

These plans for Soil and Sediment Control meet the requirements of the Howard County Soil Conservation District.

Howard Soil Conservation District — Date 3/22/93

DEVELOPER'S CERTIFICATE

" 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 THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

ENGINEER'S SIGNATURE — DATE 11-9-92

ENGINEER'S CERTIFICATE

" 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.

DEVELOPER'S SIGNATURE — DATE 11.17.92

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 6/18/93

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/5/93

CHIEF, BUREAU OF HIGHWAYS — DATE 3/30/93

CHIEF, BUREAU OF ENGINEERING — DATE 4-6-93

NO.	DATE	REVISION

PROJECT :

THORNTON WOODS

LOTS 1 - 20

TAX MAP 42 PARCEL 49 6th ELCTION DISTRICT HOWARD COUNTY , MD.

LOCATION :

TITLE :

SEDIMENT CONTROL PLAN & SOILS MAP

OWNER :

DAVID THORNTON
7240 EDENBROOK DR.
COLUMBIA, MD. 21046

DEVELOPER :

LAND DESIGN & DEVELOPMENT INC.
10850 HICKORY RIDGE ROAD
COLUMBIA , MD. 21045

Loria Engineering Inc.
CONSULTING ENGINEERS-LAND PLANNERS-SURVEYORS
3230 BETHANY LANE, SUITE 4, ELLICOTT CITY, MD. 21042
410-465-0400

DESIGN	MLL	CHECKED	MLL	DATE 11-5-92	PROJ. NO.
DRAWN	AVG	APPROVED	MLL	SCALE 1" = 50'	SHEET 6 OF 10

1660

F 93-58

H5

SPECIFICATIONS

These specification are appropriate to all ponds within the scope of the Standard for practice MD- 378. All references to ASTM and AASHTO specifications apply to the most recent version.

SITE PREPARATION :

Area under the borrow areas, embankment, and structural works shall be cleared, grubbed and the top soil stripped to remove all trees, vegetation, roots or the other objectional material. Channel banks and short breaks shall be sloped to no steeper than 1:1.

Areas covered by the pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable materials unless otherwise designated on the plans. Trees, brush, and stump shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside the limits of the dam and reseveir as directed by the owner or his authorized representative. When specified, a sufficient quality of top soil 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 area or areas. It shall be free of roots, stumps, wood, rubbish, over size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation(including freeboard) as shown on the plans.

Placement :
Area on which fill is to be placed shall be sacrified prior to placement of the fill. Fill amterials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous material shall be placed in the downstream portions of the embankment.

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

Cut- off Trench
Where specified, a cut-off trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation. With the minumum width being four 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 backfill shall be compacted with construction equipment rollers or hand tampers to assure maximum density and a minimum permeability.

STRUCTURE BACKFILL

Backfill adjacent to pipes or structures shall be of the type and quality conforming to the 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 all 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

Corrugated metal pipe
Materials - (steel pipe) – This pipe and its appurtenance shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M- 190 type A with water tight coupling bands. Any bituminous coating damaged ot otherwise removed shall be placed with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of .01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon, Plasti- Cote, Blac- Klad, and Beth- Cu- Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M- 245 and M- 246.

Materials – (Aluminum Coated Steel Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M- 274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

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

Coupling band, anti-seep collars, end sections etc., must be composed of the same amterial as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

Connections – All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti seep collars shall be connected to the pipe in such manner as to be completely watertight. Dimple bands are not considered to be watertight

All connection shall used a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connection are acceptable for pipe less than 48" inches diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with o- ring gaskets having a minimum diameter of 1/2" greater than the corrugated depth. Pipes 48" in diameter and larger shall be connected by a 24" long annular corrugated bands using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene agsket will be installed on the end of ech pipe for a total of 24". Helically corrugated pipe shall have either continuously welded seams or have lock seams.

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.

Backfilling shall conform to "Structure Backfill".

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

REINFORCED CONCRETE PIPE:

Materials – Reinforced concrete pipe shall have bell and spigot joints withrubber gasket and shall equal or exceed ASTM Designation C- 361. An approved equivalent is AWWA specification C- 302.

