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9	GRADING AND SEDIMENT CONTROL PLAN
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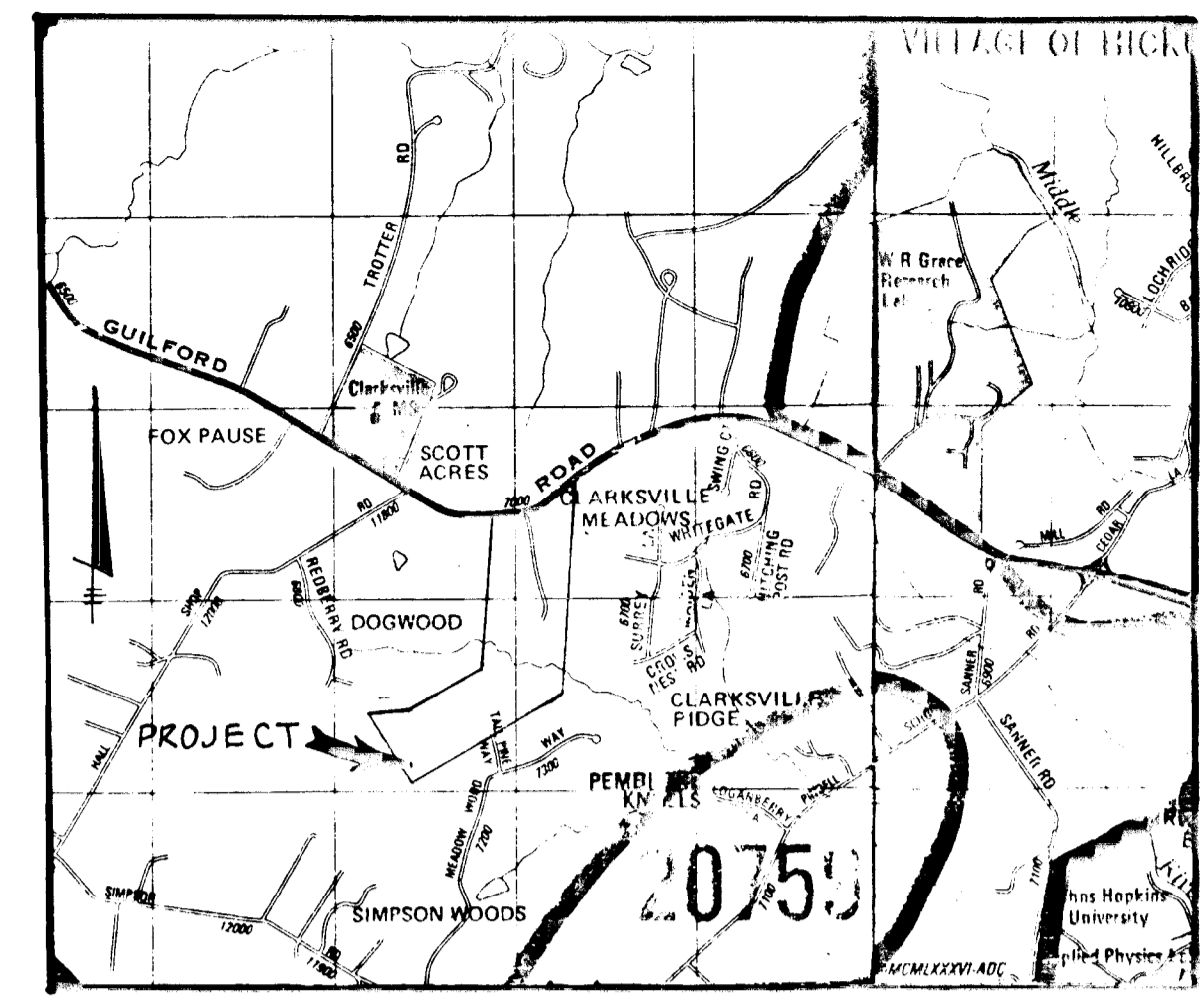
ROADWAYS & STORM DRAINS

THISTLEDOWN

SECTION ONE

5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND



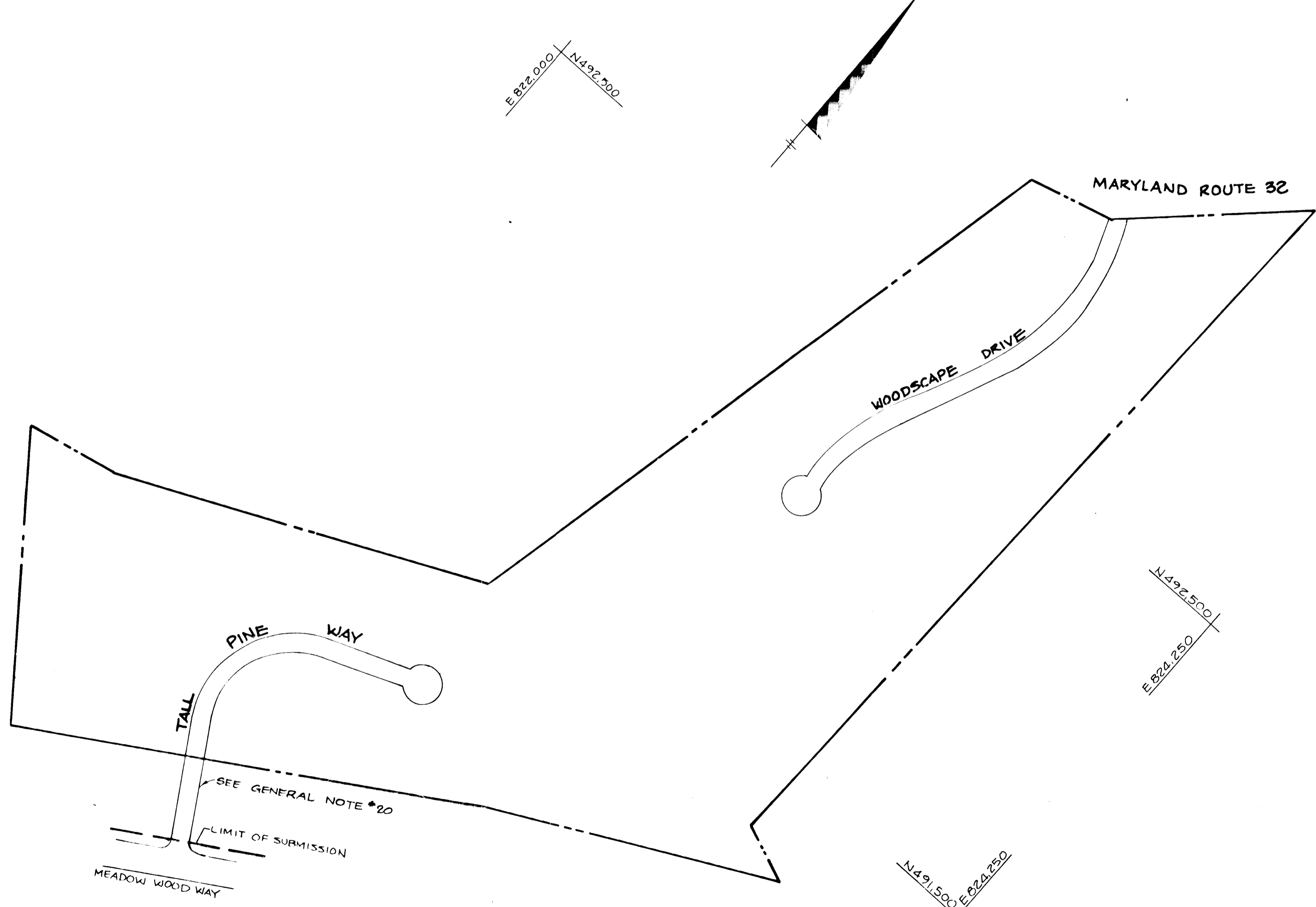
VICINITY MAP
SCALE: 1" = 2000'

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
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.
3. THE CONTRACTOR SHALL TEST FIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
4. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

MISS UTILITY	1-800-257-7777
C&P TELEPHONE COMPANY	723-9976
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS AND ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	792-7272
5. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS.
6. STORM DRAIN BACKFILL WITHIN ROADWAYS, UNDER STRUCTURES AND FOR STORM DRAIN TRENCHES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM 1557.
7. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
8. ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN DETAIL G2.01 (TRENCH IN ROCK OR TRENCH IN EARTH AS DETERMINED BY FIELD CONDITIONS) IN VOL. IV OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.
9. ALL STREET CURB RETURNS SHALL HAVE 35.0' RADIUS UNLESS OTHERWISE NOTED.
10. ALL ELEVATIONS SHOWN ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM, 1929.
11. ALL PIPE ELEVATIONS SHOWN ARE INVERT OR ELEVATIONS.
12. TOPO TAKEN FROM FIELD RIM SURVEY DATED DECEMBER, 1982.
13. SUBJECT PROPERTY ZONED BY PER 8-2-85 COMPREHENSIVE ZONING PLAN.
14. INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1978 EDITION.
15. DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:

ALL 50' RIGHT-OF-WAYS 30 M.P.H.
16. PROVIDE STD 7" CONCRETE CURBS AND GUTTER BEHIND INLETS. SEE DETAIL FOR TRANSITION FROM BITUMINOUS CURBS TO STD CURBS AND GUTTER.
17. SEE OFFICE OF PLANNING AND ZONING FILE NO. S-86-76 AND P-87-16
18. UTILITY POLE RELOCATION SHALL BE A RESPONSIBILITY OF THE DEVELOPER
19. FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SHOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPE STEM AND THE ROAD RIGHT-OF-WAY LINE.
20. THE ROAD DESIGN OF TALL PINE WAY BETWEEN MEADOW WOOD WAY AND THE PROPERTY LINE OF THISTLEDOWN IS OBTAINED FROM THE APPROVED ROAD DRAWINGS OF SIMPSON WOODS (F-80-36) REFER TO OFFICE OF PLANNING AND ZONING FILE F-80-36 FOR THE DETAILS.



PLAN
SCALE: 1" = 200'

HORIZONTAL AND VERTICAL CONTROL USED FOR AS-BUILT SURVEY.

- BENCH MARKS**
- B.M.#1 # 2437003 ELEV. 472.122
CONC. MONUMENT 0.2 MILE NW OF TROTTER ROAD, 17.7' WEST OF G&E POLE # 37159B ALONG MD. RTE 32
 - B.M.#2 ELEV. 462.14
IRON PIN ADJACENT TO WEST PROPERTY CORNER ALONG MD. RTE 32

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Arthur E. Mueggel 5-4-87
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard E. R... 5-11-87
CHIEF, BUREAU OF ENGINEERING

DATE	NO.	REVISION

OWNER: TALL PINES PARTNERSHIP
C/O CRYSTAL HILL INVESTMENTS
10005 OLD COLUMBIA ROAD
COLUMBIA, MARYLAND 21046

DEVELOPER: CRYSTAL HILL INVESTMENTS
10005 OLD COLUMBIA ROAD
COLUMBIA, MARYLAND 21046

PROJECT: **THISTLEDOWN SECTION ONE**

AREA: TAX MAP NO. 35441 PARCEL 276
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **TITLE SHEET**

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Heath Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

DATE: 4-30-87	S-86-76 P-87-16
DESIGNED BY: J.D.P.	
DRAWN BY: S.V.W.	
PROJECT NO: 28000	
DATE: FEBRUARY 24, 1987	
SCALE: AS SHOWN	
DRAWING NO. 1 OF 10	

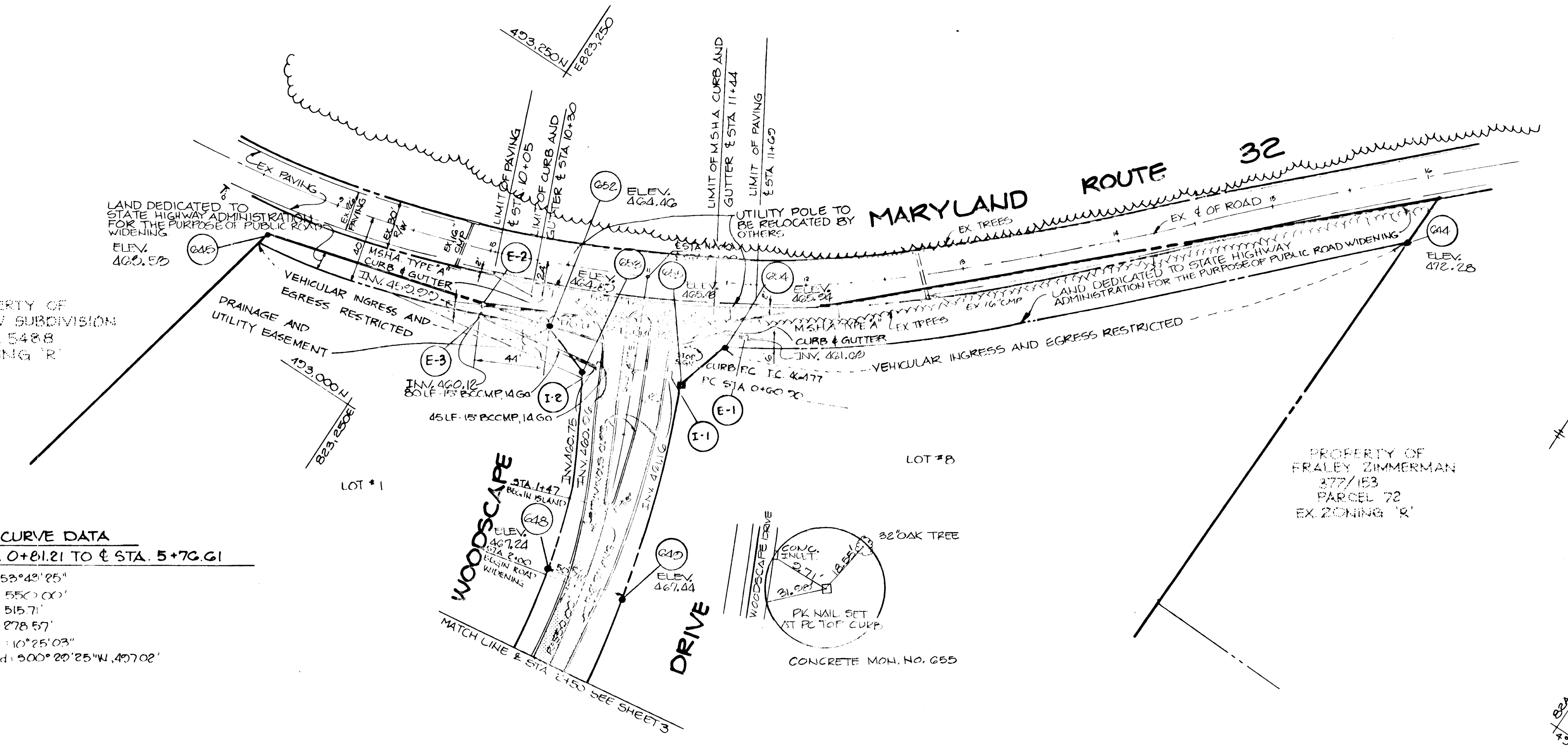
Arthur E. Mueggel
ARTHUR E. MUEGGEL, P.E.

NOTE:
ARMY CORPS OF ENGINEERS PERMIT 401 & 404 ARE NOT REQUIRED FOR THE CONSTRUCTION WITHIN THE LIMIT OF DISTURBANCE AS SHOWN ON THIS SET OF DRAWINGS.

