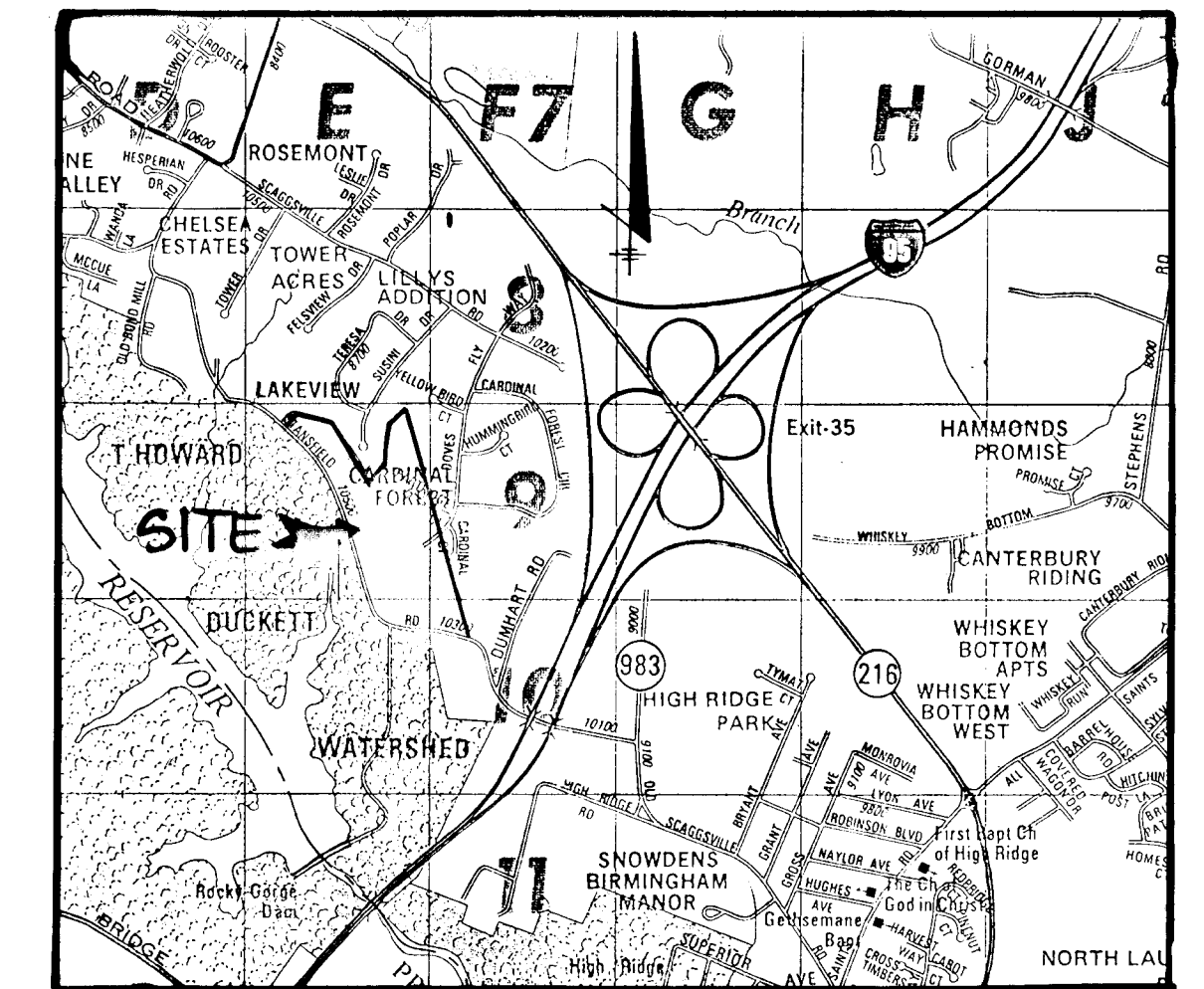


AS-BUILT RECORD OF  
ROADWAYS, STORM DRAINS  
AND STORM WATER MANAGEMENT  
THE FOREST



VICINITY MAP  
SCALE 1" = 2000'

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE OF STANSFIELD ROAD STA 21+00 TO STA 34+50
3	PLAN AND PROFILE OF STANSFIELD ROAD STA 34+50 TO STA 42+00
4	PLAN AND PROFILE OF STANSFIELD ROAD STA 42+00 TO STA 58+00
5	PLAN AND PROFILE OF DOVES FLY WAY
6	PLAN AND PROFILE OF HERON'S FLIGHT
7	PLAN AND PROFILE OF BLUEBIRD TRACE AND STORM DRAIN PROFILES
8	DETAIL SHEET AND STORM DRAIN PROFILES
9	DRAINAGE AREA MAP
10	GRADING AND SEDIMENT CONTROL PLAN
11	GRADING AND SEDIMENT CONTROL PLAN
12	GRADING AND SEDIMENT CONTROL PLAN
13	SEDIMENT CONTROL NOTES AND DETAILS AND STORM DRAIN PROFILES
14	SEDIMENT CONTROL / SWM NOTES AND DETAILS

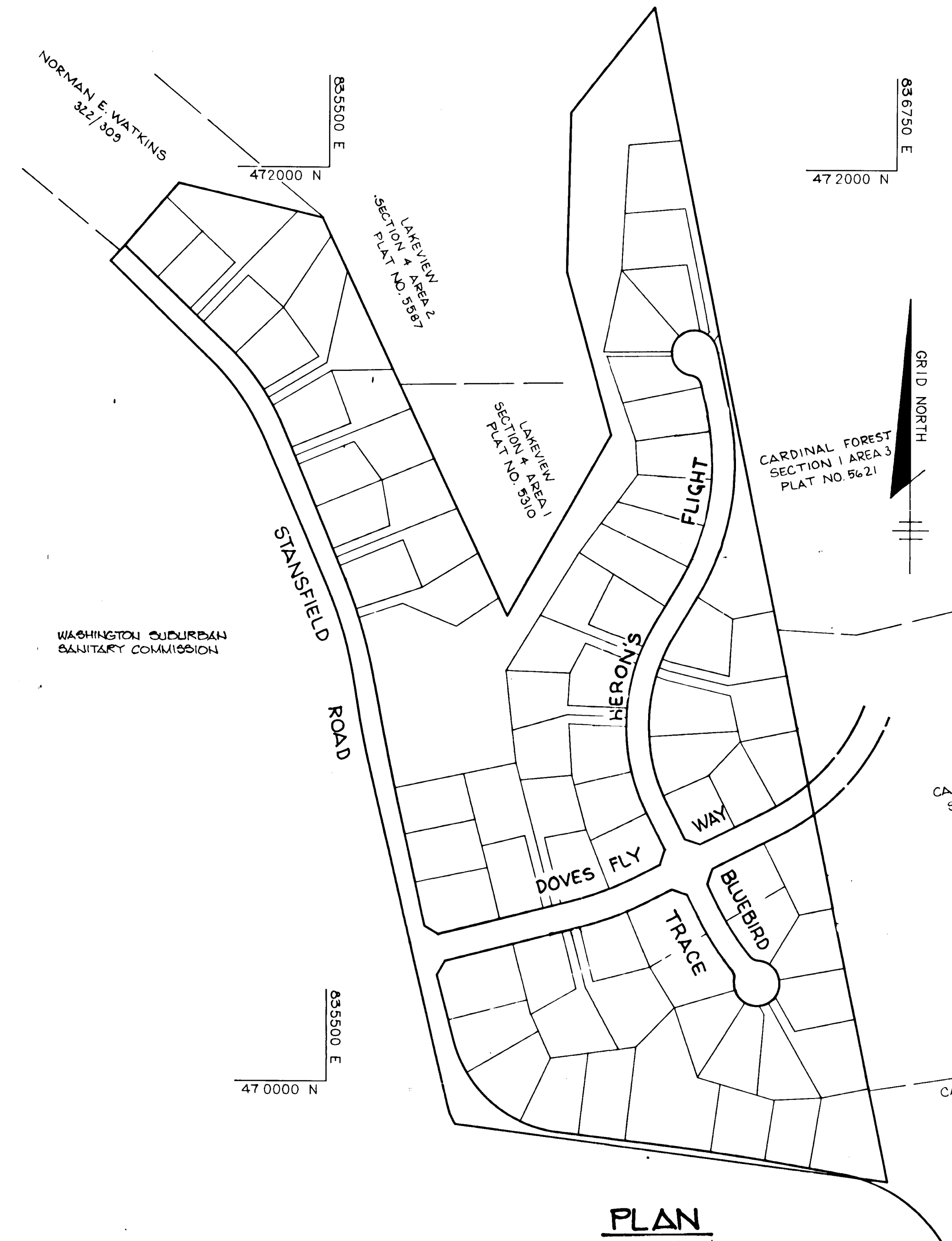
6th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES 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.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 

MISS UTILITY	1-800-257-7777
CAP TELEPHONE COMPANY	725-9976
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
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS.
- 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.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- 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.
- ALL STREET CURB RETURNS SHALL HAVE 35.0' RADII UNLESS OTHERWISE NOTED.
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM, 1929.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- TOPO TAKEN FROM FIELD RUN SURVEY DATED FEBRUARY, 1988 BY THE RIEMER GROUP, INC.
- SUBJECT PROPERTY ZONED R-20 PER 8.2.85 COMPREHENSIVE ZONING PLAN.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1984 EDITION.
- DESIGNATED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:
 

ALL 50' RIGHT-OF-WAYS	30 M.P.H.
ALL 60' RIGHT-OF-WAYS	35 M.P.H.
- AERIAL TOPO BY PHOTOGRAMMETRIC DATA SERVICES, DATED FEBRUARY 9, 1988.
- BEFORE EXCAVATING AND GRADING IS PERFORMED FOR THE WIDENING OF STANSFIELD ROAD OR AT ANY OTHER LOCATION IN THE B.G.E. RIGHT OF WAY TEST HOLES SHOULD BE DUG OVER THE PIPELINE TO DETERMINE THE DEPTH AND LOCATION.
- GRADING INDICATED WITHIN THE BUILDABLE LOTS IS TEMPORARY FOR THE PURPOSE OF ROAD CONSTRUCTION AND INSTALLATION OF SEDIMENT CONTROL MEASURES. THE FINAL SITE GRADING FOR THE LOTS WILL BE SHOWN IN COMPLIANCE WITH THE MINIMUM R-20 ZONING LOT SIZE REQUIREMENT ON THE SITE DEVELOPMENT PLAN.



BENCHMARKS

- B.M. # 712 ELEV 348.94  
HUBS (TACK SET, @ 15' LT & RD STA. 23+15 STANSFIELD ROAD (TRAVERSE STA # 712)
- B.M. # 715 ELEV 330.70  
HUBS (TACK SET, @ 14' RT & RD STA. 41+70 STANSFIELD ROAD (TRAVERSE STA # 715)
- B.M. # 718 ELEV 290.45  
HUBS (TACK SET, @ 28' NORTHWEST OF EX. M4 # 523 (TRAVERSE STA # 718)



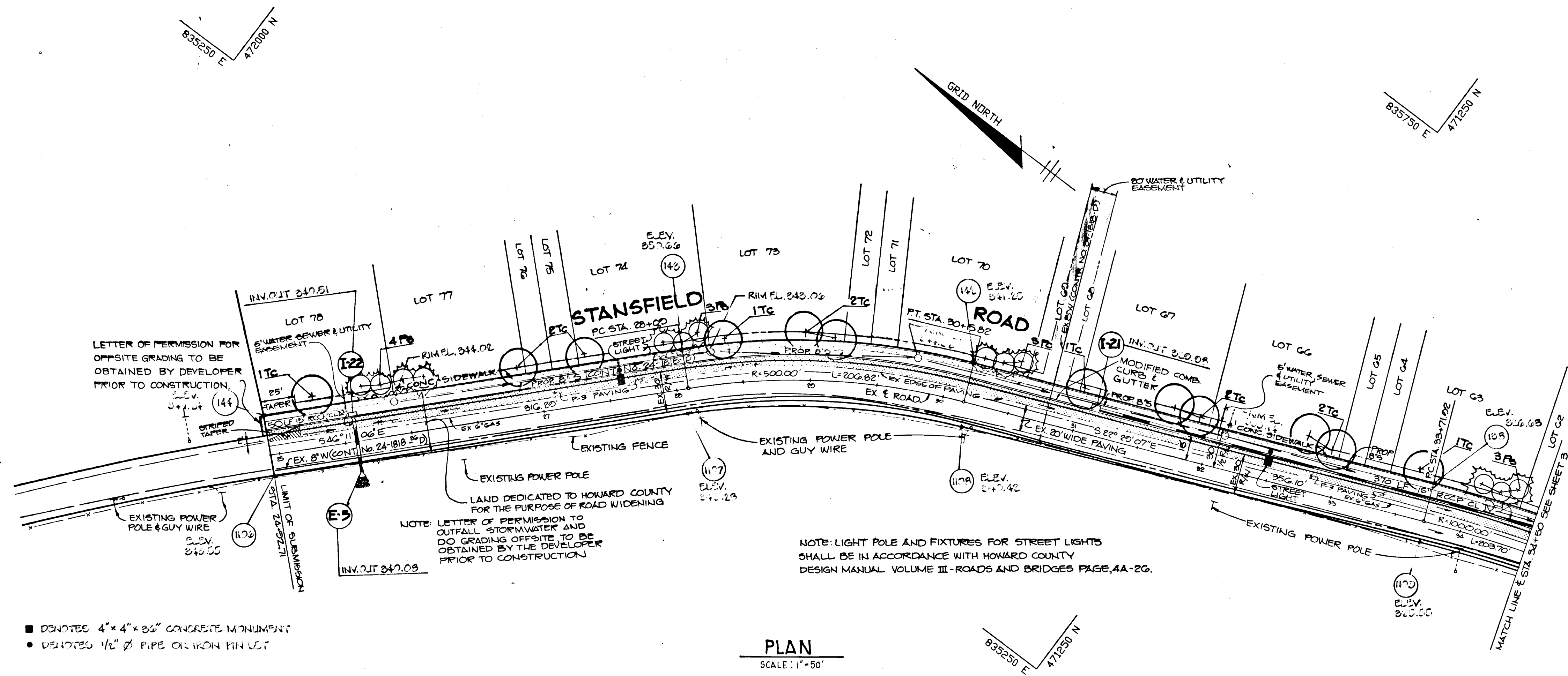
J. Smith 11.24.92  
JAYKANT D. PAREKH # 10143 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING	
<i>Mark S. D'Angelo</i>	5/2/89
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	DATE
LNS	
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>Robert J. Seaton</i>	5/12/89
CHIEF, LAND DEVELOPMENT DIVISION	DATE
<i>Travis W. Welton</i>	1/24/89
CHIEF, BUREAU OF HIGHWAYS	DATE
<i>William E. Ryan</i>	5-12-89
CHIEF, BUREAU OF ENGINEERING	DATE
DATE	REVISION
OWNER	HOWARD RESEARCH AND DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044
DEVELOPER	J.J.M., INC. 5570 SUITE 205 STERRETT PLACE COLUMBIA, MARYLAND 21044
PROJECT	THE FOREST
AREA TAX MAP NO. 4247 ZONE = R-20 PARCEL 637, 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	TITLE SHEET
<b>THE RIEMER GROUP, INC.</b>	
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm 3105 North Ridge Road, Ellicott City, Maryland 21043 (301) 461-2690	
DATE	5-88-33 P-88-67
DESIGNED BY	D.A.M.
DRAWN BY	D.B.C.
PROJECT NO.	47501
DATE	JANUARY 24, 1989
SCALE	AS SHOWN
DRAWING NO.	1 OF 14

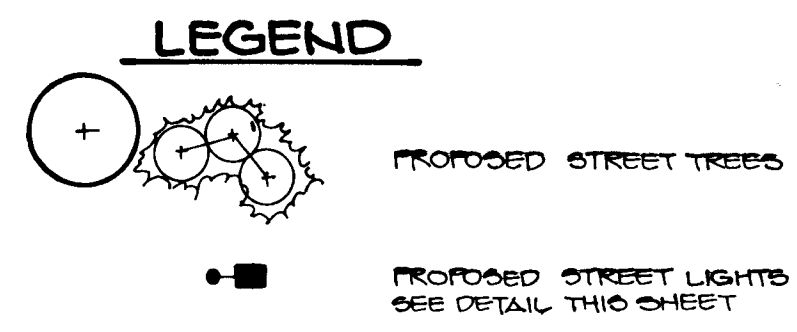
PLAN  
SCALE: 1" = 200'

STREET TREE PLANT LIST

Qty.	Symbol	Name	Size	Remarks
27	A	Acer Saccharum Sugar Maple	2 1/2 - 3" Cal., 13 - 15' Ht.	B & B, Full Head
26	Q	Quercus Rubra Red Oak	2 1/2 - 3" Cal., 13 - 15' Ht.	B & B, Full Head
41	Tc	Tilia Cordata Littleleaf Linden	2 1/2 - 3" Cal., 13 - 15' Ht.	B & B, Full Head
75	Ps	Pinus Strobus Eastern White Pine	2 1/2" Cal., 6 - 8' Ht.	B & B, Unsheared



- DENOTES 4" x 4" x 24" CONCRETE MONUMENT
- DENOTES 1/2" Ø PIPE OR IRON PIN SET



J. J. Muegge 11.24.92  
JAYVAANT W. PARSONS 10145 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*Mark S. DeLong* 5/10/89  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT LMS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Donald Saxon* 5/12/89  
CHIEF, Land Development Division  
*Dawson W. Waples* 2/18/89  
CHIEF, Bureau of Highways  
*William E. Ray* 5-12-89  
CHIEF, Bureau of Engineering

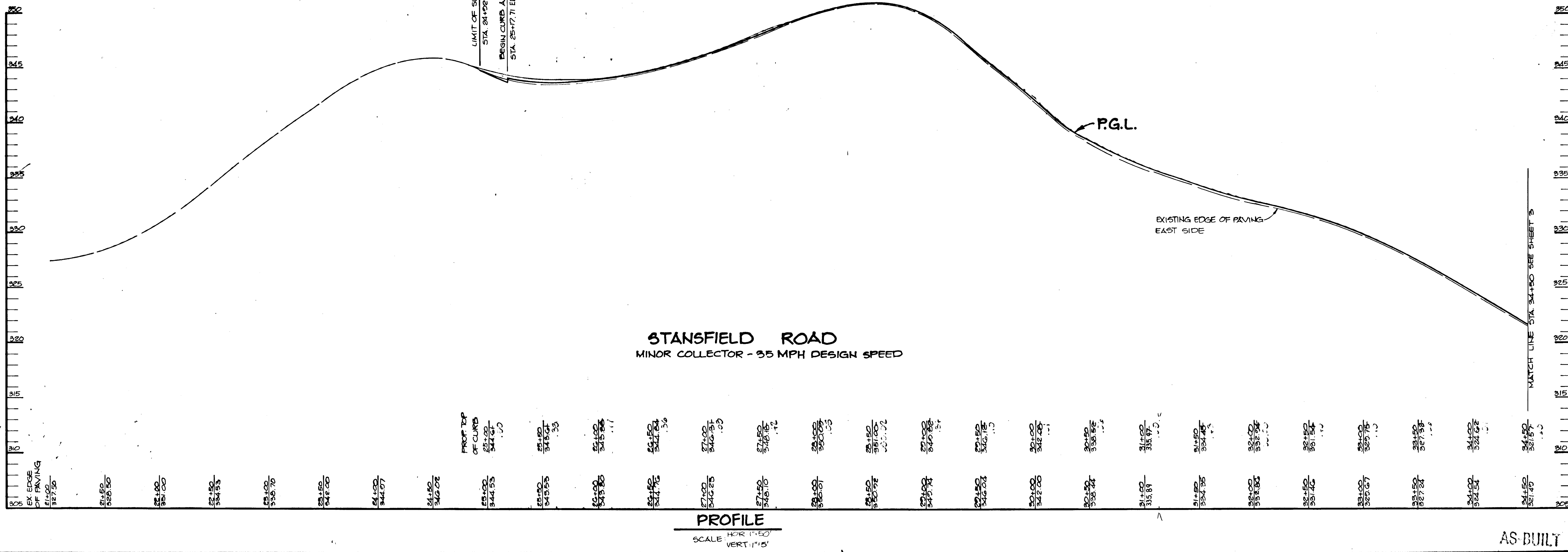
DATE	NO	REVISION
OWNER: HOWARD RESEARCH AND DEVELOPMENT CORP. 10275 LITTLE PATENT PARKWAY COLUMBIA, MARYLAND 21044		
DEVELOPER: J.J.M., INC. 5570 SUITE 205 STERRETT PLACE COLUMBIA, MARYLAND 21044		
PROJECT: THE FOREST		
AREA TAX MAP NO. 4647 ZONE R-20 PARCEL 897 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE: PLAN AND PROFILE OF STANSFIELD ROAD STA. 21+00 TO STA. 34+50		

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

DATE: 2.2.89	5-88-33 P-88-07
DESIGNED BY: DAKI	
DRAWN BY: DAKI	
PROJECT NO: 47001	
DATE: JANUARY 24, 1989	
SCALE: AS SHOWN	
DRAWING NO: 2 OF 14	



ARTHUR E. MUEGGE 10145



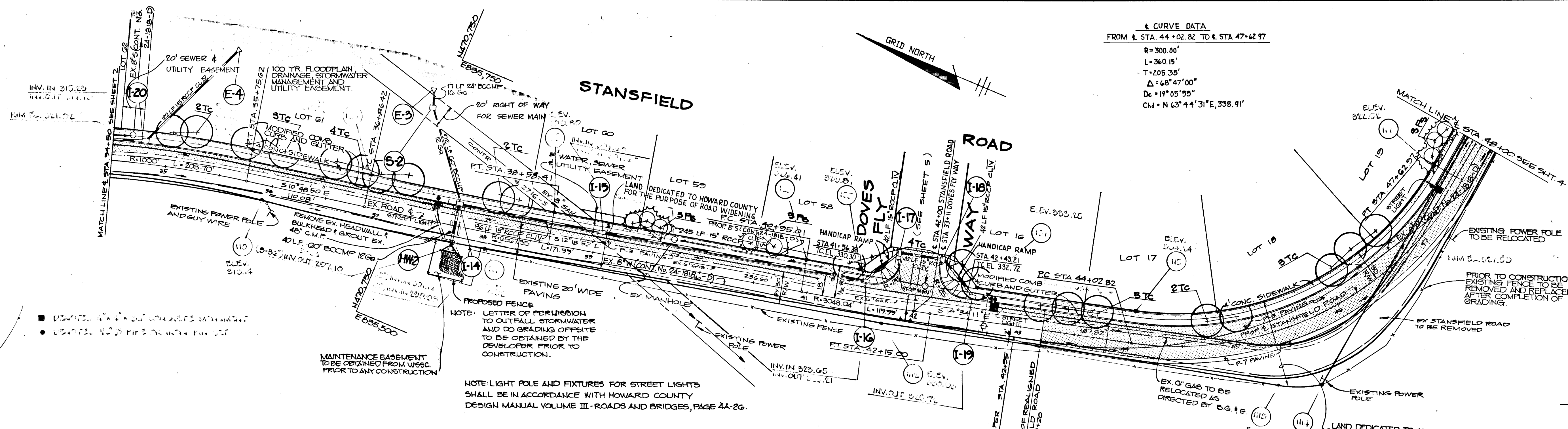
1448

AS-BUILT

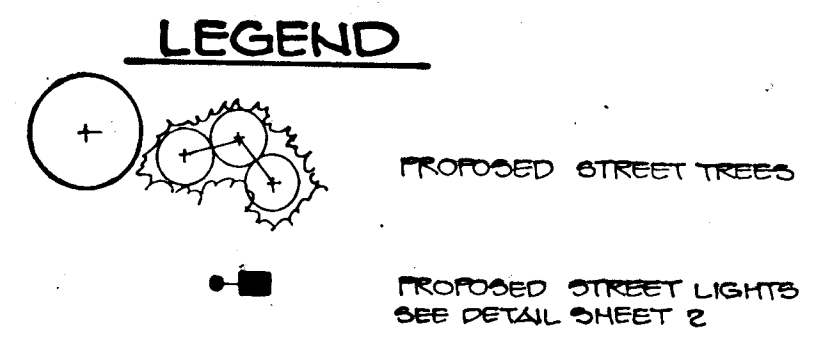
F-89-25



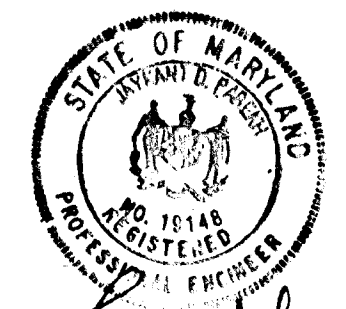
CURVE DATA  
 FROM STA. 44+02.82 TO STA. 47+62.97  
 R=300.00'  
 L=340.15'  
 T=205.35'  
 Δ=68°47'00"  
 Dc=19°05'55"  
 Ch=N 63°44'31"E, 338.91'



