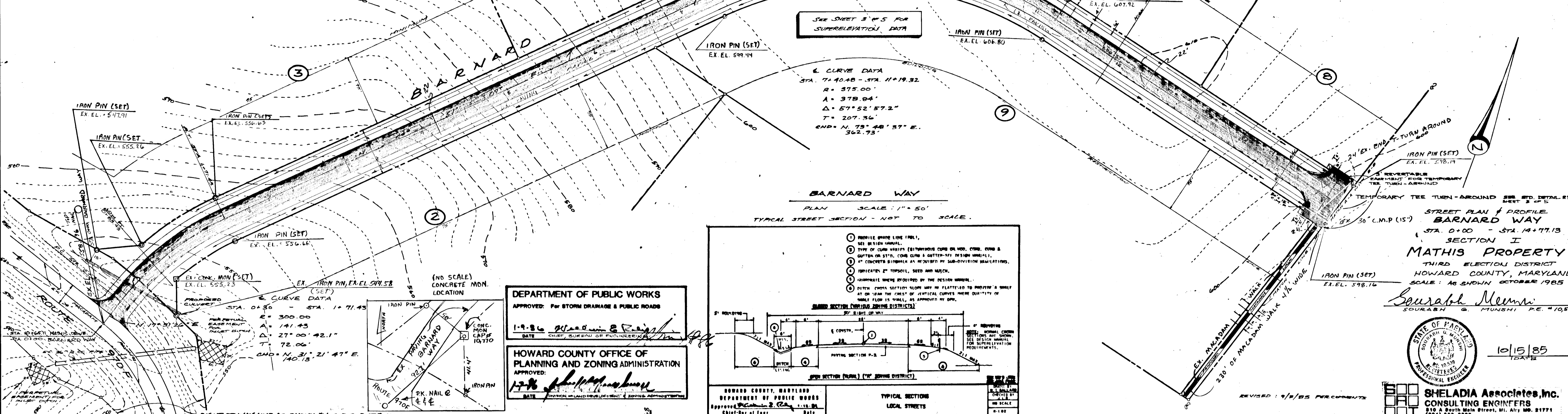






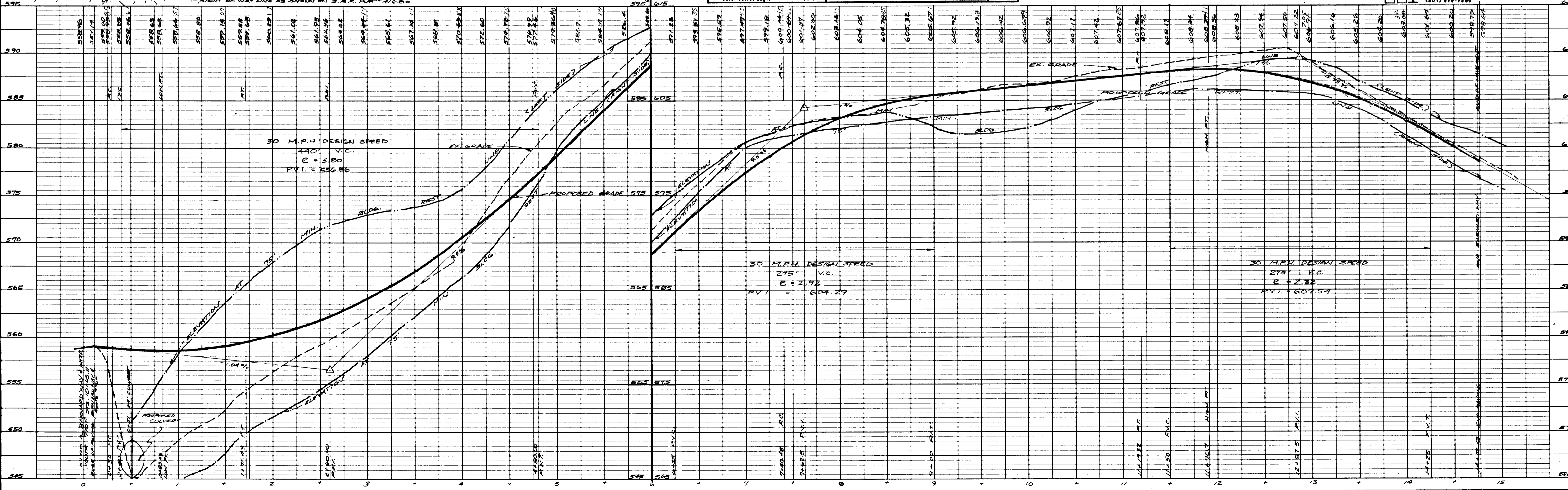
SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVEMENT MATERIALS	CONCRETE BASE ALTERNATES
P-2	URBAN LOCAL STREETS LOCAL, ONE-WAY OR TWO-WAY PRIVATE ROADS BEHIND INDUSTRIAL PARKING AREAS APARTMENTS AND COMMERCIAL INDUSTRIAL ZONES WITH NO MORE THAN 10 FEET WIDE PER DAY	FULL DEPTH BIT. CONC. ALTERNATE 1 1/2" HT. CONC. SURFACE 4" HT. CONC. BASE	CONCRETE BASE ALTERNATES 1 1/2" HT. CONC. SURFACE 4" HT. CONC. BASE 1" CHIPPED SAND COURSE 1" COURSE OF 1/2" CONC. UNDER STABILIZED AGGREGATE BASE COURSE

NOTES:  
 1) ROAD CLASSIFICATION: LOCAL  
 2) MINIMUM DESIGN SPEED: 30 MPH  
 3) A MINIMUM OF 210 FEET OF SIGHT DISTANCE IS REQUIRED TO BE PROVIDED ALONG ALL VERTICAL CURVES.