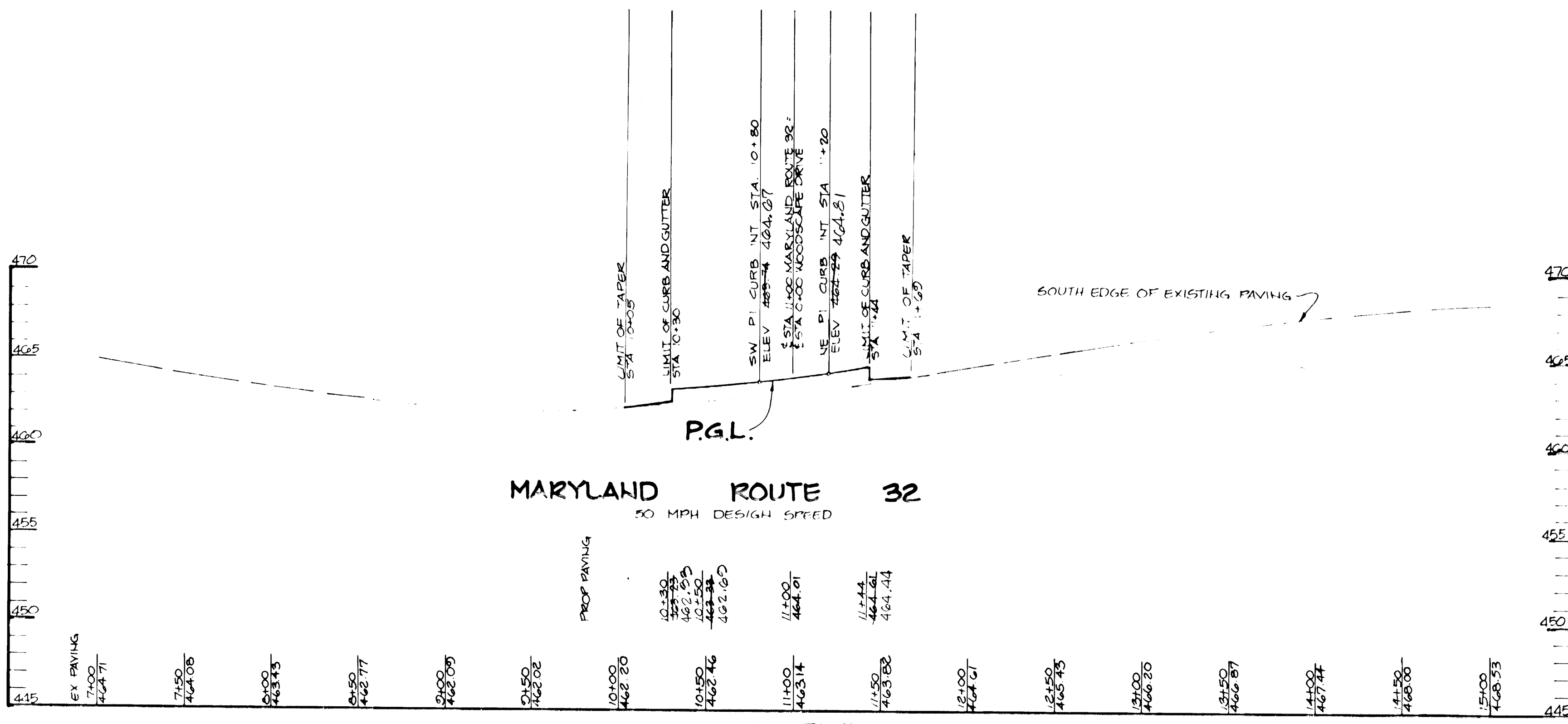
AS-BUILT
10/2/11

1264

☺ CURVE DATA
 FROM E STA. 0+81.21 TO E STA. 5+76.61
 Δ: 59°45'25"
 R: 550'00"
 L: 515.71'
 T: 278.57'
 D: 10°25'03"
 Chd: 500'20"25"W, 497.02'



PLAN



PROFILE
SCALE: 1"=10'

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING	
<i>Arthur E. Muegge</i>	5-4-87
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION	
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>William S. ...</i>	5-11-87
CHIEF, BUREAU OF ENGINEERING	
0-27-81	REVISED PER REVISIONS
DATE	NO REVISION
OWNER	TALL PINES PARTNERSHIP C/O CRYSTAL HILL INVESTMENTS 10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046
DEVELOPER	CRYSTAL HILL INVESTMENTS 10005 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21046
PROJECT	THISTLEDOWN SECTION ONE
AREA	TAX MAP NO 295 & 41 PARCEL 276 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE	PLAN AND PROFILE OF MARYLAND ROUTE 32
THE RIEMER GROUP, INC. The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2680	
4-30-87	5-86-76 P-87-16
DATE	DESIGNED BY: JDP
	DRAWN BY: DDB
	PROJECT NO: 28000
	DATE: FEBRUARY 24, 1987
	SCALE: AS SHOWN
	DRAWING NO: 2 OF 10

AS-BUILT
10/2/91

APRIL 6, 1987

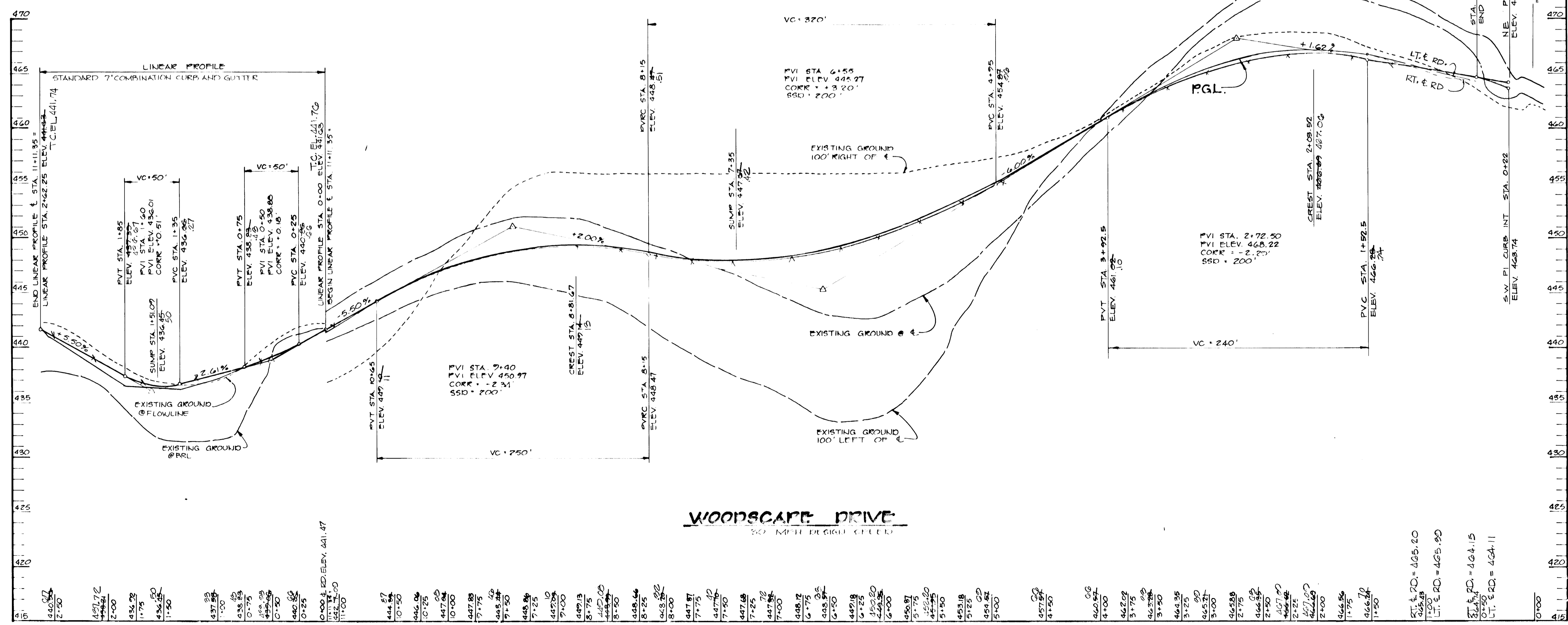
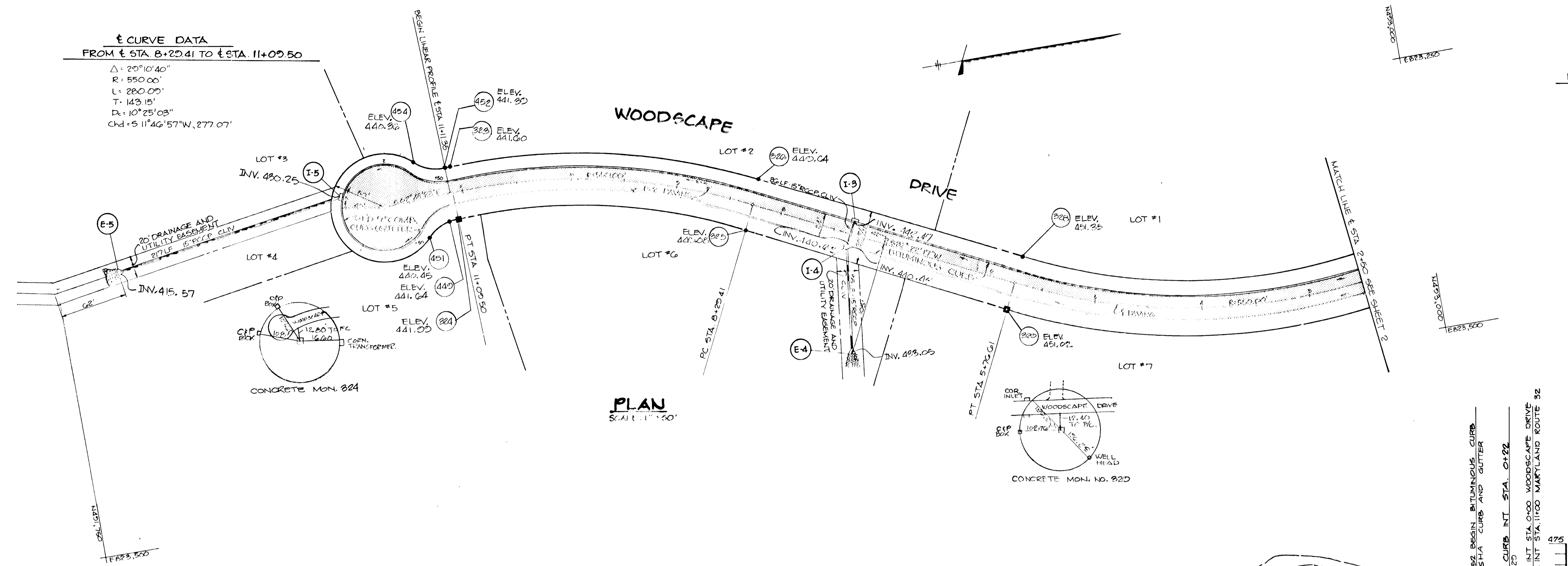
F-87-129

1260

MANHATTAN ENGINEERING CO. INC.

± CURVE DATA
 FROM ± STA. 8+22.41 TO ± STA. 11+09.50
 $\Delta: 29^{\circ}10'40''$
 $R: 550.00'$
 $L: 280.09'$
 $T: 143.15'$
 $D_c: 10^{\circ}25'03''$
 $Chd: 511^{\circ}46'57''W, 277.07'$

± CURVE DATA
 FROM ± STA. 0+81.21 TO ± STA. 5+72.61
 $\Delta: 53^{\circ}43'25''$
 $R: 550.00'$
 $L: 515.71'$
 $T: 272.57'$
 $D_c: 10^{\circ}25'03''$
 $Chd: 500^{\circ}29'25''W, 497.02'$



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John W. Munchman 5-11-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard S. R. [Signature] 5-11-87
 CHIEF, BUREAU OF ENGINEERING

DATE	NO.	REVISION

OWNER: TALL PINES PARTNERSHIP
 CO CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

DEVELOPER: CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

PROJECT: **THISTLEDOWN**
 SECTION ONE

AREA TAX MAP 10.25 & 41 PARCEL 276
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: **PLAN AND PROFILE**
WOODSCAPE DRIVE

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 481-2680

DATE: 4-30-87
 DESIGNED BY: J.D.P.
 DRAWN BY: R.E.A.
 PROJECT NO: 28000
 DATE: FEBRUARY 24, 1987
 SCALE: AS SHOWN
 DRAWING NO. 3 OF 10

1267

APRIL 6, 1987

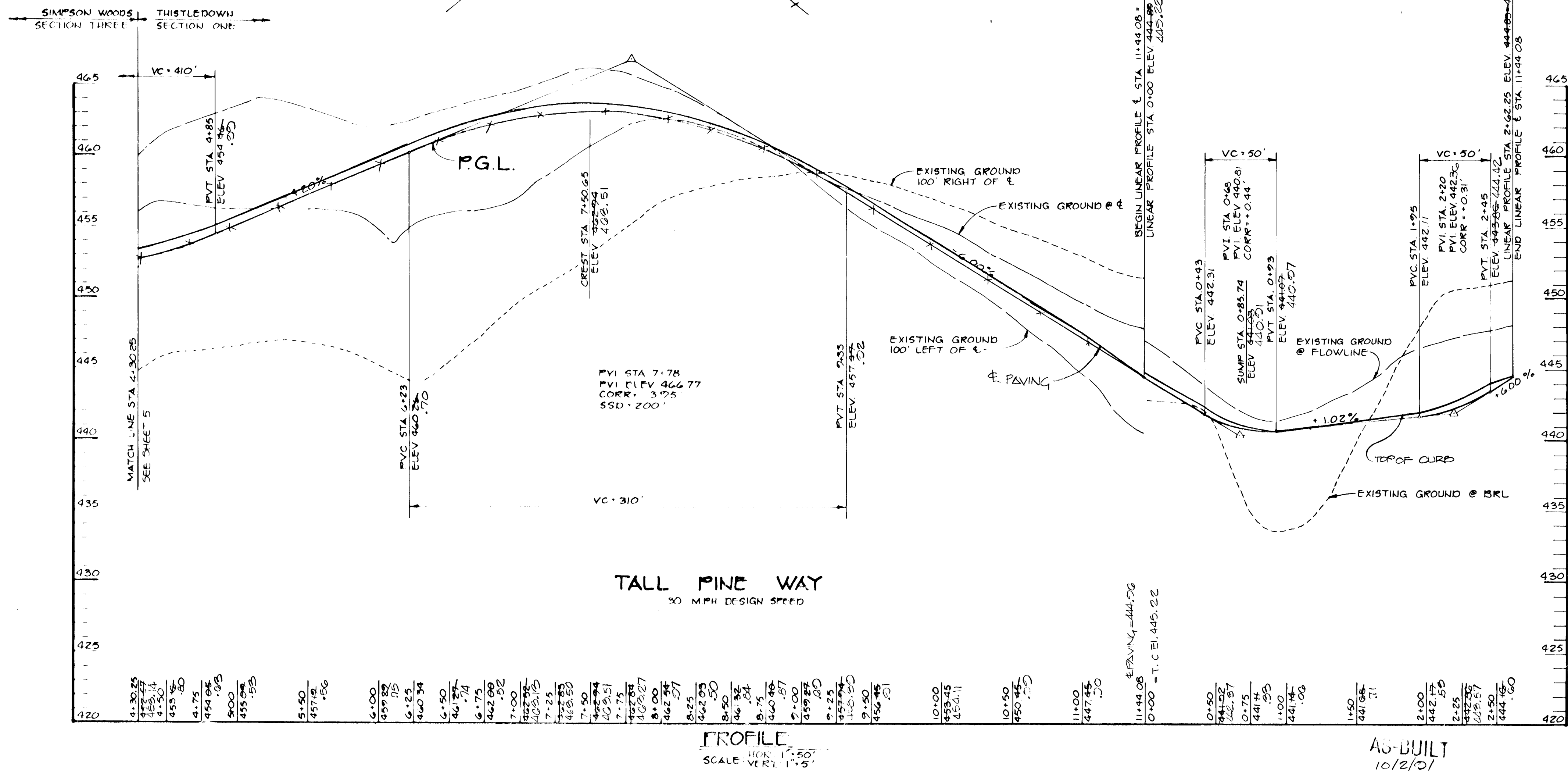
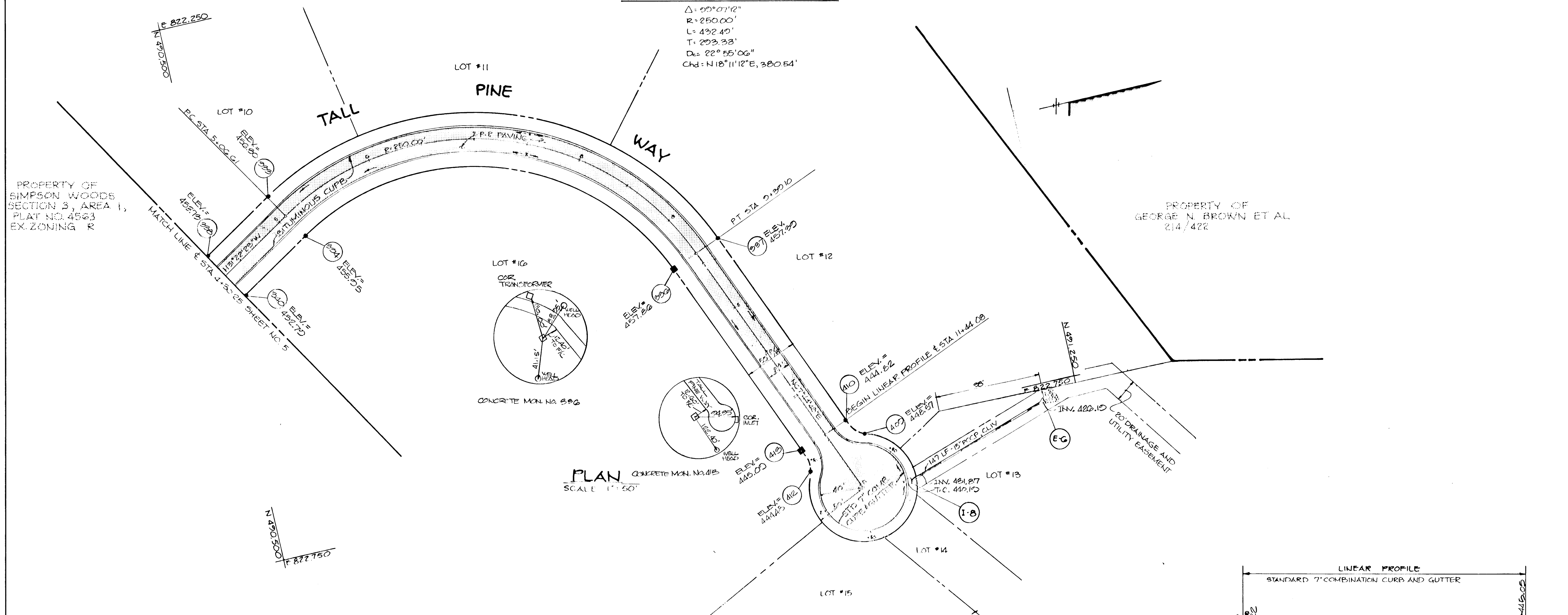
F-87-129

