

# WORTHINGTON AREA DRAINAGE IMPROVEMENTS

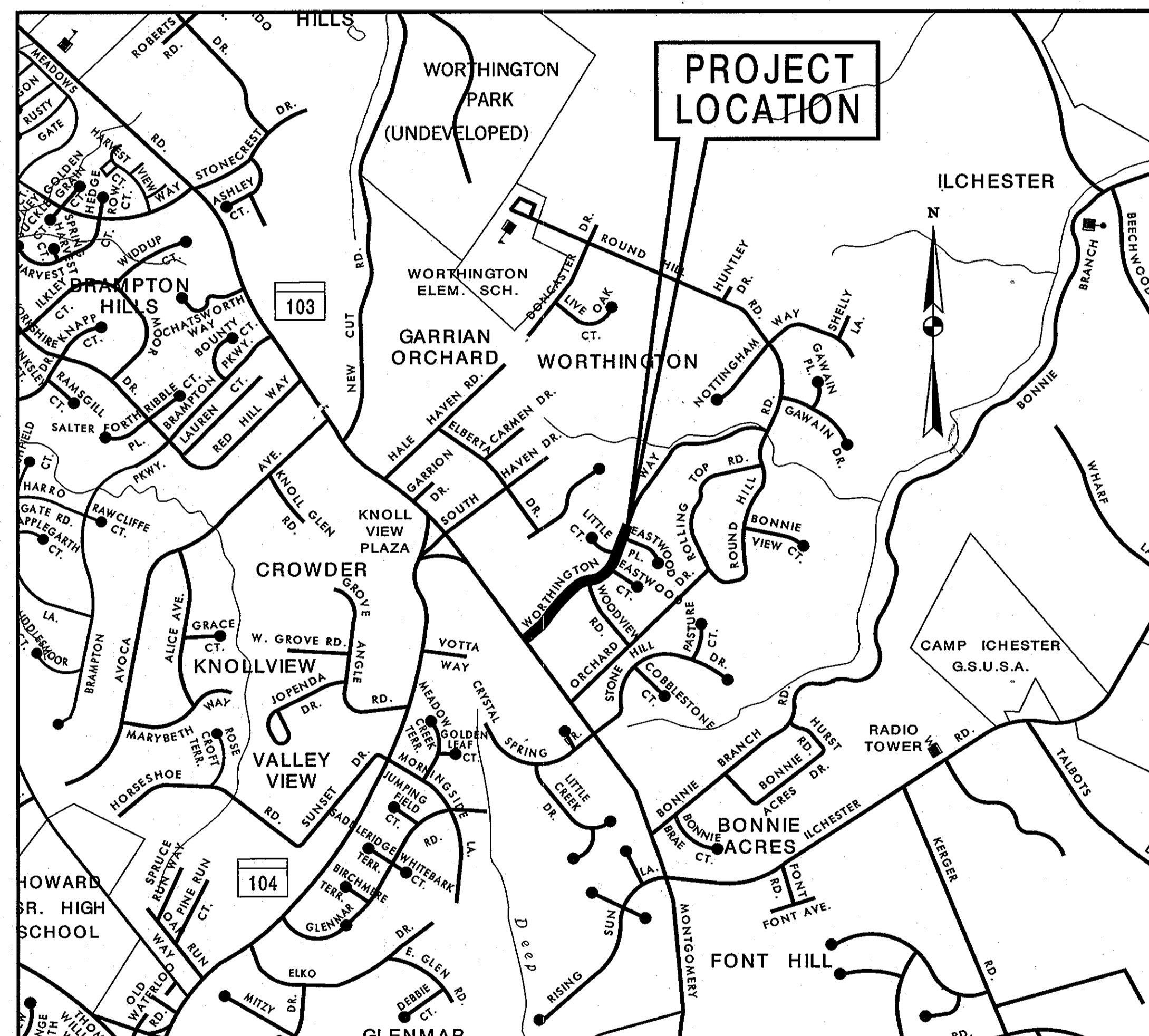
HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
CAPITAL PROJECT NO. D-1131

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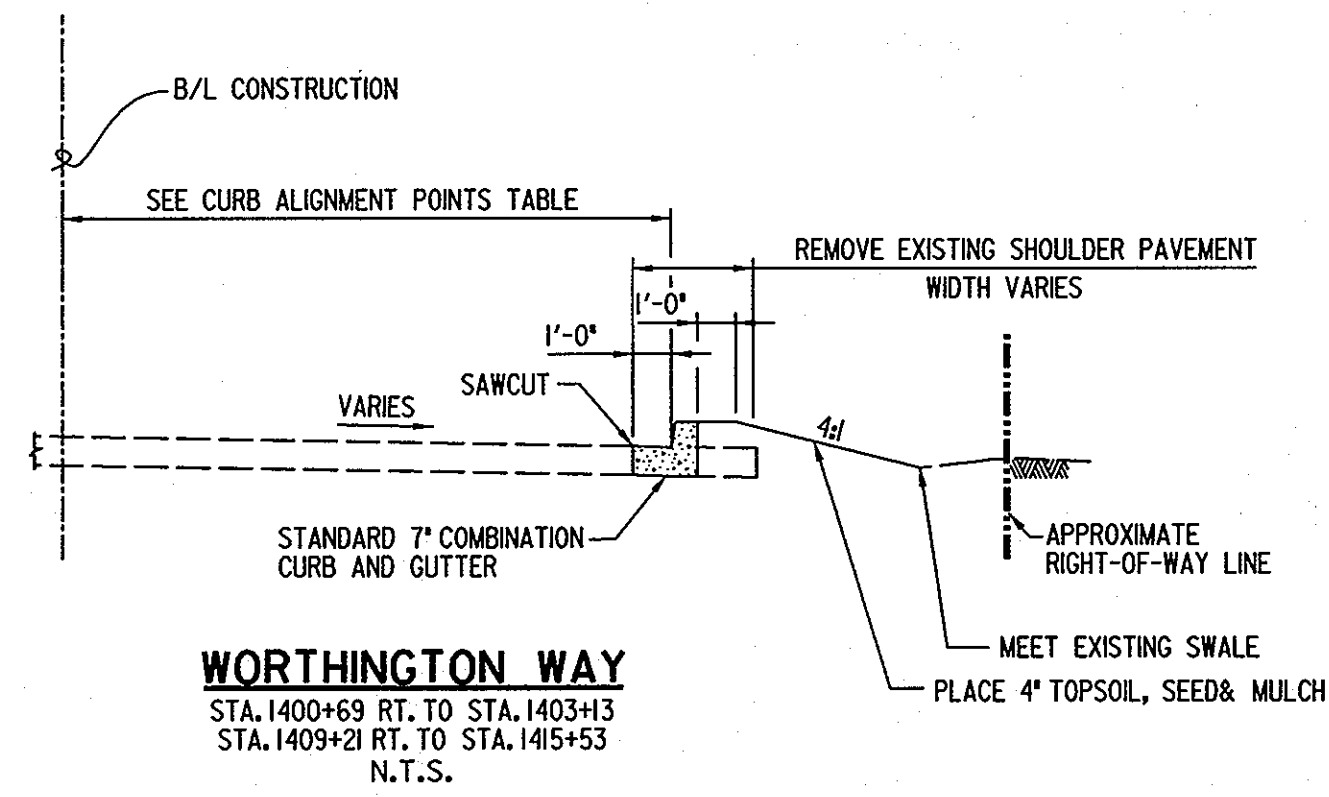
## GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AND MISS UTILITY AT 1-800-257-7777 AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK.
2. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. THE HOWARD COUNTY CONTROL STATIONS USED FOR THIS PROJECT ARE 3I D4 AND 3I A3.  
 3I D4 : N 571,700.681  
 E 1,369,606.396  
 ELEV. 495.181  
  