DATE	
BY	
REVISIONS	
PLANNED	
NOTE BOOK	
NO.	

DATE	
BY	
REVISIONS	
PLANNED	
NOTE BOOK	
NO.	

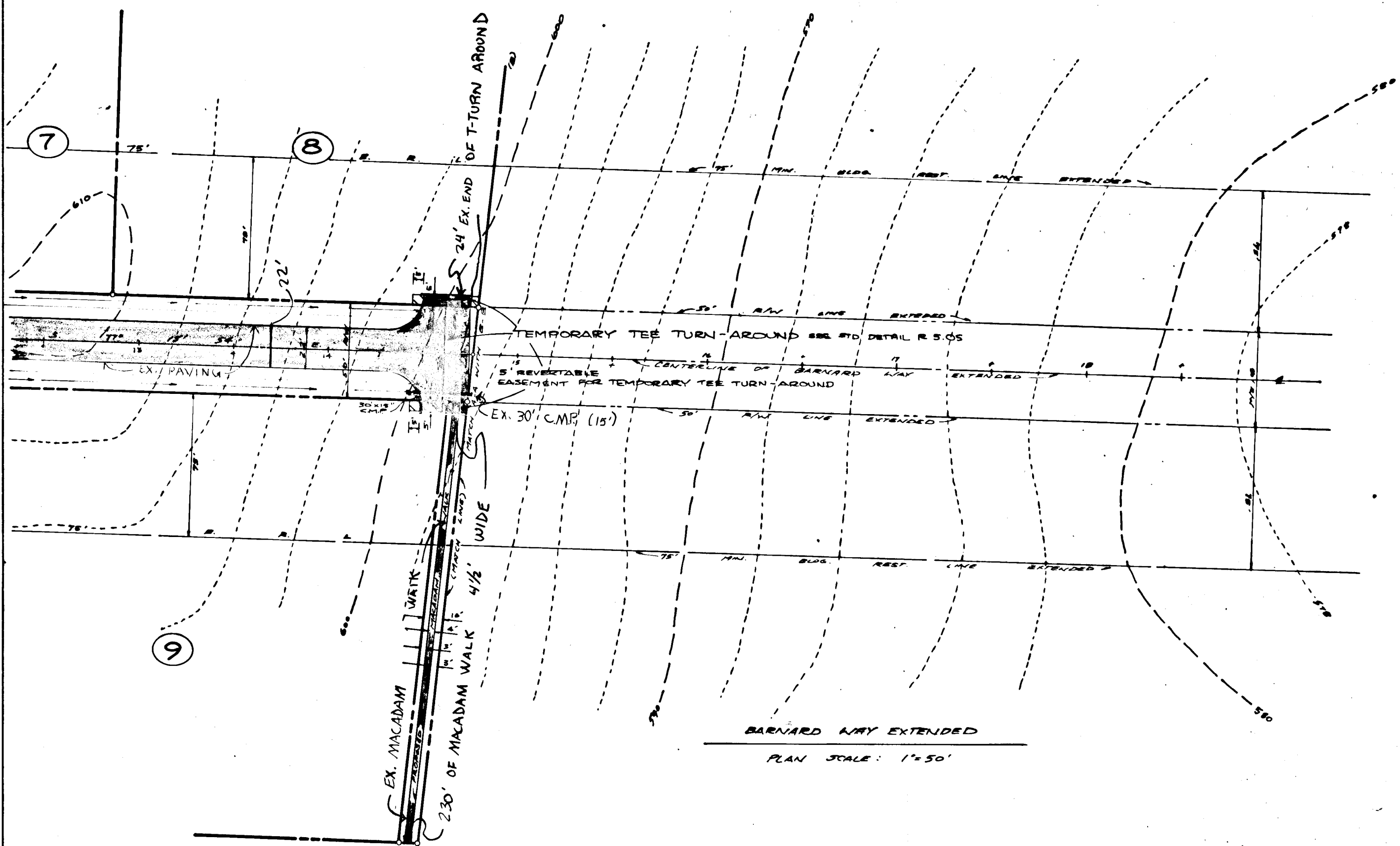


**SHELADIA Associates, Inc.**  
 CONSULTING ENGINEERS  
 210 A South Main Street, Mt. Airy, N.C. 27025  
 (800) 878-7880

#1168



DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 SUPERVISOR: \_\_\_\_\_  
 PLANNING AND ZONING ADMINISTRATION



**SUPERELEVATION DATA**

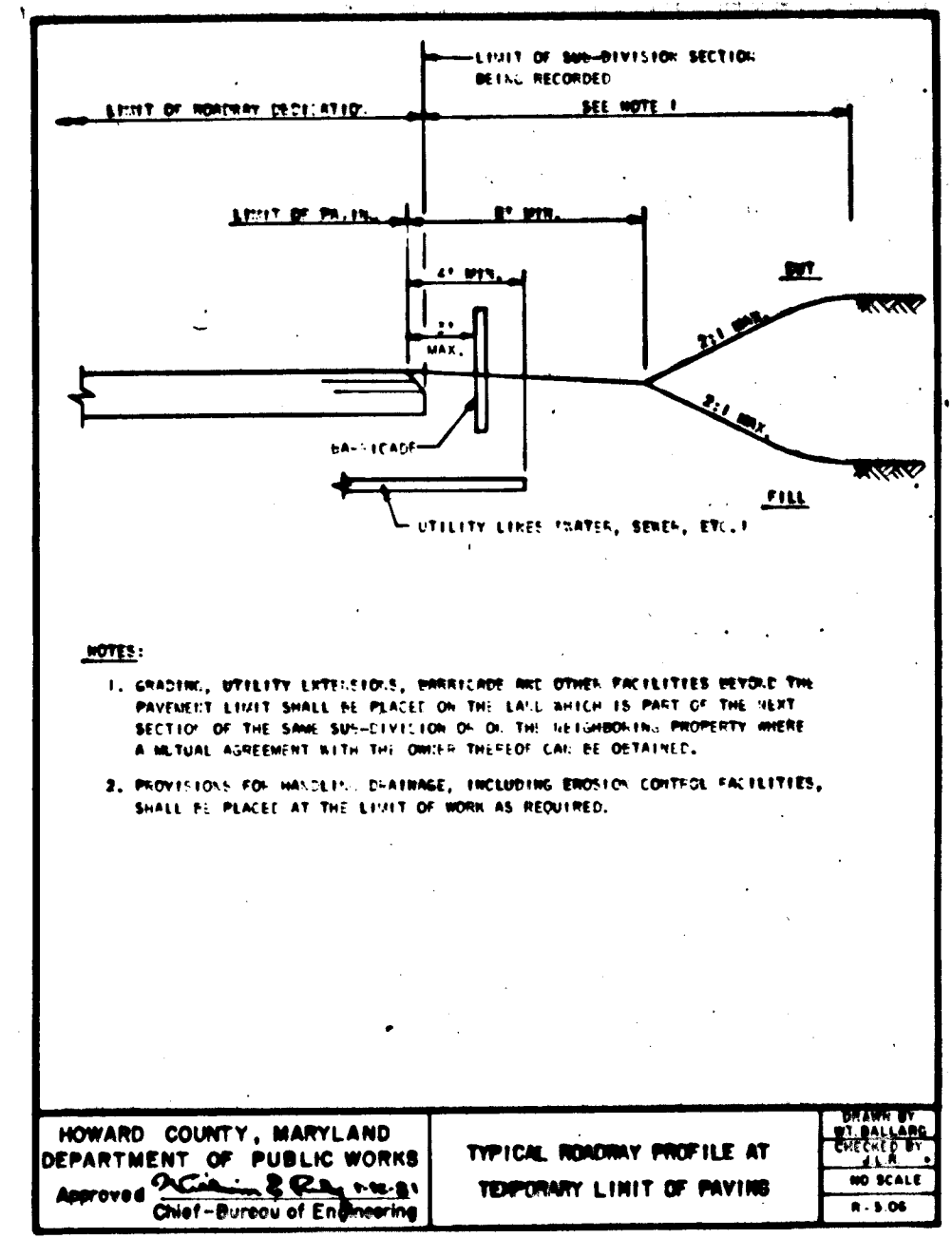
P.C. STA. = 7+40.48  
 P.T. STA. = 11+19.32  
 DEGREE = 15°16'44" CURVE RIGHT  
 SUPER = 0.030 F1/F1  
 C = 0.00030  
 TRANS. LENGTH = 200.00 FT  
 SUPEREL. RUNOUT = 100.00 FT  
 TANGENT RUNOUT = 100.00 FT  
 TRANS. RATE = 0.0033  
 CHANGE IN CROSS SLOPE = -0.03 TO 0.03 0.00

STATION	ELEV. C/L	ELEV. EDGE PAVEMENT LEFTSIDE	ELEV. EDGE PAVEMENT RIGHTSIDE	DESCRIPTION
5+73.81	586.37	586.04	586.04	
6+00.00	588.86	588.62	588.53	TANGENT RUNOUT
6+30.00	593.41	593.43	593.18	