± CURVE DATA
FROM ± STA 5+00.01 TO 5+30.10

Δ = 99° 07' 12"
R = 250.00'
L = 432.40'
T = 223.33'
Dc = 22° 55' 06"
Chd = N 18° 11' 12" E, 380.54'

PROPERTY OF
SIMPSON WOODS
SECTION 3, AREA 1,
PLAT NO. 4543
EX. ZONING R

PROPERTY OF
GEORGE N. BROWN ET AL.
214/422



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John M. Muegge 5-4-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
George N. Brown 5-11-87
 CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER: TALL PINES PARTNERSHIP
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

DEVELOPER: CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

PROJECT: THISTLEDOWN SECTION ONE

AREA TAX MAP NO. 95-441 PARCEL 871G
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: PLAN AND PROFILE TALL PINE WAY

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

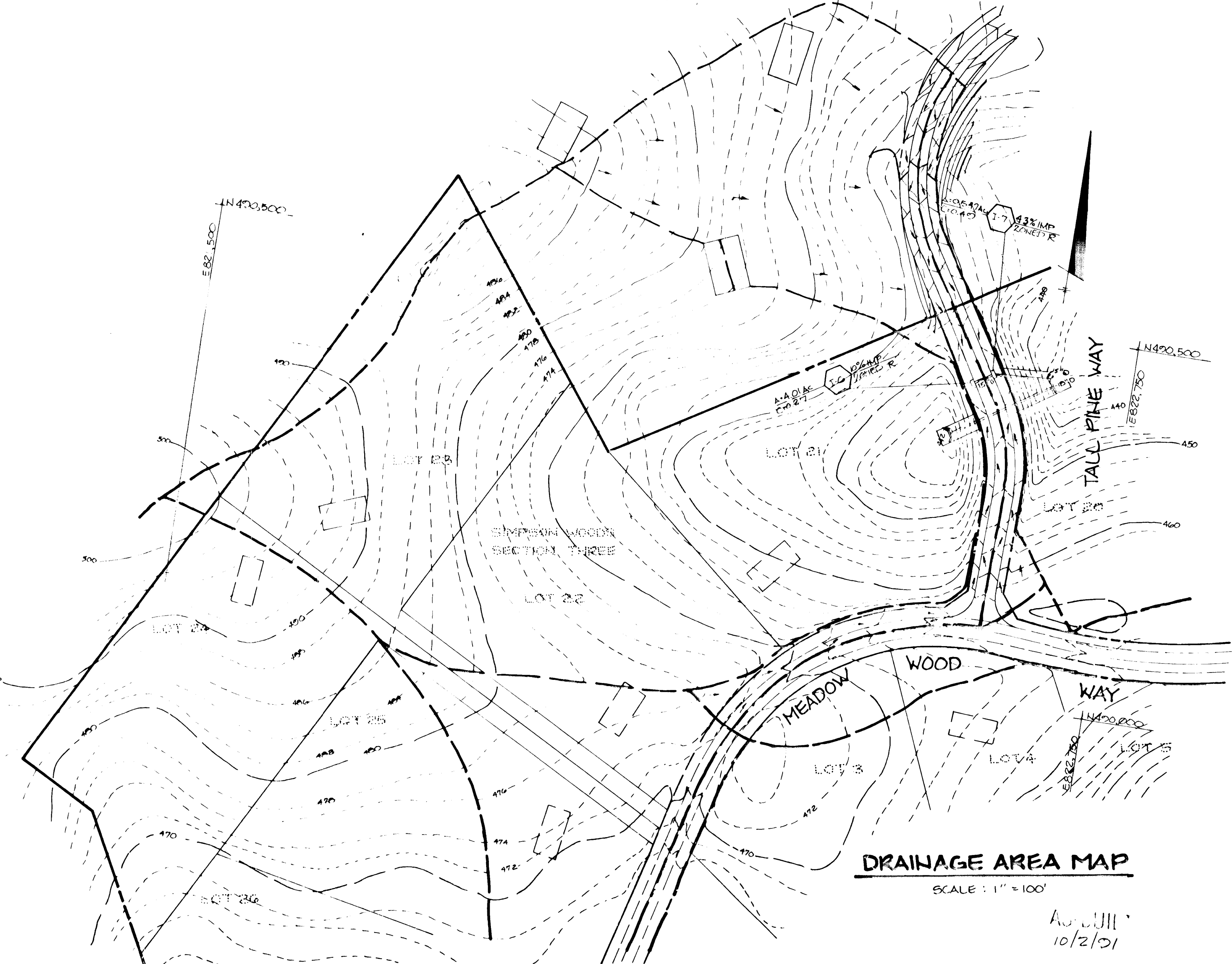
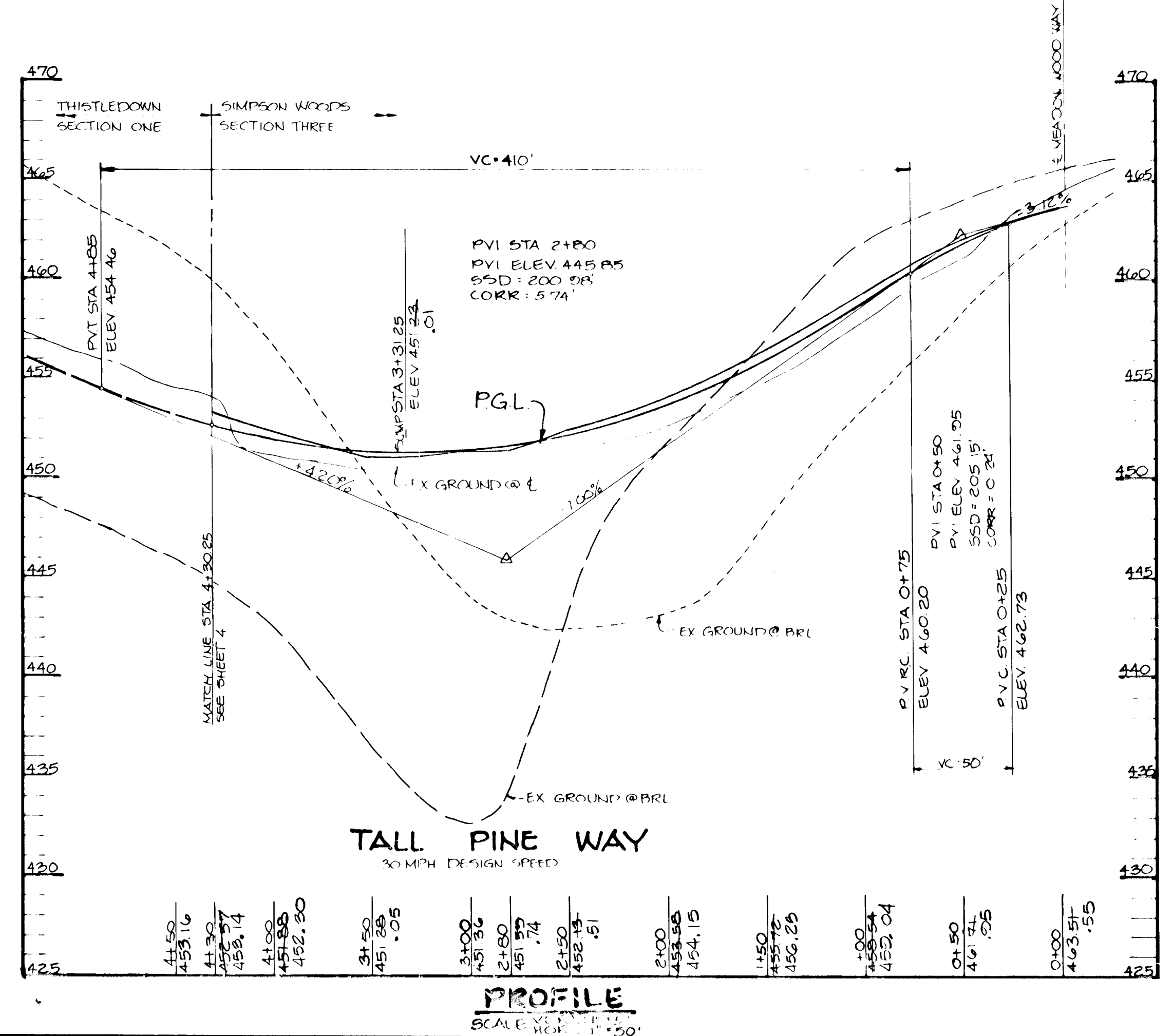
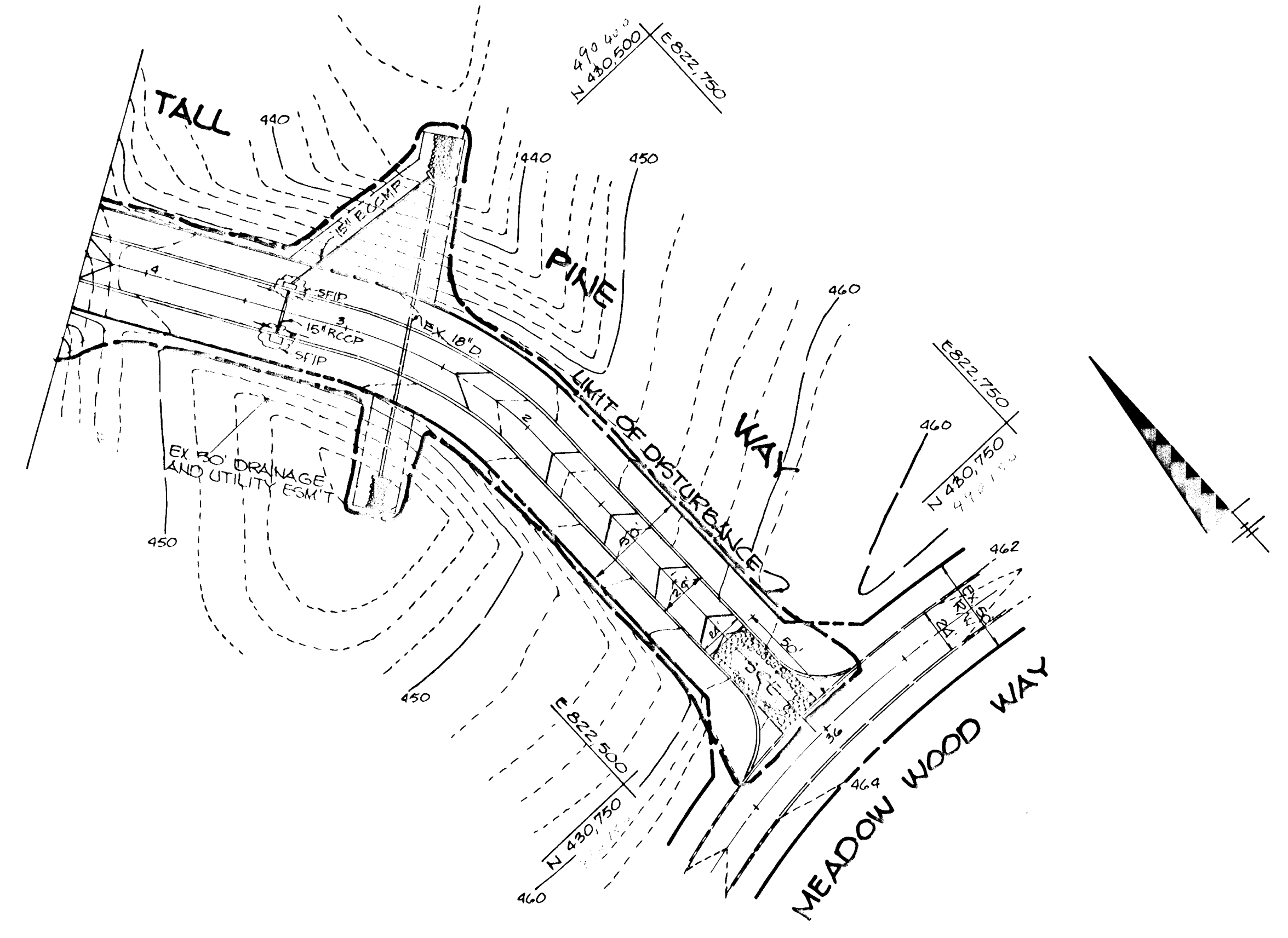
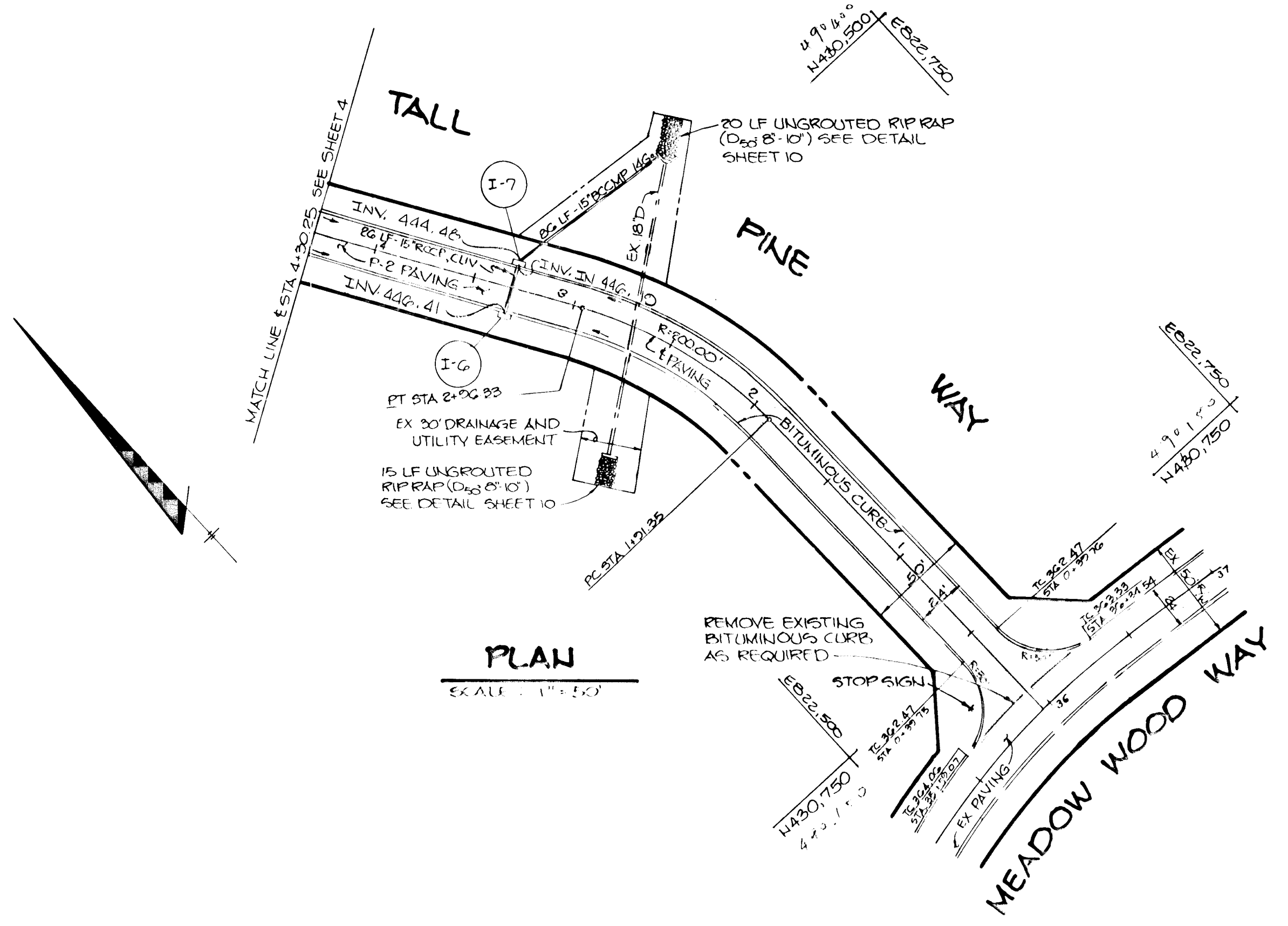
4-30-87 DATE
 5-86-76 P-87-16
 DESIGNED BY: J.D.P.
 DRAWN BY: R.E.A.
 PROJECT NO: 28000
 DATE: FEBRUARY 24, 1987
 SCALE: AS SHOWN
 DRAWING NO. 4 OF 10

ARTHUR E. MUEGGE #67071

1264

CURVE DATA
 FROM STA. 1+01.25 TO STA. 2+06.25

$\Delta = 30^\circ 04' 25''$
 $R = 200.00'$
 $L = 104.98'$
 $T = 53.73'$
 $D_c = 28^\circ 38' 52''$



BY THE DEVELOPER:
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."
 DEVELOPER: [Signature] DATE: 4-30-87

BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 ENGINEER: [Signature] DATE: 4-30-87

REVIEWED FOR: Howard S.C.D. NAME
 AND MEETS TECHNICAL REQUIREMENTS
 [Signature] DATE: 5-4-87
 U.S. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] DATE: 5/1/87
 HOWARD S.C.D.