 3I A3 : N 573,217.884  
 E 1,368,237.766  
 ELEV. 487.642
3. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
5. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH 1 FOOT CONTOUR INTERVALS PREPARED BY DEWBERRY & DAVIS DATED 7/12/99 AND URS CORPORATION DATED JANUARY 2003.
6. ALL WORK SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, ISSUED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE NATURAL RESOURCES CONSERVATION SERVICE.
7. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
8. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHOD, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
9. APPROXIMATE UTILITIES ARE SHOWN FROM AVAILABLE RECORDS. 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.  
 UTILITY CONTACTS:  
 BGE: (410)-597-7920 (ELECTRIC)  
 BGE: (410)-291-4844 (GAS)  
 VERIZON: (410)-224-9285  
 WORLDCOMMCI: (301)-630-7094
10. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
11. REFER TO CAPITAL PROJECT J-4158-13 PREPARED BY DEWBERRY & DAVIS FOR WORTHINGTON AREA VEHICULAR ACCESS - PHASE II FOR BENCHMARK & GEOMETRIC DATA.
12. SINCE THE DISTURBANCE IS LESS THAN 5000 SF, SEDIMENT AND EROSION CONTROL WILL BE PROVIDED PER HOWARD COUNTY INSPECTORS.

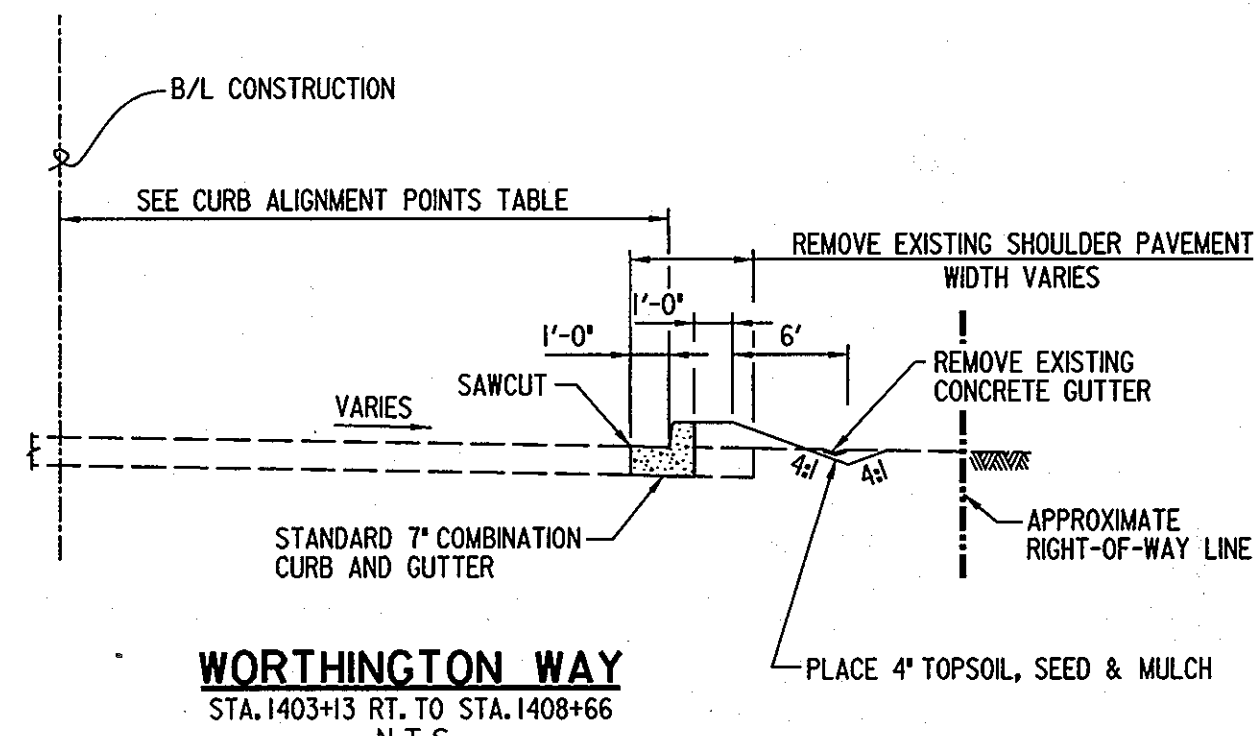


LOCATION MAP  
HOWARD COUNTY  
1000 0 1000 2000  
SCALE: 1" = 1000'

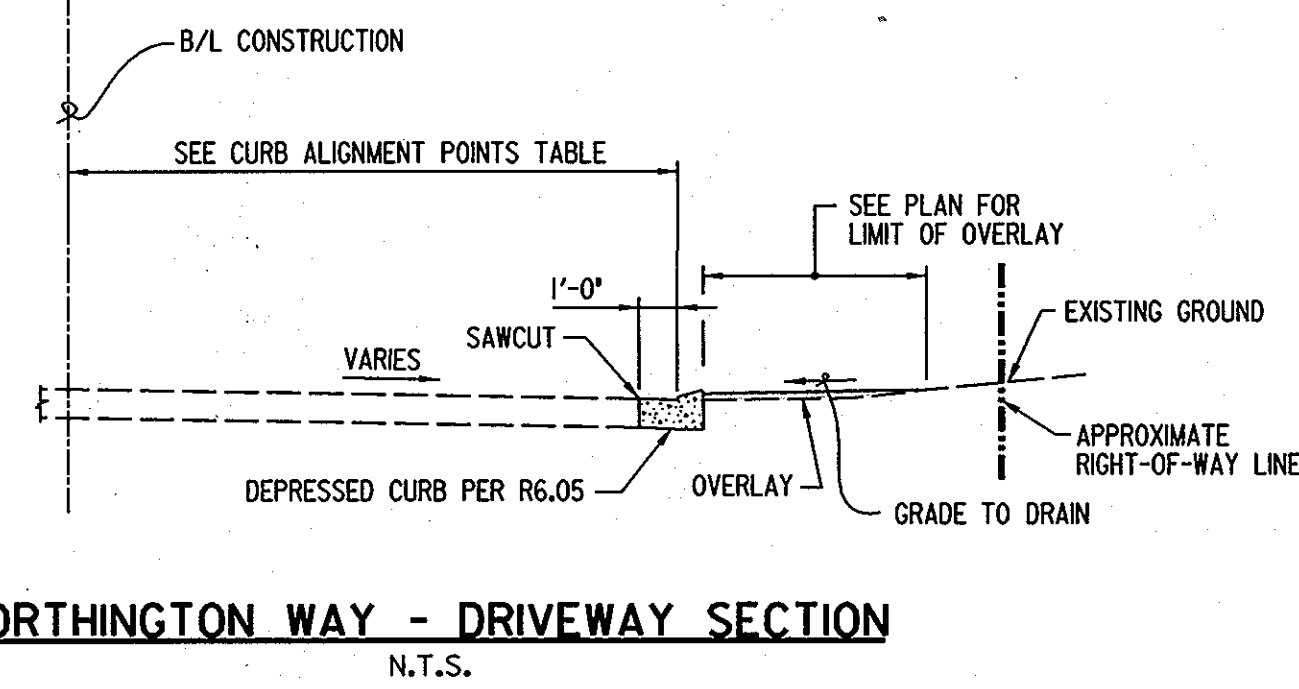
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>Steve Shaver</i> 5/30/07 Chief, Transportation and Special Projects Division	PREPARED BY <b>URS</b> 4 NORTH PARK DRIVE HUNT VALLEY, MARYLAND TEL: (410) 785-7220	STATE OF MARYLAND PROFESSIONAL ENGINEER No. 10166	DES: DTM				TITLE SHEET	WORTHINGTON AREA DRAINAGE IMPROVEMENTS CAPITAL PROJECT NO. D-1131	SCALE AS SHOWN SHEET 1 OF 5			
			DRN: EGB							2ND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND		
			CHK: DTM				DATE: 6/05	BY NO.	REVISION	DATE	SCALE MAP NO.	BLOCK NO.