6+73.81	595.50	595.50	595.17	
7+00.00	597.49	597.58	597.16	SUPEREL. RUNOUT
7+50.00	600.67	600.94	600.36	
7+73.81	601.94	602.27	601.61	
8+00.00	603.73	603.45	602.79	
8+50.00	604.78	605.11	604.05	
9+00.00	605.47	606.00	605.34	FULL SUPEREL.
9+50.00	606.77	606.50	605.84	
10+00.00	606.67	607.00	606.34	
10+50.00	607.17	607.50	606.84	
10+85.99	607.53	607.86	607.20	
11+00.00	607.67	607.95	607.34	SUPEREL. RUNOUT
11+50.00	608.17	608.29	607.84	
11+85.99	608.37	608.37	608.04	
12+00.00	608.36	608.31	608.03	TANGENT RUNOUT
12+50.00	607.94	607.73	607.61	
12+85.99	607.26	606.93	606.73	

BEGIN TRANS. AT STA. 5+73.81  
 HALF LEVEL AT STA. 6+73.81  
 P.C. STA. 7+40.48  
 FULL SUPER AT STA. 7+73.81

FULL SUPER

FULL SUPER AT STA. 10+85.99  
 P.T. STA. 11+19.32  
 HALF LEVEL AT STA. 11+85.99  
 END TRANS. AT STA. 12+85.99



DEPARTMENT OF PUBLIC WORKS  
 APPROVED: For STORM DRAINAGE & PUBLIC ROADS  
 DATE: 1-9-86  
 CHIEF, BUREAU OF ENGINEERING