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 [Signature] DATE: 5-4-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] DATE: 5-11-87
 CHIEF, BUREAU OF ENGINEERING

DATE	NO	REVISION

OWNER: TALL PINE PARTNERSHIP
 670 CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

DEVELOPER: CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

PROJECT: **THISTLEDOWN SECTION ONE**
 AREA: TAX MAP NO 3541 PARCEL 276
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE PLAN AND PROFILE OF TALL PINE WAY,
 GRADING AND SEDIMENT CONTROL PLAN
 AND DRAINAGE AREA MAP

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 North Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

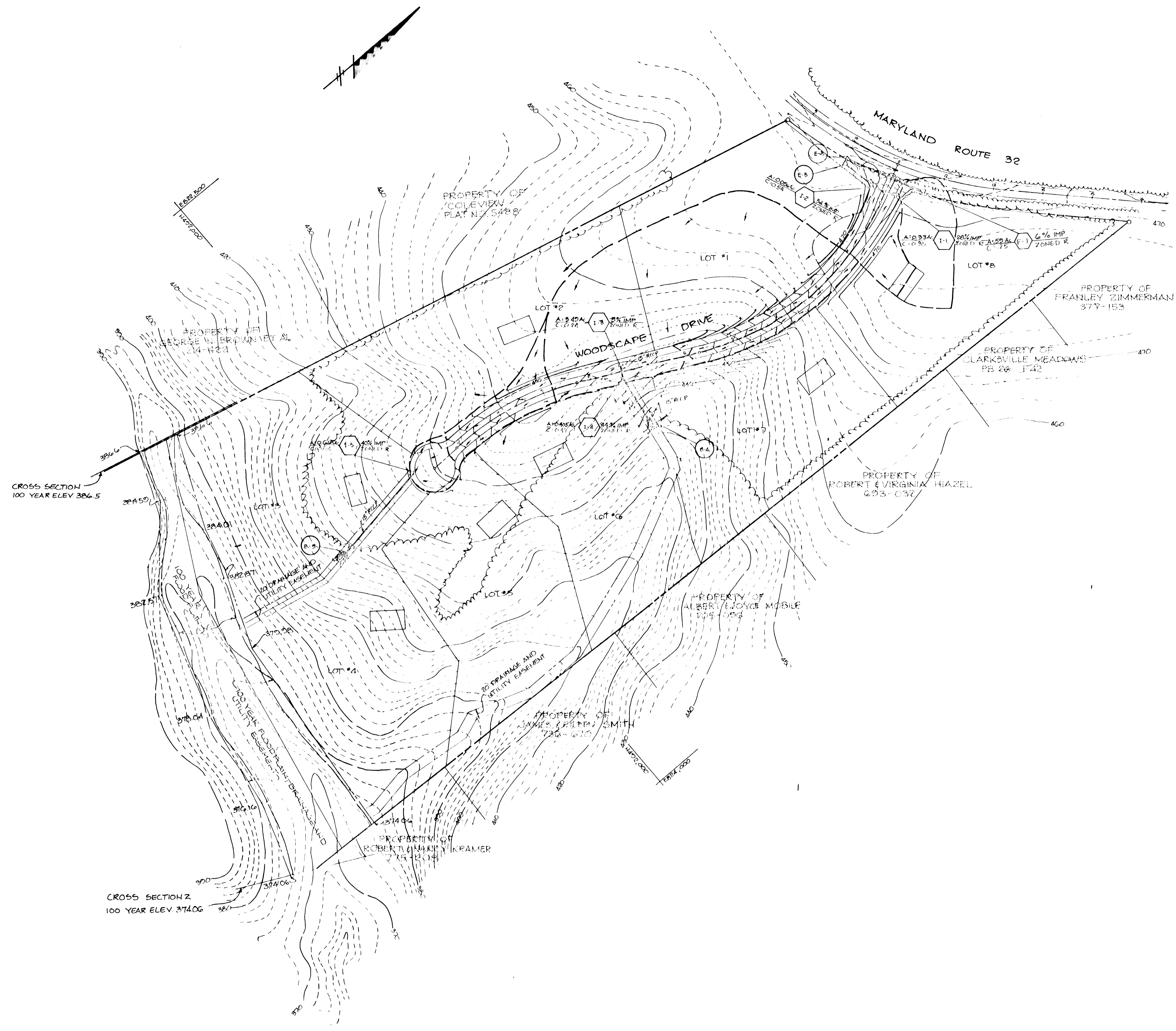
DATE: 4-30-87
 DESIGNED BY: JDP
 DRAWN BY: DDB
 PROJECT NO: 28000
 DATE: FEBRUARY 24, 1987
 SCALE: AS SHOWN
 DRAWING NO: 5 OF 10

[Professional Seal]
 ARTHUR E. MUEGGE #41101

1264

STRUCTURE SCHEDULE

TYPE	LOCATION	INV. IN	TOP OF CURB INV. OUT	ELEVATION	REMARKS
I-1	A-5 Inlet 22.5' Rt. C/L Sta. 0+59 Woodscape Drive	-	461.14	464.84	Ho. Co. Std. SD 4.01
I-2	A-5 Inlet 22.5' Lt. C/L Sta. 0+59 Woodscape Drive	460.91	460.81	464.84	Ho. Co. Std. SD 4.01
I-3	A-5 Inlet 13' Rt. C/L Sta. 7+35 Woodscape Drive	-	440.94	447.75	Ho. Co. Std. SD 4.01
I-4	A-5 Inlet 13' Lt. C/L Sta. 7+35 Woodscape Drive	440.94	472.81	447.75	Ho. Co. Std. SD 4.01
I-5	A-5 Inlet LP Sta. 1+51.09 Woodscape Drive	-	430.75	436.45	Ho. Co. Std. SD 4.01
I-6	A-5 Inlet 13' Lt. C/L Sta. 3+21.25 Tall Pine Way	-	446.35	451.31	Ho. Co. Std. SD 4.02 Ho. Co. Std. SD 4.83
I-7	A-5 Inlet 13' Rt. C/L Sta. 3+21.25 Tall Pine Way	446.25	444.50	451.31	Ho. Co. Std. SD 4.01 Ho. Co. Std. SD 4.83
I-8	A-5 Inlet LP Sta. 0+85.74 Tall Pine Way	-	434.88	441.03	Ho. Co. Std. SD 4.01
E-1	15" Metal End Section SEE PLAN Sh. 2	-	-	461.70	Ho. Co. Std. SD 5.61
E-2	15" Metal End Section SEE PLAN Sh. 2	460.00	-	-	Ho. Co. Std. SD 5.61
E-3	15" Concrete End Section SEE PLAN Sh. 2	460.00	-	-	Ho. Co. Std. SD 5.51
E-4	15" Concrete End Section 105' Lt. C/L Sta. 7+02 Woodscape Drive	434.00	-	-	Ho. Co. Std. SD 5.51
E-5	15" Concrete End Section SEE PLAN Sh. 3	416.00	-	-	Ho. Co. Std. SD 5.51
E-6	15" Concrete End Section SEE PLAN Sh. 4	429.00	-	-	Ho. Co. Std. SD 5.51



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John M. Muegge 5-11-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
James E. Smith 5-11-87
 CHIEF, BUREAU OF ENGINEERING

DATE	NO	REVISION

OWNER: TALL PINES PARTNERSHIP
 610 CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

DEVELOPER: CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

PROJECT: THISTLEDOWN SECTION ONE

AREA: TAX MAP NO. 35441 PARCEL 220
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: DRAINAGE AREA MAP

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Heath Park Drive, Ellicott City, Maryland 21043 (301) 461-2600

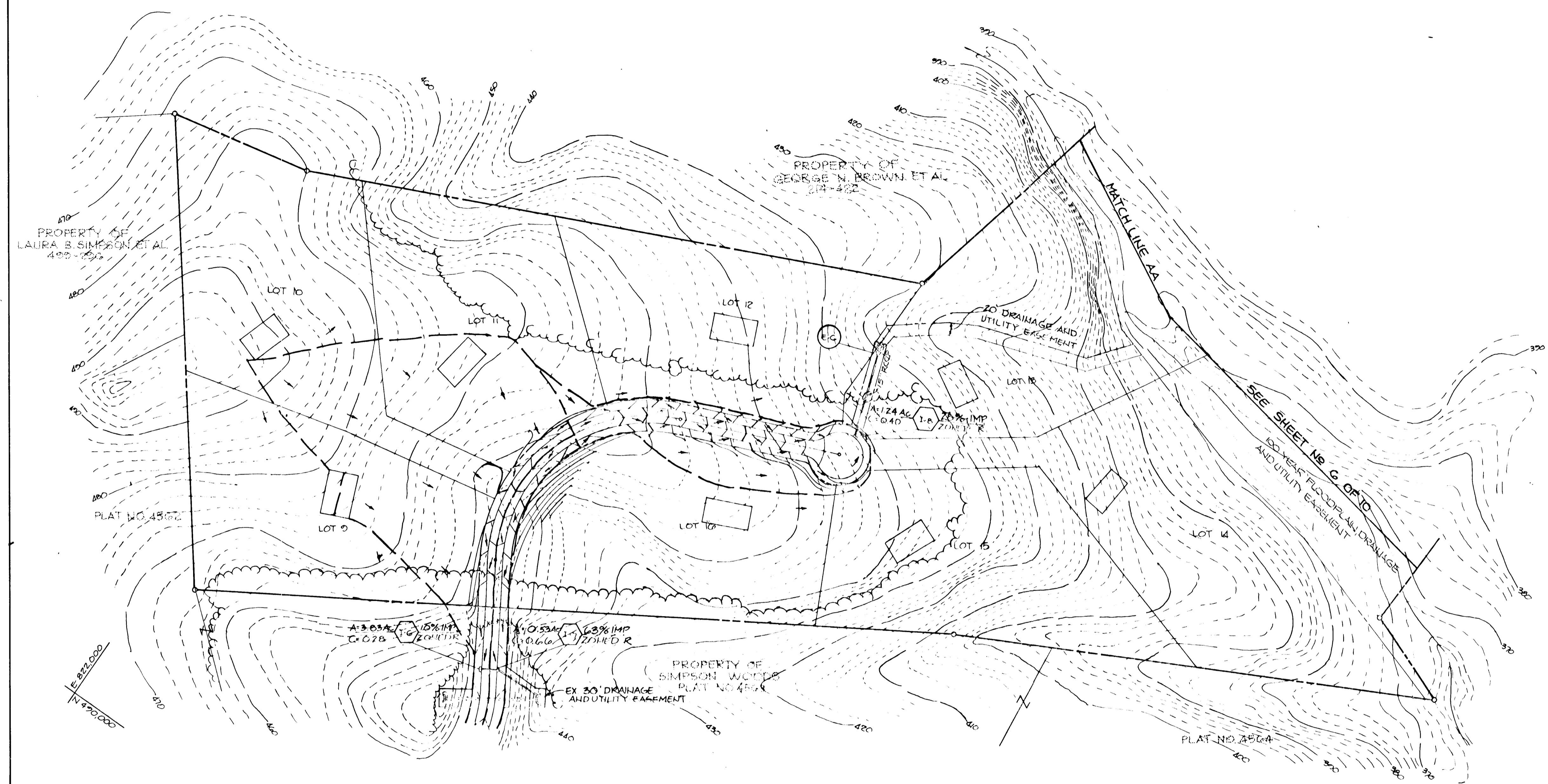
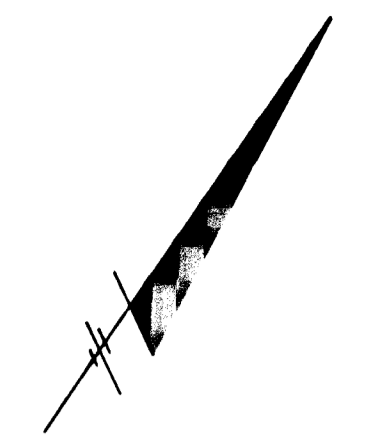
4-30-87 DATE
 S-86-76 P-87-16
 DESIGNED BY: DAM
 DRAWN BY: DAM
 PROJECT NO: 28000
 DATE: FEBRUARY 24, 1987
 SCALE: 1"=100'
 DRAWING NO. 6 OF 10

APRIL 6, 1987 F-87-179

Key

AS-BUILT
 10/2/01

E 822,000 N 421,750



N 421,750
E 822,000

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John M. Mueggler 5-4-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William S. Reilly 5-11-87
 CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO	REVISION

OWNER: TALL PINES PARTNERSHIP
 700 CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

DEVELOPER: CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

PROJECT: THISTLEDOWN
 SECTION ONE

AREA TAX MAP NO 35641 PARCEL 276
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: DRAINAGE AREA MAP

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Heath Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

4-30-87 DATE	5-26-76 P-87-16
DESIGNED BY: DAM	
DRAWN BY: DAM	
PROJECT NO: 28000	
DATE: FEBRUARY 24, 1987	
SCALE: 1"=100'	
DRAWING NO: 7 OF 10	

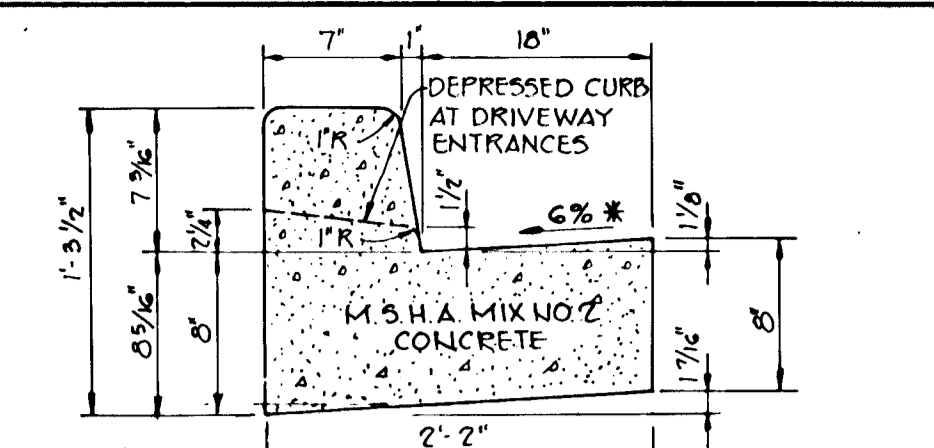
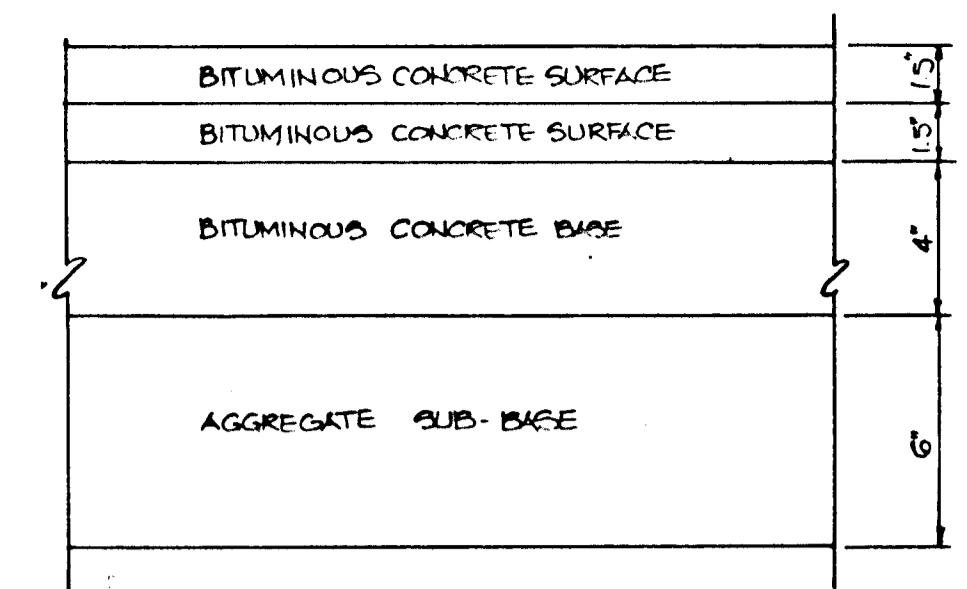
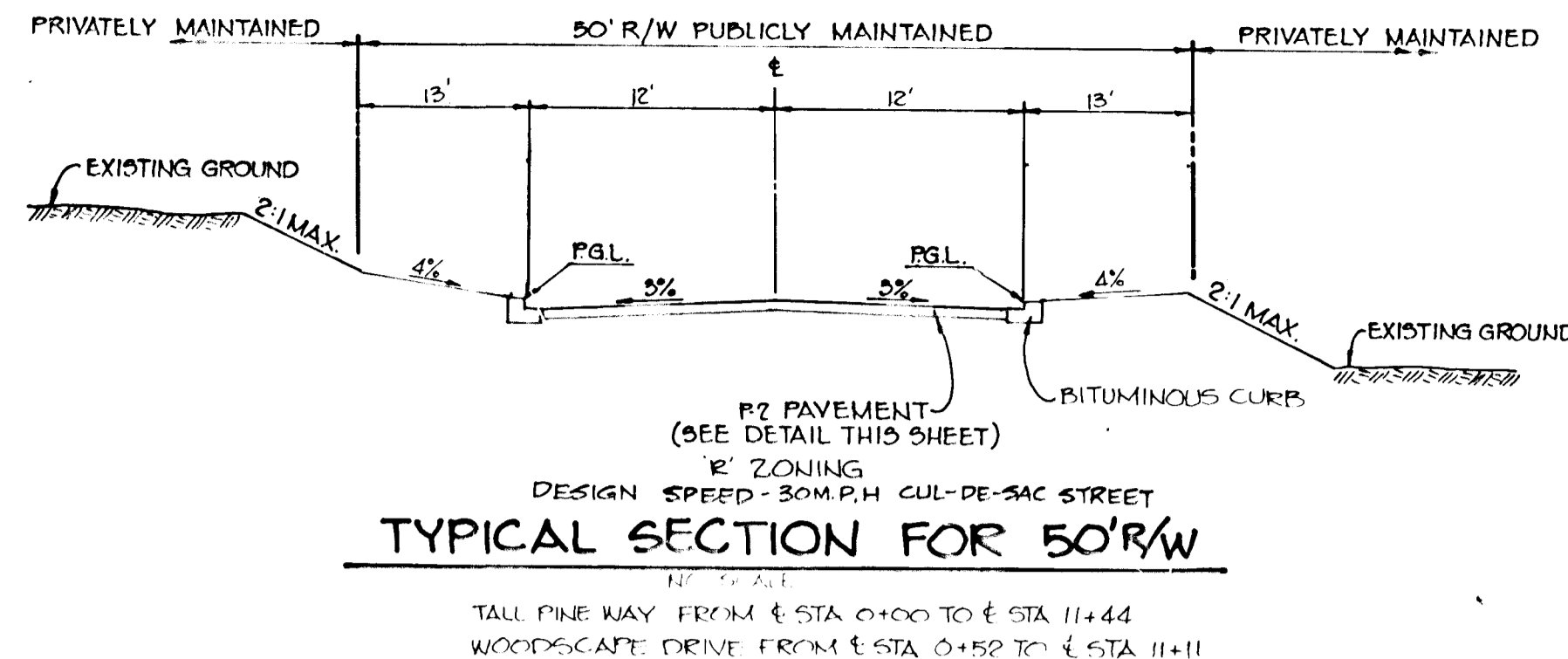
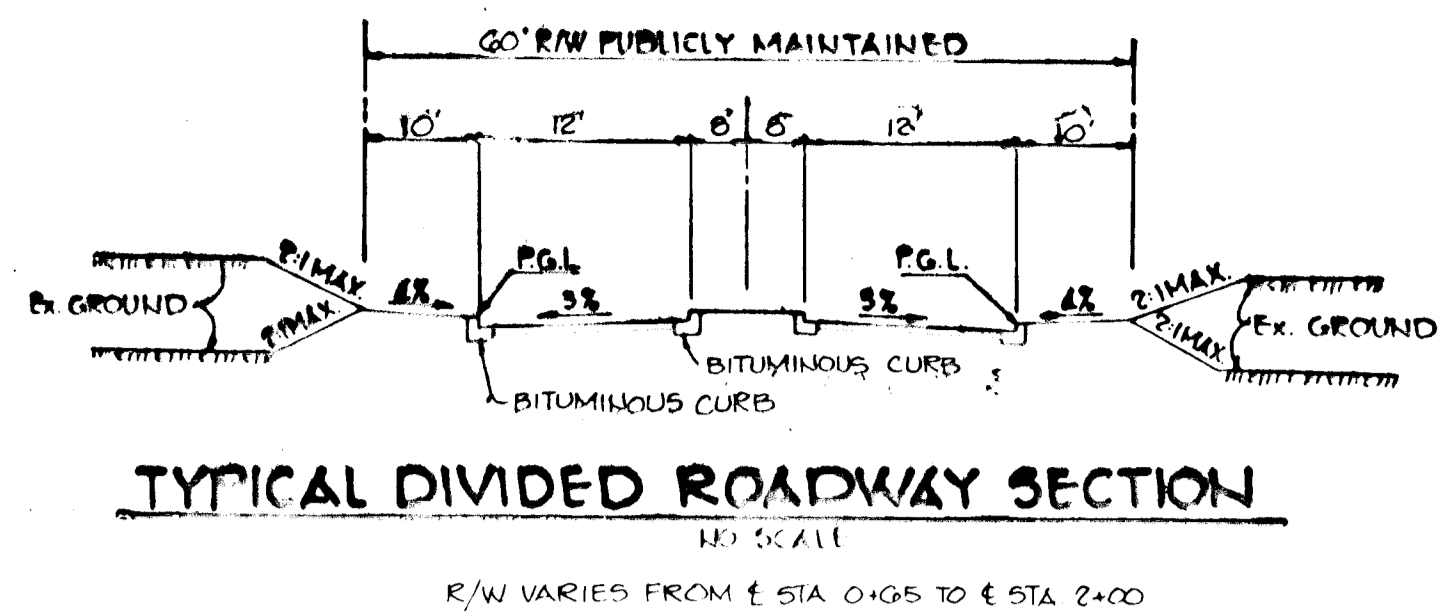