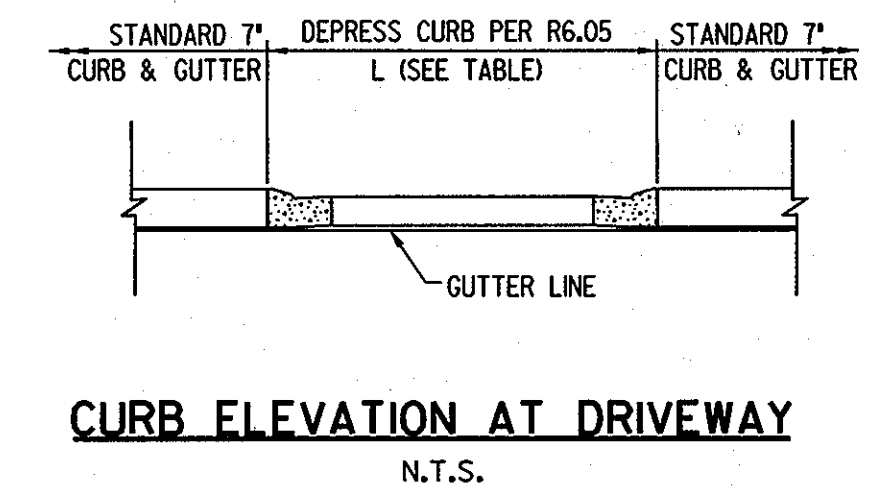
**WORTHINGTON WAY**  
 STA. 1400+69 RT. TO STA. 1403+13  
 STA. 1409+21 RT. TO STA. 1415+53  
 N.T.S.