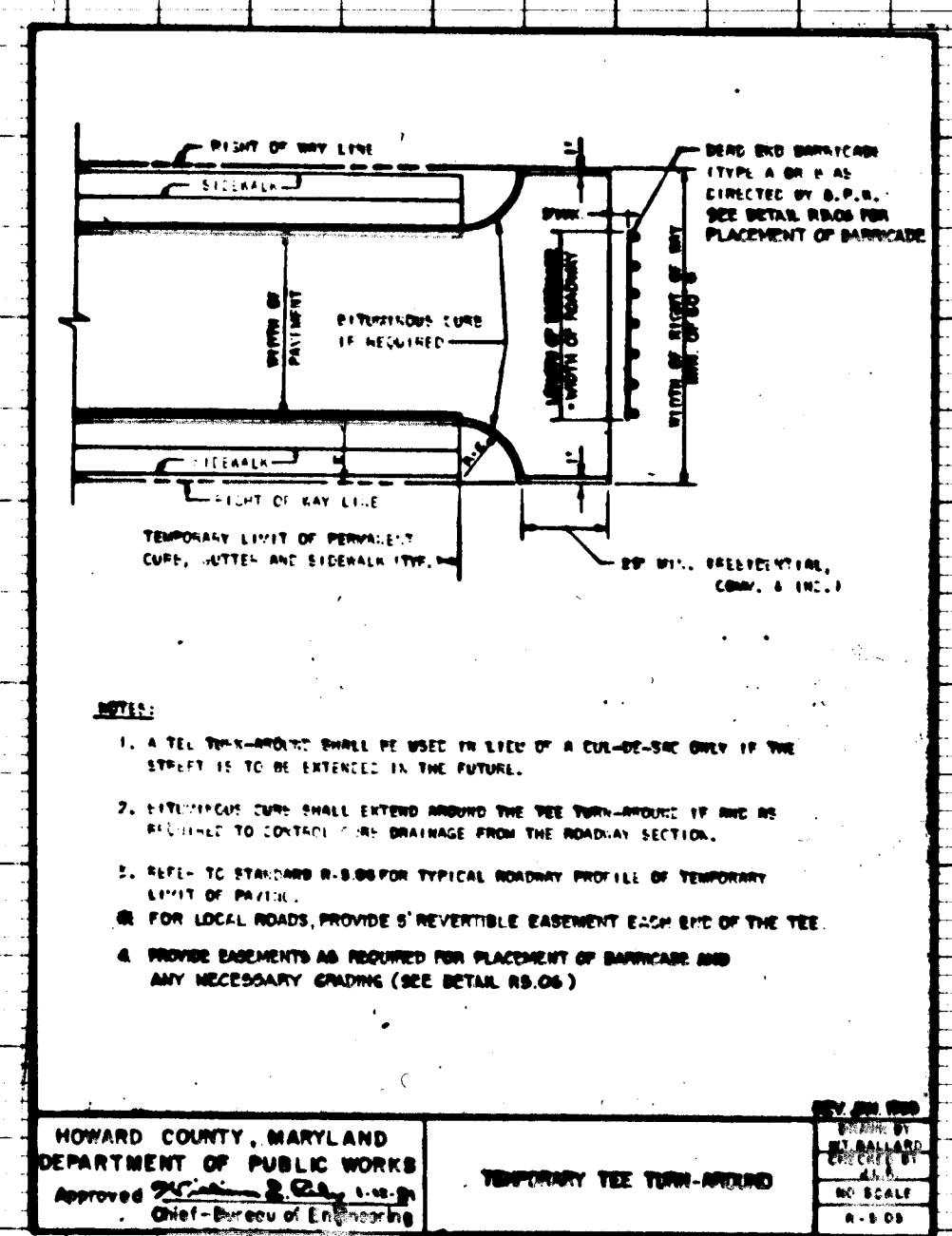
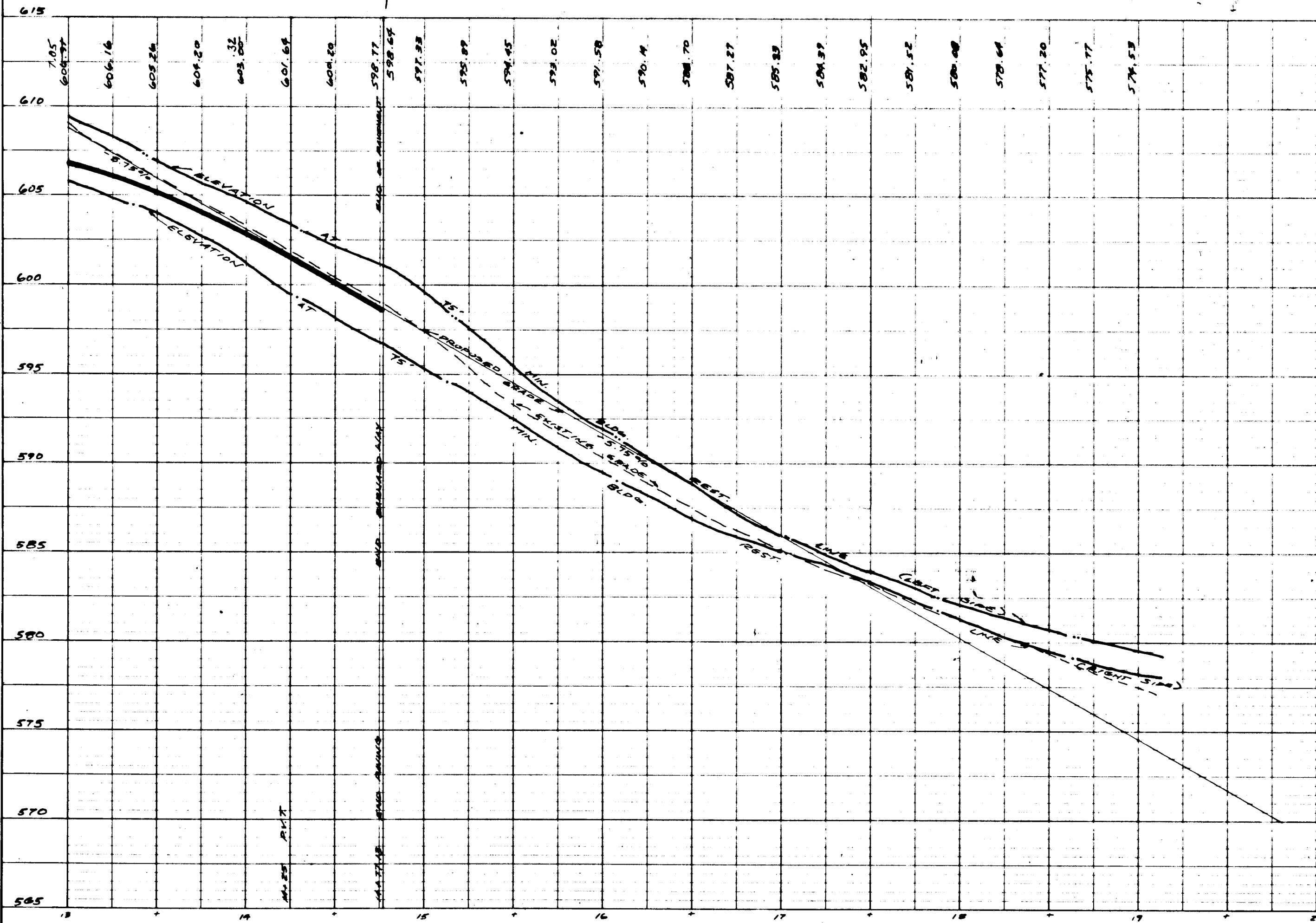
HOWARD COUNTY OFFICE OF PLANNING AND ZONING ADMINISTRATION  
 APPROVED: 1-7-86  
 DATE: 1-7-86