AS BUILT
 10/7/01

APRIL 6, 1987 F-87-129

1264

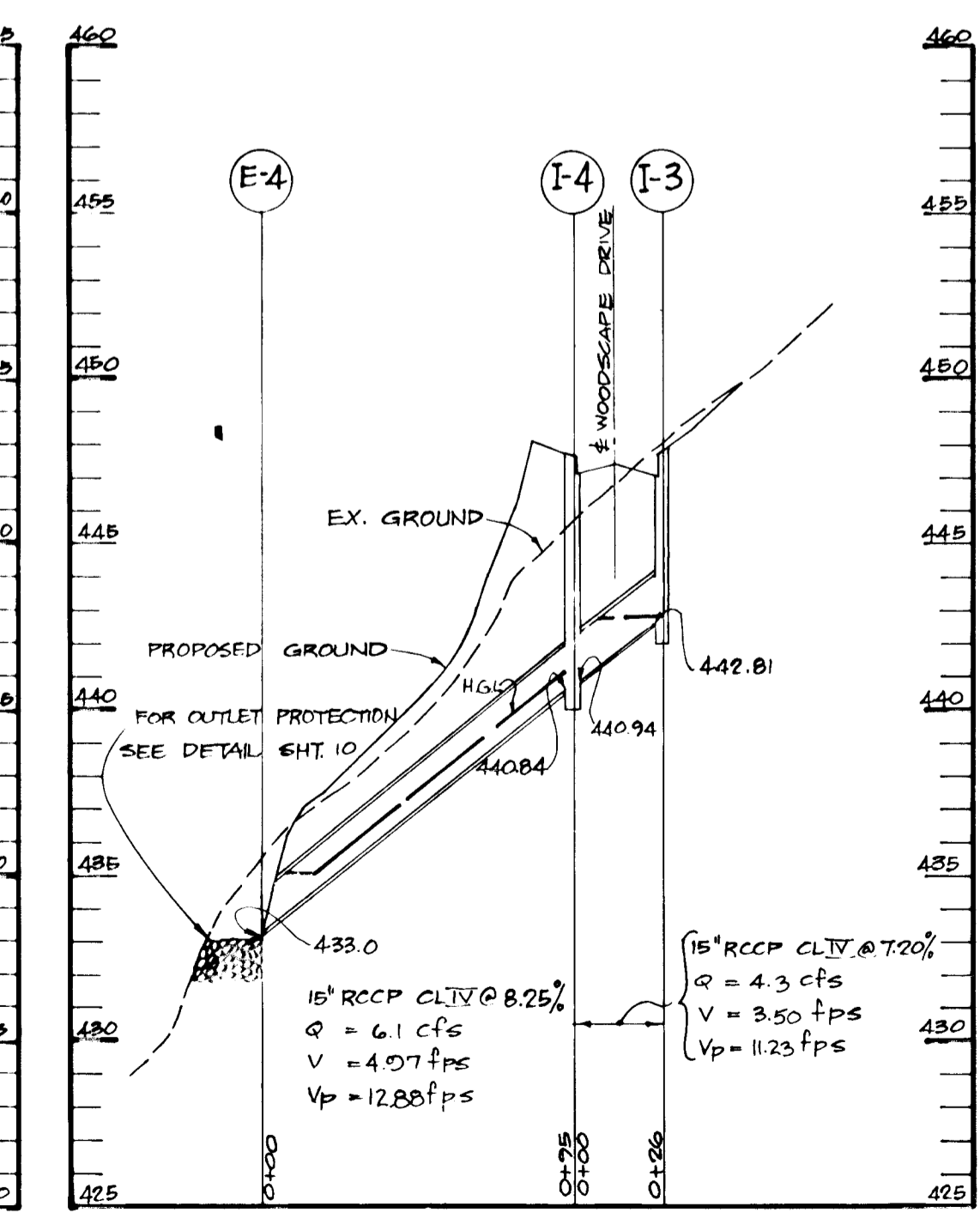
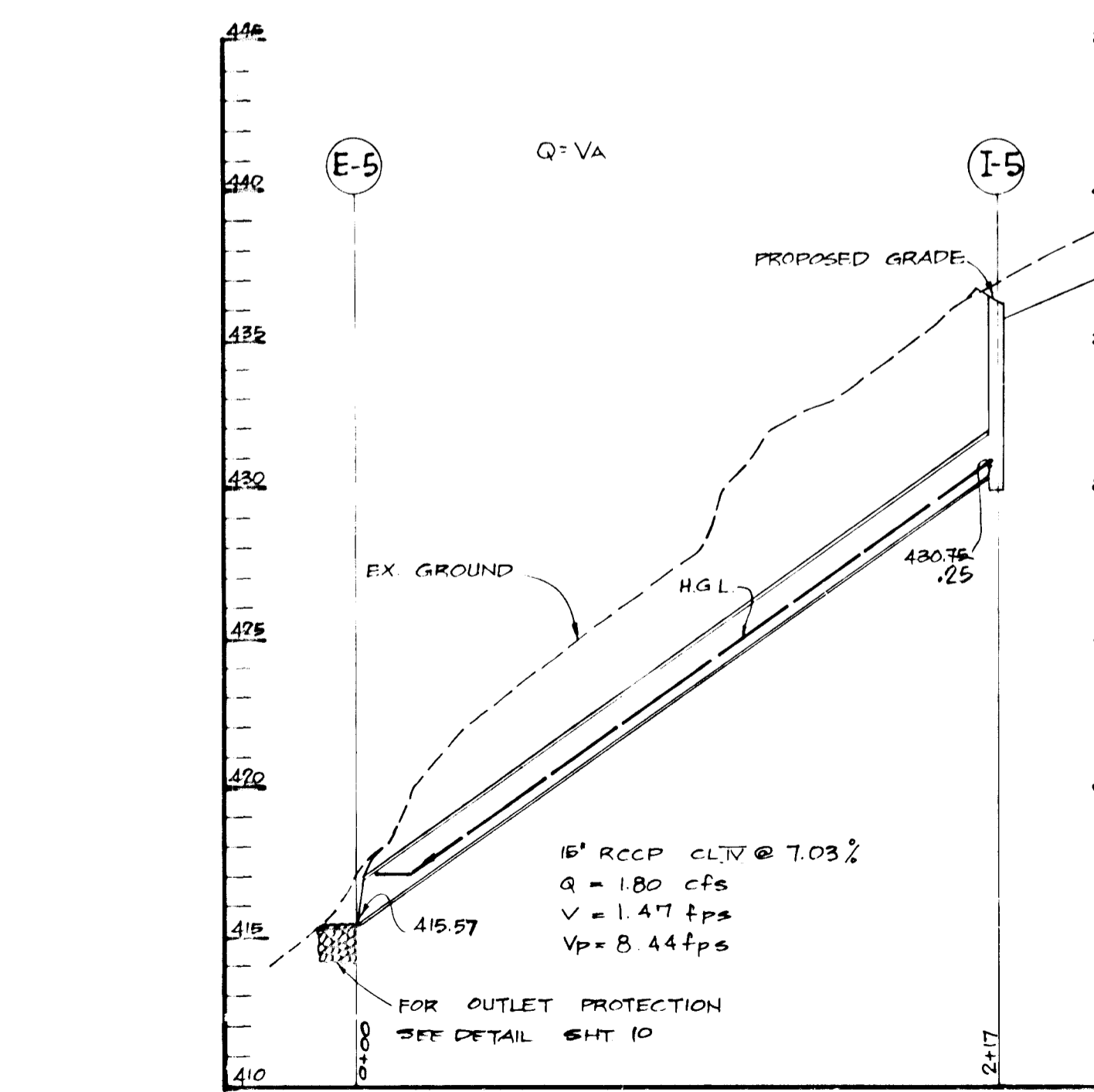
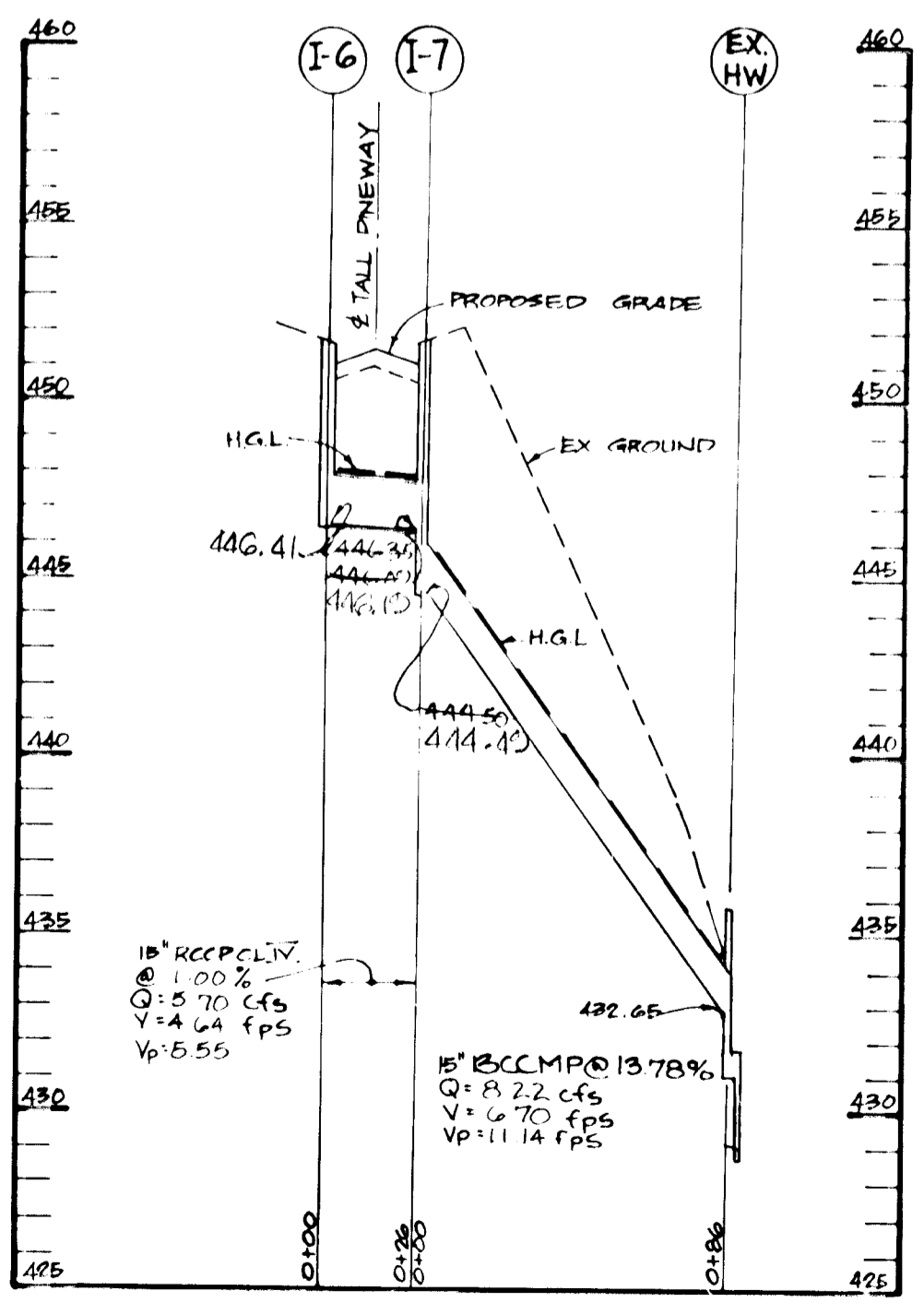
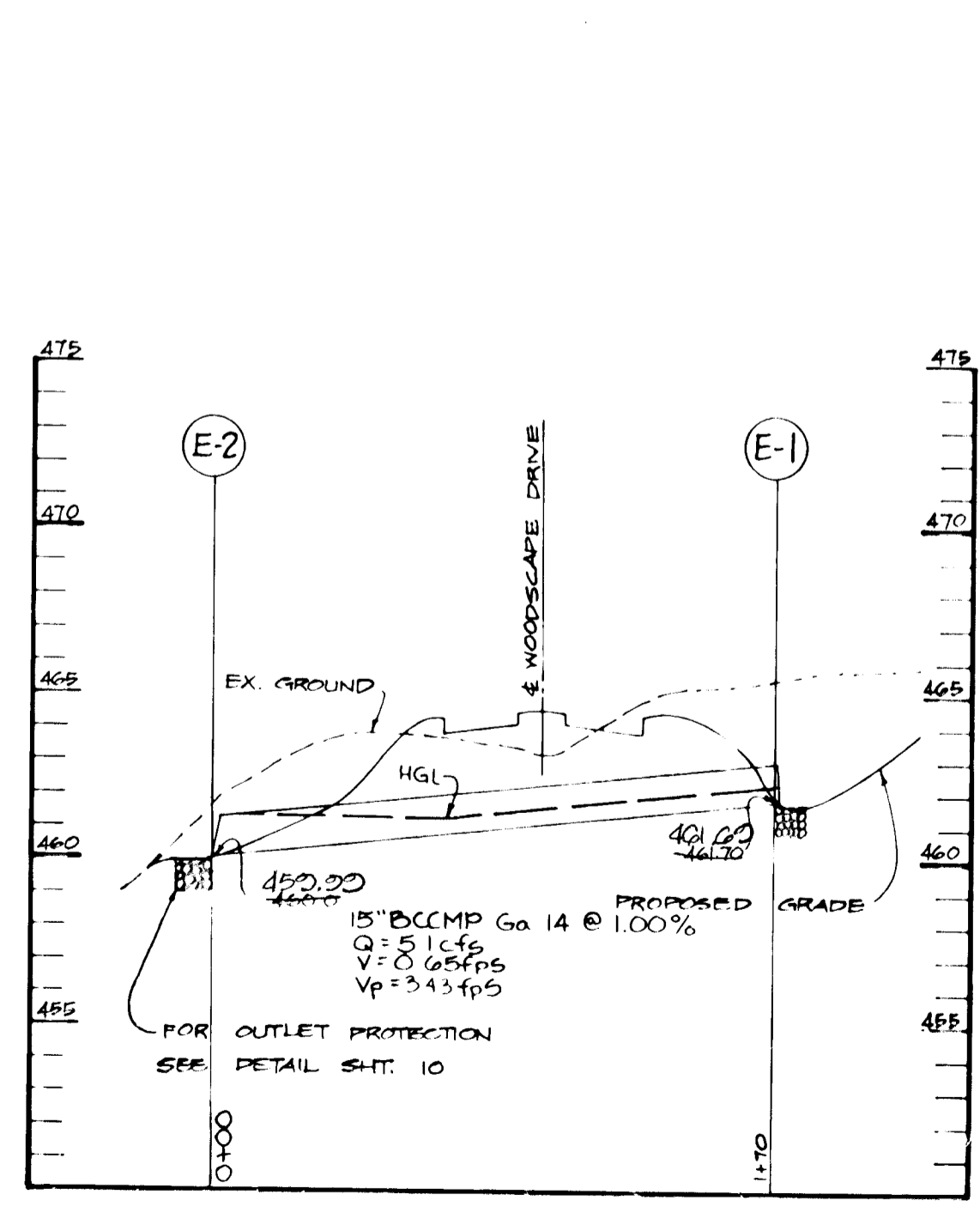
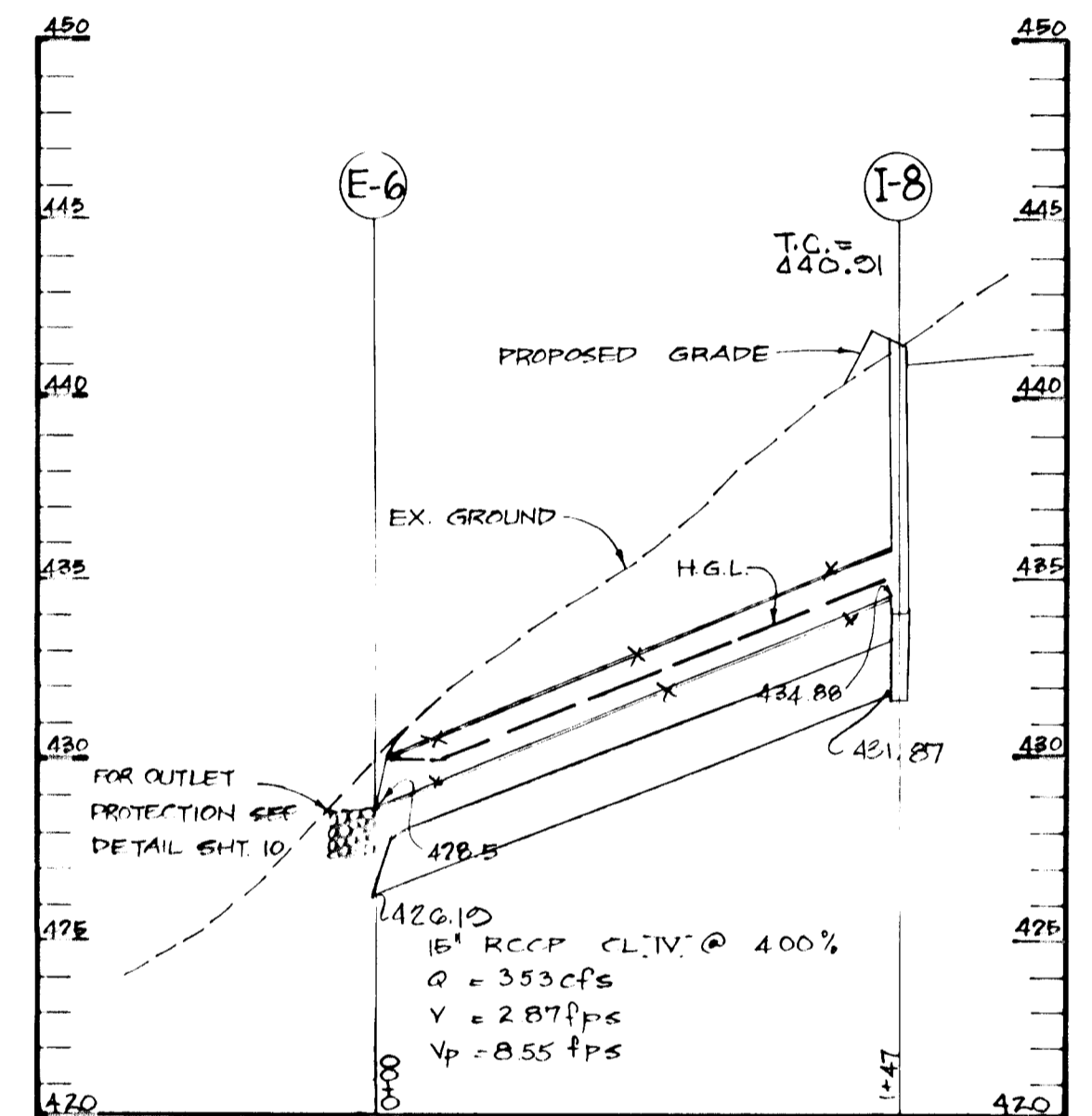