**WORTHINGTON WAY**  
 STA. 1403+13 RT. TO STA. 1408+66  
 N.T.S.

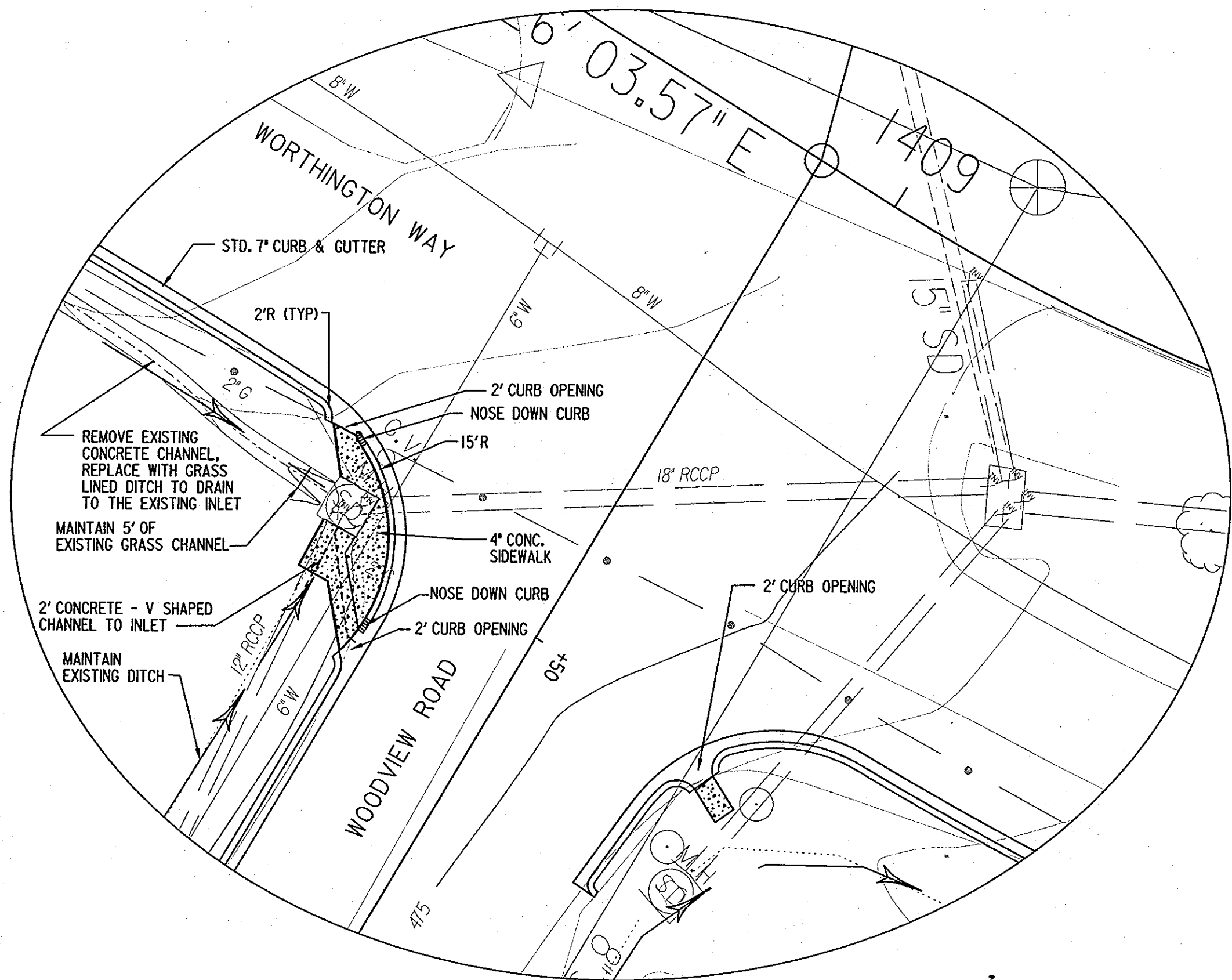


**WORTHINGTON WAY - DRIVEWAY SECTION**  
 N.T.S.

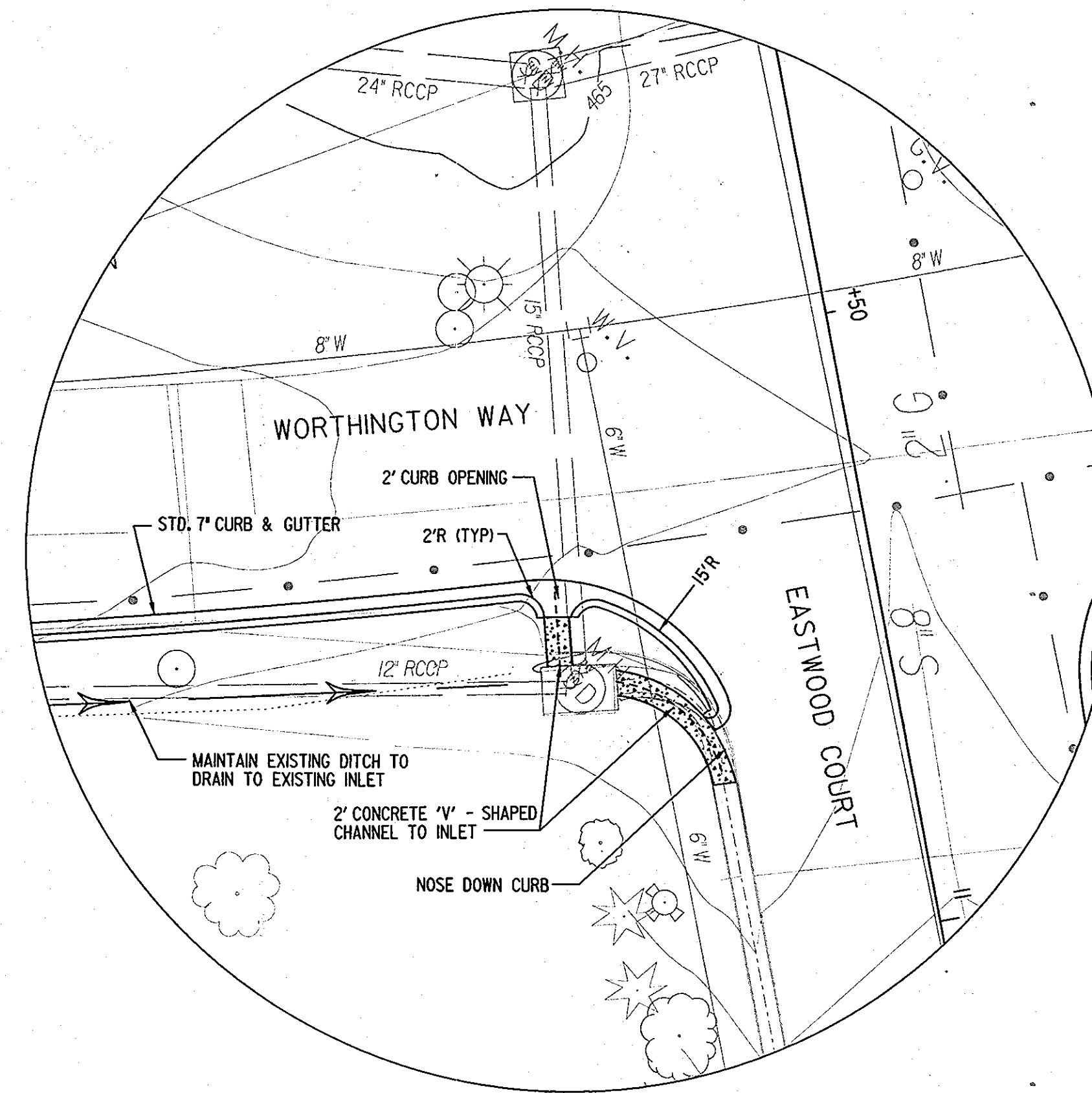


STATION	LENGTH (L)
1401+25	19'
1401+63	10.5'
1402+02	13'
1403+03	18'
1404+18	18'
1405+45	11'
1407+04	21'
1410+18	12.5'
1412+36	11.6'

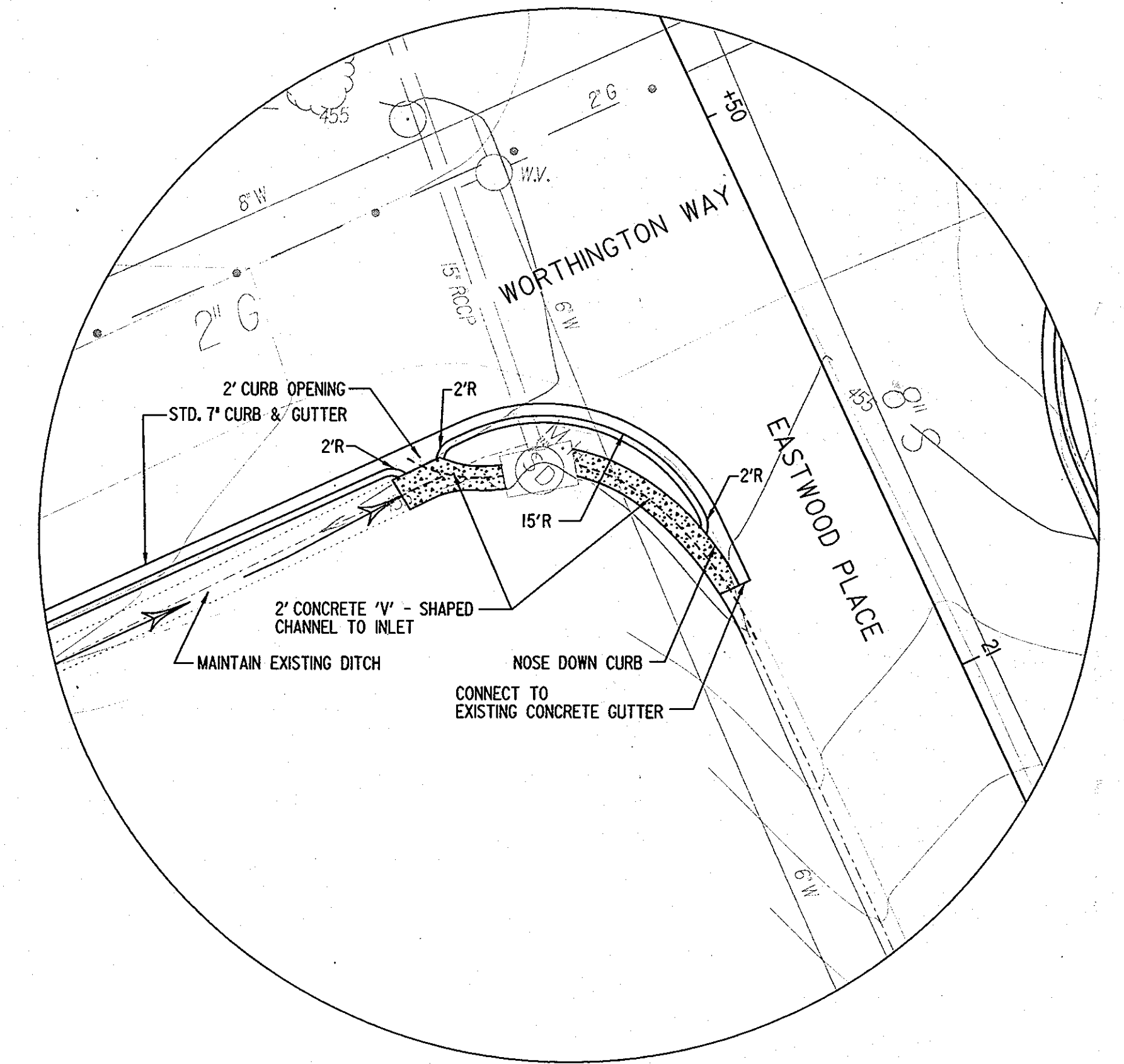
- NOTES:**
1. NO PROVISION FOR FUTURE SIDEWALK
  2. HOLD EXISTING EDGE OF ROAD, MAINTAIN SHOULDER AREA.