STREET PLAN & PROFILE  
 BARNARD WAY  
 STA. 0+00 - STA. 12+77.13  
 SECTION I  
 MATHIS PROPERTY  
 THIRD ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN OCTOBER 1985

SHELADIA Associates, Inc.  
 CONSULTING ENGINEERS  
 210 E. 30th Street, Prince Georges, MD 20814  
 (301) 271-5200

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 SUPERVISOR: \_\_\_\_\_  
 PLANNING AND ZONING ADMINISTRATION



DEPARTMENT OF PUBLIC WORKS  
 APPROVED: 1-7-86  
 DATE: 1-7-86

HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PUBLIC WORKS  
 APPROVED: 1-7-86  
 DATE: 1-7-86

SHELADIA Associates, Inc.  
 CONSULTING ENGINEERS  
 210 E. 30th Street, Prince Georges, MD 20814  
 (301) 271-5200

BARNARD WAY  
 PROFILE

50' R/W

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

PLATE 1 PLAN PROFILE OF P. & R. E. STANDARD  
 CITY/STATE COORDINATION  
 PRINTED IN U.S.A.

AS-BUILT 1-7-88

SHEET 3 OF 5

F-86-60

JOB NO. 281-377

#1168



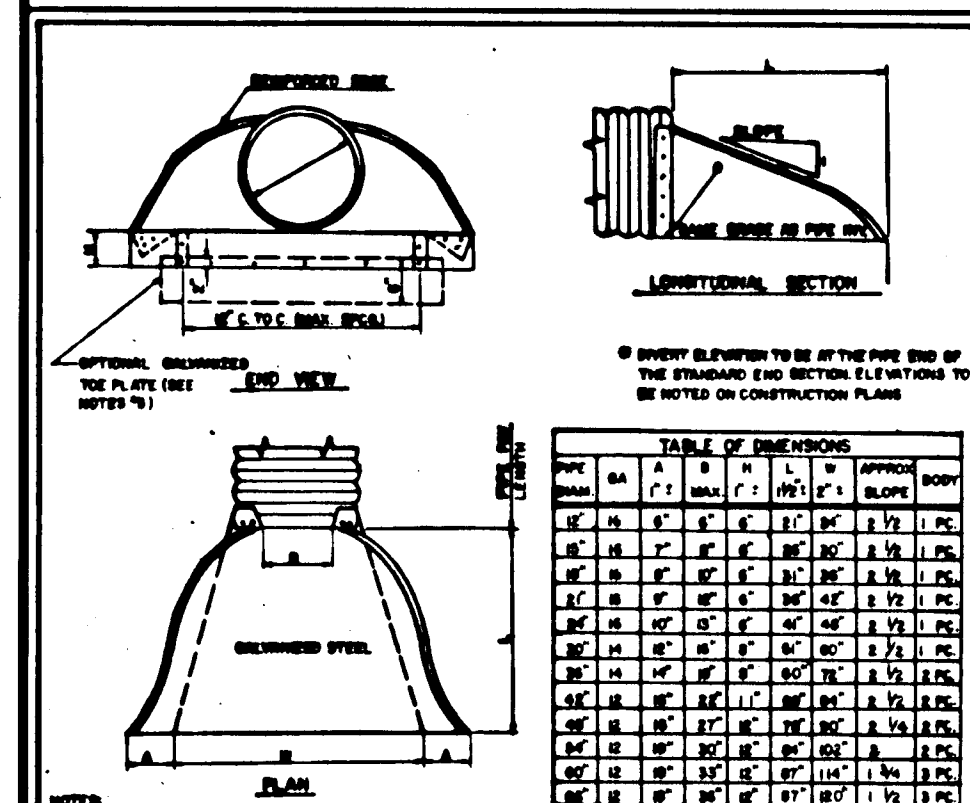
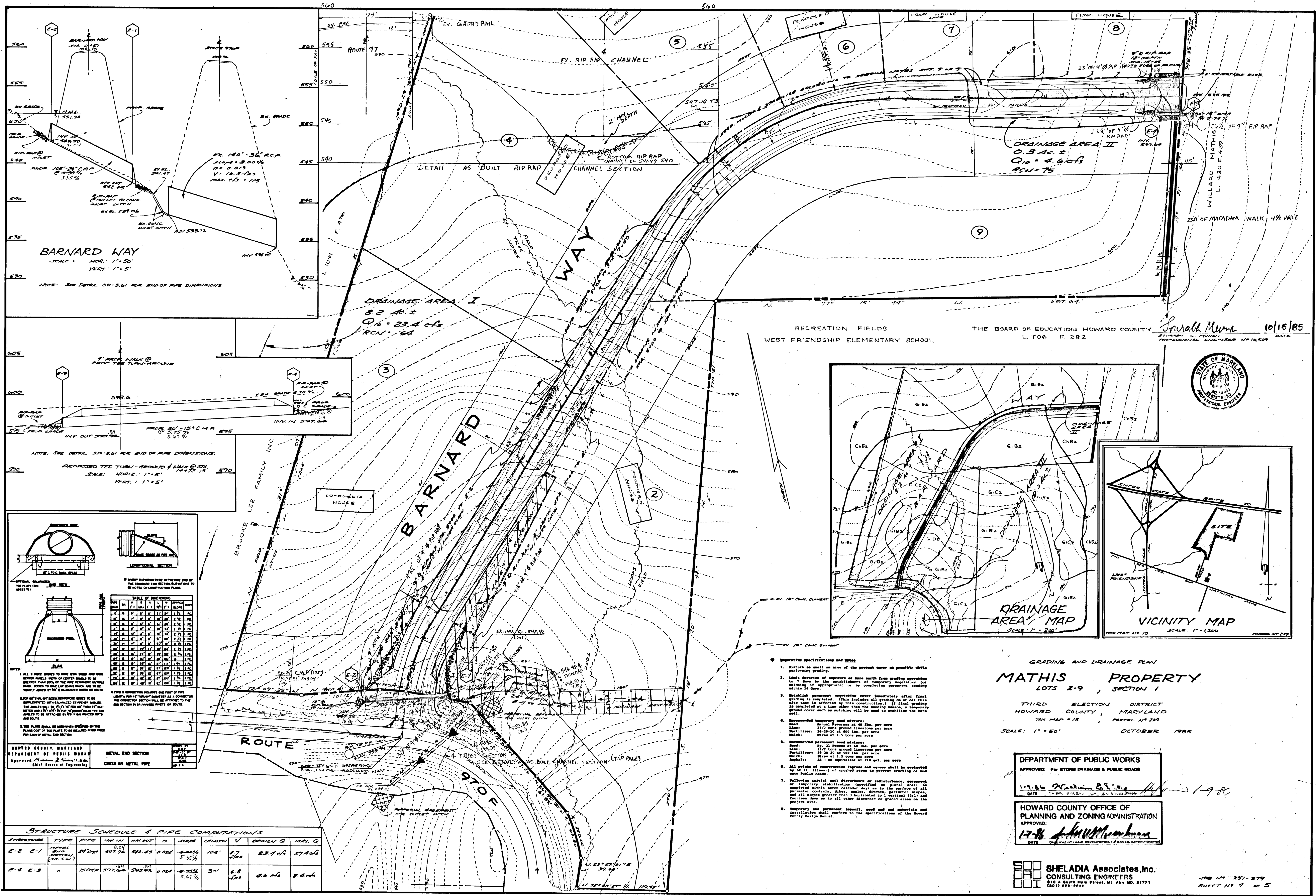