**PLAN**  
 SCALE: 1"=50'



CONCRETE MONUMENT # 117  
 ELEV. 322.10



J. Sarekh 11.24.92  
 JATKAT 11.24.92

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Mark J. Langley 5/12/69  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Paul J. ... 5/12/69  
 Chief, Land Development Division  
 ... 1/28/69  
 Chief, Bureau of Highways  
 ... 5-12-89  
 Chief, Bureau of Engineering

DATE NO. REVISION

OWNER: HOWARD RESEARCH AND DEVELOPMENT CORP.  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21044

DEVELOPER: J.J.M., INC.  
 5570 SUITE 205 STERRETT PLACE  
 COLUMBIA, MARYLAND 21044

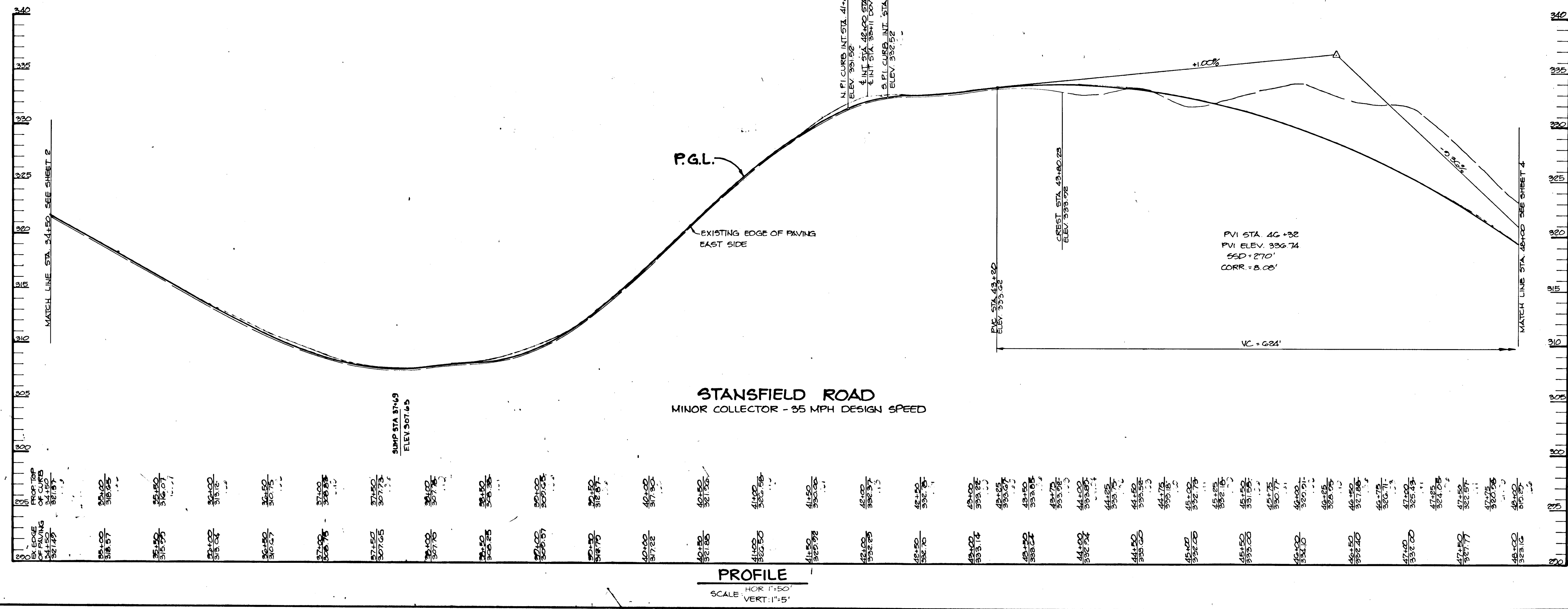
PROJECT: THE FOREST

AREA TAX MAP NO 4647 ZONED=R-20 PARCEL 837  
 6TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

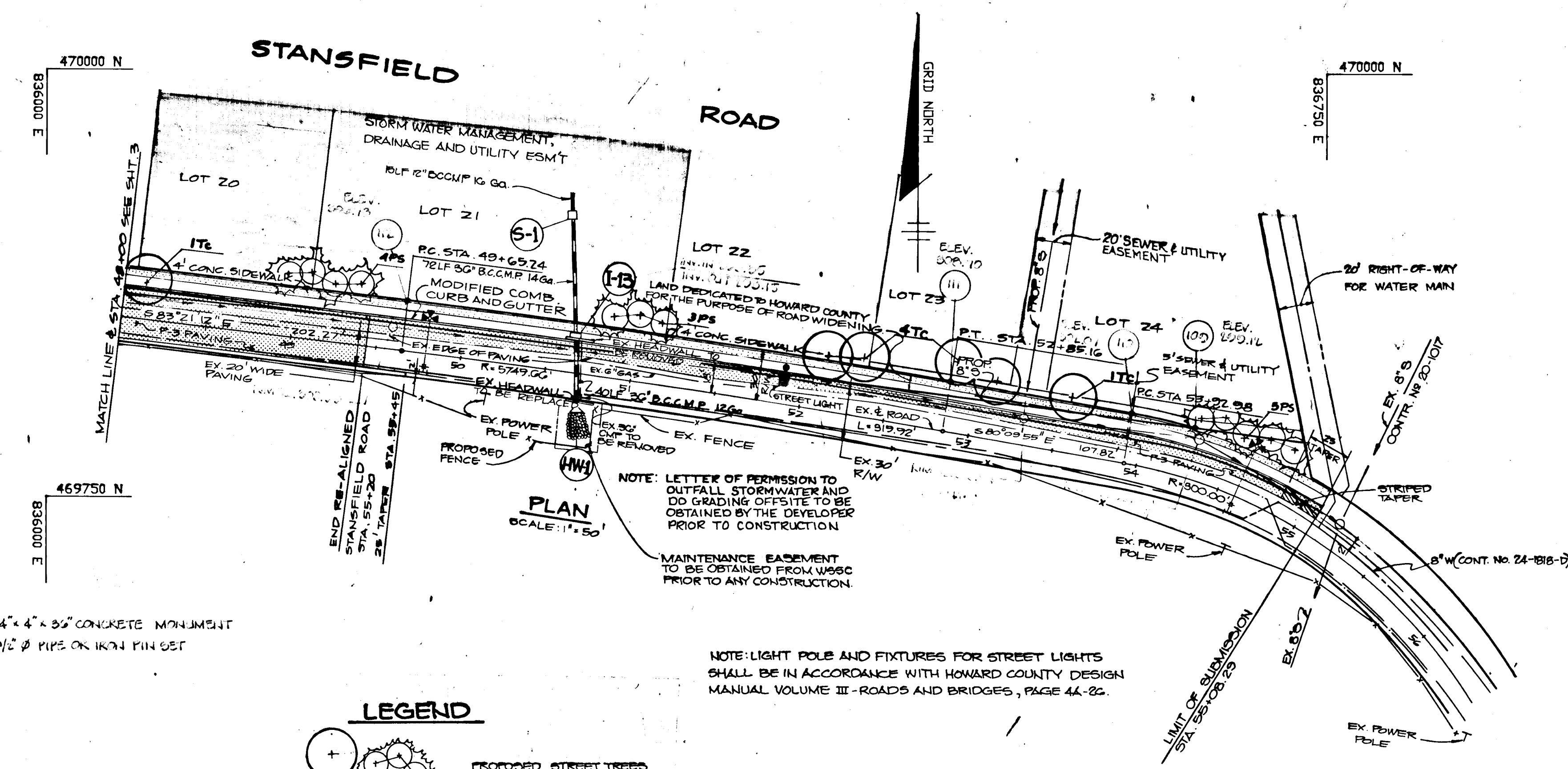
TITLE: PLAN AND PROFILE  
 OF STANSFIELD ROAD  
 STA. 34+50 TO STA. 48+00

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

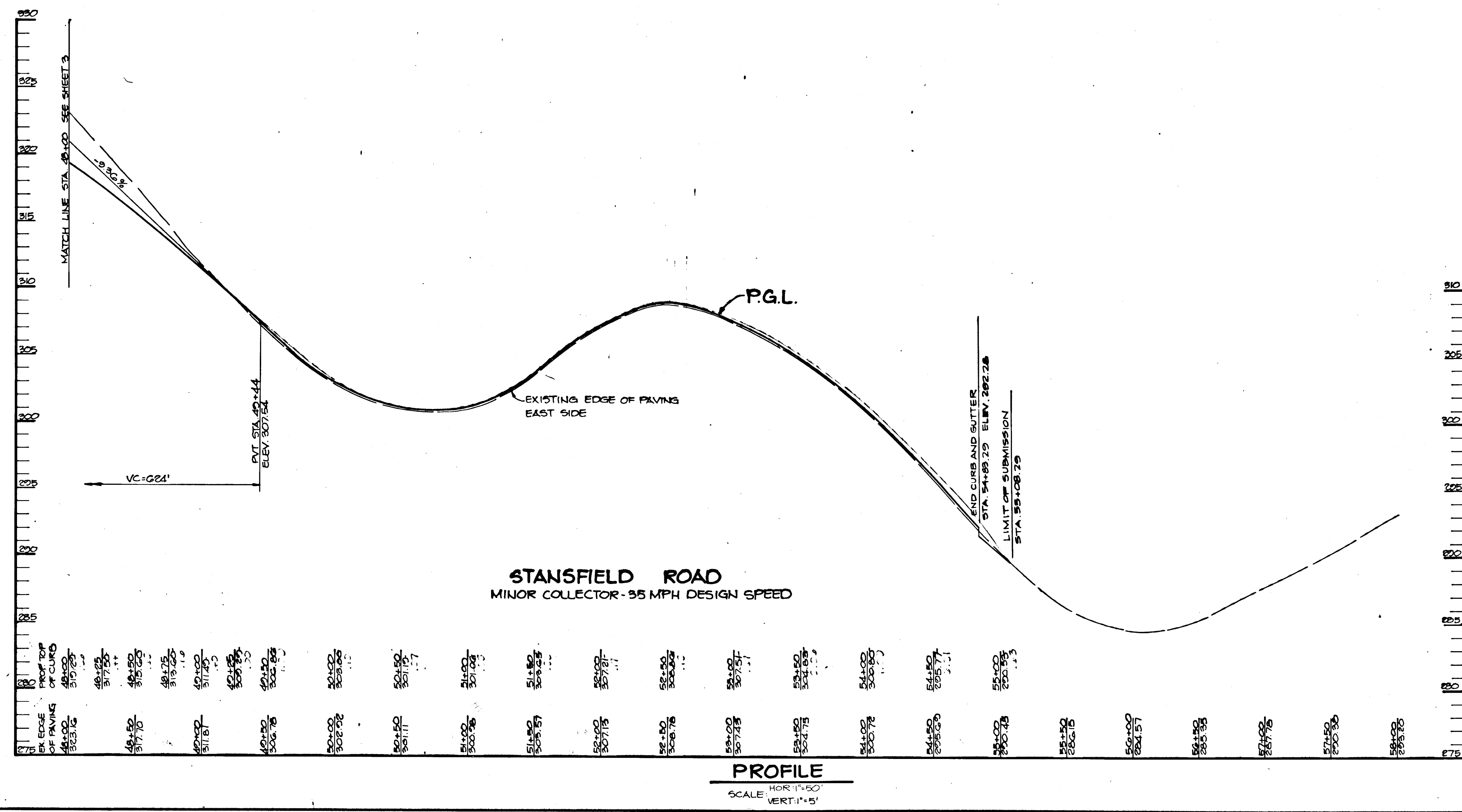
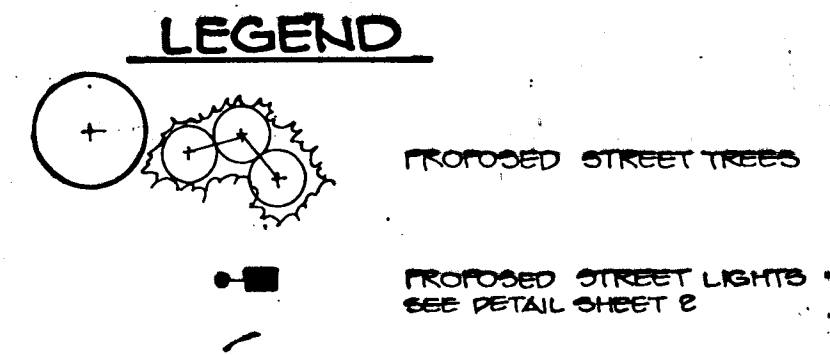
DATE: 11-24-89  
 DESIGNED BY: DAM  
 DRAWN BY: DAM  
 PROJECT NO: 47001  
 DATE: JANUARY 24, 1989  
 SCALE: AS SHOWN  
 DRAWING NO: 3 OF 14



1448



- DENOTES 4" x 4" x 36" CONCRETE MONUMENT
- DENOTES 1/2" Ø PIPE ON IRON PIN SET



J. Parekh  
JAYKANT D. PAREKH # 15148  
DATE: 11-24-92

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*Frank S. Taylor* 5/2/14  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Ronald J. Simon* 5/2/89  
 CHIEF, Land Development Division

*Francis W. Williams* 2/28/89  
 CHIEF, Bureau of Highways

*William E. Ray* 5-12-89  
 CHIEF, Bureau of Engineering

DATE	NO.	REVISION

OWNER: HOWARD RESEARCH AND DEVELOPMENT CORP.  
 10275 LITTLE PATUMENT PARKWAY  
 COLUMBIA, MARYLAND 21044

DEVELOPER: J.J.M., INC.  
 5570 SUITE 205 STIRRETT PLACE  
 COLUMBIA, MARYLAND 21044

PROJECT: THE FOREST

AREA TAX MAP NO. 46-47 ZONE R-20 PARCEL 887  
 6TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

TITLE: PLAN AND PROFILE OF STANSFIELD ROAD  
 STA. 48+00 TO STA. 58+00

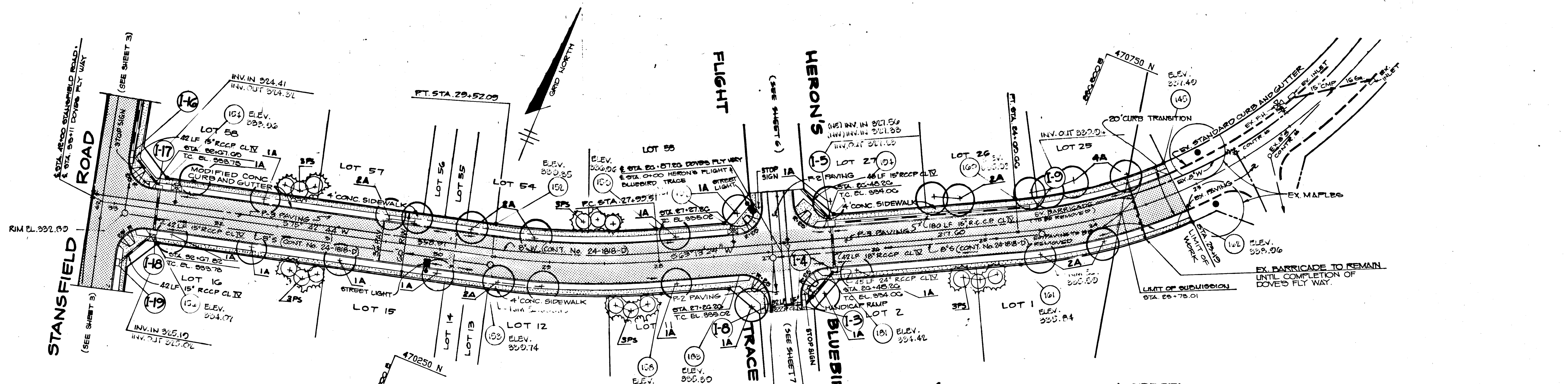
**THE RIEMER GROUP, INC.**  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 3105 North Ridge Road, Ellicott City, Maryland 21043 (301) 461-2690

DATE: 2-2-89  
 DESIGNED BY: DAM  
 DRAWN BY: DAM-0LB  
 PROJECT NO: 47001  
 DATE: JANUARY 24, 1989  
 SCALE: AS SHOWN  
 DRAWING NO. 4 OF 14

ARTHUR E. MUEGGE #8707

1448





- DENOTES 4" x 4" x 36" CONCRETE MONUMENT
- DENOTES 1/2" Ø PIPE OR IRON PIN USE

± CURVE DATA  
FROM ± STA. 27+00.00 TO ± STA. 29+52.00

R	700.00
L	152.85
T	76.58'
PC	05+11.00'
PT	12+23.20'
Chd.	N 85° 42' 20" W, 122.25'

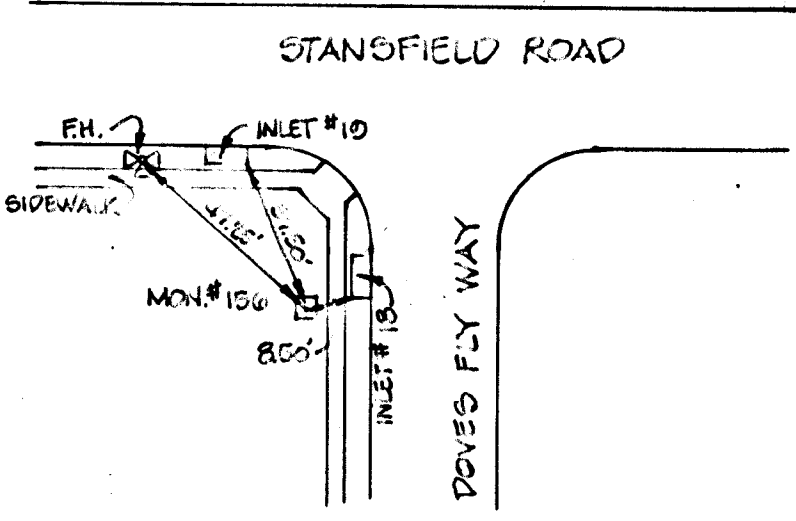
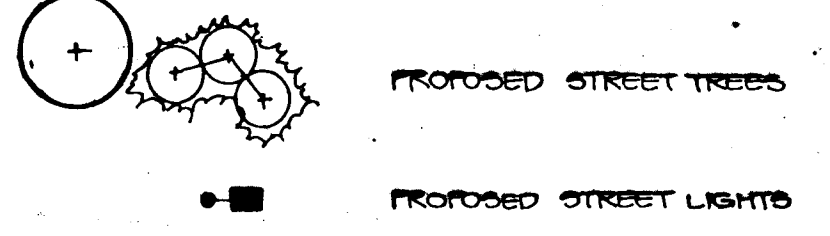
± CURVE DATA  
FROM ± STA. 23+10 TO ± STA. 24+00.00

R	475.00'
L	151.15'
T	70.22'
PC	15+15.55'
PT	17+03.44'
Chd.	S 75° 55' 50" W, 130.51'

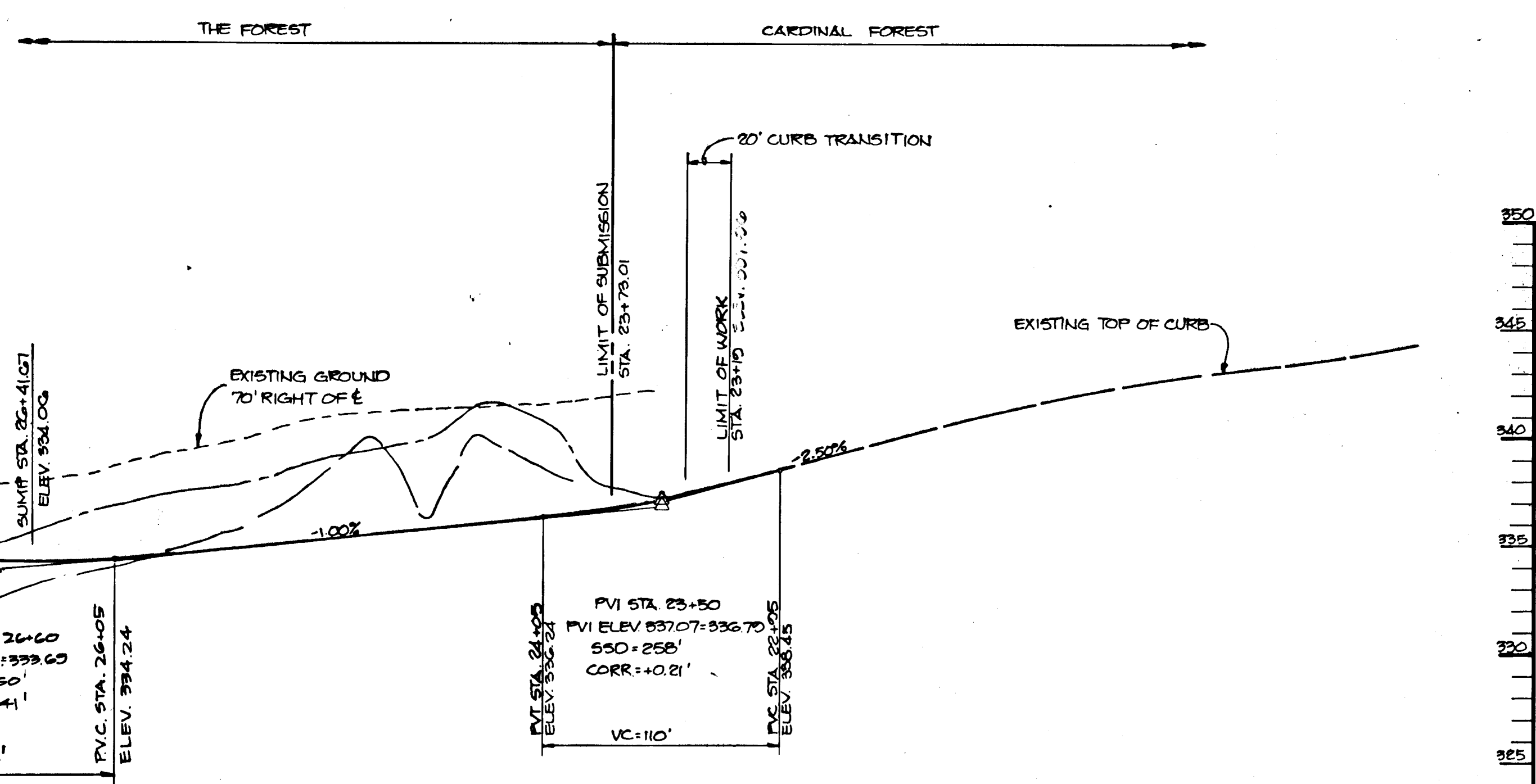
NOTE: LIGHT POLE AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME III - ROADS AND BRIDGES, PAGE 4A-2G.