**DETAIL 'A'**  
 STA. 1408+74, RT. WORTHINGTON WAY  
 SCALE: 1" = 10'



**DETAIL 'B'**  
 STA. 1411+17, RT. WORTHINGTON WAY  
 SCALE: 1" = 10'



**DETAIL 'C'**  
 STA. 1414+48, RT. WORTHINGTON WAY  
 SCALE: 1" = 10'

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND

Director of Public Works: *Steve Sharav* 5/30/07  
 Chief, Transportation and Special Projects Division

Chief, Bureau of Engineering: *Paul S. Sapon* 5/30/07  
 Chief, Bureau of Highways: *William J. Gabel* 5-31-07

PREPARED BY  
**URS**  
 4 NORTH PARK DRIVE  
 HUNT VALLEY, MARYLAND  
 TEL: (410) 785-7220



DES: DTM			
DRN: EGB			
CHK: DTM			
DATE: 6/05			
BY	NO.	REVISION	DATE

**TYPICAL SECTION & CURB DETAILS**

SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

**WORTHINGTON AREA DRAINAGE IMPROVEMENTS**  
 CAPITAL PROJECT NO. D-1131

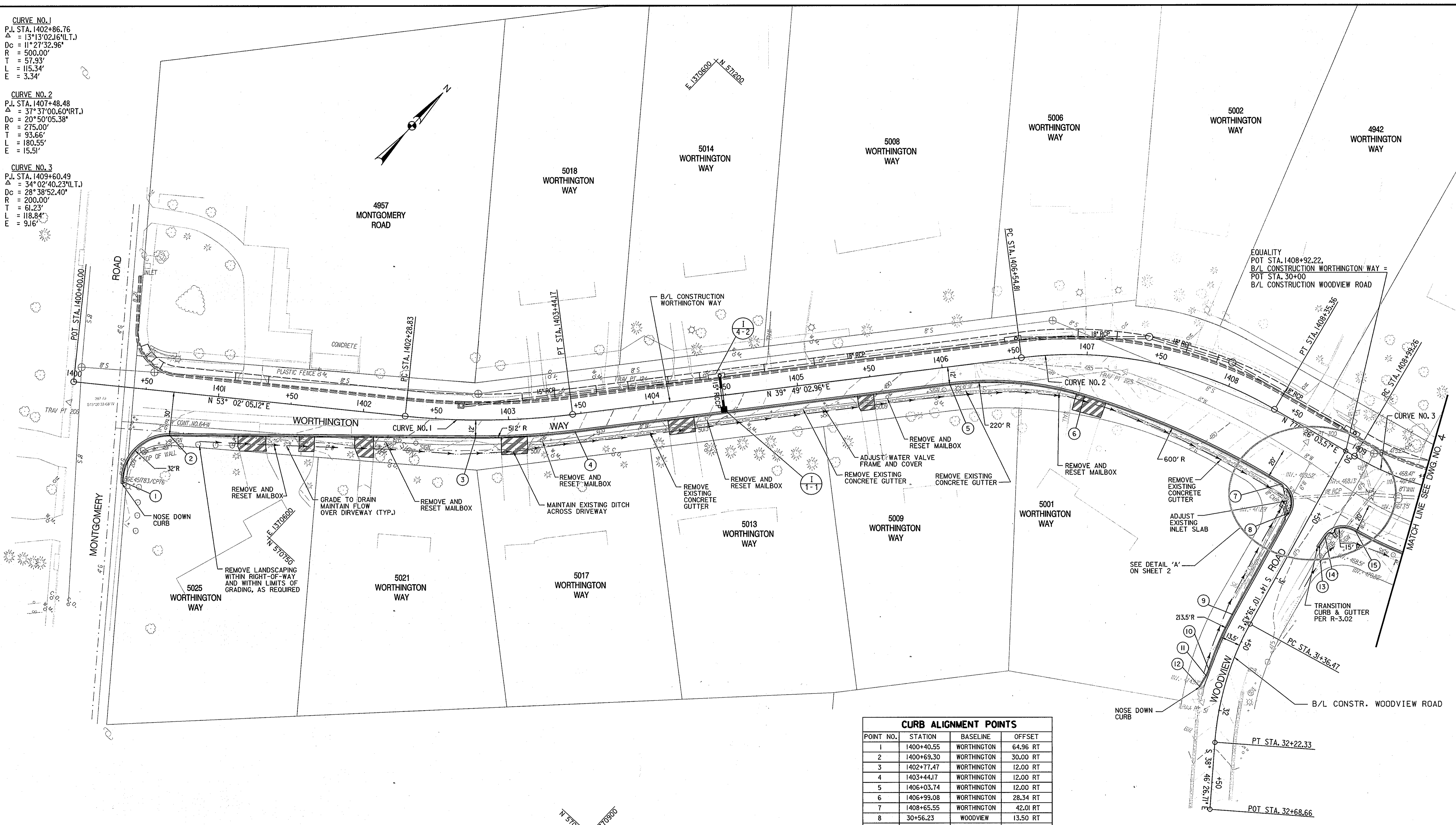
2ND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE  
 SHEET 2 OF 5

CURVE NO. 1  
 P.I. STA. 1402+86.76  
 $\Delta = 13^{\circ}13'02.16''$ (LT.)  
 $D_c = 11^{\circ}27'32.96''$   
 $R = 500.00'$   
 $T = 57.93'$   
 $L = 115.34'$   
 $E = 3.34'$