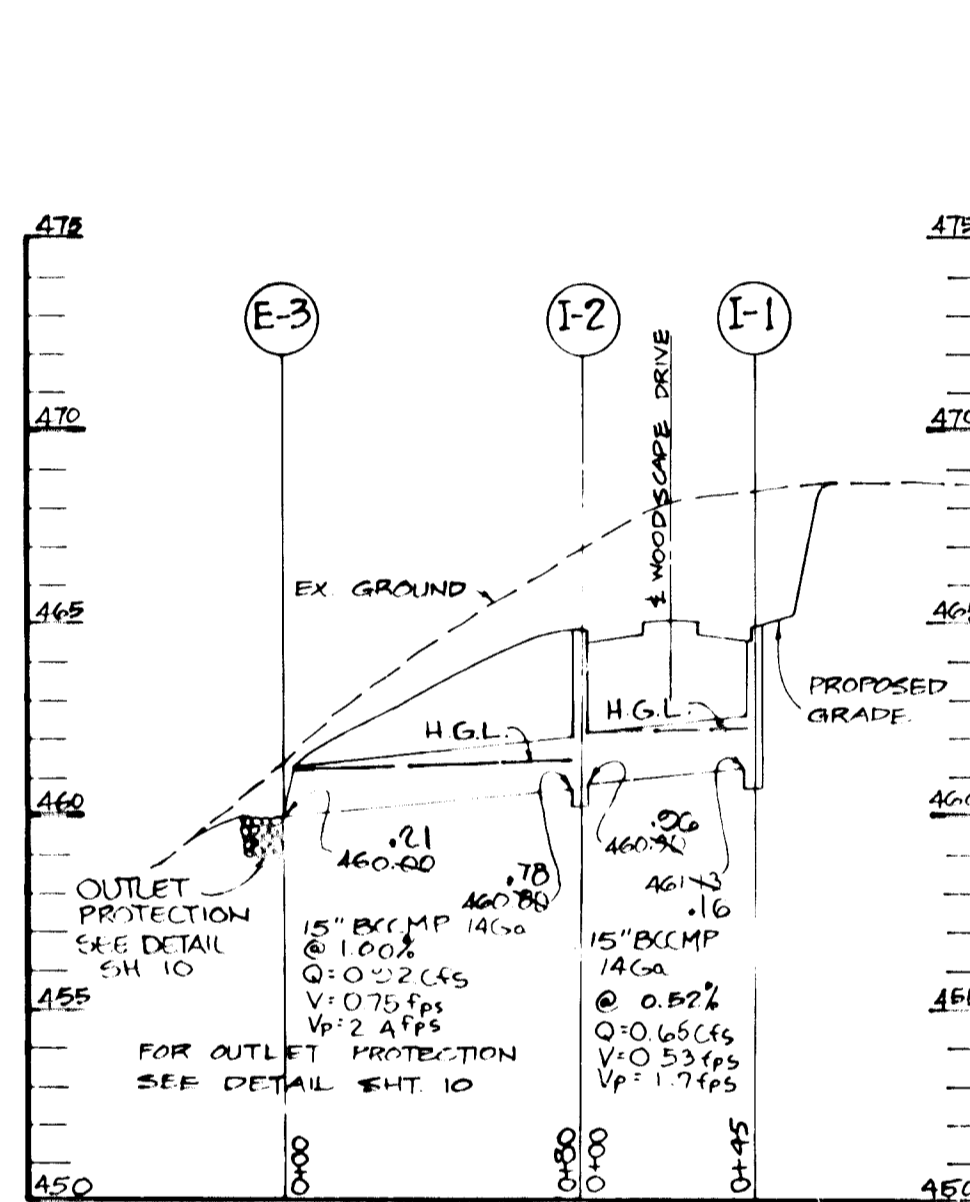
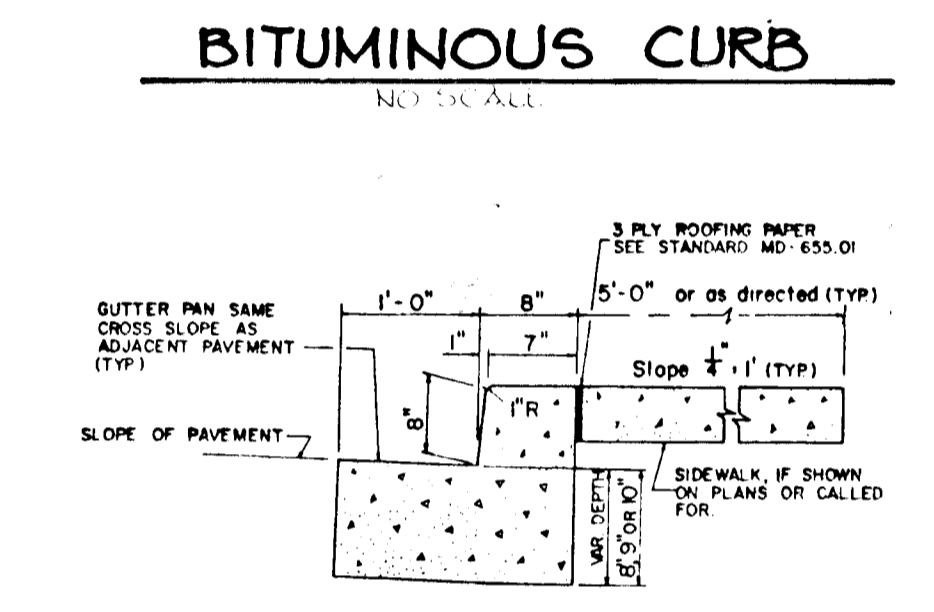
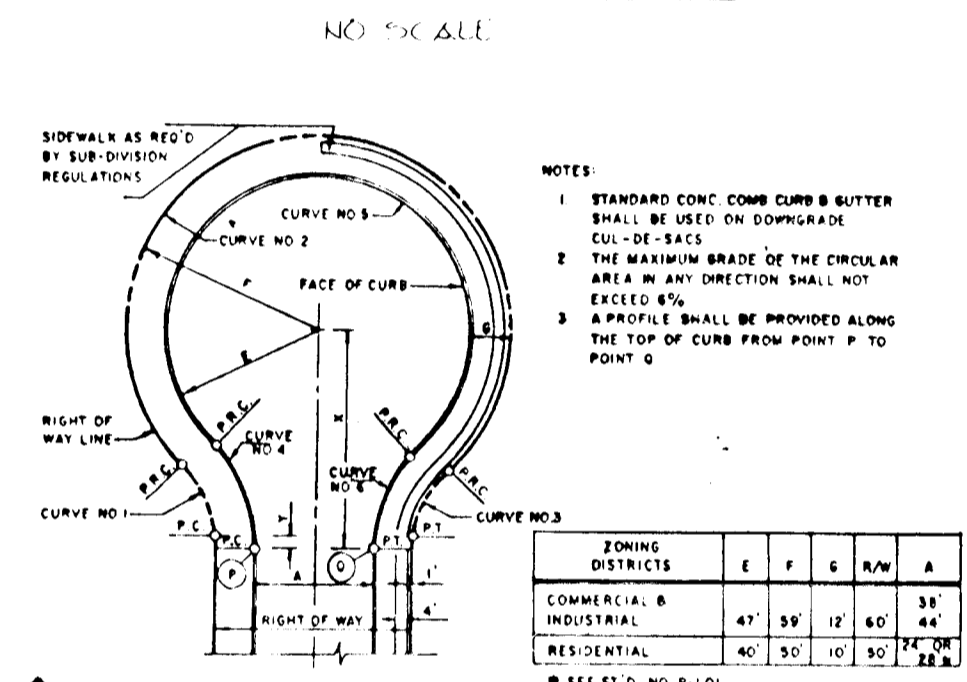
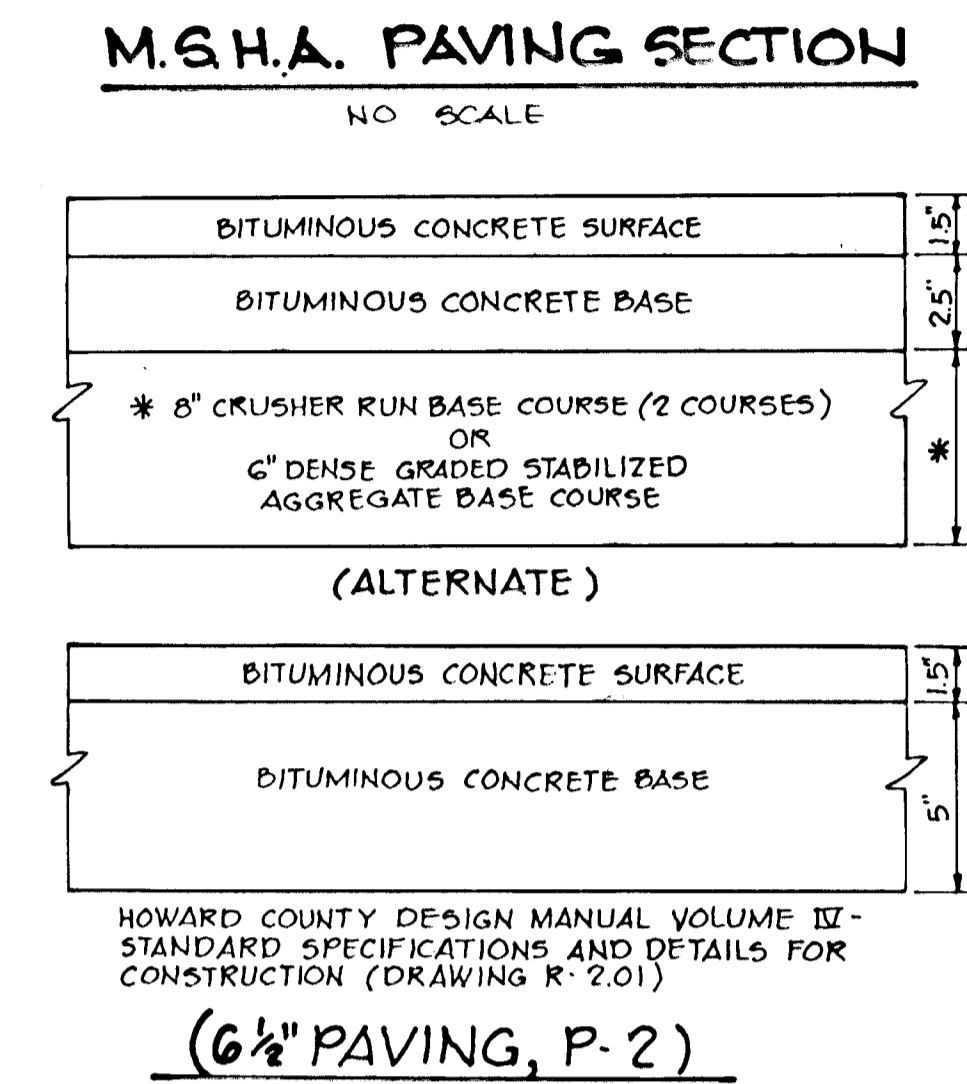
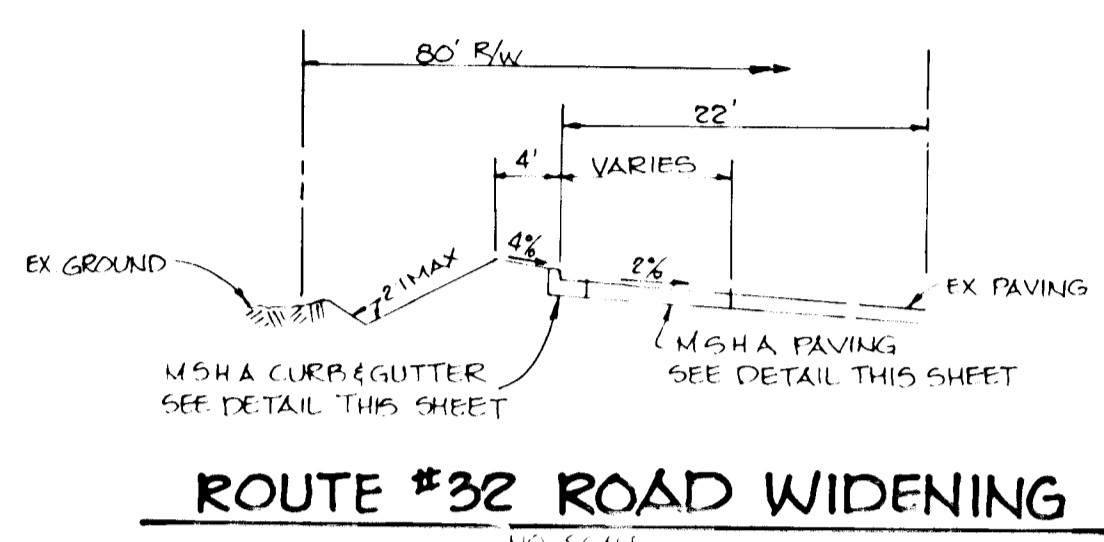
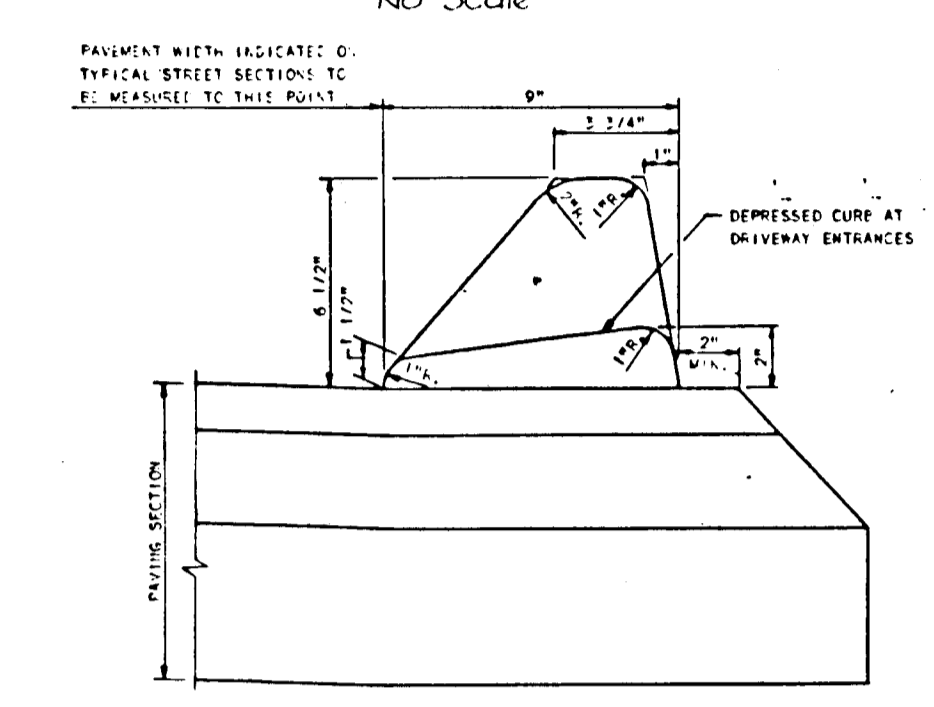
MARYLAND BLUEPRINT CO. INC. (410) 528-1100