TABLE OF DIMENSIONS

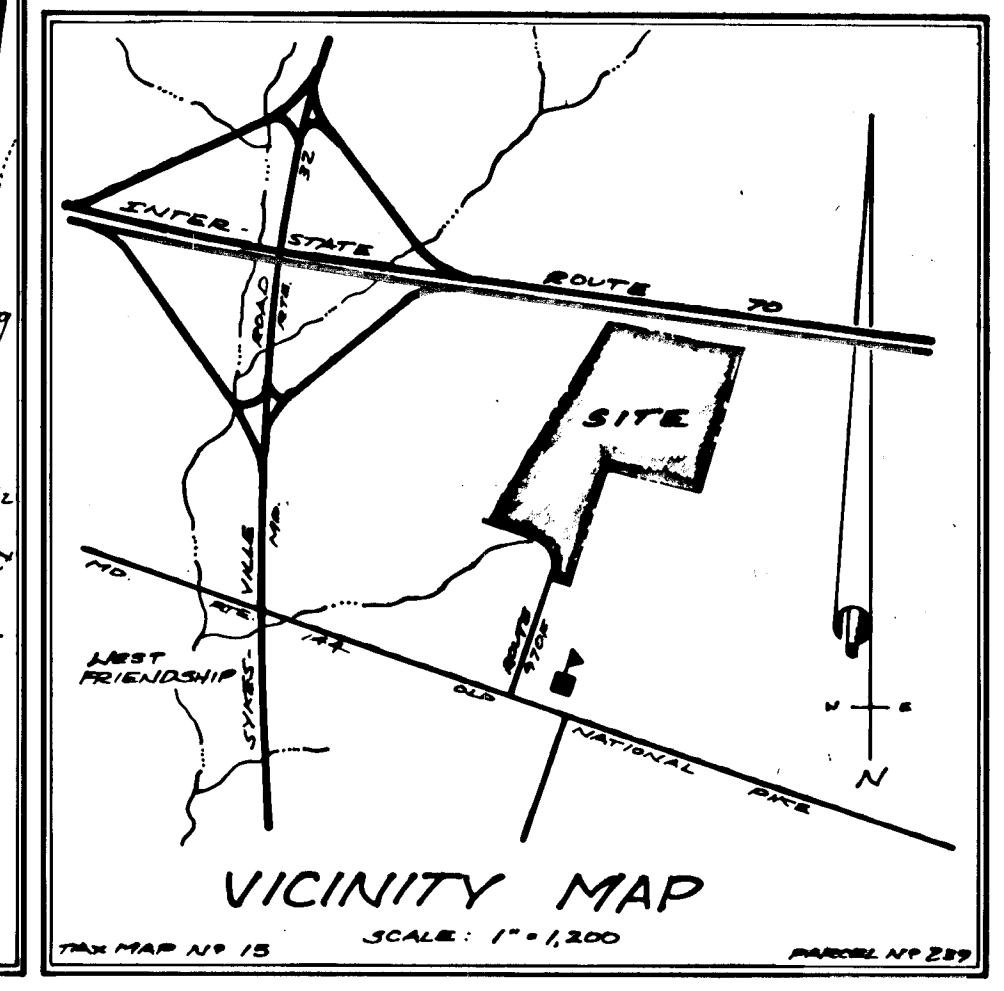
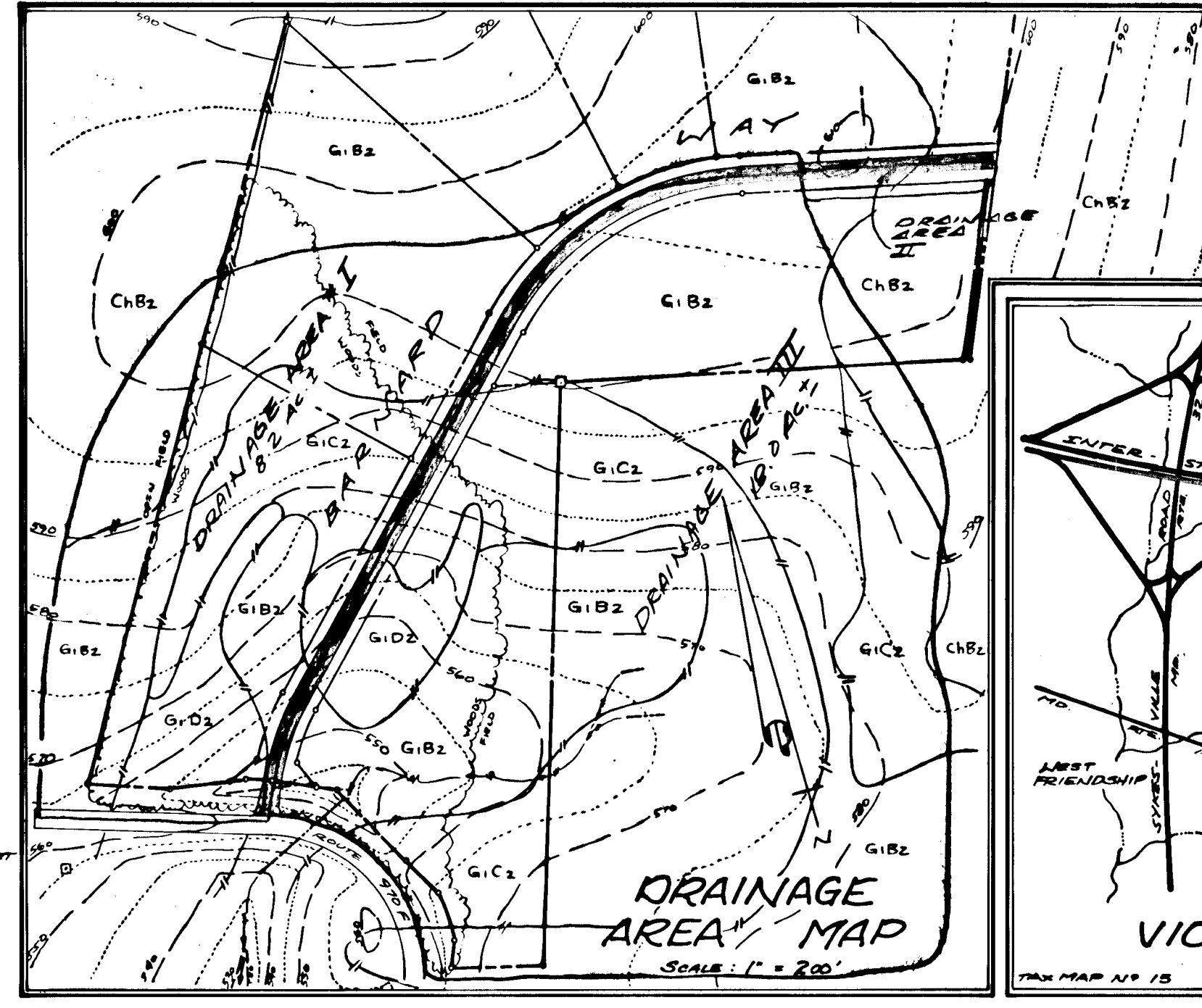
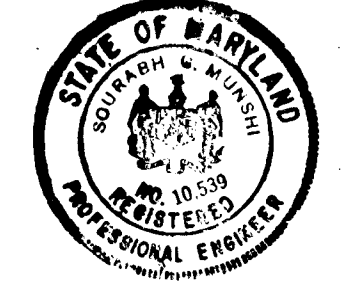
NO.	TYPE	DIAMETER (IN)	LENGTH (FT)	DEPTH (FT)	AREA (SQ FT)	PERCENTAGE
1	E-1	36"	100'	4.00'	1131.00	100%
2	E-1	36"	100'	4.00'	1131.00	100%
3	E-1	36"	100'	4.00'	1131.00	100%
4	E-1	36"	100'	4.00'	1131.00	100%
5	E-1	36"	100'	4.00'	1131.00	100%
6	E-1	36"	100'	4.00'	1131.00	100%
7	E-1	36"	100'	4.00'	1131.00	100%
8	E-1	36"	100'	4.00'	1131.00	100%
9	E-1	36"	100'	4.00'	1131.00	100%
10	E-1	36"	100'	4.00'	1131.00	100%
11	E-1	36"	100'	4.00'	1131.00	100%
12	E-1	36"	100'	4.00'	1131.00	100%
13	E-1	36"	100'	4.00'	1131.00	100%
14	E-1	36"	100'	4.00'	1131.00	100%
15	E-1	36"	100'	4.00'	1131.00	100%
16	E-1	36"	100'	4.00'	1131.00	100%
17	E-1	36"	100'	4.00'	1131.00	100%
18	E-1	36"	100'	4.00'	1131.00	100%
19	E-1	36"	100'	4.00'	1131.00	100%
20	E-1	36"	100'	4.00'	1131.00	100%
21	E-1	36"	100'	4.00'	1131.00	100%
22	E-1	36"	100'	4.00'	1131.00	100%