Bedding – All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

Laying pipe – Bell and spigot pipe shall be placed with the bell end upstream. joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.

Backfilling shall conform to "Structure Backfill".

Other details (anti-seep collar, valvess, etc.) shall be as shown on the drawings.

POLYVINYL CHLORIDE (PVC) PIPE

Materials – PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D- 1785 or ASTM D- 2241.

Joints and connections to anti-seep collars shall be completely watertight.

Bedding – The pipe shall be firmly and uniformly bedded through out 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 tp provide adequate support.

CONCRETE :

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specification 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 conductive to accelerated weathering. The rock fragments shallbe angular to subrounded in shape. The least dimension of an individual rock fragment shall be not less than one third the greatest dimension of the fragments.

The rock shall have the following properties :

1. Bulk specific gravity (saturerated 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 soduim sulfate is used.

Bulk specify garvity and absorption shall be determined according to ASTM C 127. The test for soudness shall be performed according to ASTM C 88.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonabley homogeneous with the larger uniformly distributed and firmly in contact one to another with the smaller rock s filling the voids between the larger rocks. Filter cloth shall be under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration for Construction and materials, Section 919.12.

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 streams diversions necessary to protect the areas to be occupied by the permanent works the contractor shall also furnnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required by the Engineer for constructing each part of the work. After having served their porpuse, all temporary protective works shall be removed or leveled and graded to the extent required tp prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full floww can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placeing and compacting of material in required excavations, the water level at the loocation being refilled shall be maintained below the bottm 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 sightly condition. All exposed surfaces of the embankment spillway, spoil and borrow areas, and 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 operation 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. Contruction plans shall detail erosion and sediment control measures to be employed during the construction process.

STATE OF MARYLAND
No. 9975
REGISTERED
PROFESSIONAL ENGINEER

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 6/8/93 DATE

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, LAND DEVELOPMENT DIVISION — 4/5/93 DATE

CHIEF, BUREAU OF ENGINEERING — 4-6-93 DATE

CHIEF, BUREAU OF HIGHWAYS — 4/6/93 DATE

1660

Doria engineering inc.
CONSULTING ENGINEERS-LAND PLANNERS-SURVEYORS
3230 BETHANY LANE, SUITE 4, ELLICOTT CITY, MD.
465-0400

These plans have been reviewed for the Howard Soil Conservation district and meet the technical requirements for the Small pond construction, soil and sediment control.

3/22/93

These plans for Soil and Sediment Control meet the requirements of the Howard County Soil Conservation District.

3/22/93

ENGINEER'S CERTIFICATE

I hereby 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 and conditions and it was prepared in accordance with the requirements of Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation Service with an "As Built" plan of the pond within 30 days of completion.

SIGNATURE OF ENGINEER — 11-18-92 DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and construction will be done in accordance with this plan, and that any responsible personel involved in the construction will have a Certificate of Attendance at the Department of the Environment Approved training Program for the Control of the Sediment before beginning the project. I also authorize periodic inspection by the Howard Soil Conservation Service. I will provide the Howard Soil Conservation Service with an "as built" plan of the pond within 30 days of completion.

BY — DATE

GENERAL NOTES FOR PONDS

THORNTON WOODS
LOTS 1 - 20

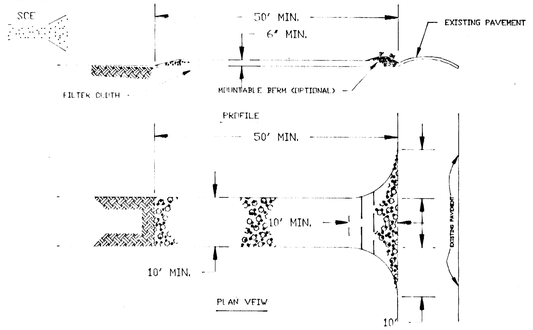
DESIGN : MLL	CHECKED MLL	DATE 11-5-92	PROJ. NO.
DRAWN : AVG	APPROVED MLL	SCALE	SHEET 9 OF 10