HOWARD COUNTY DESIGN MANUAL VOLUME IX - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.0)

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

STANDARD 7\"/>



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

John W. Murchman 5-4-87 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William R. Rios 5-11-87 DATE

CHIEF, BUREAU OF ENGINEERING

OWNER: TALL PINES PARTNERSHIP, C/O CRYSTAL HILL INVESTMENTS, 10005 OLD COLUMBIA ROAD, COLUMBIA, MARYLAND 21046

DEVELOPER: CRYSTAL HILL INVESTMENT, 10005 OLD COLUMBIA ROAD, COLUMBIA, MARYLAND 21046

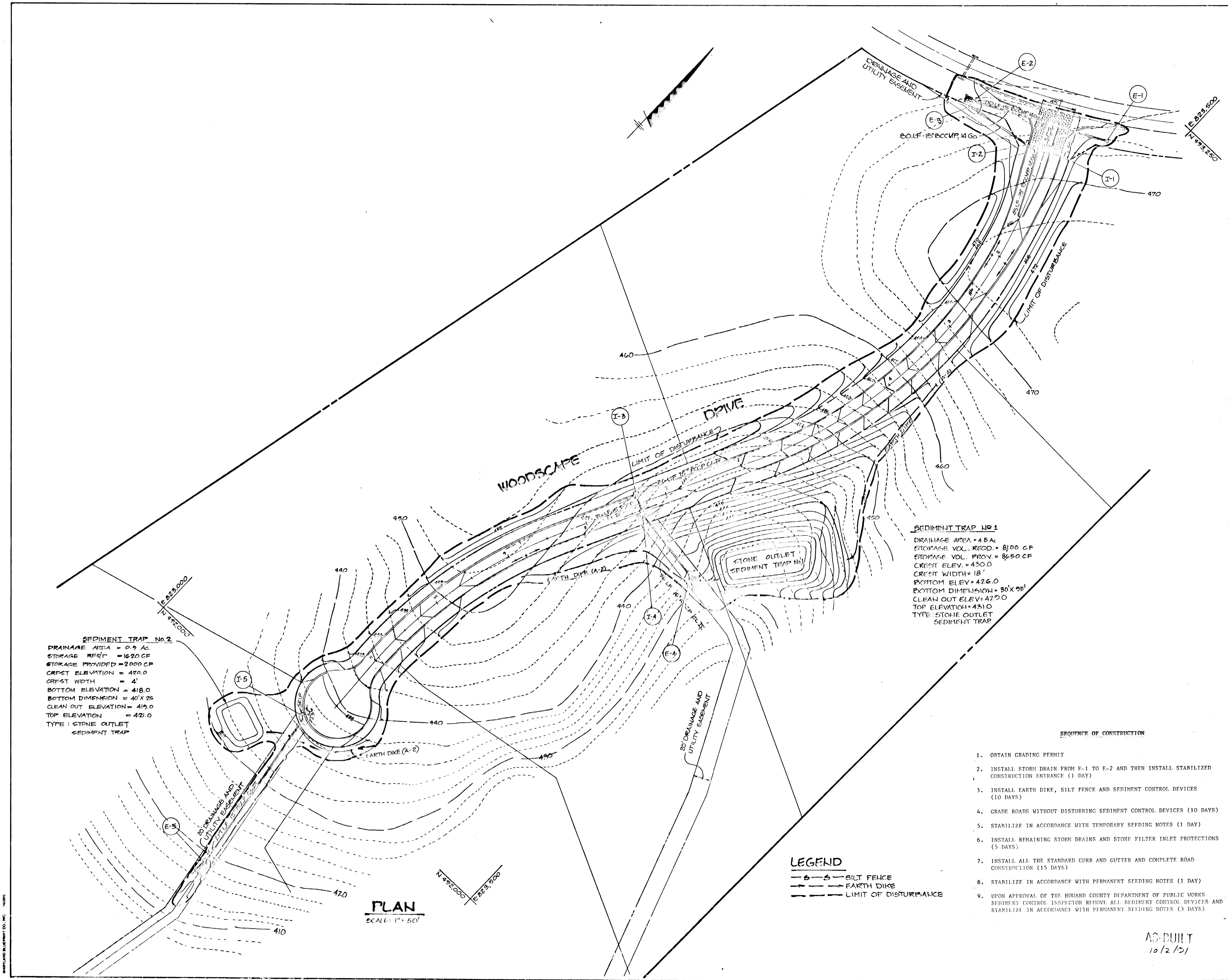
PROJECT: THISTLEDOWN SECTION ONE

AREA: TAX MAP NO. 35-641 PARCEL C76, 5TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: STORMDRAIN PROFILES AND DETAILS

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2660

DATE: 4-30-87
DESIGNED BY: J.D.P.
DRAWN BY: DBS
PROJECT NO: 28000
DATE: FEBRUARY 24, 1987
SCALE: AS SHOWN
DRAWING NO. 8 OF 10



SEDIMENT TRAP No. 2
 DRAINAGE AREA = 0.9 AC.
 STORAGE REQ'D = 1620 CF
 STORAGE PROVIDED = 2000 CF
 CREST ELEVATION = 420.0
 CREST WIDTH = 4'
 BOTTOM ELEVATION = 418.0
 BOTTOM DIMENSION = 40' X 25'
 CLEAN OUT ELEVATION = 419.0
 TOP ELEVATION = 421.0
 TYPE: STONE OUTLET SEDIMENT TRAP

SEDIMENT TRAP No. 1
 DRAINAGE AREA = 4.5 AC.
 STORAGE VOL. REQ'D = 8100 CF
 STORAGE VOL. PROV. = 8650 CF
 CREST ELEV. = 430.0
 CREST WIDTH = 18'
 BOTTOM ELEV. = 426.0
 BOTTOM DIMENSION = 30' X 20'
 CLEAN OUT ELEV. = 427.0
 TOP ELEVATION = 431.0
 TYPE: STONE OUTLET SEDIMENT TRAP

LEGEND
 - - - - - SILT FENCE
 ———— EARTH DIKE
 - - - - - LIMIT OF DISTURBANCE

- SEQUENCE OF CONSTRUCTION**
- OBTAIN GRADING PERMIT
 - INSTALL STORM DRAIN FROM E-1 TO E-2 AND THEN INSTALL STABILIZED CONSTRUCTION ENTRANCE (1 DAY)
 - INSTALL EARTH DIKE, SILT FENCE AND SEDIMENT CONTROL DEVICES (10 DAYS)
 - GRADE ROADS WITHOUT DISTURBING SEDIMENT CONTROL DEVICES (10 DAYS)
 - STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDING NOTES (1 DAY)
 - INSTALL REMAINING STORM DRAINS AND STORE FILTER INLET PROTECTIONS (5 DAYS)
 - INSTALL ALL THE STANDARD CURB AND GUTTER AND COMPLETE ROAD CONSTRUCTION (15 DAYS)
 - STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES (1 DAY)
 - UPON APPROVAL OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROL DEVICES AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES (3 DAYS)

PLAN
 SCALE: 1" = 50'

BY THE DEVELOPER:
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."
 DEVELOPER: Howard DATE: 4-30-87

BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 ENGINEER: Arthur E. Shuman DATE: 4-30-87

REVIEWED FOR HOWARD S.C.D. NAME
 AND MEETS TECHNICAL REQUIREMENTS
 U.S. SOIL CONSERVATION SERVICE: James M. Nelson DATE: 5-4-87

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD S.C.D. DATE: 5-4-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John M. Washburn DATE: 5-4-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Eric R. Roca DATE: 5-11-87
 CHIEF, BUREAU OF ENGINEERING

DATE	NO.	REVISION

OWNER: TALL PINES PARTNERSHIP
 C/O CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

DEVELOPER: CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

PROJECT: **THISTLEDOWN SECTION ONE**

AREA TAX MAP NO. 25 (41) PARCEL 276
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: **GRADING AND SEDIMENT CONTROL PLAN**

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Heath Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

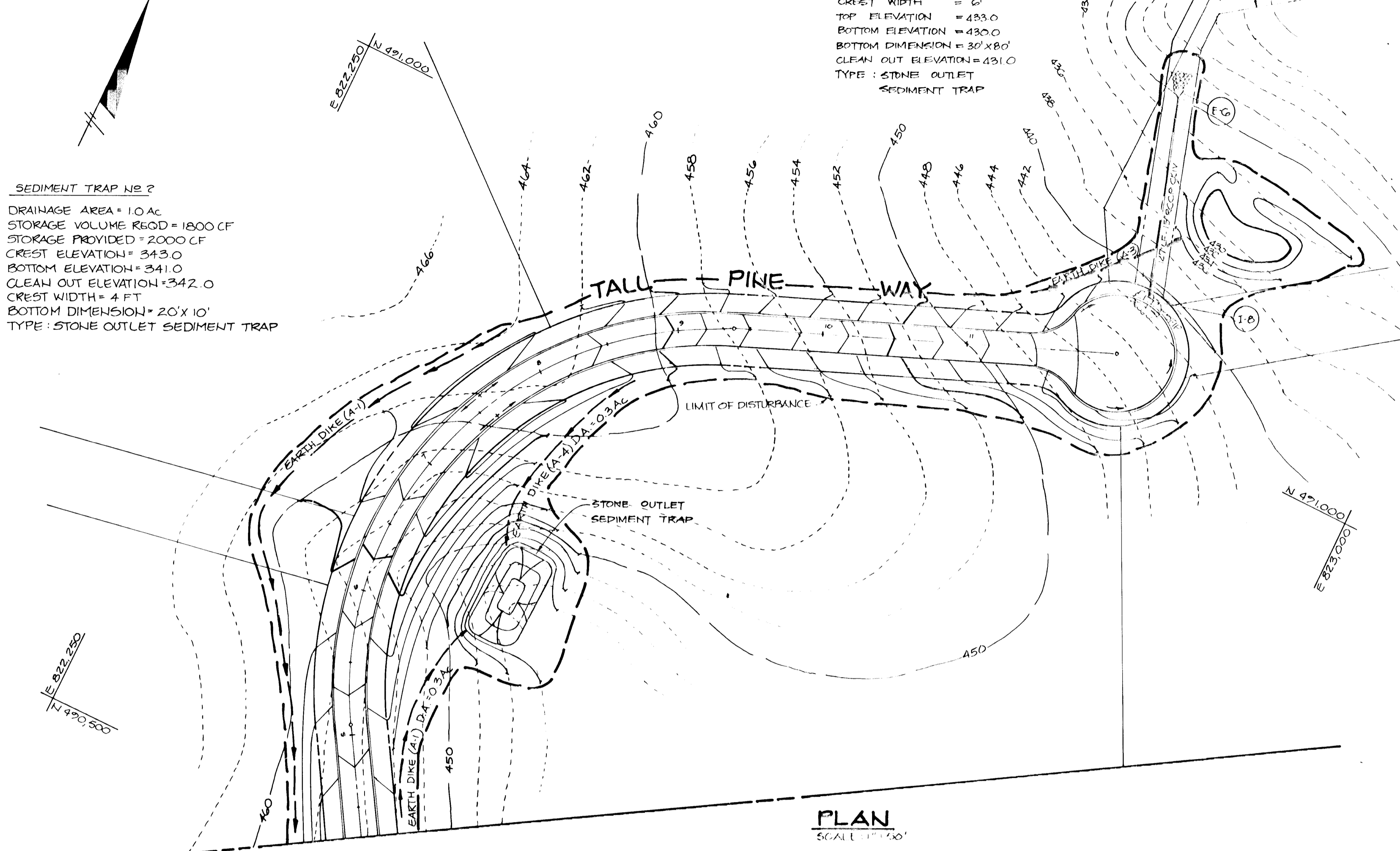
DATE: 4-30-87
 DESIGNED BY: J.D.P.
 DRAWN BY: O.D.B.
 PROJECT NO: 28000
 DATE: FEBRUARY 24, 1987
 SCALE: AS SHOWN
 DRAWING NO. 2 OF 10

AS-BUILT
 10/2/87

1264

SEDIMENT TRAP NO. 2
 DRAINAGE AREA = 1.0 AC.
 STORAGE VOLUME REQ'D = 1800 CF
 STORAGE PROVIDED = 2000 CF
 CREST ELEVATION = 343.0
 BOTTOM ELEVATION = 341.0
 CLEAN OUT ELEVATION = 342.0
 CREST WIDTH = 4 FT
 BOTTOM DIMENSION = 20' X 10'
 TYPE: STONE OUTLET SEDIMENT TRAP

SEDIMENT TRAP NO. 3
 DRAINAGE AREA = 1.57 AC.
 VOLUME REQUIRED = 2784 CF
 VOLUME PROVIDED = 4500 CF
 CREST ELEVATION = 432.0
 CREST WIDTH = 6'
 TOP ELEVATION = 433.0
 BOTTOM ELEVATION = 430.0
 BOTTOM DIMENSION = 30' X 80'
 CLEAN OUT ELEVATION = 431.0
 TYPE: STONE OUTLET SEDIMENT TRAP



PLAN
 SCALE 1" = 40'

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or 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.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 53) and (Sec. 54), temporary seedings (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	1603 acres
Area Disturbed	5.21 acres
Area to be roofed or paved	1.61 acres
Area to be vegetatively stabilized	1.52 acres
Total Cut	6082 Cu. Yds.
Total Fill	6190 Cu. Yds.

PERMANENT SEEDING NOTES

Seeding Preparation: Loosen upper 3 inches of soil by raking, disking or other acceptable means before seeding.