CURVE NO. 2  
 P.I. STA. 1407+48.48  
 $\Delta = 37^{\circ}37'00.60''$ (RT.)  
 $D_c = 20^{\circ}50'05.38''$   
 $R = 275.00'$   
 $T = 93.66'$   
 $L = 180.55'$   
 $E = 15.51'$

CURVE NO. 3  
 P.I. STA. 1409+60.49  
 $\Delta = 34^{\circ}02'40.23''$ (LT.)  
 $D_c = 28^{\circ}38'52.40''$   
 $R = 200.00'$   
 $T = 61.23'$   
 $L = 118.84'$   
 $E = 9.16'$



EQUALITY  
 POT STA. 1408+92.22,  
 B/L CONSTRUCTION WORTHINGTON WAY =  
 POT STA. 30+00  
 B/L CONSTRUCTION WOODVIEW ROAD

CURB ALIGNMENT POINTS			
POINT NO.	STATION	BASELINE	OFFSET
1	1400+40.55	WORTHINGTON	64.96 RT
2	1400+69.30	WORTHINGTON	30.00 RT
3	1402+77.47	WORTHINGTON	12.00 RT
4	1403+44.17	WORTHINGTON	12.00 RT
5	1406+03.74	WORTHINGTON	12.00 RT
6	1406+99.08	WORTHINGTON	28.34 RT
7	1408+65.55	WORTHINGTON	42.01 RT
8	30+56.23	WOODVIEW	13.50 RT
9	31+36.47	WOODVIEW	13.50 RT
10	31+75.43	WOODVIEW	13.50 RT
11	31+79.67	WOODVIEW	14.07 RT
12	31+87.49	WOODVIEW	16.40 RT
13	30+66.14	WOODVIEW	15.24 LT
14	30+58.65	WOODVIEW	15.93 LT
15	1409+20.62	WORTHINGTON	45.50 RT

- NOTES:
- RESIDENTIAL DRIVEWAYS TO BE CONSTRUCTED PER DRIVEWAY TYPICAL SECTION
  - DRAINAGE PIPES TO BE INSTALLED PER MD SHA SPECIFICATIONS SECTION 303.
  - ALL ROADWAY SIGNS WITHIN LIMIT OF GRADING SHALL BE RESET AS REQUIRED TO MAINTAIN PROPER ROADSIDE CLEARANCES.

LEGEND  
 WEDGE/LEVEL ASPHALT

STANDARD 7" COMBINATION CURB AND GUTTER (STD. NO. R-3.01)		
STATION	L.F.	REMARKS
1400+40.55 RT. TO 1408+87.34 RT.	991	WORTHINGTON
1409+08.35 RT. TO 1409+50.00 RT.	57	WORTHINGTON

STRUCTURE SCHEDULE							
STRUCTURE DESIGNATION	REFERENCE B/L	WORK POINT		STRUCTURE TYPE	TOP OF STRUCTURE	INVERT IN	INVERT OUT
		STATION	OFFSET				
I-1-I	WORTHINGTON WAY	1404+47.80	12.10' RT	WR INLET	495.40	---	492.16

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

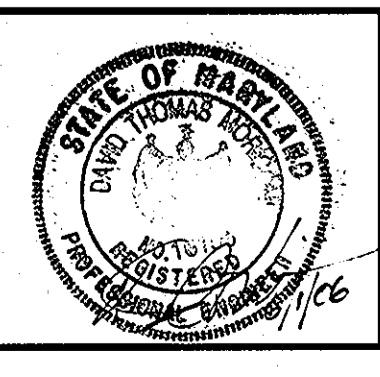
5/31/07  
 DIRECTOR OF PUBLIC WORKS

5/30/07  
 CHIEF, BUREAU OF ENGINEERING

5/30/07  
 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

5/31/07  
 CHIEF, BUREAU OF HIGHWAYS

PREPARED BY  
**URS**  
 4 NORTH PARK DRIVE  
 HUNT VALLEY, MARYLAND  
 TEL: (410) 785-7220



DES: DTM			
DRN: EGB			
CHK: DTM			
DATE: 6/05	BY	NO.	REVISION

ROADWAY PLAN

DATE: 6/05

SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

WORTHINGTON AREA DRAINAGE IMPROVEMENTS  
 CAPITAL PROJECT NO. D-1131

2ND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE 1" = 30'  
 SHEET 3 OF 5

**CURVE NO. 3**  
 P.I. STA. 1409+60.49  
 $\Delta = 34^{\circ} 02' 40.23''$  (L.T.)  
 $D_c = 28^{\circ} 38' 52.40''$   
 $R = 2000.00'$   
 $T = 61.23'$   
 $L = 118.84'$   
 $E = 9.16'$

**CURVE NO. 4**  
 P.I. STA. 1410+89.71  
 $\Delta = 11^{\circ} 06' 34.73''$  (L.T.)  
 $D_c = 11^{\circ} 27' 32.96''$   
 $R = 500.00'$   
 $T = 48.63'$   
 $L = 96.95'$   
 $E = 2.36'$

**CURVE NO. 5**  
 P.I. STA. 1412+78.2  
 $\Delta = 10^{\circ} 59' 18''$  (L.T.)  
 $D_c = 05^{\circ} 43' 46.48''$   
 $R = 1000.00'$   
 $T = 89.10'$   
 $L = 177.73'$   
 $E = 3.96'$