PLAN  
SCALE: 1" = 50'

LEGEND



CONCRETE MONUMENT #156  
ELEV. 334.07



DOVES FLY WAY  
MINOR COLLECTOR - 35 MPH DESIGN SPEED

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



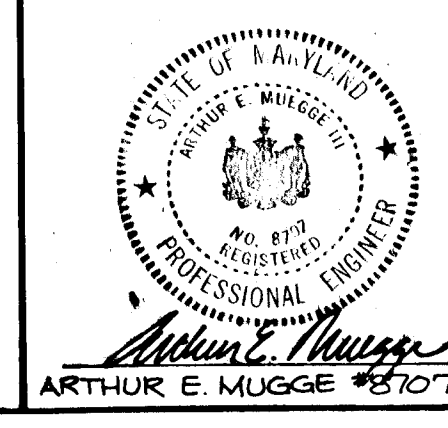
J. Parikh 11-24-92  
JAYKANT L. PARIKH # 10143 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING	<i>Derek S. Wright</i> 5/1/99 DATE
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	125
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	<i>Paul J. ...</i> 11/1/99 DATE
CHIEF, LAND DEVELOPMENT DIVISION	
<i>Travis W. ...</i> 2/28/89 DATE	
CHIEF, BUREAU OF HIGHWAYS	
<i>... 2 ...</i> 5/5/89 DATE	
CHIEF, BUREAU OF ENGINEERING	

DATE	NO.	REVISION
OWNER: HOWARD RESEARCH AND DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044		
DEVELOPER: J.J.M. INC. 5570 SUITE 205 STERRETT PLACE COLUMBIA, MARYLAND 21044		
PROJECT: THE FOREST		
AREA TAX MAP NO 44647 ZONE R-20 PARCEL 837 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE: PLAN AND PROFILE OF DOVES FLY WAY		

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

DATE: 11-24-92	5-85-93 P-85-67
DESIGNED BY: DAM	
DRAWN BY: DAM - J.L.B.	
PROJECT NO: 47001	
DATE: JANUARY 24, 1989	
SCALE: AS SHOWN	
DRAWING NO. 5 OF 14	



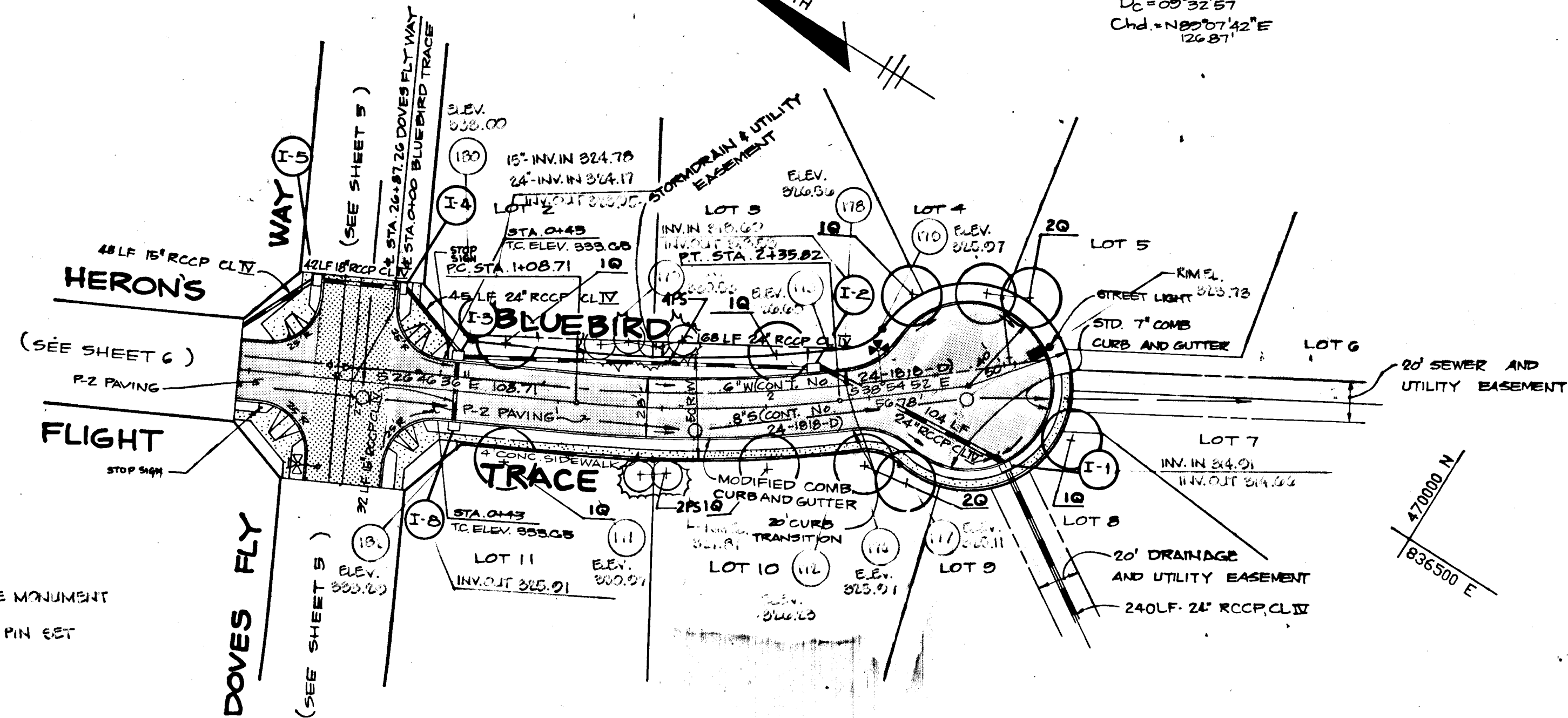
81441





**CURVE DATA**  
 FROM STA. 1+08.71 TO STA. 2+42.22

R = 600.00'  
 L = 127.11'  
 T = 63.89'  
 $\Delta = 12^{\circ}08'18''$   
 $D_c = 09^{\circ}32'57''$   
 Chd. = N89°07'42"E  
 126.87'

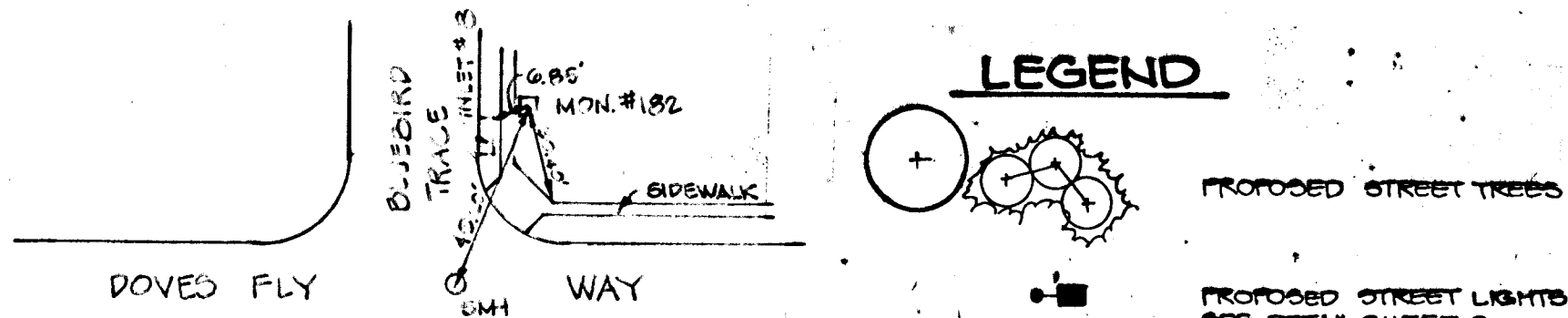


- DENOTES 4" x 4" x 36" CONCRETE MONUMENT
- DENOTES 1/2" Ø PIPE OR IRON PIN SET

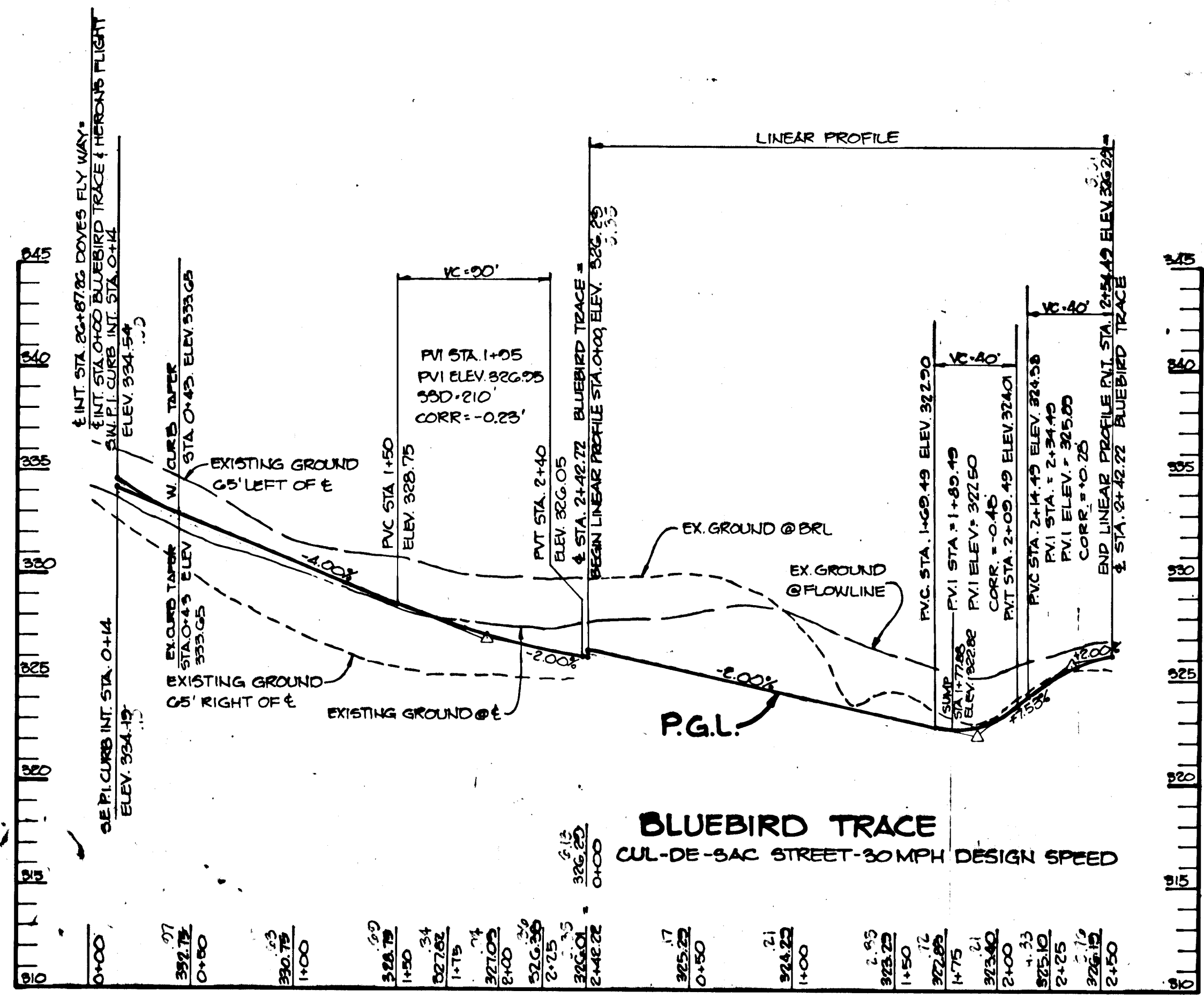
NOTE: LIGHT POLE AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME III - ROADS AND BRIDGES, PAGE 4A-26.

**PLAN**  
 SCALE: 1" = 50'

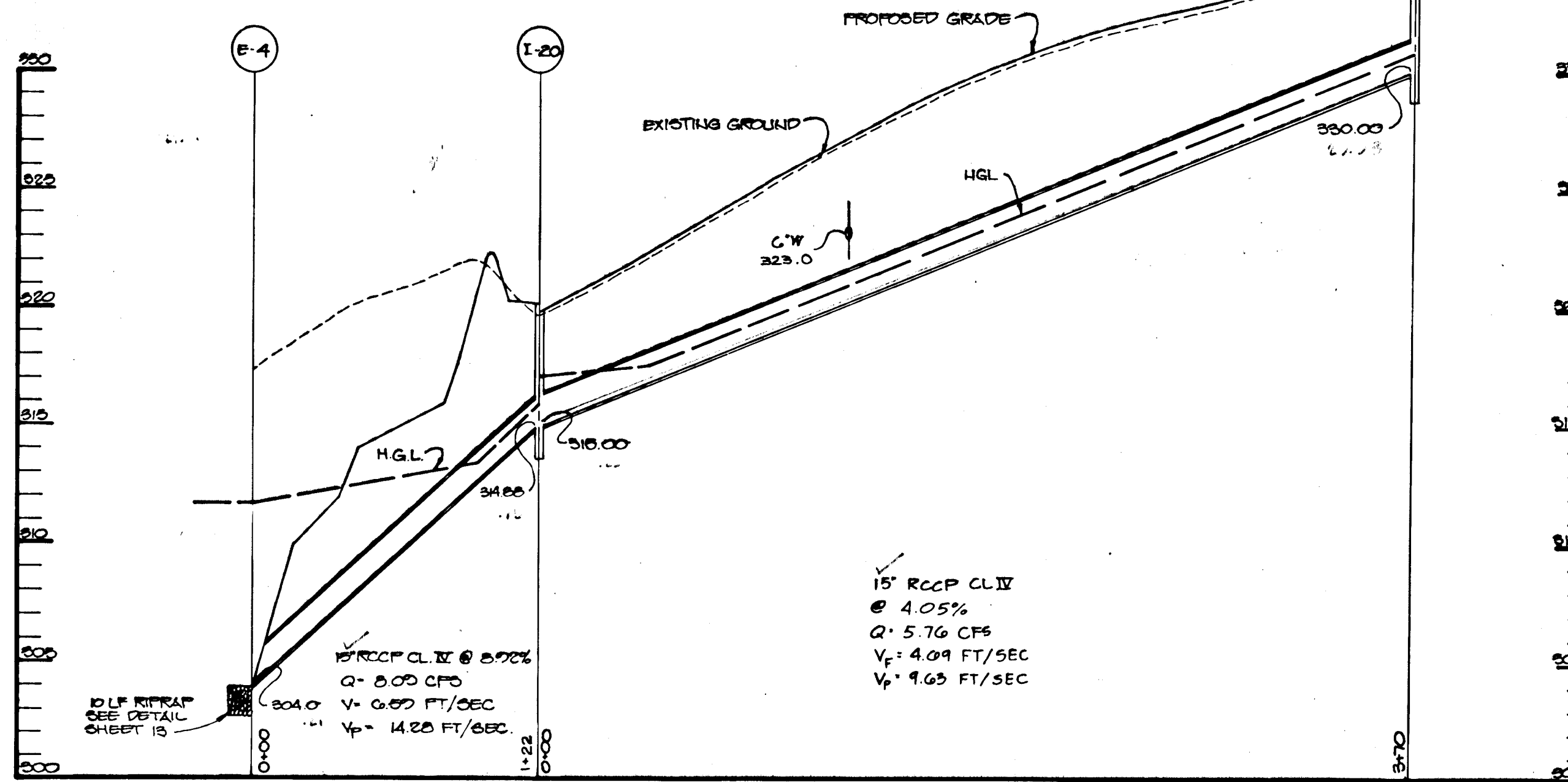
**LEGEND**



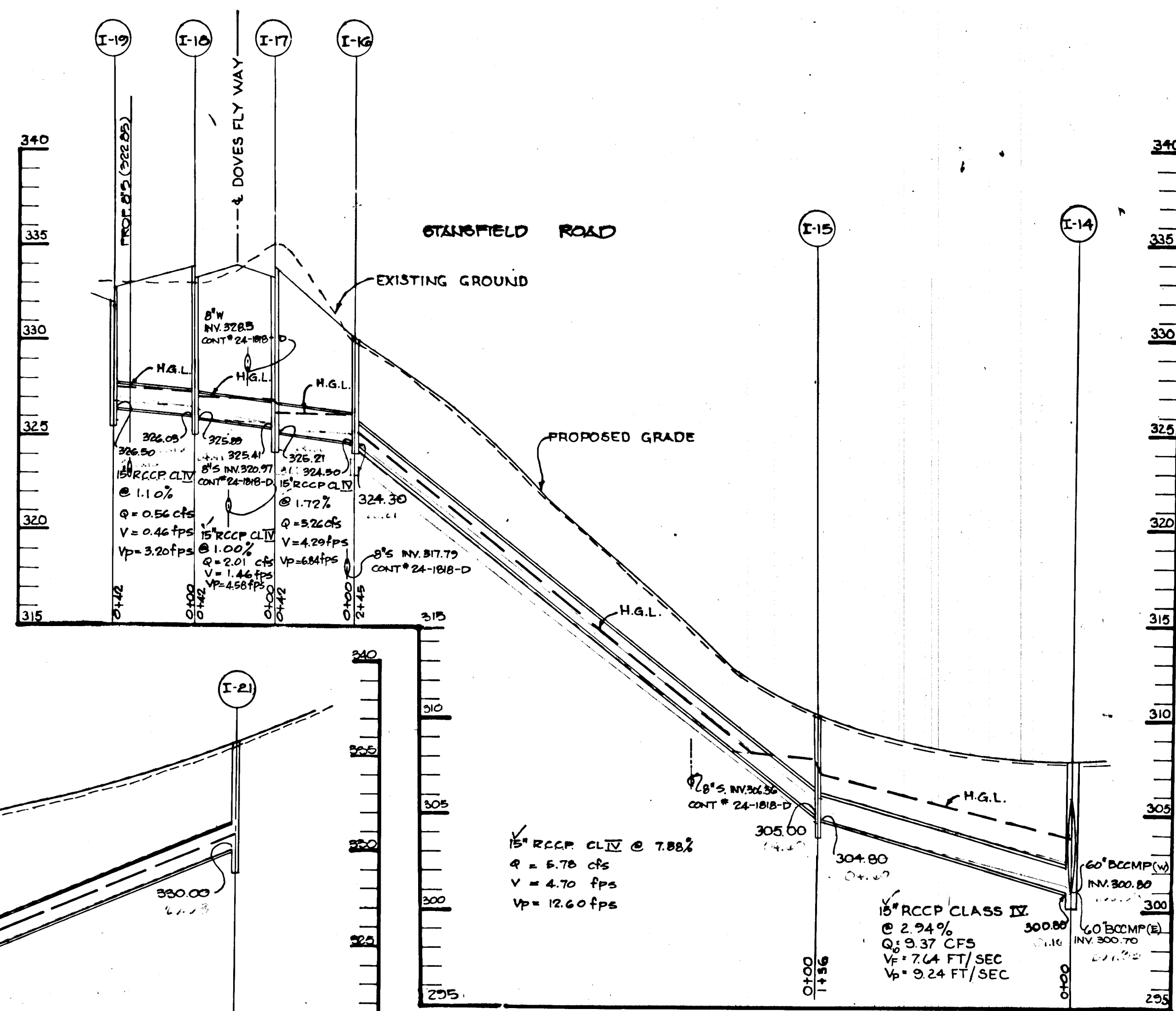
CONCRETE MONUMENT #182  
 ELEV. 300.20



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



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



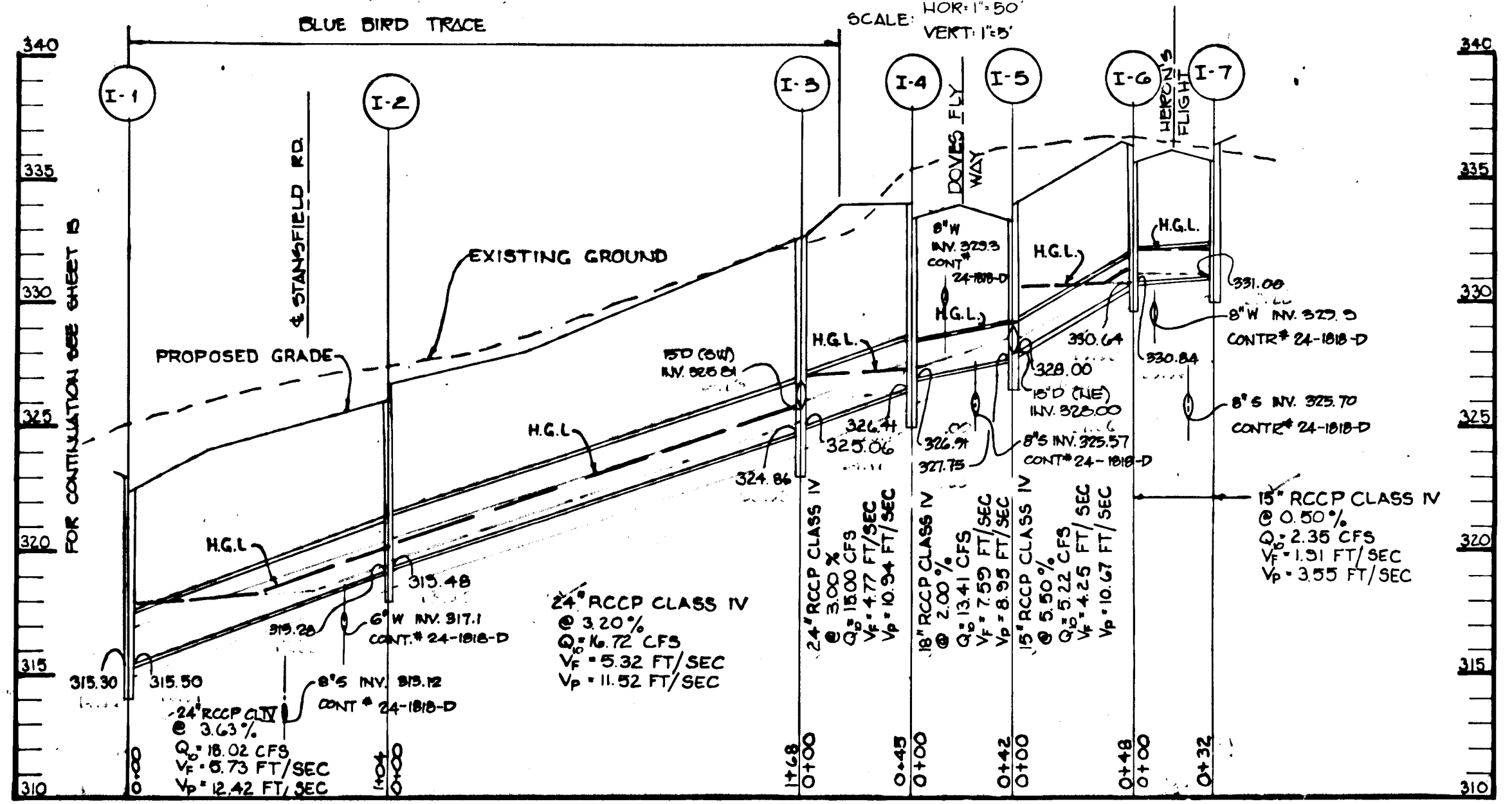
**STORM DRAIN PROFILE**  
 SCALE: HOR: 1" = 50'  
 VERT: 1" = 5'

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 Chief, Division of Community Planning and Land Development  
 DATE: 5/12/89