F 93-58

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

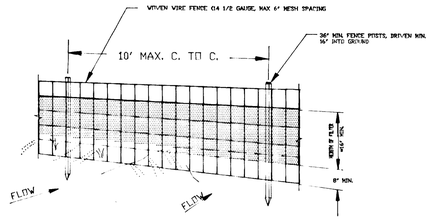
STANDARD SYMBOL



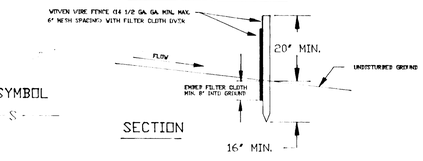
CONSTRUCTION SPECIFICATION

1. STONE SIZE - USE 2" STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TEN (10) FOOT MINIMUM, BUT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5% SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN IS REQUIRED, IT SHALL BE DONE 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.

SILT FENCE



PERSPECTIVE VIEW



STANDARD SYMBOL

SECTION

CONSTRUCTION NOTES FOR FABRICATION SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY EVERY 24' AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN ' BULGES ' DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FENCE: WOVEN WIRE, 14.5 GAL. 6' MAX. MESH SPACING

FILTER CLOTH: FILTER X, MIRAFI 100 X, STABI - LINKA T 140 N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

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, UNLESS PREVIOUSLY LOOSENED.

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

1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE(92 LBS/1000 SQUARE FEET) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ FT).

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

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL-ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL-ANCHORED STRAW.

MULCHING - APLLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/100 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

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

TEMPORARY SEEDING NOTES

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

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, UNLESS PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL-ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

STANDARD AND SPECIFICATION FOR VEGETATIVE STABILIZATION WITH SOD

1. CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD.
2. SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH.
3. STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
4. INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
5. SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
6. SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO ITS INSTALLATION.

I. SITE PREPARATION

FERTILIZER AND LIME APPLICATION RATES SHALL BE DETERMINED BY SOIL TESTS. UNDER UNUSUAL CIRCUMSTANCES WHERE THERE IS INSUFFICIENT TIME FOR A COMPLETE SOIL TEST, FERTILIZER AND LIME MATERIALS MAY BE APPLIED IN AMOUNTS SHOWN UNDER B, BELOW.

A. PRIOR TO SODDING, THE SURFACE SHALL BE CLEARED OF ALL TRASH, DEBRIS, AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES, AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.

B. WHERE THE SOIL IS ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 2 TONS/ACRE OR 100 POUNDS PER 1,000 SQUARE FEET. IN ALL SOILS 1,000 POUNDS PER ACRE OR 25 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 FERTILIZER OR EQUIVALENT SHALL BE UNIFORMLY APPLIED AND MIXED INTO THE TOP 3 INCHES OF SOIL WITH THE REQUIRED LIME.

C. ALL AREAS RECEIVING SOD SHALL BE UNIFORMLY FINE GRADED, HARD-PACKED EARTH SHALL BE SCAREFIED PRIOR TO PLACEMENT OF SOD.

1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (992-2437)

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. SITE ANALYSIS:

TOTAL AREA OF SITE	6.69	ACRES
AREA DISTURBED	4.9	ACRES
AREA TO BE ROOFED OR PAVED	1.90	ACRES
AREA TO BE VEGETATIVELY STABILIZED	2.10	ACRES
TOTAL CUT	3000	CU. YDS
TOTAL FILL	3000	CU. YDS
OFFSITE WASTE/BORROW AREA LOCATION		

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

STATE OF MARYLAND — DONALD P. REUTER — NO. 9709 — REGISTERED PROFESSIONAL ENGINEER

GENERAL NOTES

1) REFER TO '1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN.

2) WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, MINOR FIELD ADJUSTMENTS CAN AND WILL BE MADE TO INSURE THE CONTROL OF ANY SEDIMENT. CHANGES IN SEDIMENT CONTROL PRACTICES REQUIRE PRIOR APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE COUNTY SOIL CONSERVATION DISTRICT.