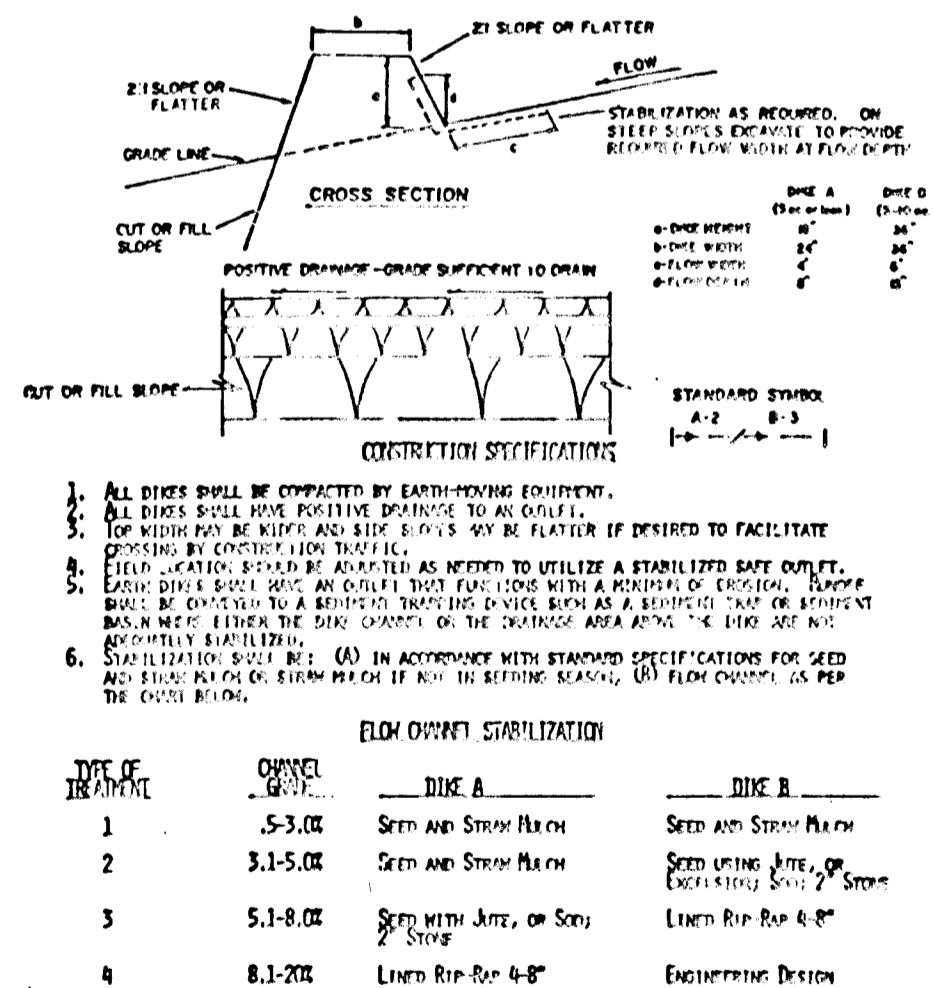
Soil Amendments: Use one of the following schedules:

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

Seeding - For the periods March 1 through April 30, and August 1 through October 15, seed with 60 lbs. per acre (1.4 lbs./1000 square ft.) of Kentucky 31 Tall Fescue. For the period May 1 through July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 square ft.) of creeping lovegrass. During the period of October 16 through 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.

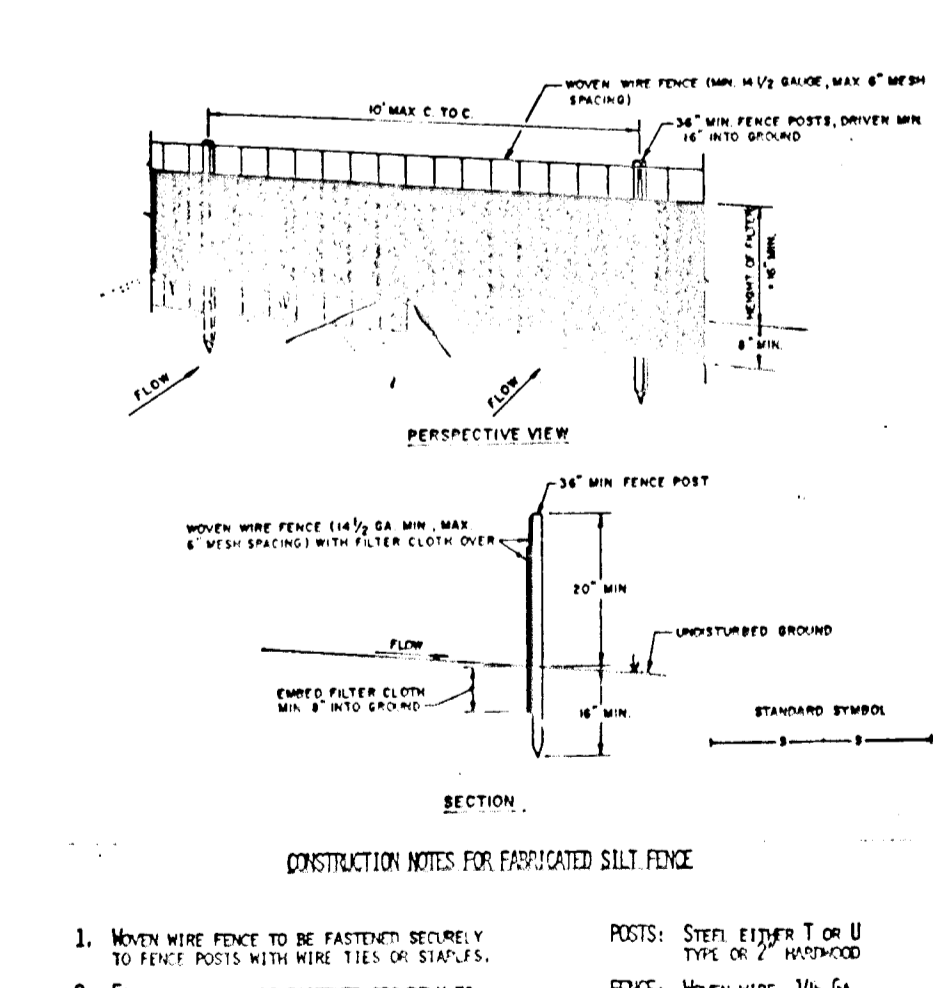
Mulching - Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 square ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. On slopes 8 feet or higher, use 348 gal. per acre (8 gal./1000 square ft.) for anchoring.

Maintenance - Inspect all seeded areas and make needed repairs, replantings and reseedings.

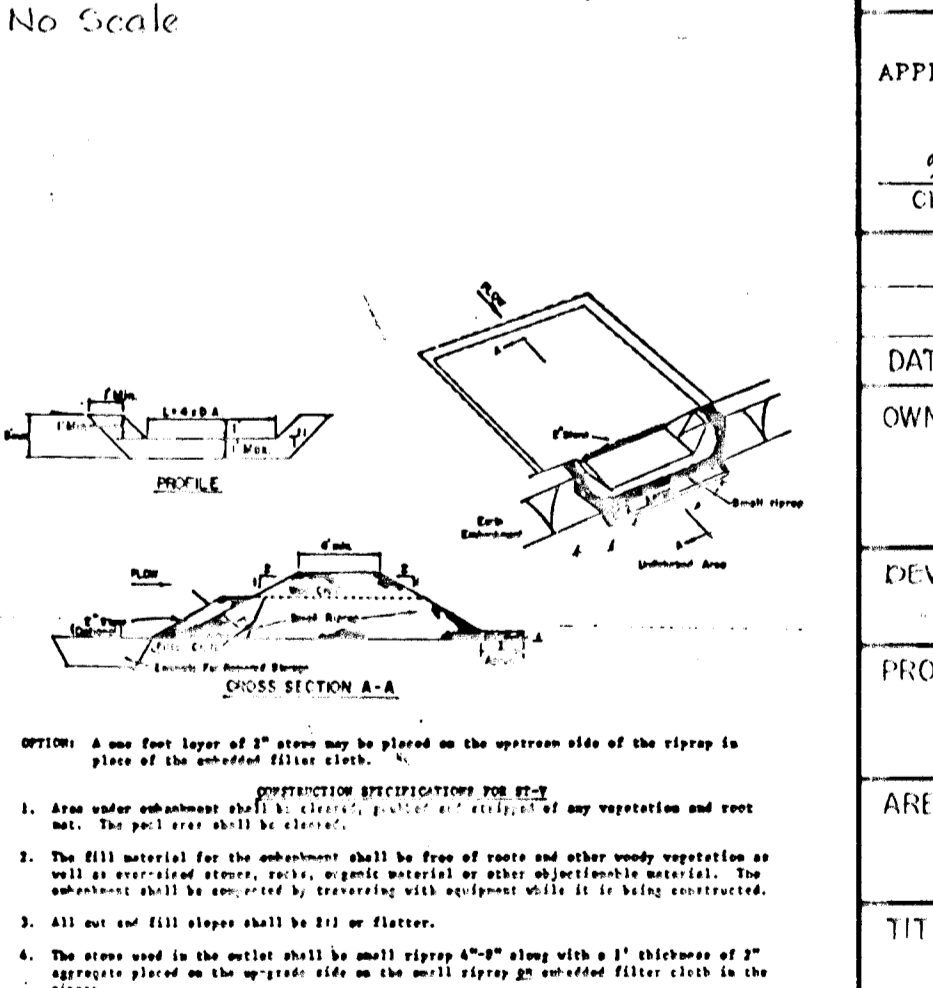


EARTH DIKE
 NO SCALE

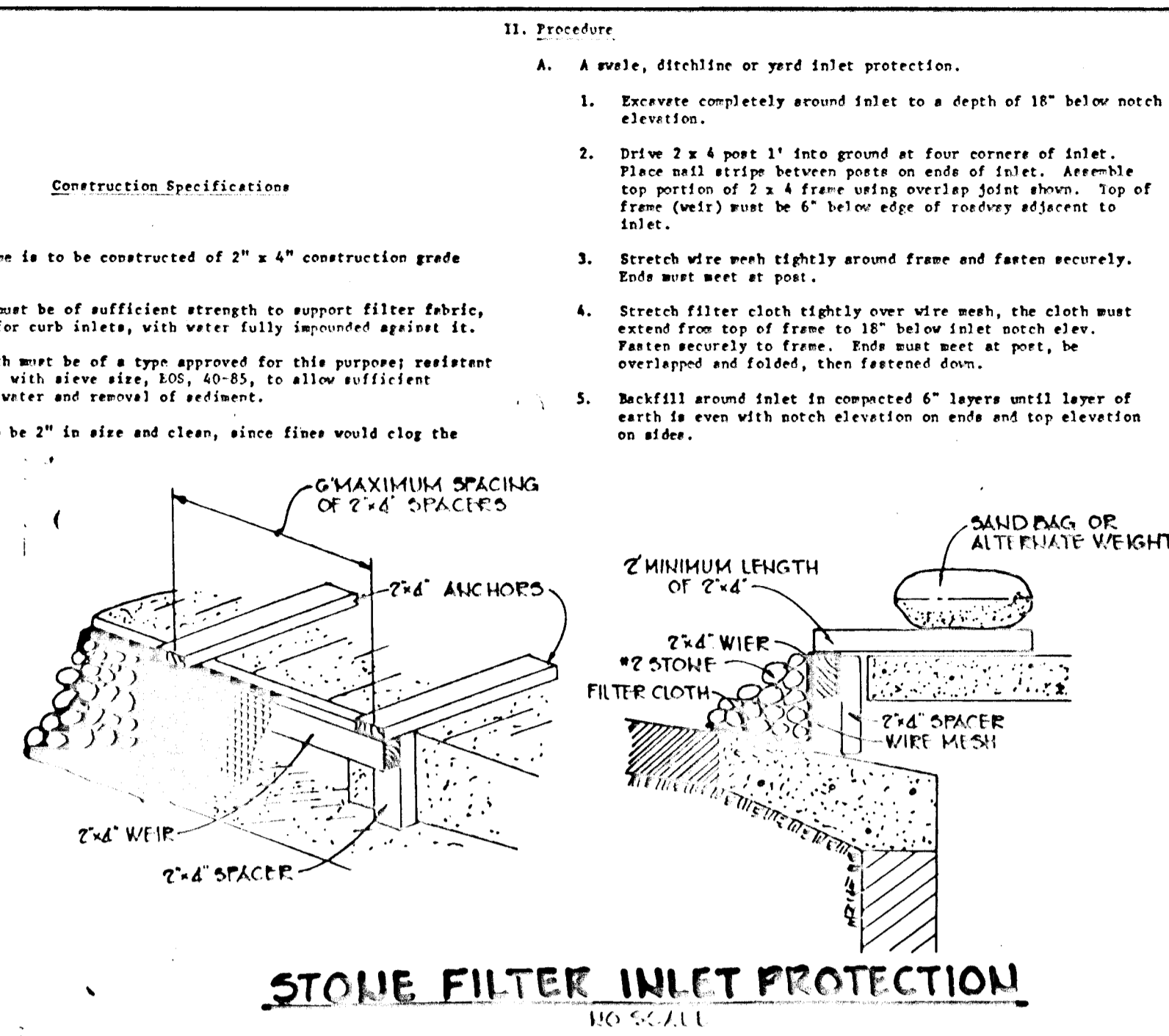
STABILIZED CONSTRUCTION ENTRANCE
 NO SCALE



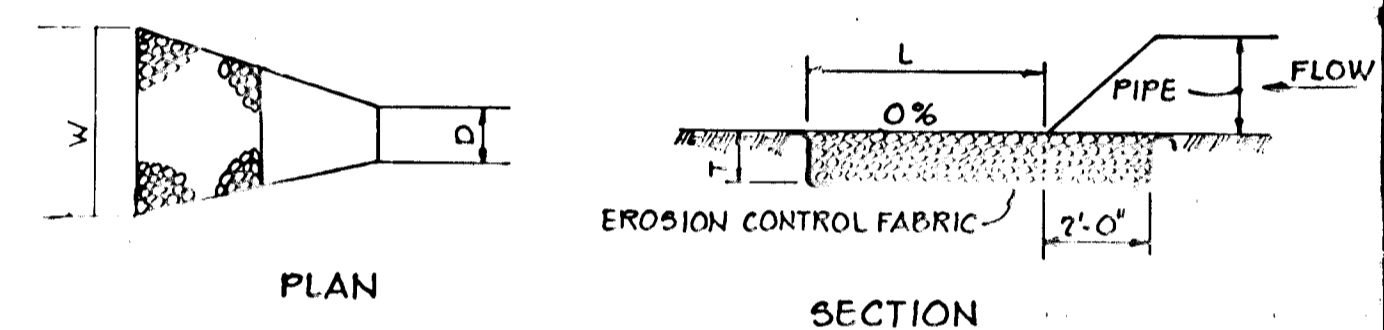
SILT FENCE
 NO SCALE



STONE OUTLET SEDIMENT TRAP
 NO SCALE



STONE FILTER INLET PROTECTION
 NO SCALE



STRUCTURE	MEDIUM STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)
1-1	4"	20'	10' 5"	10"
1-2	4"	10'	10' 5"	10"
1-3	4"	10'	10' 5"	10"
1-4	4"	10'	10' 5"	10"
1-5	4"	10'	10' 5"	10"
1-6	4"	10'	10' 5"	10"

OUTLET PROTECTION DETAIL
 No Scale

11. Procedure

- A. A weep, ditchline or yard inlet protection.**
- Excavate completely around inlet to a depth of 18" below notch elevation.
 - Drive 2 x 4 post 1' into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2 x 4 frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to inlet.
 - Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
 - Stretch filter cloth tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet notch elev. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down.
 - Backfill around inlet in compacted 6" layers until layer of earth is even with notch elevation on ends and top elevation on sides.

- If the inlet is not in a low point, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (weir).
 - This structure must be inspected frequently and the filter fabric replaced when clogged.
- B. Curb Inlet Protection.**
- Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
 - Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
 - Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6" apart).
 - Place the assembly against the inlet curb and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
 - The assembly shall be placed so that the end spacers are a minimum 1" beyond both ends of the throat opening.
 - Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" coarse over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
 - This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
 - Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."

John M. Nolan 4-30-87
 DEVELOPER DATE

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Arthur E. Mueggler 4-30-87
 ENGINEER DATE

REVIEWED FOR HOWARD S.C.D.
 NAME
 AND MEETS TECHNICAL REQUIREMENTS
John M. Nolan 5-4-87
 U.S. SOIL CONSERVATION SERVICE, DATE

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

Arthur E. Mueggler 5-4-87
 HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Arthur M. Mueggler 5-4-87
 CHIEF, DIVISION OF PLANNING, DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

John M. Nolan 5-11-87
 CHIEF, BUREAU OF ENGINEERING DATE

DATE NO REVISION

OWNER: TALL PINES PARTNERSHIP
 % CRYSTAL HILL INVESTMENTS
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND, 21046

DEVELOPER: CRYSTAL HILL DEVELOPMENT INC.
 10005 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046

PROJECT: THISTLEDOWN
 SECTION ONE

AREA: TAX MAP NO. 28-8-41 PARCEL 276
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: GRADING AND SEDIMENT CONTROL PLAN AND DETAIL SHEET

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2680

4-30-87 DATE
 0-86-76 P. 37-16
 DESIGNED BY J.D.P.
 DRAWN BY R.E.A.
 PROJECT NO 28000
 DATE 2-23-87
 SCALE: AS SHOWN
 DRAWING NO 10 OF 10