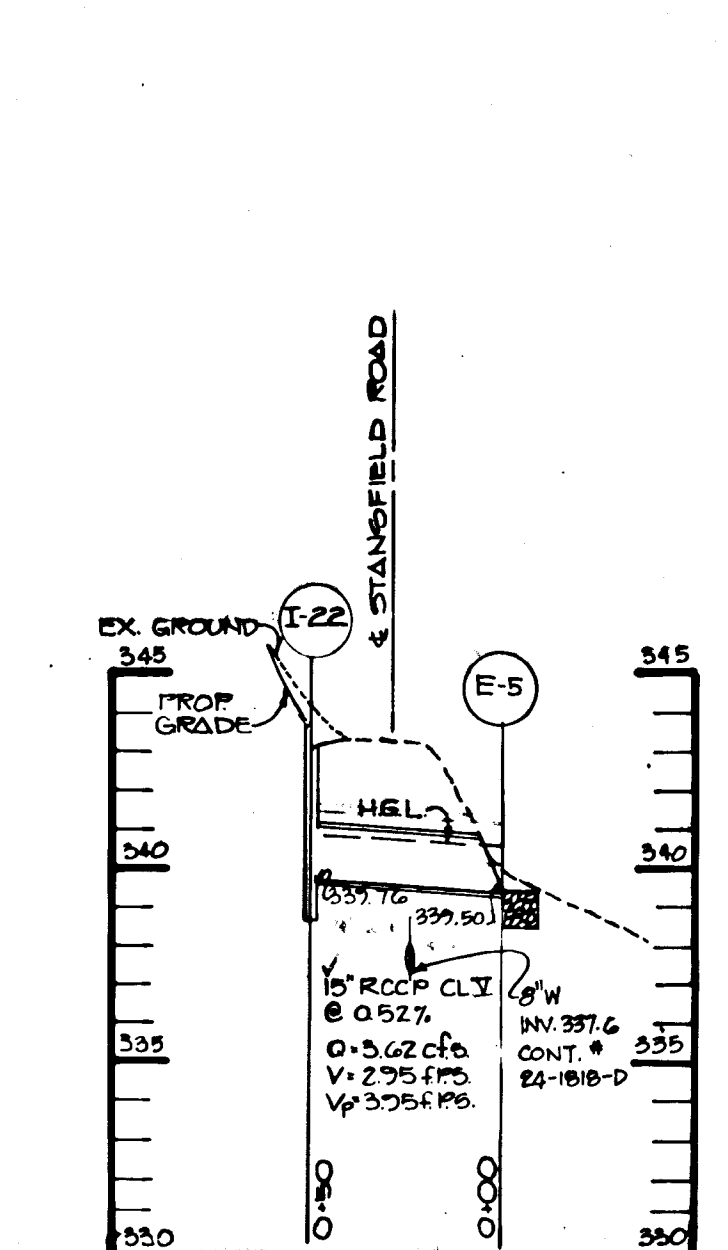
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Bureau of Highways  
 DATE: 5/12/89