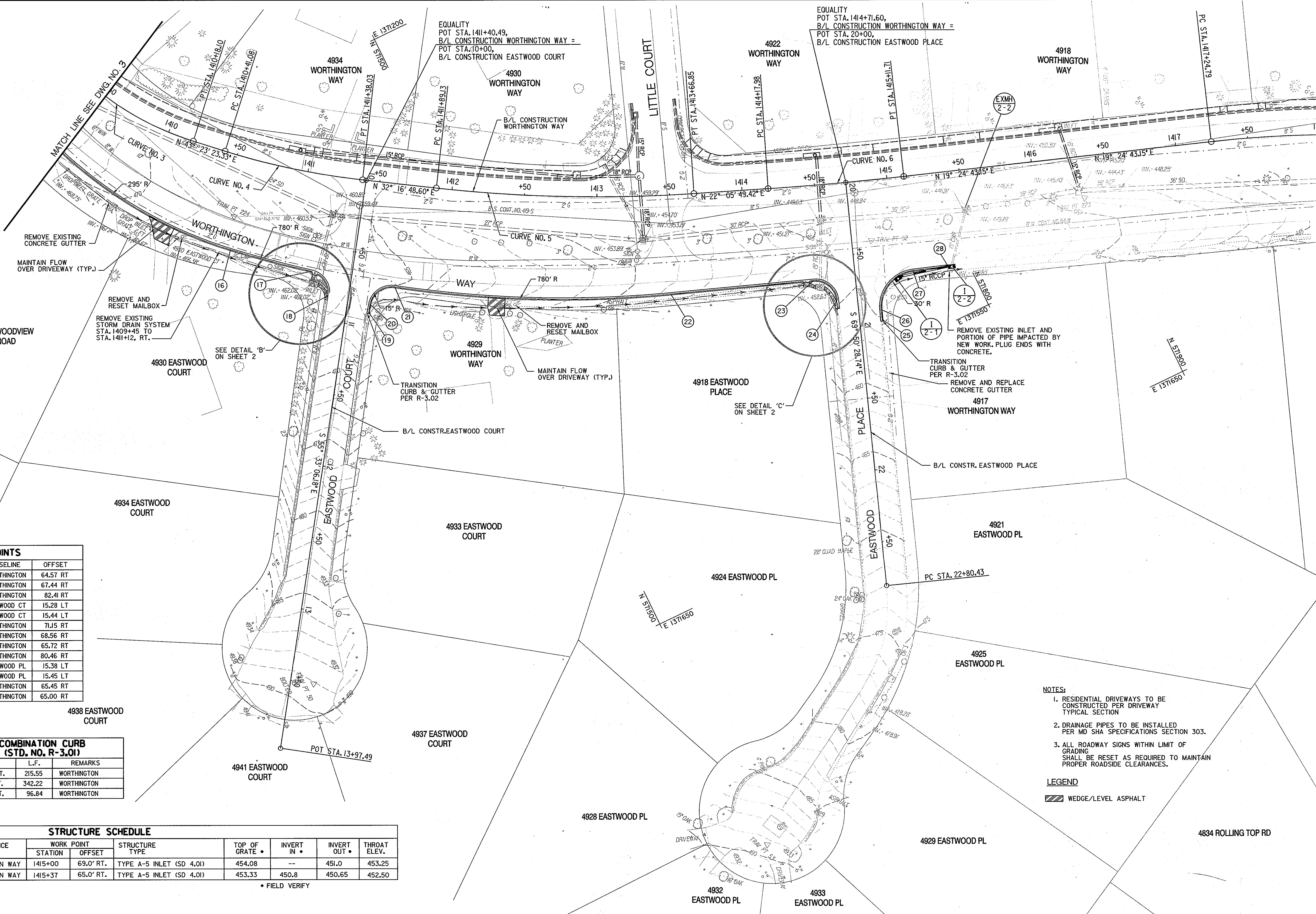
**CURVE NO. 6**  
 P.I. STA. 1414+64.85  
 $\Delta = 02^{\circ} 41' 06.27''$  (L.T.)  
 $D_c = 02^{\circ} 51' 53.24''$   
 $R = 2000.00'$   
 $T = 46.87'$   
 $L = 93.73'$   
 $E = 0.55'$

CURB ALIGNMENT POINTS			
POINT NO.	STATION	BASELINE	OFFSET
16	1410+62.42	WORTHINGTON	64.57 RT
17	1411+13.38	WORTHINGTON	67.44 RT
18	1411+25.44	WORTHINGTON	82.41 RT
19	10+90.00	EASTWOOD CT	15.28 LT
20	10+84.59	EASTWOOD CT	15.44 LT
21	1411+68.26	WORTHINGTON	71.15 RT
22	1413+47.58	WORTHINGTON	68.56 RT
23	1414+44.04	WORTHINGTON	65.72 RT
24	1414+58.69	WORTHINGTON	80.46 RT
25	20+96.91	EASTWOOD PL	15.38 LT
26	20+90.06	EASTWOOD PL	15.45 LT
27	1415+10.67	WORTHINGTON	65.45 RT
28	1415+35.00	WORTHINGTON	65.00 RT

STANDARD 7" COMBINATION CURB AND GUTTER (STD. NO. R-3.01)			
STATION	L.F.	REMARKS	
1409+50.00 RT. TO 1411+25.42 RT.	215.55	WORTHINGTON	
1411+50.96 RT. TO 1414+58.70 RT.	342.22	WORTHINGTON	
1414+84.36 RT. TO 1415+64.47 RT.	96.84	WORTHINGTON	

STRUCTURE SCHEDULE								
STRUCTURE DESIGNATION	REFERENCE B/L	WORK POINT		STRUCTURE TYPE	TOP OF GRATE	INVERT IN	INVERT OUT	THROAT ELEV.
		STATION	OFFSET					
I-2-1	WORTHINGTON WAY	1415+00	69.0' RT.	TYPE A-5 INLET (SD 4.0)	454.08	---	451.0	453.25
I-2-2	WORTHINGTON WAY	1415+37	65.0' RT.	TYPE A-5 INLET (SD 4.0)	453.33	450.8	450.65	452.50

• FIELD VERIFY



- NOTES:**
- RESIDENTIAL DRIVEWAYS TO BE CONSTRUCTED PER DRIVEWAY TYPICAL SECTION
  - DRAINAGE PIPES TO BE INSTALLED PER MD SHA SPECIFICATIONS SECTION 303.
  - ALL ROADWAY SIGNS WITHIN LIMIT OF GRADING SHALL BE RESET AS REQUIRED TO MAINTAIN PROPER ROADSIDE CLEARANCES.

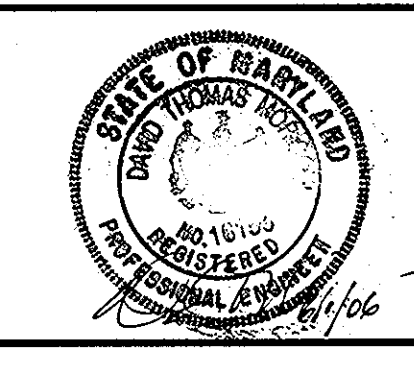
**LEGEND**  
 WEDGE/LEVEL ASPHALT

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND

Director of Public Works: *Steve Sharav* 5/30/07  
 Chief, Transportation and Special Projects Division

Chief, Bureau of Engineering: *Paul J. Reardon* 5/30/07  
 Chief, Bureau of Highways: *Walter Z. Mould* 5-31-07