23	E-1	36"	100'	4.00'	1131.00	100%
24	E-1	36"	100'	4.00'	1131.00	100%
25	E-1	36"	100'	4.00'	1131.00	100%
26	E-1	36"	100'	4.00'	1131.00	100%
27	E-1	36"	100'	4.00'	1131.00	100%
28	E-1	36"	100'	4.00'	1131.00	100%
29	E-1	36"	100'	4.00'	1131.00	100%
30	E-1	36"	100'	4.00'	1131.00	100%
31	E-1	36"	100'	4.00'	1131.00	100%
32	E-1	36"	100'	4.00'	1131.00	100%
33	E-1	36"	100'	4.00'	1131.00	100%
34	E-1	36"	100'	4.00'	1131.00	100%
35	E-1	36"	100'	4.00'	1131.00	100%
36	E-1	36"	100'	4.00'	1131.00	100%
37	E-1	36"	100'	4.00'	1131.00	100%
38	E-1	36"	100'	4.00'	1131.00	100%
39	E-1	36"	100'	4.00'	1131.00	100%
40	E-1	36"	100'	4.00'	1131.00	100%
41	E-1	36"	100'	4.00'	1131.00	100%
42	E-1	36"	100'	4.00'	1131.00	100%
43	E-1	36"	100'	4.00'	1131.00	100%
44	E-1	36"	100'	4.00'	1131.00	100%
45	E-1	36"	100'	4.00'	1131.00	100%
46	E-1	36"	100'	4.00'	1131.00	100%
47	E-1	36"	100'	4.00'	1131.00	100%
48	E-1	36"	100'	4.00'	1131.00	100%
49	E-1	36"	100'	4.00'	1131.00	100%
50	E-1	36"	100'	4.00'	1131.00	100%