APPROVED: J. P. ...  
 Chief, Bureau of Engineering  
 DATE: 5/12/89

J. P. ... 11.24.92  
 JAYK. G. D. PAREKH #19143 DATE



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

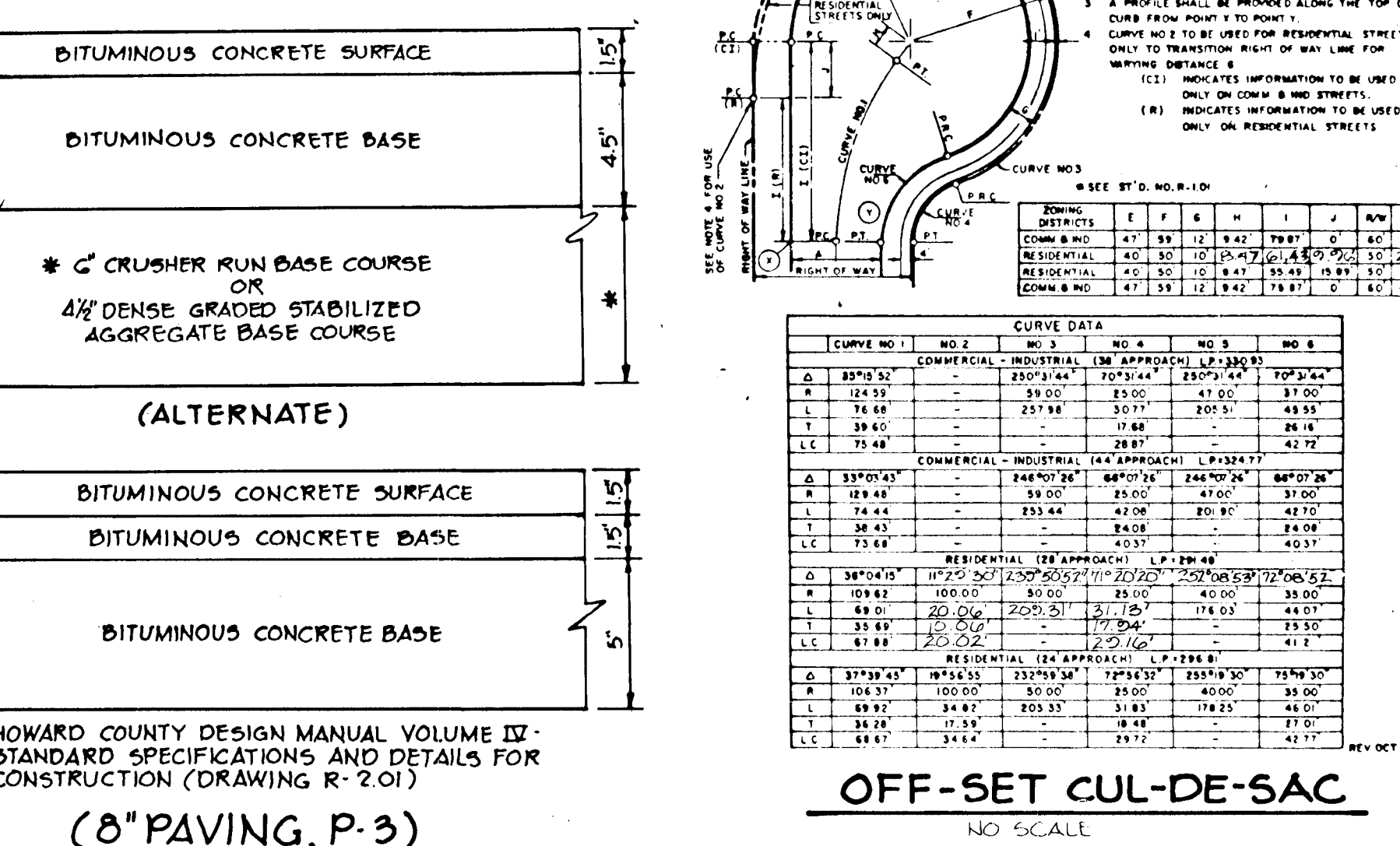
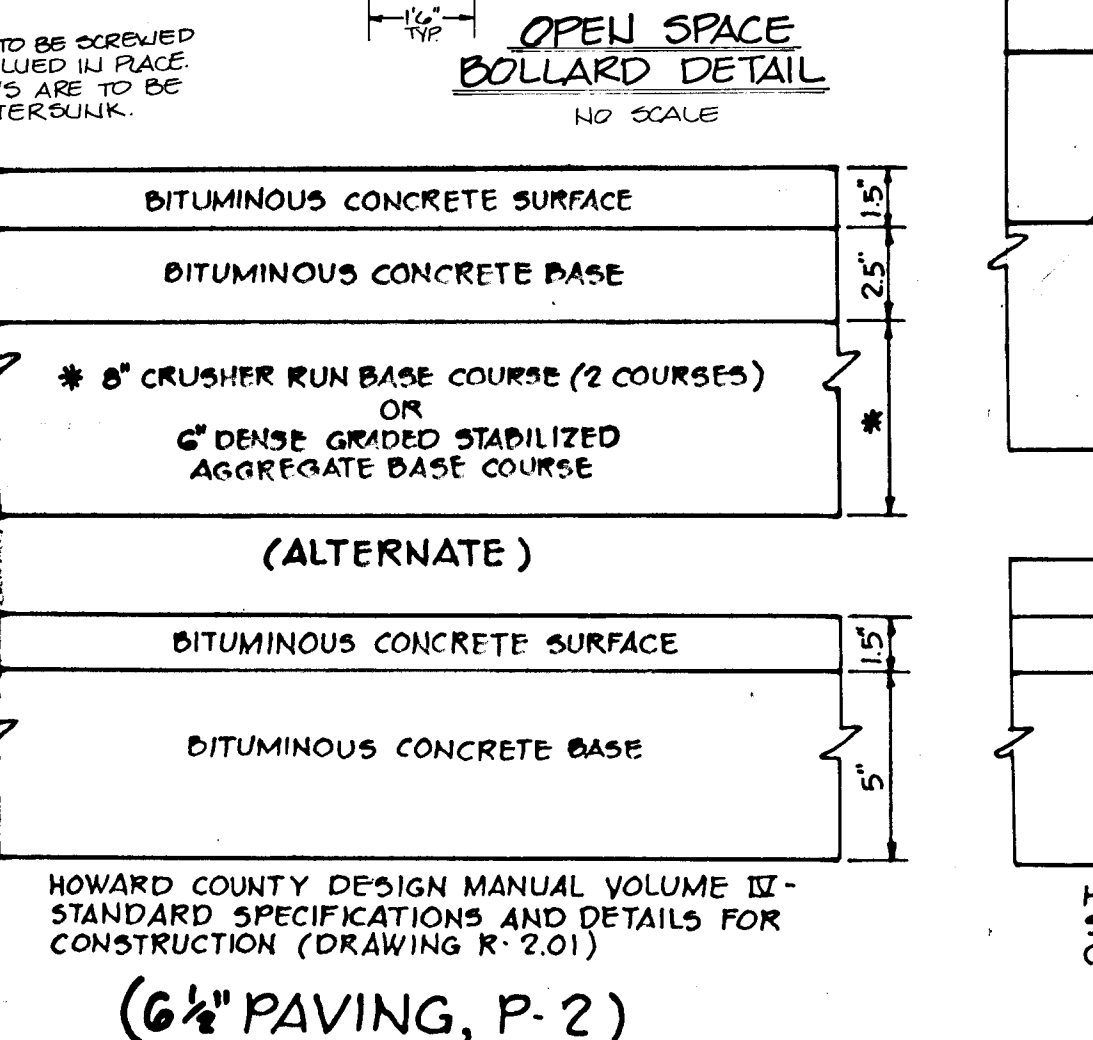
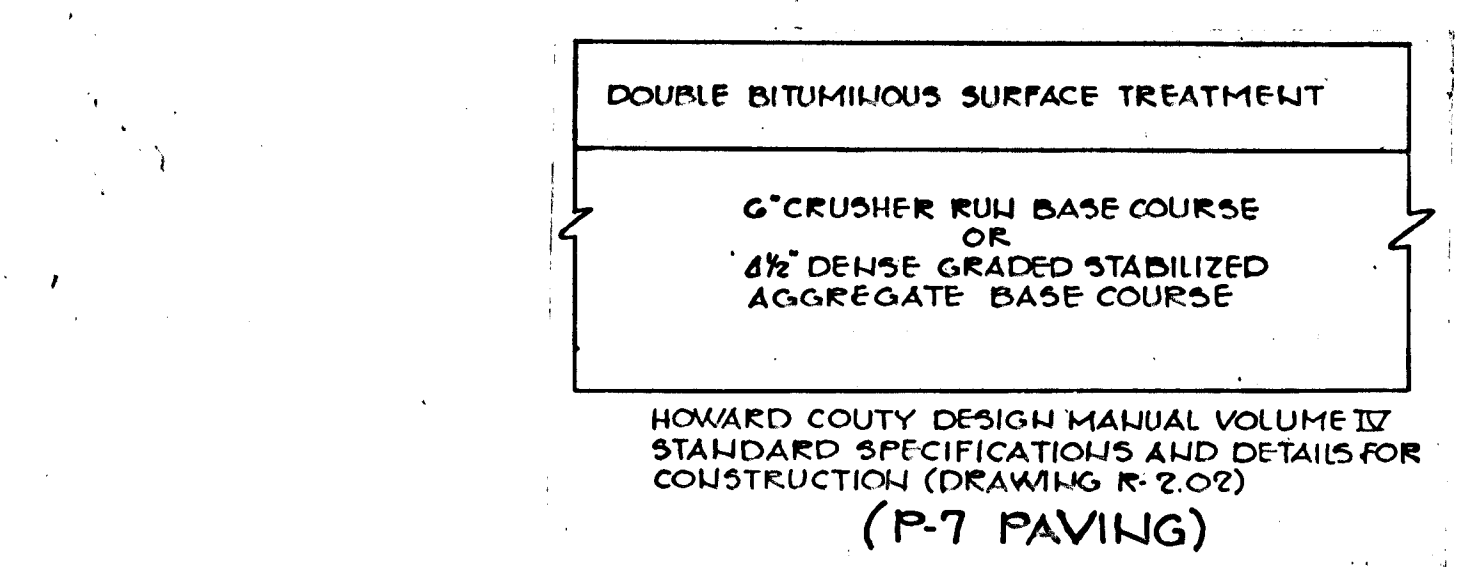
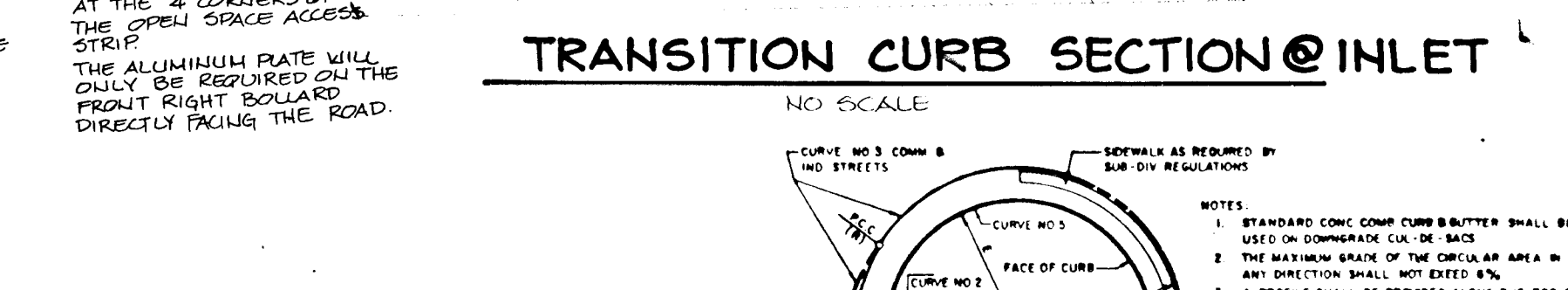
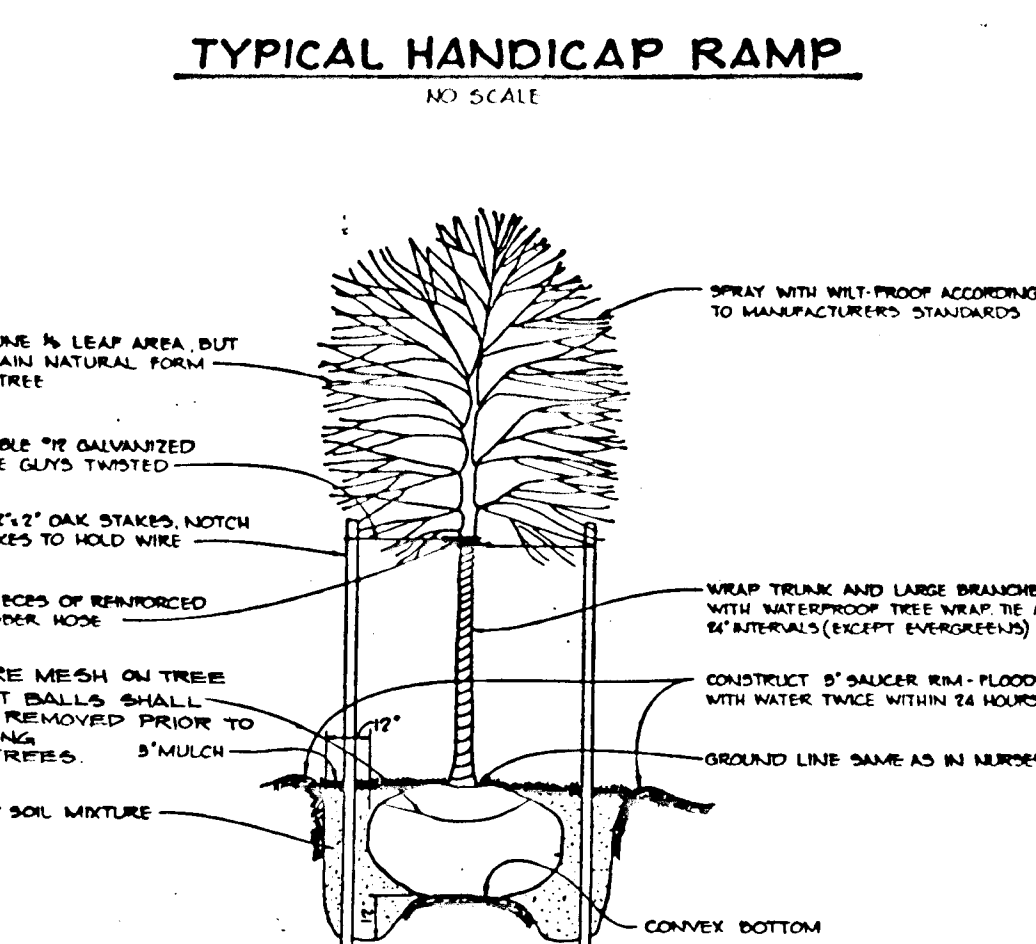
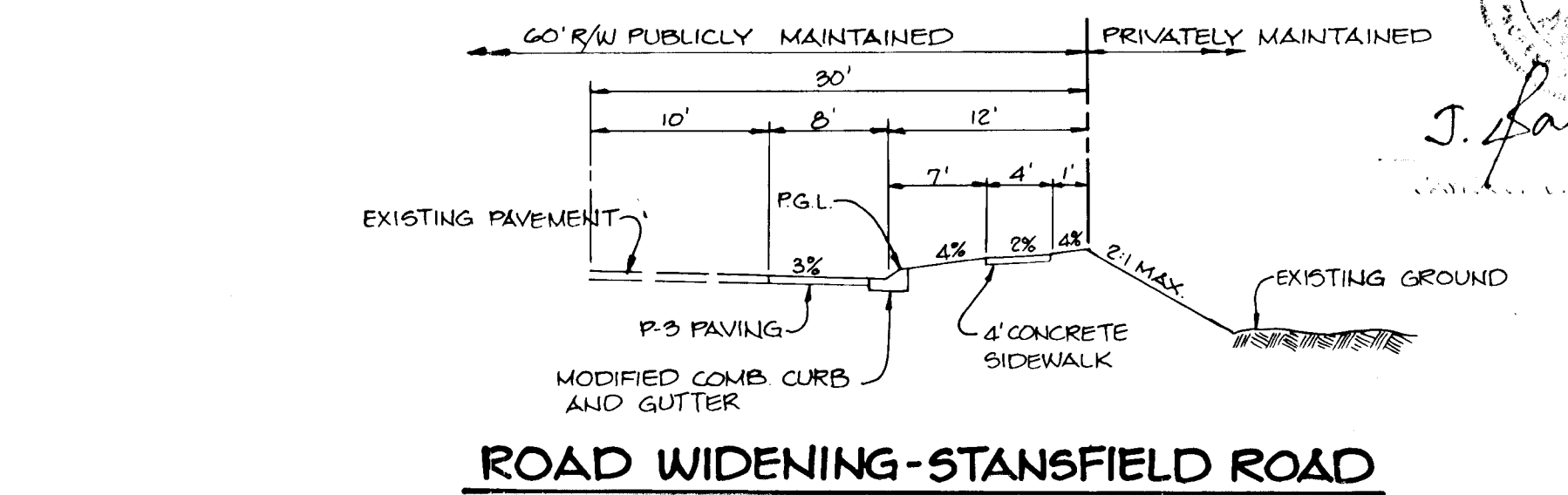
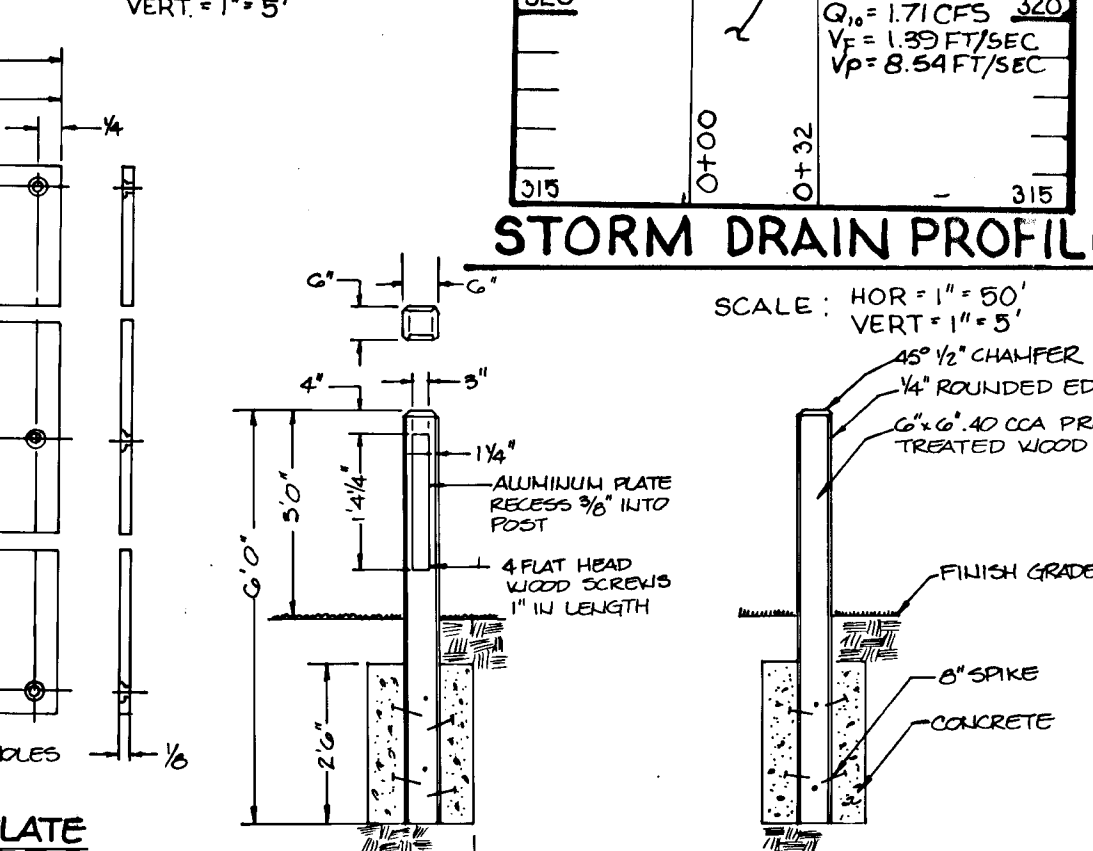
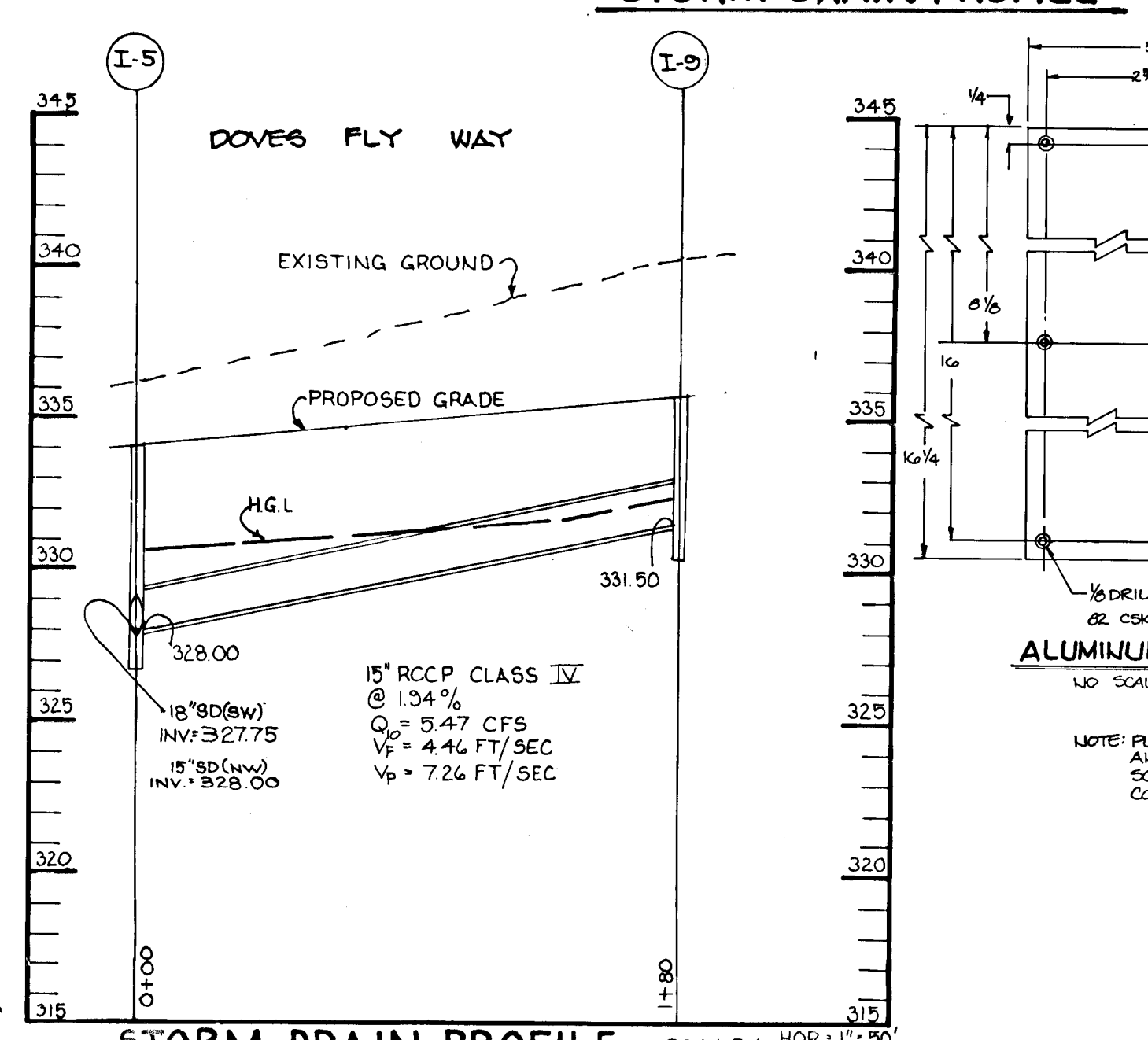
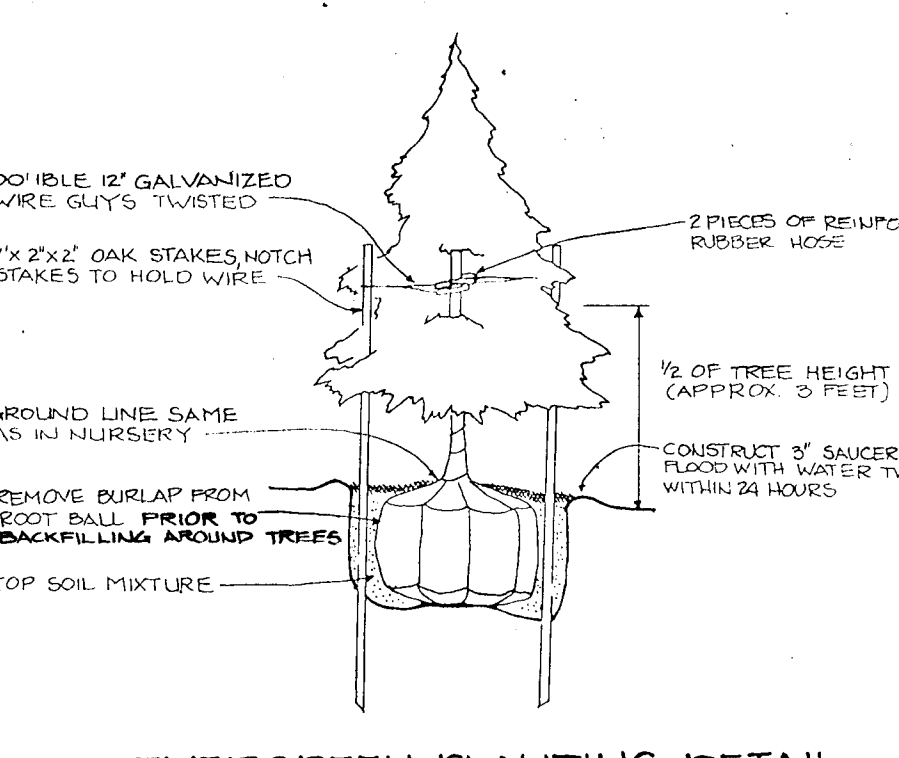
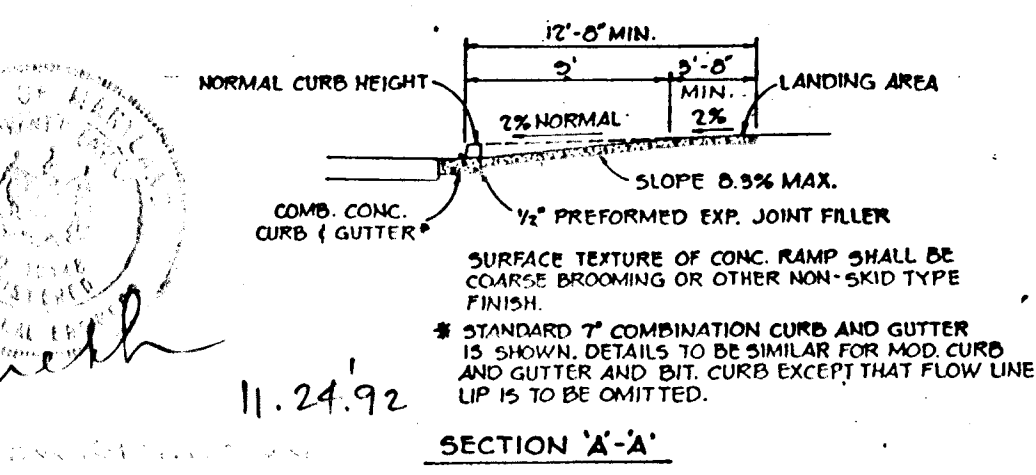
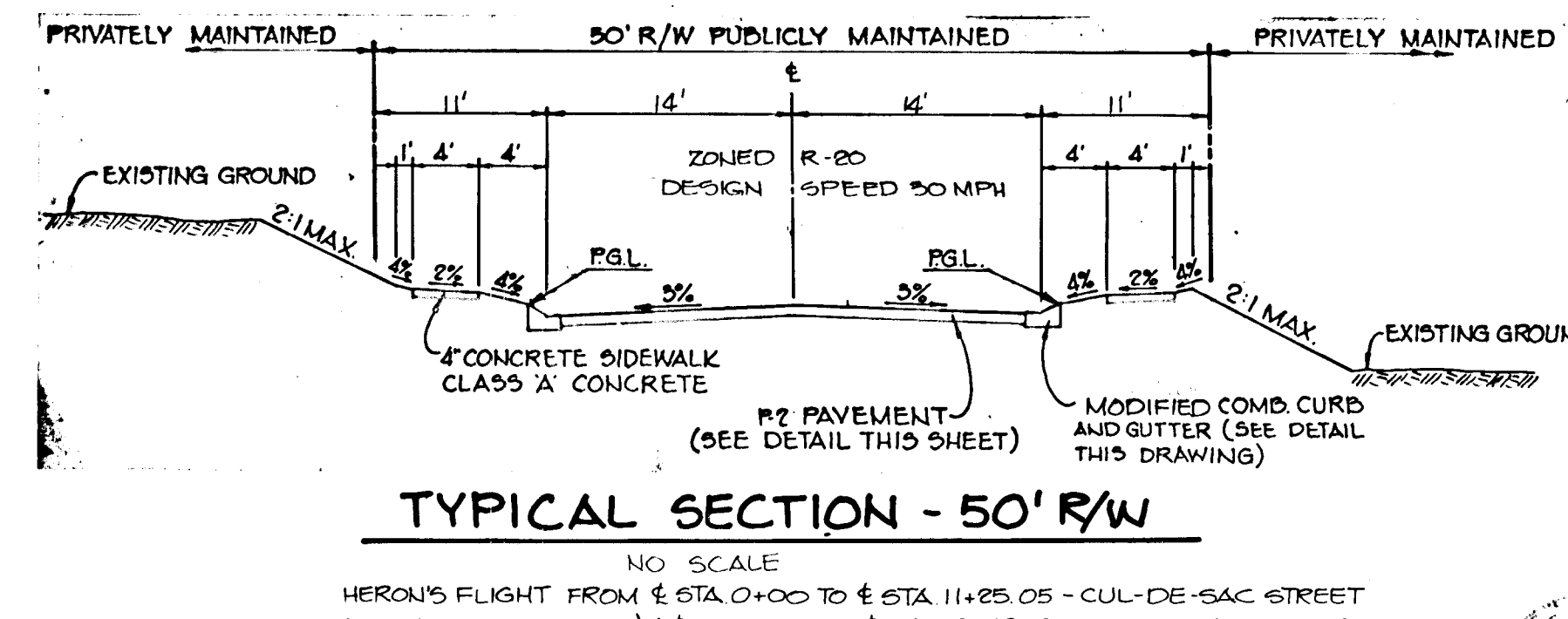
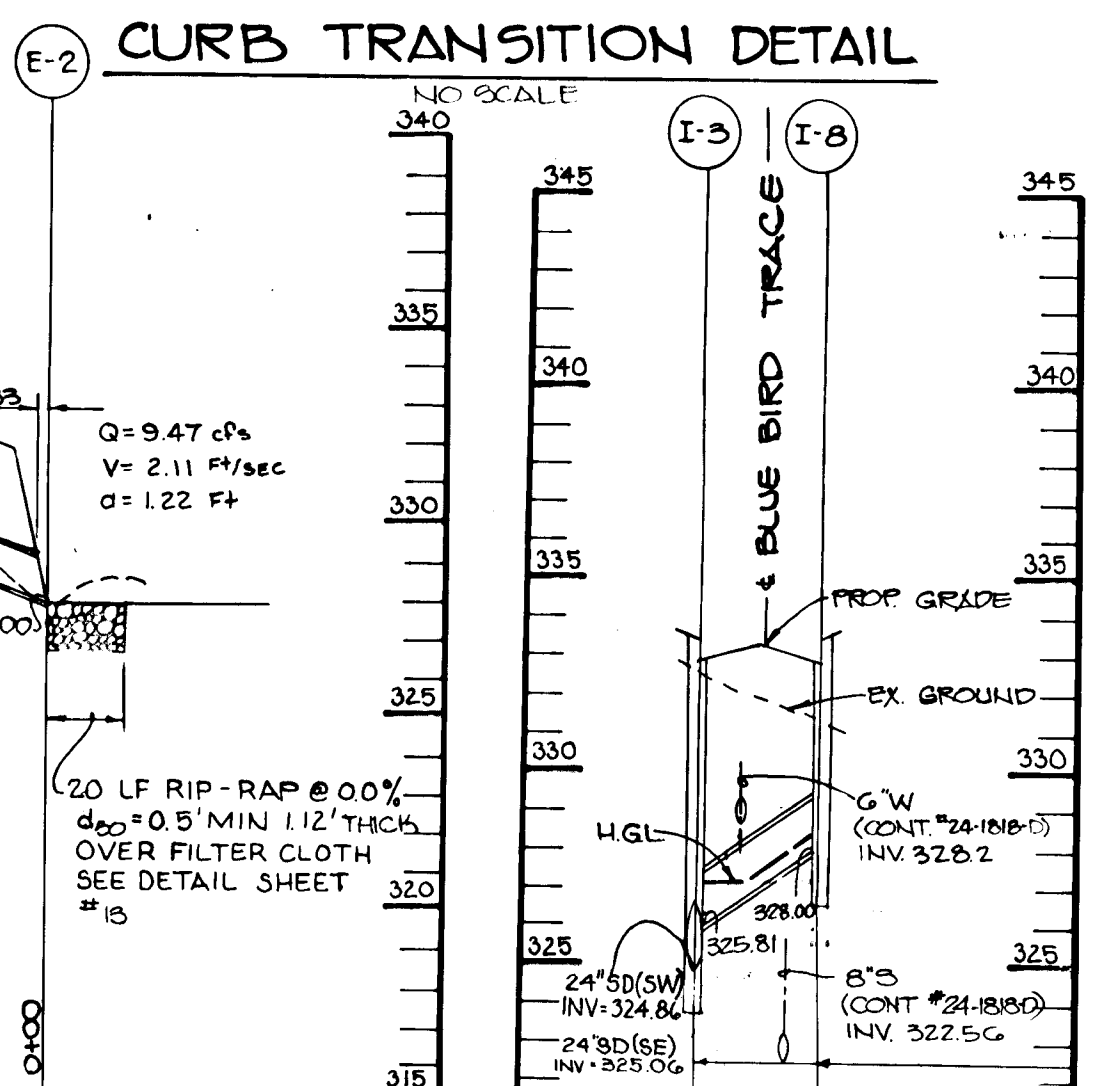
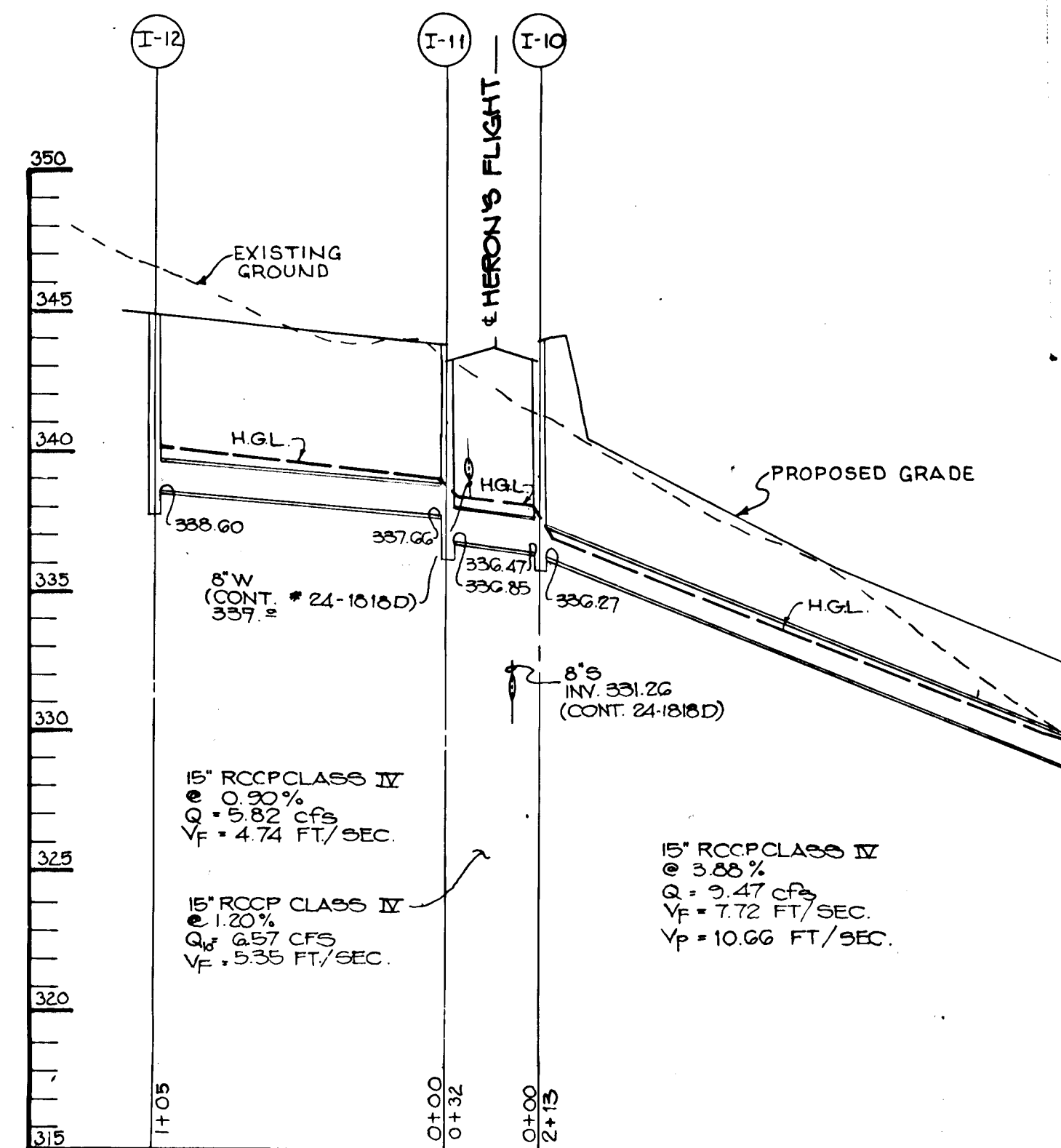
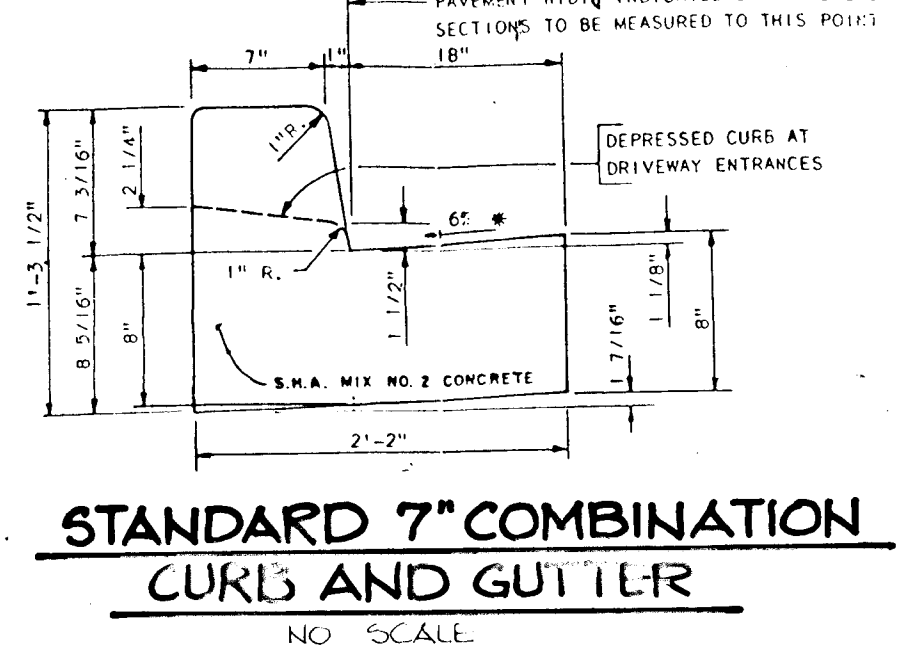
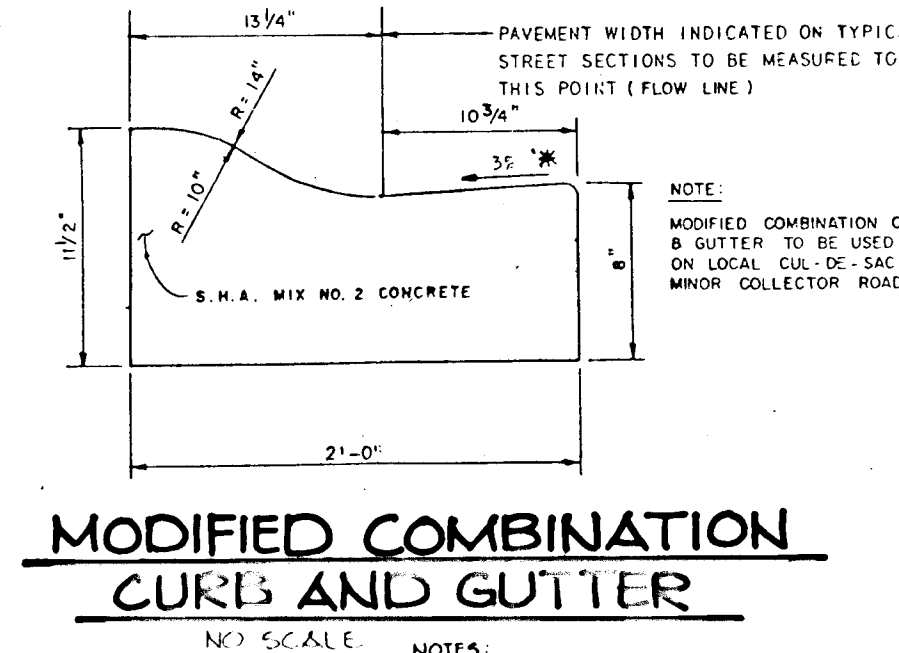
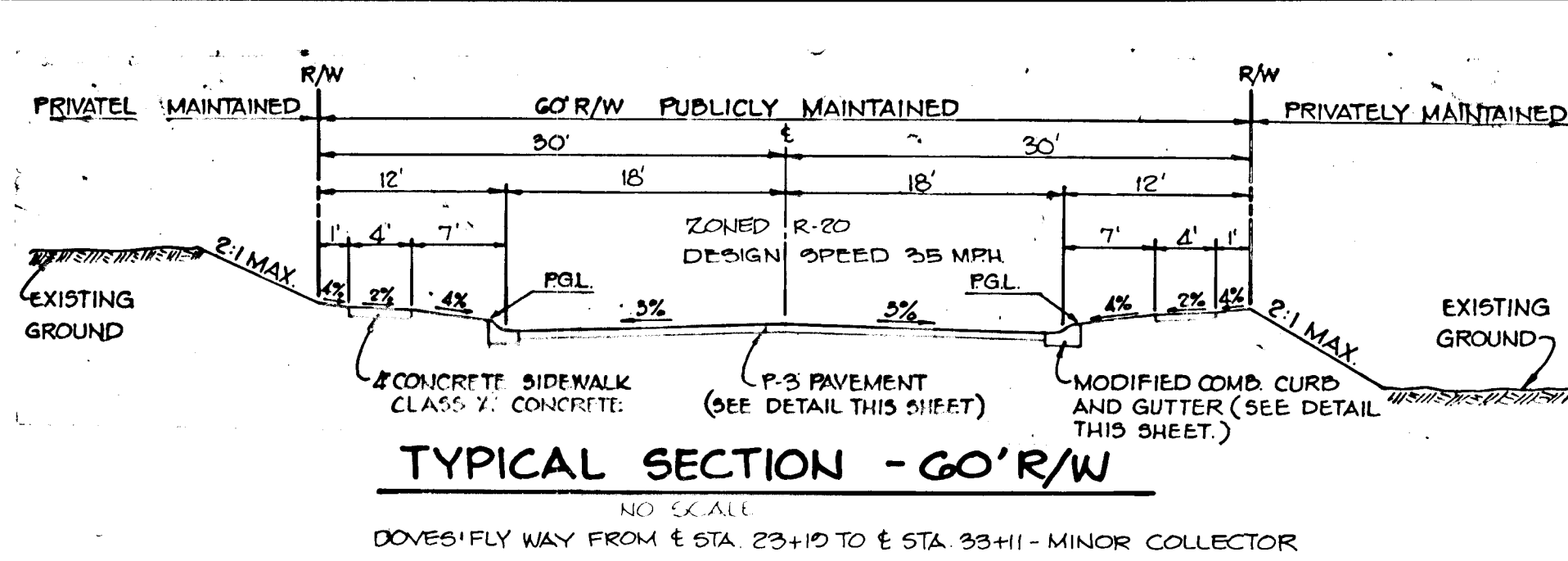
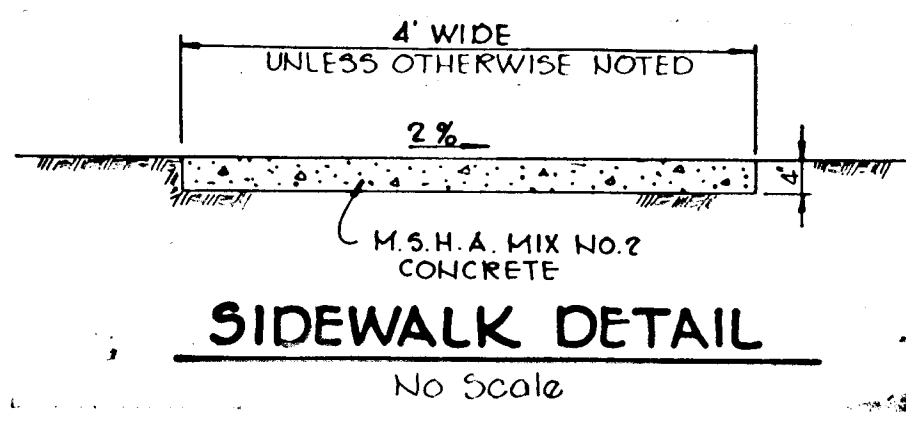
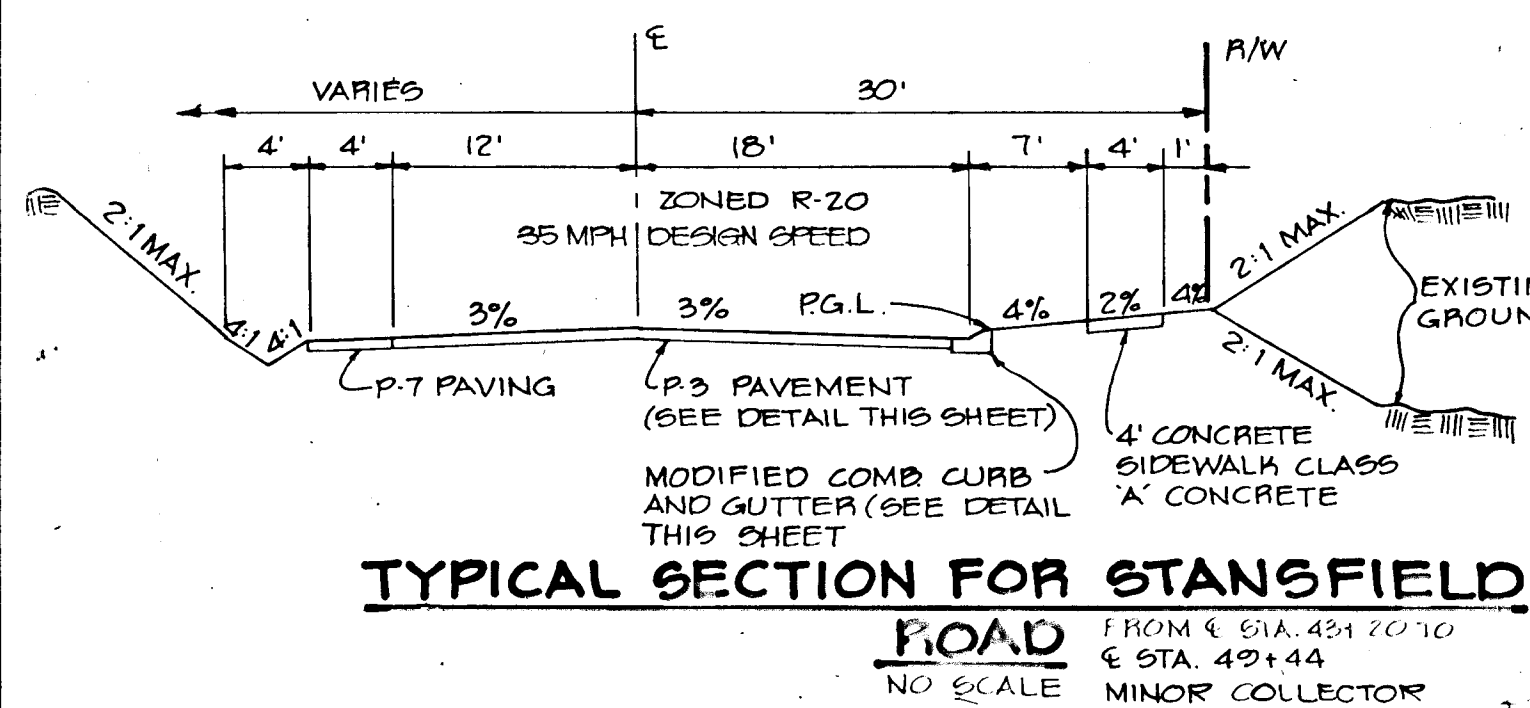