3) AT THE END OF EACH WORKING DAY, ALL SEDIMENT CONTROL PRACTICES WILL BE INSPECTED AND LEFT IN OPERATIONAL CONDITION.

4) FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A.) SEVEN CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND (B.) FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

5) ANY CHANGE TO THE GRADING PROPOSED ON THIS PLAN REQUIRES RE-SUBMISSION TO COUNTY SOIL CONSERVATION DISTRICT FOR APPROVAL.

6) DUST CONTROL WILL BE PROVIDED FOR ALL DISTURBED AREAS. REFER TO 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, PP 62.01 AND 62.02 FOR ACCEPTABLE METHODS AND SPECIFICATIONS FOR DUST CONTROL.

7) ANY VARIATION FROM THE SEQUENCE OF OPERATIONS STATED ON THIS PLAN REQUIRES THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE COUNTY SOIL CONSERVATION DISTRICT PRIOR TO THE INITIATION OF THE CHANGE.

8) EXCESS CUT OR BORROW MATERIAL SHALL GO TO OR COME FROM, RESPECTIVELY, A SITE WITH AN APPROVED SEDIMENT CONTROL PLAN.

THE FOLLOWING ITEM MAY BE USED AS APPLICABLE:

9) REFER TO 'MARYLAND'S GUIDELINES TO WATERWORKS CONSTRUCTION' BY THE WATER RESOURCES ADMINISTRATION (WRA), DATED JANUARY, 1986 FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.

CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS:

A. REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OR DEBRIS TO AN UPLAND DISPOSAL AREA.

B. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NON-TIDAL WETLAND.

C. STORE HEAVY EQUIPMENT IN UPLAND AREAS AND SUITABLE OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO THE REMAINING NON-TIDAL WETLANDS.

D. ALL STABILIZATION IN THE WETLAND AND BUFFER SHALL BE OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HOREDUM SP.), OATS (UNIOLA SP.) AND OR RYE (SECALE CEREALE) WHILE ALSO ALLOWING OR THE VOLUNTARY REVEGATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE BUT MUST BE APPROVED BY THE DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN THE WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.

E. REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS IN EXCESS OF THE NONTIDAL WETLANDS LOST UNDER THE ORIGINAL STRUCTURE OR FILL.

F. TO PROTECT IMPORTANT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM AS FOLLOWS:

1.) CLASS I WATERS: IN STREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.

~~APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT~~

~~COUNTY HEALTH OFFICER DATE~~

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 6/18/93

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/15/93

CHIEF, BUREAU OF ENGINEERING — DATE 4-6-93

CHIEF, BUREAU OF HIGHWAYS — DATE 4/6/93

1660

loria engineering inc.
CONSULTING ENGINEERS * LAND PLANNERS * SURVEYORS
3230 BETHANY LANE, SUITE 4
ELLICOTT CITY, MARYLAND 21043
TEL. (301) 465-0400

These plans have been reviewed for the Howard Soil Conservation district and meet the technical requirements for soil and sediment control

Howard Soil Conservation District — date 3/22/93

These plans for soil and sediment control meet the requirements of the Howard Soil Conservation District.

Robert W. Guhse — Howard Soil Conservation District — date 3/22/93

ENGINEER'S CERTIFICATE

I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site and conditions and it was prepared in accordance with the requirements of Howard Soil Conservation District.

SIGNATURE OF ENGINEER — DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and construction will be done in accordance with this plan, and that any responsible personnel involved in the construction will have a Certificate of Attendance at the Department of the Environment Approved Training Program for the Control of Sediment beforre begining the project. I also authorize periodic inspection by the Howard Soil Conservation Service.

BUILDER/DEVELOPER — DATE 11-17-92

THORNTON WOODS

LOTS 1 - 20

SEDIMENT AND EROSION CONTROL NOTES

owner :

SCALE:	DATE: 11-5-92	SHEET 10 OF 10
DESIGNED	DRAWN	CHECKED

F 93-58

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