STRUCTURE SCHEDULE & PIPE COMPUTATIONS

STRUCTURE	TYPE	PIPE	IN IN	LN IN	D	SCPM	DEPTH	V	DESIGN Q	MAX. Q
E-2	E-1	METAL END SECTION (30'-5.6')	36"	547.70	0.028	5.00%	105'	0.7	23.4 cfs	27.0 cfs
E-4	E-3	"	36"	597.04	0.024	5.67%	30'	0.8	46 cfs	8.4 cfs

RECREATION FIELDS THE BOARD OF EDUCATION HOWARD COUNTY  
 WEST FRIENDSHIP ELEMENTARY SCHOOL L.706 F.282

Surabh Mehta 10/15/85  
 BOARD OF ENGINEERS PROFESSIONAL ENGINEER NO. 10539 DATE



- Descriptive Specifications and Notes
1. Disturb as small an area of the present cover as possible while performing grading.
  2. Limit duration of exposure of bare earth from grading operation to 7 days by the establishment of temporary vegetation (or mulching if appropriate) or by completing permanent seeding within 14 days.
  3. Establish permanent vegetative cover immediately after final grading is completed. (This includes all grading on or off this site that is affected by this construction.) If final seeding is completed at a time other than the seeding season, a temporary ground cover such as mulching will be used to stabilize the bare soil.
  4. Recommended temporary seed mixtures:  
 Seed: Annual Ryegrass at 40 lbs. per acre  
 Lime: 1 1/2 tons ground limestone per acre  
 Fertilizer: 16-20-20 at 400 lbs. per acre  
 Mulch: Straw at 1.5 tons per acre
  5. Recommended permanent seed mixtures:  
 Seed: Ry. 33 Perenn at 40 lbs. per acre  
 Lime: 1 1/2 tons ground limestone per acre  
 Fertilizer: 16-20-20 at 400 lbs. per acre  
 Mulch: Straw at 1.5 tons per acre  
 Ample: 80-1 or equivalent at 210 gal. per acre
  6. All points of construction ingress and egress shall be protected by 24 in. diameter crushed stone to prevent tracking of mud onto Public Roads.
  7. Following initial soil disturbance or disturbance, permanent or temporary stabilization (specified on plans) shall be completed within seven calendar days as to the surface of all perimeter controls, ditches, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and fourteen days as to all other disturbed or graded areas on the project site.
  8. Temporary and permanent sumps, mud and sand materials and stabilization shall conform to the specifications of the Board County Design Manual.

GRADING AND DRAINAGE PLAN  
**MATHIS PROPERTY**  
 LOTS 2-9, SECTION 1  
 THIRD ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 TAX MAP #15 PARCEL #1289  
 SCALE: 1" = 50' OCTOBER 1985

DEPARTMENT OF PUBLIC WORKS  
 APPROVED: For STORM DRAINAGE & PUBLIC ROADS

1-9-85 [Signature]  
 DATE CHIEF, BUREAU OF ENGINEERING

HOWARD COUNTY OFFICE OF  
 PLANNING AND ZONING ADMINISTRATION  
 APPROVED:  
 1-7-86 [Signature]  
 DATE CHIEF OF LAND DEVELOPMENT & ZONING ADMINISTRATION

SHELADIA Associates, Inc.  
 CONSULTING ENGINEERS  
 810 A South Main Street, Mt. Airy, MD. 21771  
 (410) 229-7600

JOB #1 251-279  
 SHEET # 4 OF 5

#1168