**STORM DRAIN PROFILE**  
 SCALE: HOR: 1" = 50'  
 VERT: 1" = 5'

DATE	NO.	REVISION
OWNER: HOWARD RESEARCH AND DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044		
DEVELOPER: J.J.M. INC. 5570 SUITE 205 STERRETT PLACE COLUMBIA, MARYLAND 21044		
PROJECT: THE FOREST		
AREA TAX MAP NO. 46-47 ZONE R-20 PARCEL 837 G.W. ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE: PLAN AND PROFILE OF BLUEBIRD TRACE AND STORM DRAIN PROFILES		
<b>THE RIEMER GROUP, INC.</b> The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm 3105 North Ridge Road, Ellicott City, Maryland 21043 (301) 461-2890		
DATE: 2-2-89	5-88-83	P-88-07
DESIGNED BY: DAM	DRAWN BY: DAM, J.L.B.	
PROJECT NO: 47001	DATE: JANUARY 24, 1989	
SCALE: AS SHOWN	DRAWING NO. 7 OF 14	

8771





CURVE DATA											
CURVE NO.	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10	NO. 11	NO. 12
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*Paula S. Taylor* 5/12/89  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Paul M. Seaman* 5/12/89  
 Chief, Land Development Division

*Lawrence W. Winkler* 2/8/89  
 Chief, Bureau of Highways

*W. Seaman & R. Ray* 5/12/89  
 Chief, Bureau of Engineering

7-10-02 1 REMOVED MACADAM PATH DETAILS, ADDED BOLLARD DETAIL.  
 DATE NO REVISION

OWNER: HOWARD RESEARCH AND DEVELOPMENT CORP.  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21044

DEVELOPER: J.J.W., INC.  
 5570 SUITE 205 STERRETT PLACE  
 COLUMBIA, MARYLAND 21044

PROJECT: **THE FOREST**

AREA TAX MAP NO. 46-147 ZONED R-20 PARCEL 837  
 6<sup>TH</sup> ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

TITLE: **DETAIL SHEET AND STORM DRAIN PROFILES**

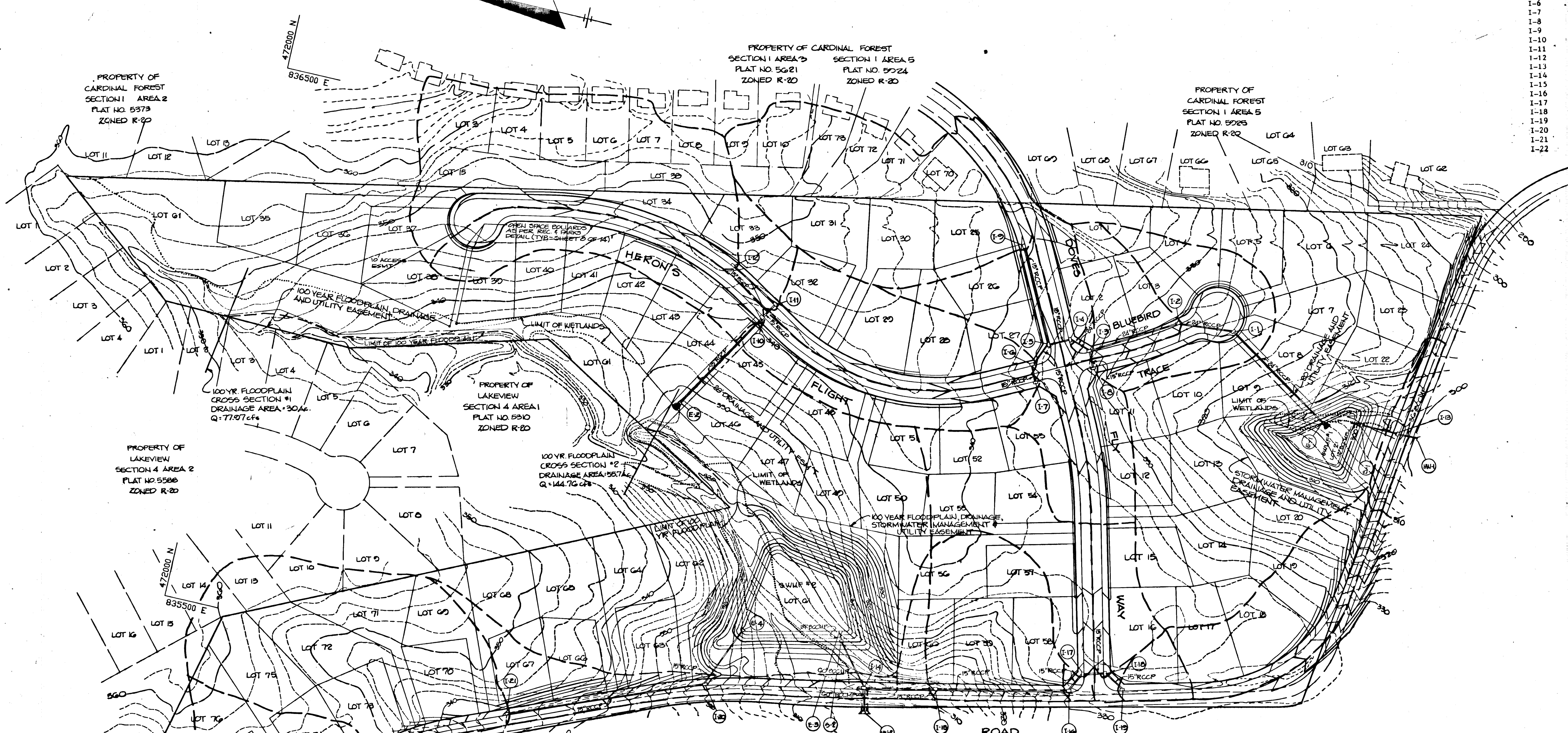
**THE RIEMER GROUP, INC.**  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 3105 North Ridge Road, Ellicott City, Maryland 21043 (301) 461-2690

DATE: 2-2-89  
 DESIGNED BY: DAK  
 DRAWN BY: DAK  
 PROJECT NO: 47001  
 DATE: JANUARY 24, 1989  
 SCALE: AS SHOWN  
 DRAWING NO. 8.11 OF 14

1448



STRUCTURE	DRAINAGE AREA	C FACTOR	% IMPERVIOUS	ZONING
I-1	0.98 Ac.	0.49	44	R-20
I-2	0.75 Ac.	0.35	37	R-20
I-3	0.05 Ac.	0.86	86	R-20
I-4	0.60 Ac.	0.48	37	R-20
I-5	1.36 Ac.	0.40	38	R-20
I-6	1.53 Ac.	0.32	44	R-20
I-7	0.98 Ac.	0.40	44	R-20
I-8	0.52 Ac.	0.52	54	R-20
I-9	2.98 Ac.	0.32	34	R-20
I-10	1.21 Ac.	0.43	43	R-20
I-11	0.47 Ac.	0.32	36	R-20
I-12	1.17 Ac.	0.32	34	R-20
I-13	1.94 Ac.	0.46	46	R-20
I-14	0.73 Ac.	0.47	51	R-20
I-15	1.58 Ac.	0.39	35	R-20
I-16	0.13 Ac.	0.69	84	R-20
I-17	1.60 Ac.	0.34	36	R-20
I-18	0.57 Ac.	0.42	27	R-20
I-19	0.22 Ac.	0.41	49	R-20
I-20	0.83 Ac.	0.45	52	R-20
I-21	3.25 Ac.	0.33	33	R-20
I-22	1.79 Ac.	0.35	37	R-20



PLAN  
SCALE: 1"=100'

No.	Type	Location	Top Elev.	Inv. In.	Inv. Out.	Remarks
I-1	A-5 W/Deflectors	Sump Sta. 1+77.78 Lin. Profile Bluebird Trace	322.82	315.30	314.20	Ho. Co. Std. Detail SD 4.01 & SD 4.83
I-2	A-8 W/Deflectors	14' Lt. C/L Sta. 2+25 Bluebird Trace	326.66	319.40	318.05	Ho. Co. Std. Detail SD 4.01 & SD 4.83
I-3	A-5	14' Lt. C/L Sta. 0+32 Bluebird Trace	332.95	325.19	324.78	Ho. Co. Std. Detail SD 4.01
I-4	A-5	18' Lt. C/L Sta. 26+41.67 Doves Fly Way	334.34	326.94	324.77	Ho. Co. Std. Detail SD 4.32 & SD 4.93
I-5	A-10 Depressed	18' Re. C/L Sta. 26+41.67 Doves Fly Way	334.34	328.00	327.75	Ho. Co. Std. Detail SD 4.02 & SD 4.81
I-6	A-5 W/Deflectors	14' Re. C/L Sta. 0+60 Heron's Flight	336.60	330.84	329.94	Ho. Co. Std. Detail SD 4.01 & SD 4.83
I-7	A-5 W/Deflectors	14' Lt. C/L Sta. 0+60 Heron's Flight	336.60	331.00	330.44	Ho. Co. Std. Detail SD 4.01 & SD 4.83
I-8	A-5 W/Deflectors	14' Re. C/L Sta. 0+52 Bluebird Trace	332.95	328.00	327.01	Ho. Co. Std. Detail SD 4.01 & SD 4.83
I-9	A-10 W/Deflectors	18' Re. C/L Sta. 24+55 Doves Fly Way	336.02	331.00	329.74	Ho. Co. Std. Detail SD 4.02 & SD 4.83
I-10	A-5	14' Lt. C/L Sta. 5+95 Heron's Flight	343.99	336.47	335.01	Ho. Co. Std. Detail SD 4.01
I-11	A-5	14' Re. C/L Sta. 5+95 Heron's Flight	343.99	337.66	337.05	Ho. Co. Std. Detail SD 4.01
I-12	A-10 W/Deflectors	14' Lt. C/L Sta. 7+00 Heron's Flight	345.04	337.05	336.00	Ho. Co. Std. Detail SD 4.02 & SD 4.83
I-13	A-10 W/Deflectors	18' Lt. C/L Sta. 50+65 Stansfield Rd	301.43	293.15	293.15	Ho. Co. Std. Detail SD 4.02 & SD 4.83
I-14	A-10 W/Deflectors	18' Lt. C/L Sta. 37+69 Stansfield Rd	307.93	300.80	300.70	Ho. Co. Std. Detail SD 4.01 & SD 4.81
I-15	A-10 W/Deflectors	18' Lt. C/L Sta. 39+05 Stansfield Rd	310.25	305.00	304.50	With Modification See Detail Sheet 14
I-16	A-10	18' Lt. C/L Sta. 41+50 Stansfield Rd	300.28	324.50	324.50	Ho. Co. Std. Detail SD 4.02
I-17	A-10	18' Re. C/L Sta. 32+61.69 Doves Fly Way	334.02	325.47	324.41	Ho. Co. Std. Detail SD 4.02
I-18	A-5 W/Deflectors	18' Lt. C/L Sta. 32+61.82 Doves Fly Way	334.02	326.01	325.17	Ho. Co. Std. Detail SD 4.01 & SD 4.83
I-19	A-5	18' Lt. C/L Sta. 42+50 Stansfield Rd	333.06	326.50	325.42	Ho. Co. Std. Detail SD 4.01
I-20	A-5 W/Deflectors	18' Lt. C/L Sta. 34+78 Stansfield Rd	320.21	315.00	315.00	Ho. Co. Std. Detail SD 4.01 & SD 4.83
I-21	A-10 W/Deflectors	18' Lt. C/L Sta. 31+13 Stansfield Rd	335.85	330.00	329.78	Ho. Co. Std. Detail SD 4.02 & SD 4.83
I-22	S Comb W/Ret Grate	18' Lt. C/L Sta. 25+60 Stansfield Rd	343.94	343.11	343.11	Ho. Co. Std. Detail SD 4.32 & SD 4.93
E-1	24" Concrete End Section	See Plan		297.00		Ho. Co. Std. Detail SD 5.51 & SD 5.52
E-2	15" Concrete End Section	See Plan		328.00	328.05	Ho. Co. Std. Detail SD 5.51 & SD 5.52
E-3	24" Metal End Section	120' Lt. C/L Sta. 37+28 Stansfield Rd	304.00			Ho. Co. Std. Detail SD 5.61
E-4	15" Concrete End Section	118' Lt. C/L Sta. 35+49 Stansfield Rd		304.09	304.21	Ho. Co. Std. Detail SD 5.51 & SD 5.52
E-5	15" Concrete End Section	31' Re. C/L Sta. 25+60 Stansfield Rd		339.50	339.50	Ho. Co. Std. Detail SD 5.51 & SD 5.52

NQ	TYPE	LOCATION	TOP ELEV.	INV. IN.	INV. OUT.	REMARKS
0-1	CONTROL STRUCTURE	91' LT. & STA. 50+64 STANSFIELD RD	308.07	300.70	295.00	SEE SHEET 14
0-2	CONTROL STRUCTURE	105' LT. & STA. 37+30 STANSFIELD RD	312.07	305.05	301.00	SEE SHEET 14
HW-1	TYPE 'A' HEADWALL	32' RT. & STA. 50+75 STANSFIELD RD	294.70	-	291.00	HO. CO. STD. DETAIL SD-51
HW-2	TYPE 'A' HEADWALL	30' RT. & STA. 37+69 STANSFIELD RD	308.50	-	304.70	HO. CO. STD. DETAIL SD-51

STATE OF MARYLAND  
J. J. J. J.  
11-24-89  
JAYKANT & PAREKH #10148

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
Date: 5/12/89  
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Date: 5/12/89  
Date: 2/28/89  
Date: 5/12/89

REMOVED PATH & ADDED BOLLARDS  
DATE NO REVISION  
OWNER: HOWARD RESEARCH AND DEVELOPMENT CORP.  
10278 LITTLE PATUMENT PARKWAY  
COLUMBIA, MARYLAND 21044

DEVELOPER: J.J.M. INC.  
5870 SUITE 205 STERRETT PLACE  
COLUMBIA, MARYLAND 21044  
PROJECT: THE FOREST  
AREA TAX MAP NO. 46447 ZONED R-20 PARCEL B37  
6TH 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 North Ridge Road, Ellicott City, Maryland 21043 (301) 481-2690

DATE: 2-2-89  
DESIGNED BY: M.C.M.  
DRAWN BY: DAM  
PROJECT NO: 47901  
DATE: JANUARY 24, 1989  
SCALE: AS SHOWN  
DRAWING NO. 9 OF 14  
F-89-29

1448





J. Farrell 11-24-89  
DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
Mark V. Kaylor 5/12/89  
DATE  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Frank S. Brown 5/12/89  
DATE  
CHIEF, Land Development Division  
William W. Weiland 2/28/89  
DATE  
Chief, Bureau of Highways  
James E. Brown 5/12/89  
DATE  
Chief, Bureau of Engineering

BY THE DEVELOPER:  
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERFORM ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
2-1-89  
DATE  
DEVELOPER

BY THE ENGINEER:  
"I CERTIFY THAT THIS PLAN FOR PONDS 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."  
Arthur E. Muegge 2-2-89  
DATE  
ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL PONDS CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.  
John M. Helm 2/9/89  
DATE  
SOIL CONSERVATION DISTRICT

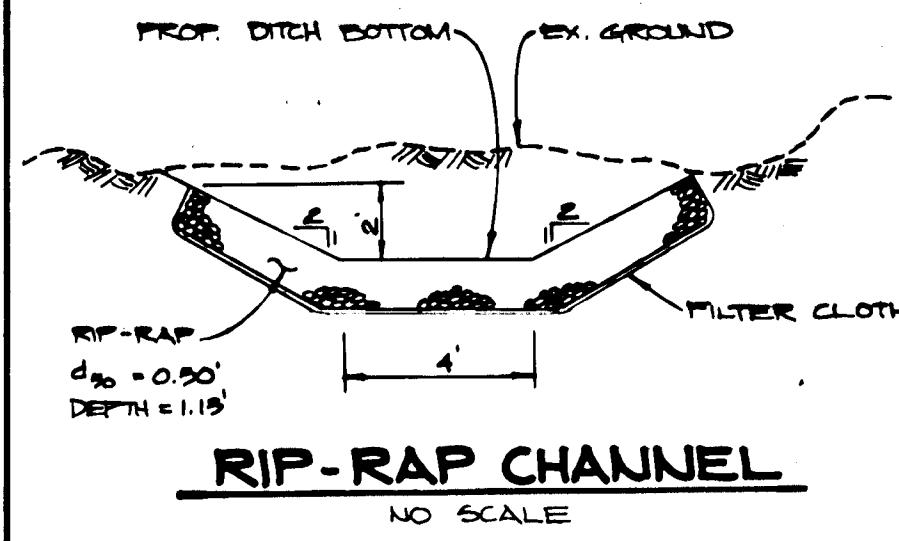
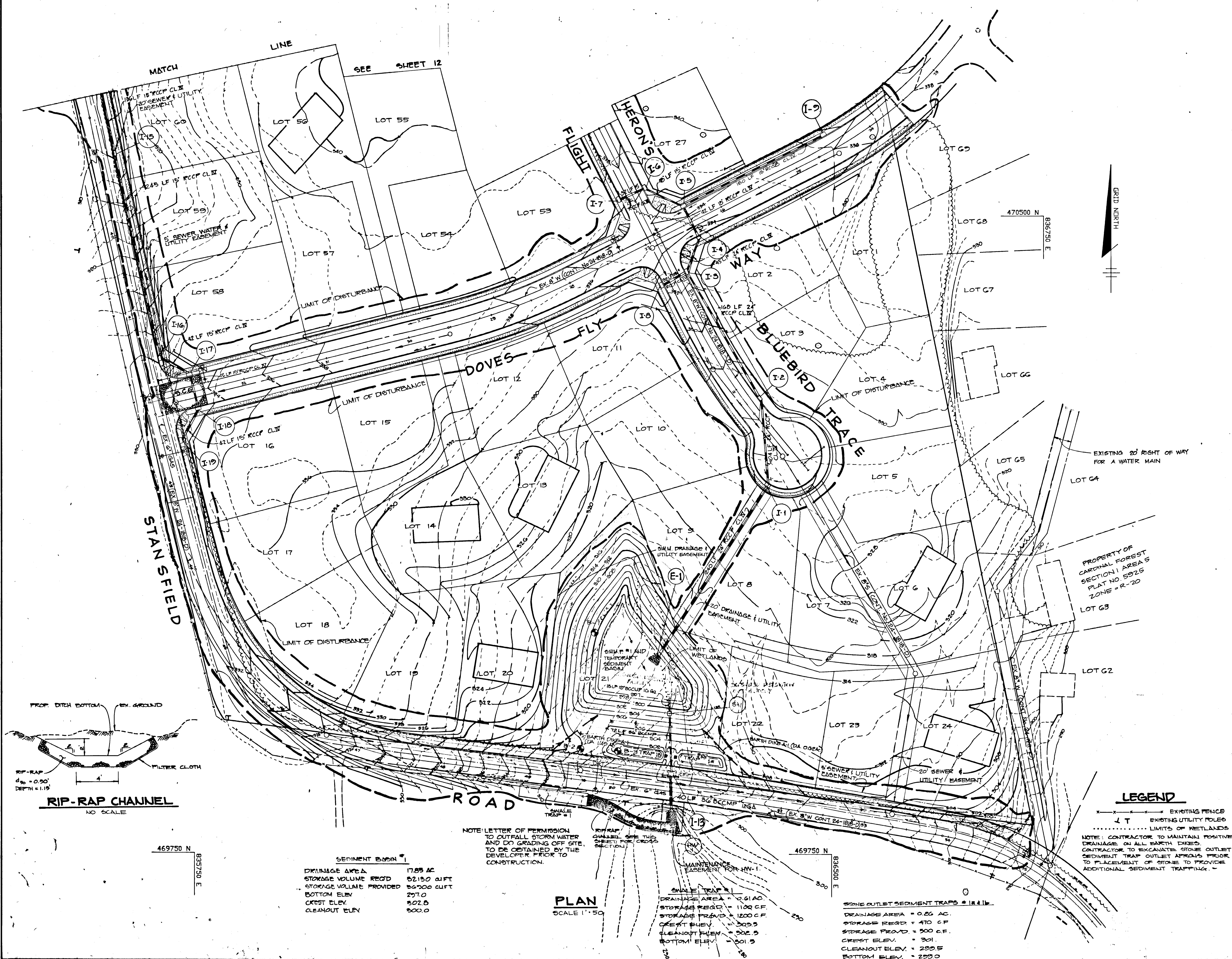
THESE PLANS FOR SMALL PONDS CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
Richard Ziehm 2/9/89  
DATE  
HOWARD S.O.D.

DATE	NO.	REVISION
OWNER HOWARD RESEARCH AND DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044		
DEVELOPER J.J.M., INC. 5570 SUITE 205 STERRETT PLACE COLUMBIA, MARYLAND 21044		
PROJECT: <b>THE FOREST</b>		
AREA TAX MAP NO. 46 & 47 ZONE R-20 PARCEL 897 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE: <b>GRADING AND SEDIMENT CONTROL PLAN</b>		

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

DATE 2-2-89  
DESIGNED BY: DAM-J.L.B.  
DRAWN BY: J.L.B.  
PROJECT NO: 47901  
DATE: JANUARY 24, 1989  
SCALE: 1"=50'  
DRAWING NO. 10 OF 14

F-89-29



SEDIMENT BASIN #1

DRAINAGE AREA	17.85 AC
STORAGE VOLUME REQ'D	52150 CUFT
STORAGE VOLUME PROVIDED	54700 CUFT
BOTTOM ELEV.	297.0
CREST ELEV.	302.0
CLEANOUT ELEV.	300.0

PLAN SCALE 1"=50'

SNAGLE TRAP #1

DRAINAGE AREA	2.61 AC
STORAGE REQ'D	1100 CF
STORAGE PROVIDED	1200 CF
CREST ELEV.	300.5
CLEANOUT ELEV.	302.5
BOTTOM ELEV.	301.5

STONE OUTLET SEDIMENT TRAPS #1 & #2

DRAINAGE AREA	0.26 AC
STORAGE REQ'D	470 CF
STORAGE PROVIDED	500 CF
CREST ELEV.	301
CLEANOUT ELEV.	299.5
BOTTOM ELEV.	299.0

NOTE: LETTER OF PERMISSION TO OUTFALL STORM WATER AND DO GRADING OFF SITE, TO BE OBTAINED BY THE DEVELOPER PRIOR TO CONSTRUCTION.

NOTE: CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE ON ALL EARTH DICES. CONTRACTOR TO EXCAVATE STONE OUTLET SEDIMENT TRAP OUTLET AREAS PRIOR TO PLACEMENT OF STONE TO PROVIDE ADDITIONAL SEDIMENT TRAPPING.

1448





J. Sarek 11-24-92

BY THE DEVELOPER:

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE ANY ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

*Joseph M. Sarek* 2-1-89  
DEVELOPER DATE

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR PONDS 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."

*Arthur E. Muegge* 2-2-89  
ENGINEER DATE

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

*Joseph M. Sarek* 2/9/89  
S.O.S. SOIL CONSERVATION SERVICE DATE

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

APPROVED *Robert D. Zecher* 2/9/89  
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

*Frank C. Taylor* 2/9/89  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Paul J. Sasser* 5/12/89  
Chief, Land Development Division DATE

*Lawrence W. McLeod* 2/28/89  
Chief, Bureau of Highways DATE

*William E. Riley* 5/12/89  
Chief, Bureau of Engineering DATE

7-15-02	1	REMOVED PATH & ADDED BOLLARDS
DATE	NO	REVISION
OWNER HOWARD RESEARCH AND DEVELOPMENT CORP. 10276 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044		

DEVELOPER  
J.J.M., INC.  
5570 SUITE 209 STERRETT PLACE  
COLUMBIA, MARYLAND 21022

PROJECT: **THE FOREST**

AREA TAX MAP NO. 4647 ZONE = R-20 PARCEL 837  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

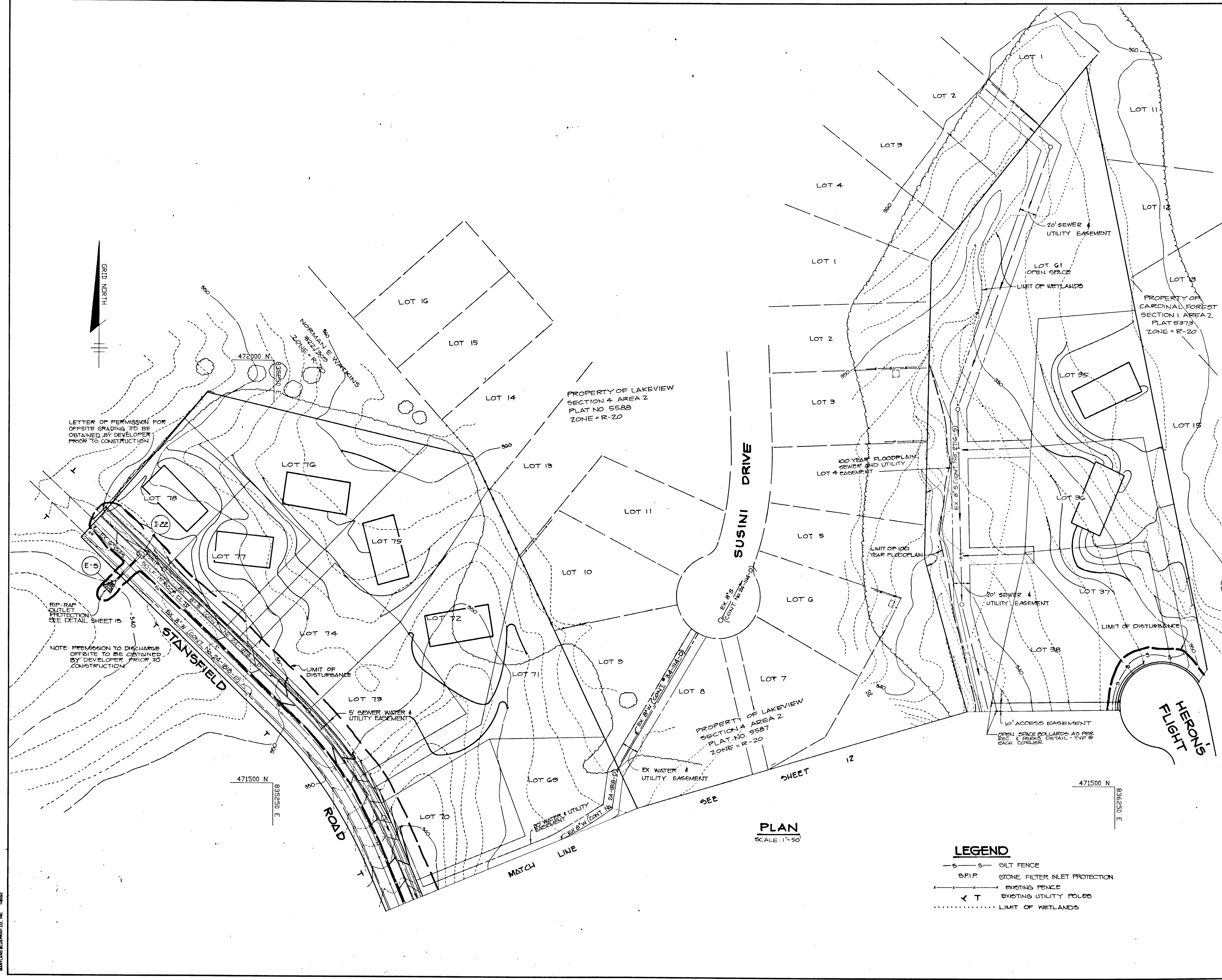
TITLE: **GRADING AND SEDIMENT CONTROL PLAN**

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

2-2-89  
DATE

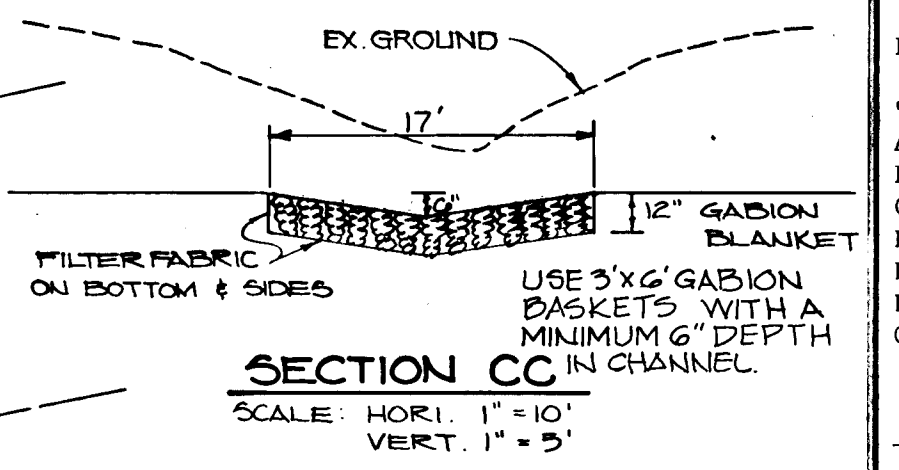
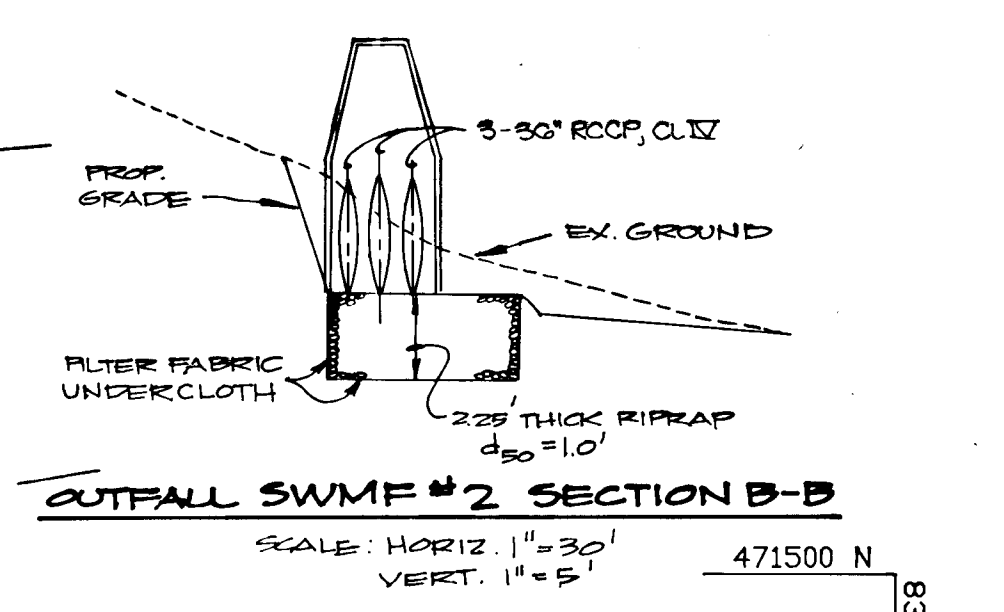
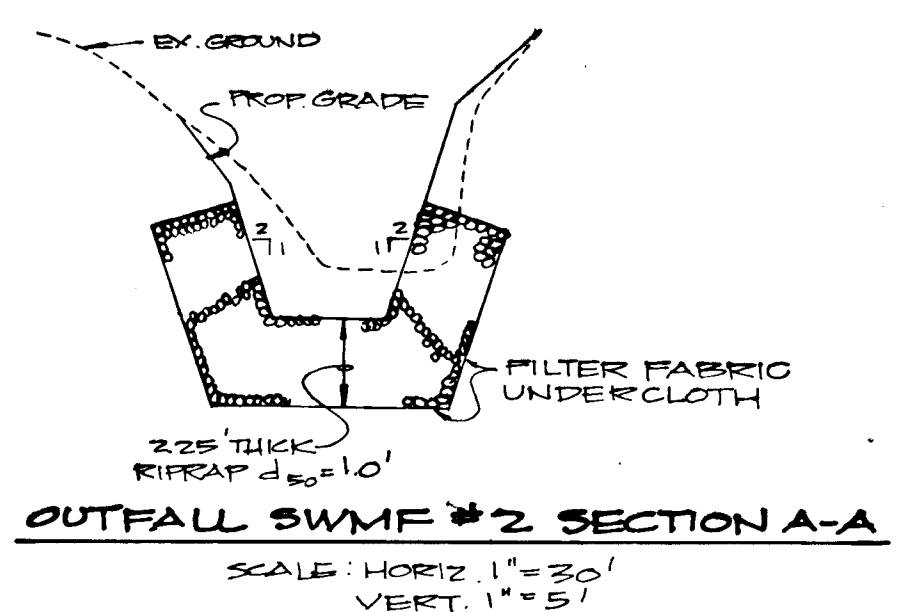
DESIGNED BY: D.A.M.  
DRAWN BY: J.L.B.  
PROJECT NO: 47901  
DATE: JANUARY 24, 1989  
SCALE: AS SHOWN  
DRAWING NO. 11 OF 14

*Arthur E. Muegge*  
ARTHUR E. MUEGGE #6107



1448





BY THE DEVELOPER:  
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE FIELD NON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
*J. Sarch*  
DEVELOPER  
11-24-92  
DATE

BY THE ENGINEER:  
"I CERTIFY THAT THIS PLAN FOR PONDS 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."  
*Allen E. Muegge*  
ENGINEER  
2-8-89  
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL PONDS CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.  
*James M. John* 2/9/89  
U.S. SOIL CONSERVATION SERVICE  
DATE

THESE PLANS FOR SMALL PONDS CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
APPROVED *Robert Zichne* 2/9/89  
HOWARD S.P.D.  
DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*Frank J. J. Coughlin* 5/5/89  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Donald J. Sartin* 5/12/89  
Chief, Land Development Division  
Date  
*Francine W. Cleveland* 2/28/89  
Chief, Bureau of Highways  
Date  
*James E. Ray* 5/12/89  
Chief, Bureau of Engineering  
Date

10-10-89 | REVISE OUTFALL PIPE & GRADING AT SWMF #2  
DATE NO REVISION

OWNER HOWARD RESEARCH AND DEVELOPMENT CORP.  
10275 LITTLE PATRIMENT PARKWAY  
COLUMBIA, MARYLAND 21044

DEVELOPER J.J.M. INC.  
5570 SUITE 205 STERRETT PLACE  
COLUMBIA, MARYLAND 21044

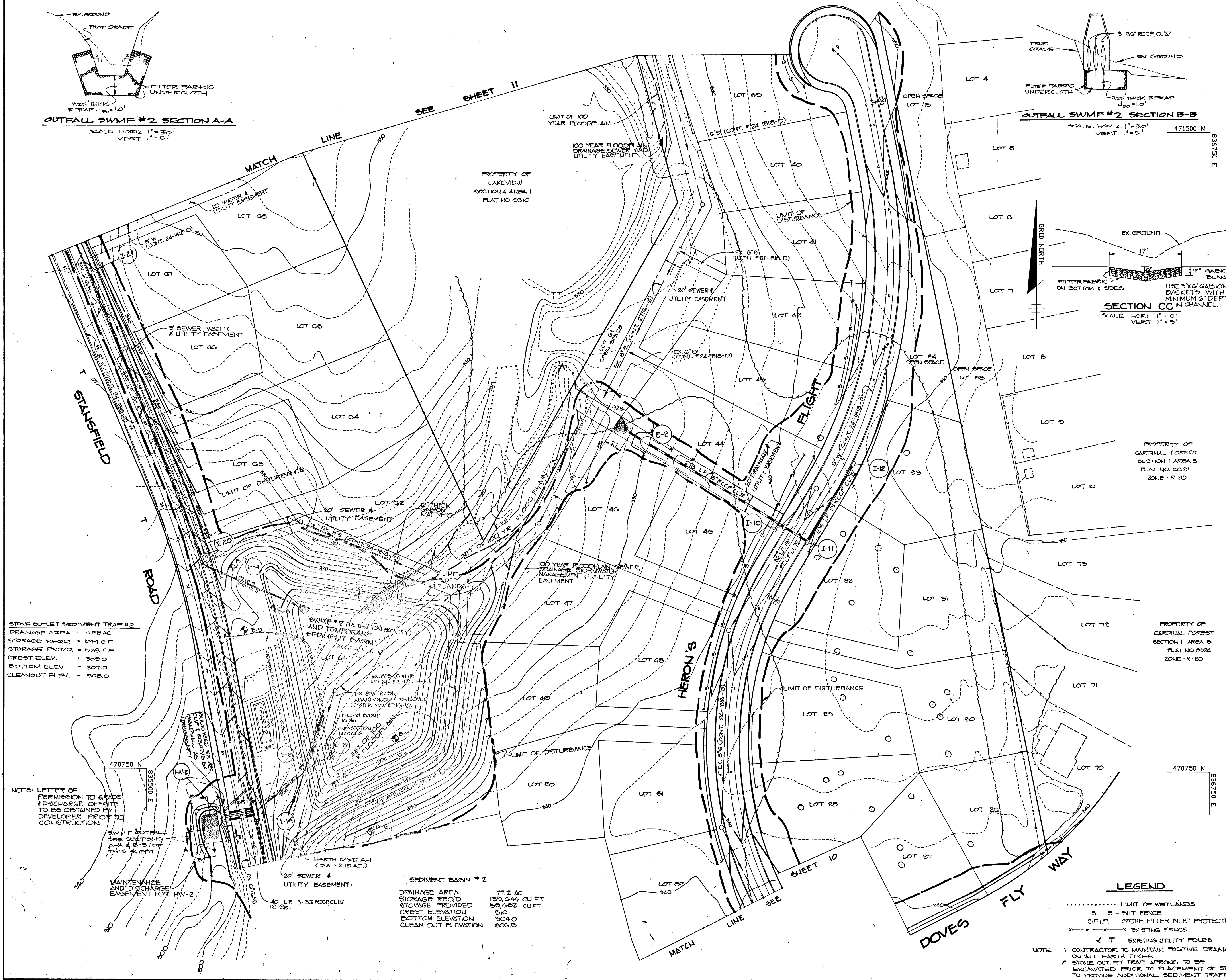
PROJECT: **THE FOREST**

AREA TAX MAP NO. 46447 ZONE R-20 PARCEL 887  
6TH 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 North Ridge Road, Ellicott City, Maryland 21034 (301) 461-2690

DATE 2-8-89  
DESIGNED BY: DAM  
DRAWN BY: J.L.B.  
PROJECT NO: 47301  
DATE: JANUARY 24, 1989  
SCALE: 1" = 50'  
DRAWING NO. 12 OF 14



**STONE OUTLET SEDIMENT TRAP #2**  
DRAINAGE AREA = 0.98 AC.  
STORAGE REQ'D = 1044 CU.FT.  
STORAGE PROVIDED = 1288 CU.FT.  
CREST ELEV. = 300.0  
BOTTOM ELEV. = 307.0  
CLEANOUT ELEV. = 308.0

NOTE: LETTER OF PERMISSION TO GRADE & DISCHARGE OFFSITE TO BE OBTAINED BY DEVELOPER PRIOR TO CONSTRUCTION.  
SWMF OUTFALL SEE SECTIONS A-A & B-B ON THIS SHEET

**SEDIMENT BASIN #2**  
DRAINAGE AREA 77.2 AC.  
STORAGE REQ'D 133,644 CU.FT.  
STORAGE PROVIDED 155,652 CU.FT.  
CREST ELEVATION 510  
BOTTOM ELEVATION 304.0  
CLEAN OUT ELEVATION 306.5

**LEGEND**  
..... LIMIT OF WETLANDS  
- - - SILT FENCE  
S.F.I.P. STONE FILTER INLET PROTECTION  
- - - - - EXISTING FENCE  
X EXISTING UTILITY POLES  
T EXISTING UTILITY POLES  
NOTE: 1. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE ON ALL EARTH DIKES.  
2. STONE OUTLET TRAP APRONS TO BE EXCAVATED PRIOR TO PLACEMENT OF STONE TO PROVIDE ADDITIONAL SEDIMENT TRAPPING.

448 / 448

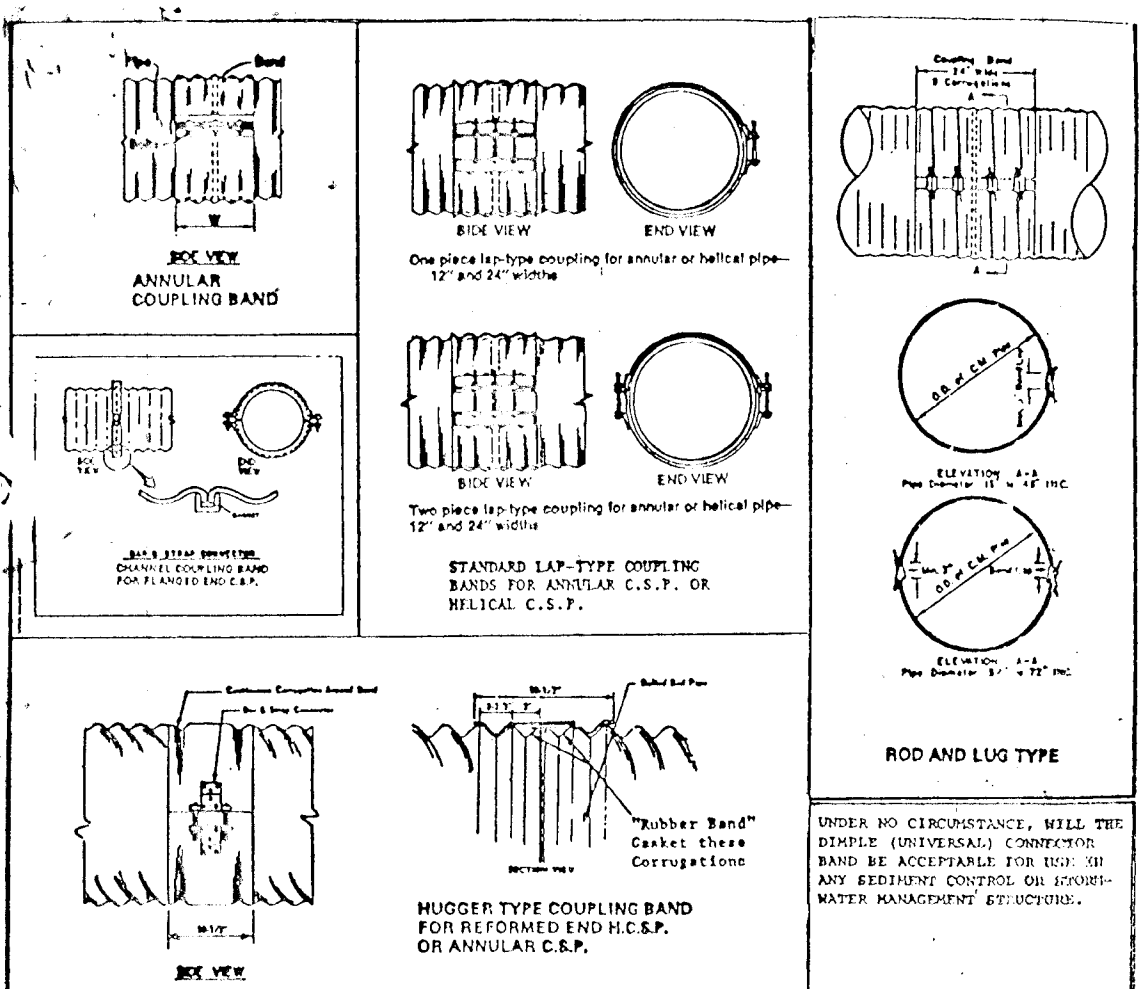




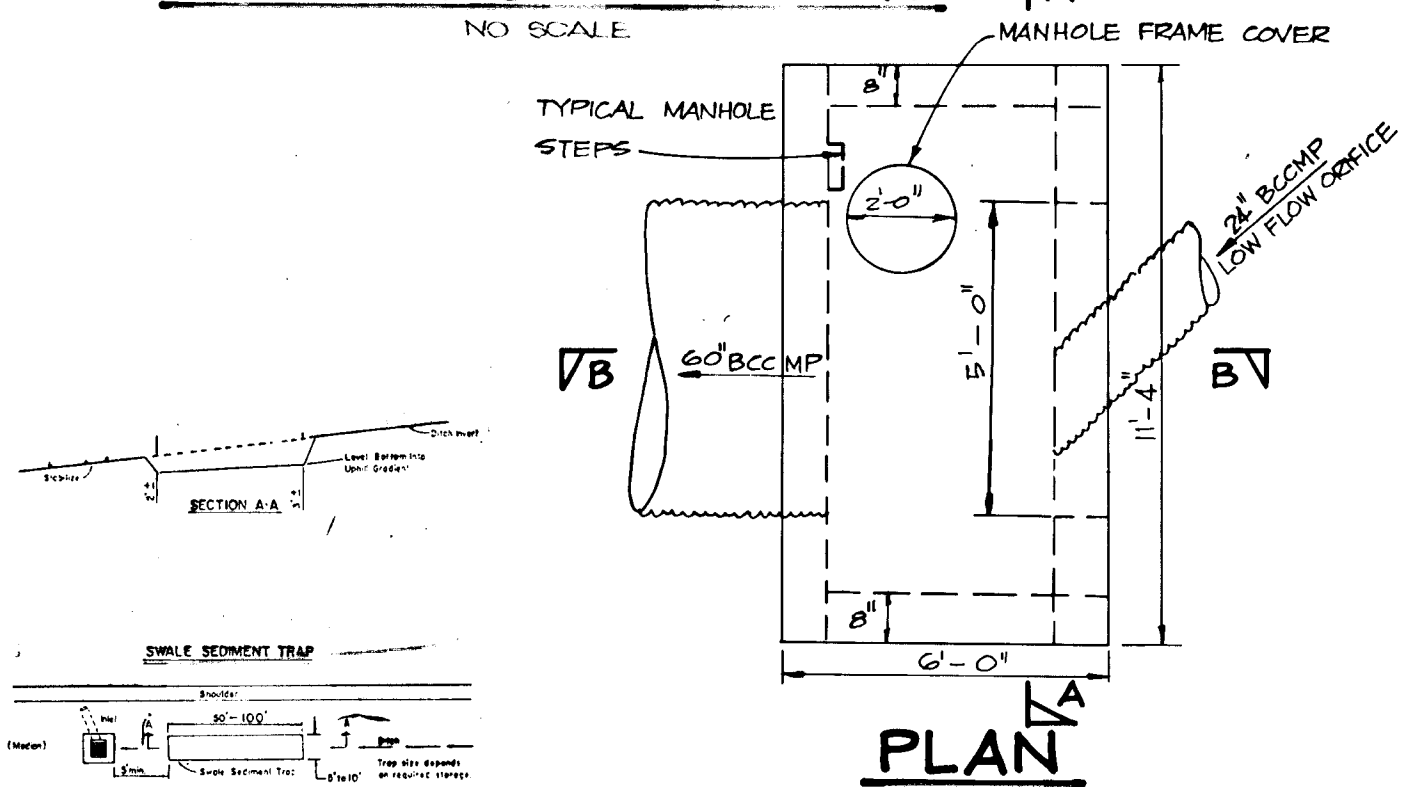


SEQUENCE OF CONSTRUCTION

1. Obtain a grading permit. Army Corps, MDE 401 and 404 wetland permits must be obtained prior to any site grading.
2. Obtain letters of permission from adjoining property owners to allow grading and discharge offsite.
3. Prior to construction of basin #2, existing sewer must be rerouted as per was contract drawings I-14-B.
4. Install stabilized construction entrance. (1 day)
5. Install sediment traps 1a, 1b and 2. Contractor to excavate for stone aprons (2 days)
6. Grade for and install sediment basins number 1 and 2. Install control structures and block low flow orifices. Install anti-seep collars and core trench along dam embankment. Contractor must test-pit for existing gas line in Stansfield Road prior to storm drain installation. (2 weeks)
7. Install silt fence, earth dikes and swale sediment trap number 1. (2 days)
8. Perform widening of Stansfield Road. Contractor to maintain one lane of traffic at all times during construction. (4 weeks)
9. Perform clearing to allow for onsite road grading. (1 week)
10. Perform grading and install all utilities. Install stone filter inlet protection as necessary. (3 weeks)
11. Stabilize all disturbed areas in accordance with permanent seeding notes. (3 days)
12. Complete construction activities including curb and gutter, sidewalk and paving.
13. Install street trees, street lights and stabilize all disturbed areas in accordance with the permanent seeding notes. (4 days)
14. Upon approval of the Howard County Department of Public Works Sediment Control Inspector remove all sediment controls and convert sediment basins to Storm Water Management Facilities as follows:
  - a. Flush storm drain systems. (1/2 day)
  - b. Pump out any impounded water. (1 day)
  - c. Remove sediment and place as directed by the Howard County Department of Public Works Sediment Control Inspector. (1/2 day)
  - d. Remove low flow orifice blocking. (1/2 day)
  - e. Install trash racks for swmf #1 & 2 as per details on sheet I-14-B (1/2 day)
  - f. Stabilize the remaining disturbed areas in accordance with the permanent seeding notes.



COUPLING BAND DETAILS FOR ANTI-SEEP COLLARS



NOTES

1. REINFORCEMENT OF STRUCTURE SHALL BE PER HOWARD CO. STD DETAIL SD 4-02.
2. THIS STRUCTURE SHALL BE BUILT WITH REINFORCED CONCRETE.
3. THE TRASH RACK SHALL BE EQUALLY SPACED AND SHALL BE PAINTED WITH NON-CORROSIVE PAINT OR EPOXY.
4. PROVIDE TYPICAL MANHOLE STEPS PER HO. CO. STD DETAIL G-5-21.
5. FOR STD MANHOLE FRAME AND COVER SEE HO. CO. STD DETAIL S.D. 3-91.

STONE OUTLET SEDIMENT TRAP

NO SCALE

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (492-7437)
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 redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1; b) 14 days 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) and (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding rates 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: 42.89 acres
  - Area Disturbed: 18.23 acres
  - Area to be roofed or paved: 3.66 acres
  - Area to be vegetatively stabilized: 20.87 acres
  - Total Cut: 42,828 Cu. Yds.
  - Total Fill: 75,109 Cu. Yds.
  - TOTAL TOPSOIL: 4,675 Cu. Yds.
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. Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
11. Sediment will be removed from traps when its depth reaches the clean out elevation shown on the plans.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Soil Amendments: Apply 0-20-20 fertilizer at the rate of 600 lbs. per acre. Narrow or disc lime and 0-20-20 fertilizer into the soil to a minimum depth of 3". Lawns or high maintenance areas will be dragged and leveled with a York rake. At the time of seeding, apply 200 lbs. of 30-0-0 ureiform fertilizer and 500 lbs. of 10-20-20 or equivalent fertilizer per acre.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 31, seed with 40 lbs. per acre (1 lb./1000 sq. ft.) of a mixture of certified "Merion" Kentucky bluegrass, common Kentucky bluegrass @ 40 lbs. per acre (1 lb./1000 sq. ft.) and Red Fescue, Pennlawn or Jamestown @ 20 lbs. per acre (0.5 lb./1000 sq. ft.) for the period May 1 thru July 31, seed with 40-60-20 mix as specified above and 2 lbs. per acre (0.05 lb./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 40-40-20 mix specified above and mulch with 2 tons/acre well-anchored straw.

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 2/8 gal. per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 3/8 gal. 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 redistributed where a short-term vegetative cover is needed.

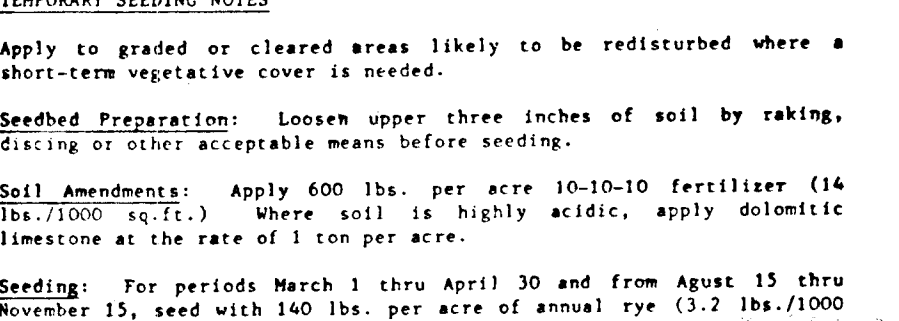
Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.) where soil is highly acidic, apply dolomitic limestone at the rate of 1 ton per acre.

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 100 lbs. per acre of annual ryegrass (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 2/8 gal. per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 3/8 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.

INSTALL COLLAR WITH CORRUPTIONS VERTICAL

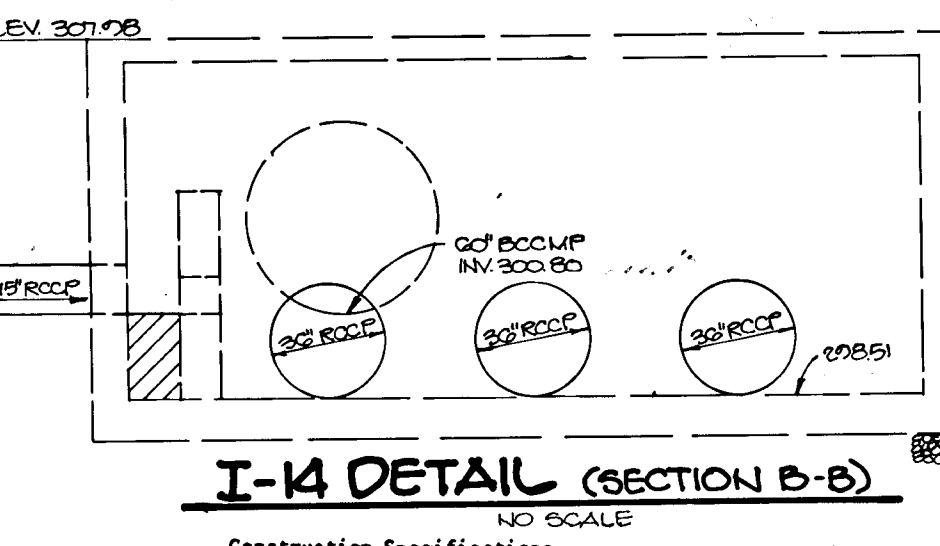


NOTES FOR COLLARS:

1. All reinforcing material shall be free of dirt, rust, scale, oil, paint or other coatings. The steel shall be accurately placed and securely welded in place. No movement of the steel will occur during placement of concrete.
2. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
3. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at time of installation.
4. Each collar shall be furnished with two 1/2" diameter rods with standard "ank lugs" for connecting collars to pipe.

ANTI-SEEP COLLAR

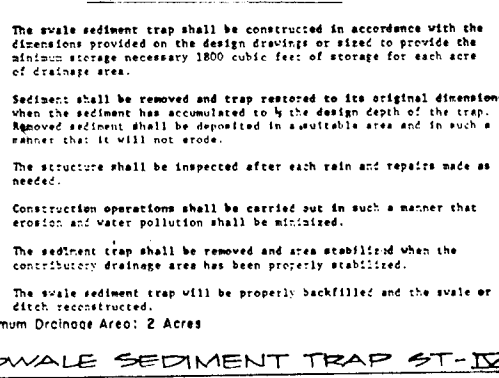
NO SCALE



STONE FILTER INLET PROTECTION

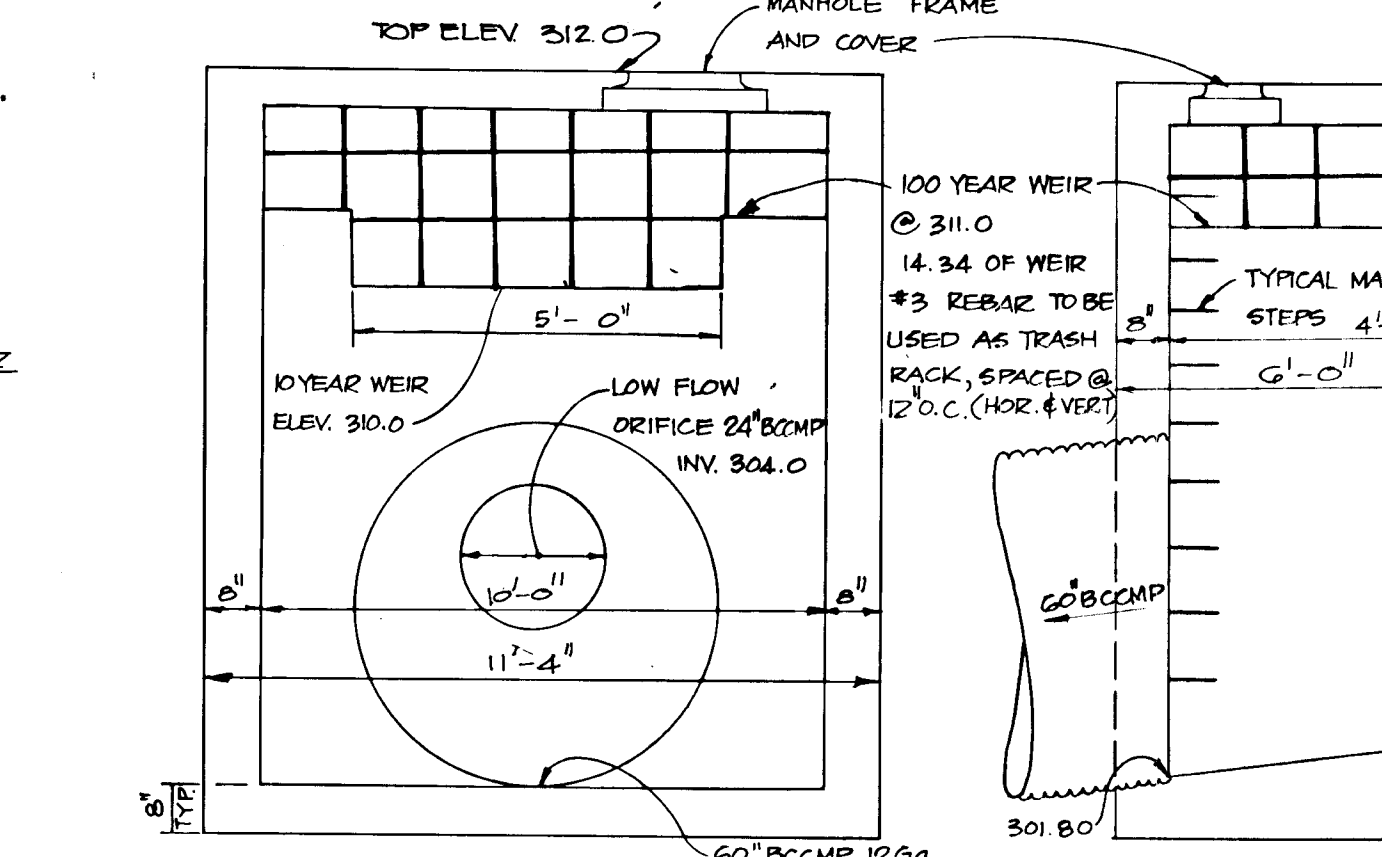
NO SCALE

1. Materials:
  - A. Wooden frame is to be constructed of 2" x 4" construction grade lumber.
  - B. Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inlets, with water fully impounded against it.
  - C. Filter cloth must be of a type approved for this purpose; resistant to sunlight with sieve size, 100, 40-60, to allow sufficient passage of water and removal of sediment.
  - D. Stone is to be 2" in size and clean, since fines would clog the cloth.
2. Procedure:
  - A. Awele, ditchline or yard inlet protection.
    1. Excavate completely around inlet to a depth of 18" below notch elevation.
    2. 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.
    3. Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
    4. 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.
    5. Backfill around inlet in compacted 6" layers until layer of earth is even with notch elevation on ends and top elevation on side.
    6. If the inlet is not at a low point, construct a compacted earth dike to the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (weir).
    7. This structure must be inspected frequently and the filter fabric replaced when clogged.
  - B. Curb Inlet Protection.
    1. 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.
    2. Place a piece of approved filter cloth (40-60 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
    3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6" apart).
    4. Place the assembly against the inlet throat 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 washers or alternate weight).
    5. From 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" stone 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.
    6. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
    7. Assume that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.



SWALE SEDIMENT TRAP S-1-D

NO SCALE

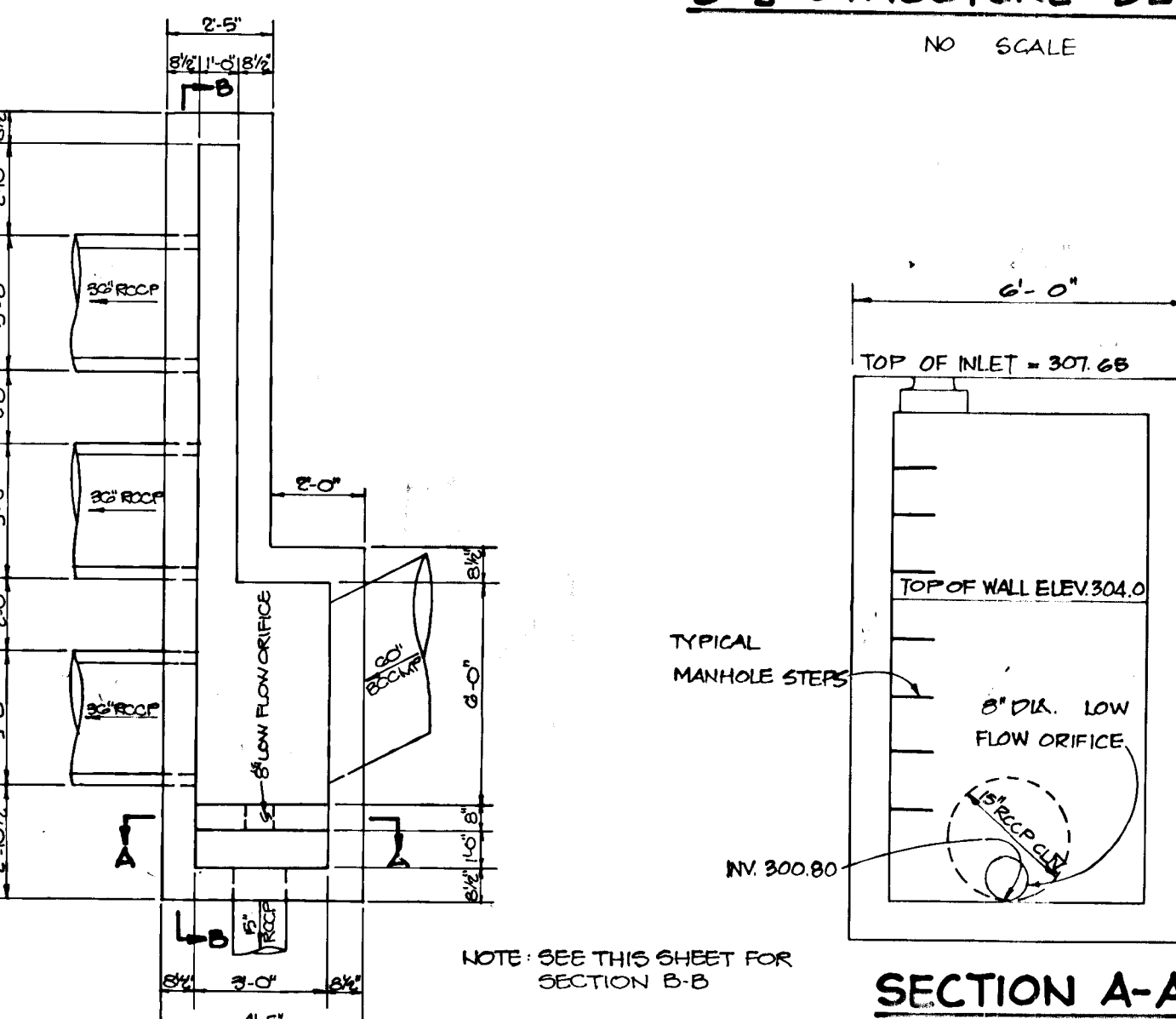


SECTION A-A

SECTION B-B

S-2 STRUCTURE DETAIL

NO SCALE



NOTE: SEE THIS SHEET FOR SECTION B-B

PLAN

I-14 DETAIL NO SCALE

J. Sanchez  
11.24.92

BY THE DEVELOPER:  
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."  
Arthur E. Muegge  
DEVELOPER  
2-1-89  
DATE

BY THE ENGINEER:  
"I CERTIFY THAT THIS PLAN FOR PONDS 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."  
Arthur E. Muegge  
ENGINEER  
2-2-89  
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL PONDS CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.  
John A. Johnson  
S.S. SOIL CONSERVATION SERVICE  
2/9/89  
DATE

APPROVED: Howard County Office of Planning and Zoning  
Richard J. Zelin  
HOWARD S.C.U.  
2/9/89  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Frank S. Langley  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
5/6/85  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Paul M. Mason  
CHIEF, Land Development Division  
5/12/89  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Dawson W. Wilcock  
CHIEF, Bureau of Highways  
2/28/89  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
Dawson W. Wilcock  
CHIEF, Bureau of Engineering  
5/12/89  
DATE

10-10-89 1 REVISE DETAIL FOR I-14  
DATE NO REVISION  
OWNER: HOWARD RESEARCH AND DEVELOPMENT CORP  
10275 LITTLE PATUXENT PARKWAY  
COLUMBIA, MARYLAND 21044  
DEVELOPER: JUM, INC.  
9570 SUITE 208 STERRETT PLACE  
COLUMBIA, MARYLAND 21044

PROJECT: THE FOREST  
AREA TAX MAP NO 46147 ZONED R-20 PARCEL 831  
G<sup>th</sup> ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
TITLE: SEDIMENT CONTROL/SWM NOTES AND DETAILS

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

2-2-89 DATE  
3-28-89 P-88-07  
DESIGNED BY: CJR  
DRAWN BY: SLS  
PROJECT NO: 47901  
DATE: JANUARY 24, 1989  
SCALE: AS SHOWN  
DRAWING NO. 14 OF 14

F-89-20