PREPARED BY  
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 4 NORTH PARK DRIVE  
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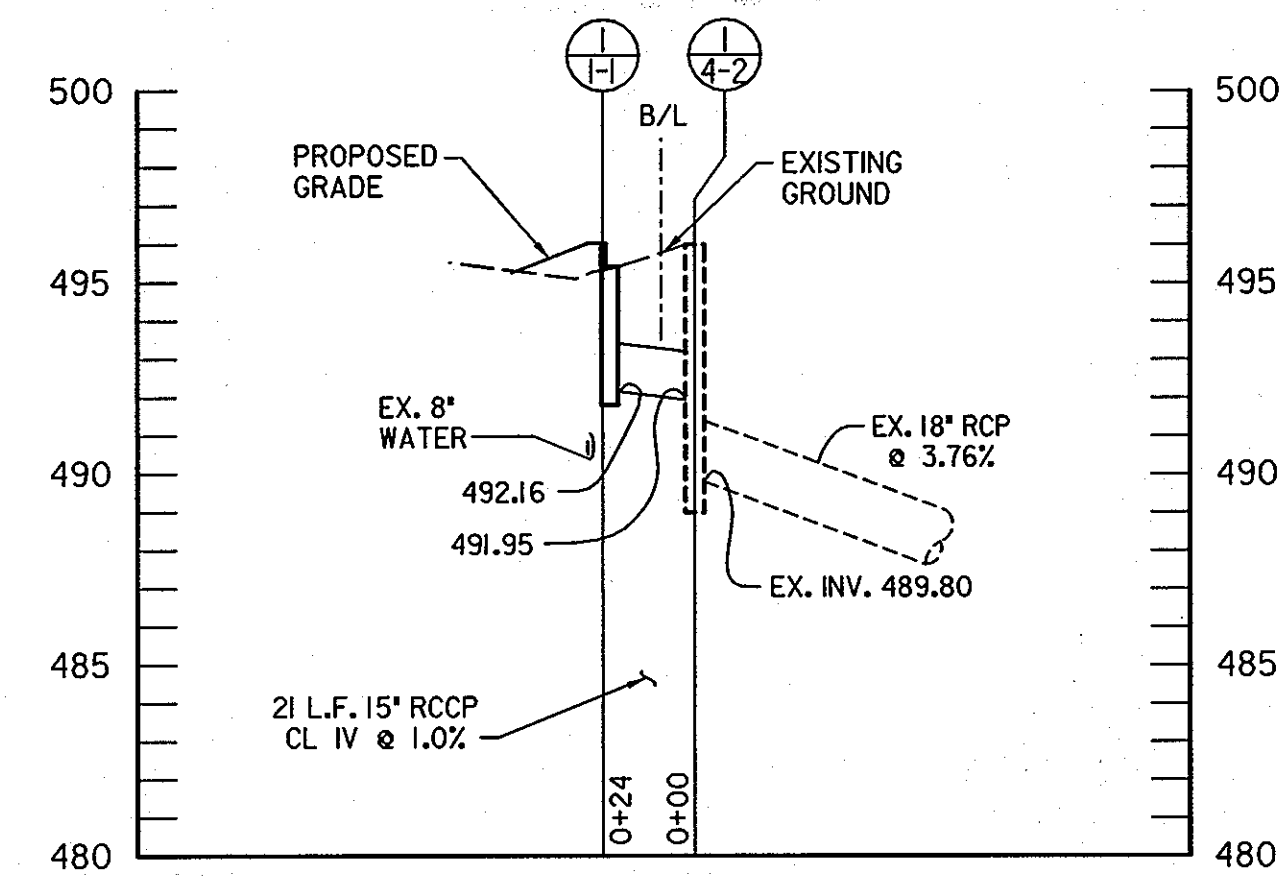
**ROADWAY PLAN**

SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

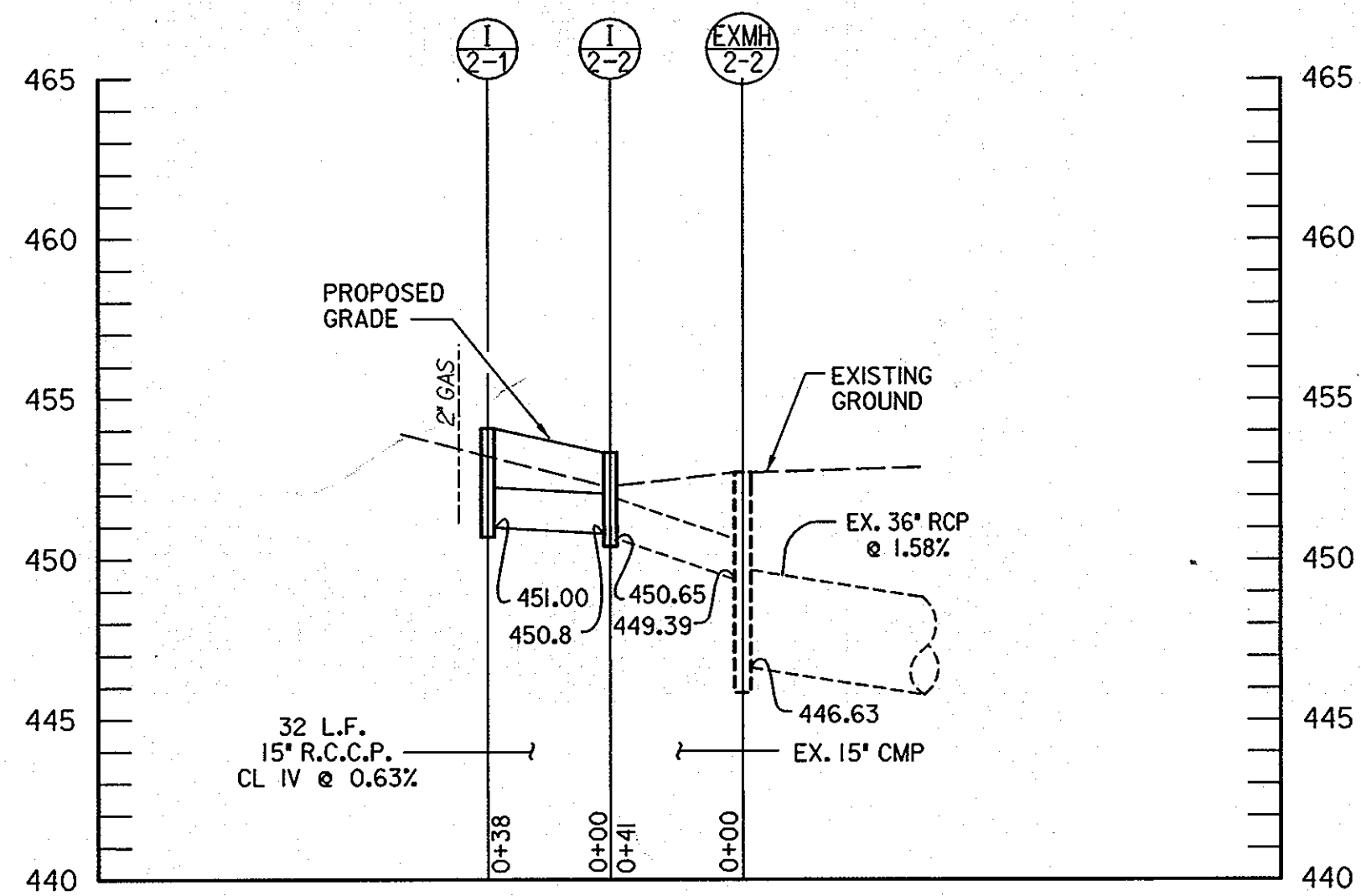
**WORTHINGTON AREA DRAINAGE IMPROVEMENTS**  
 CAPITAL PROJECT NO. D-1131

2ND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE 1" = 30'  
 SHEET 4 OF 5



I-1-1 TO EX-4-2  
STA 1404+47 WORTHINGTON WAY



I-2-1 TO EX MH 2-2

SCALE: HORIZONTAL 1" = 50'  
VERTICAL 1" = 5'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works: *Steve Sharav* 5/30/07  
 Date: 5/30/07

Chief, Bureau of Engineering: *William T. Kelly* 5/30/07  
 Date: 5/30/07

Chief, Transportation and Special Projects Division: *Steve Sharav* 5/30/07  
 Date: 5/30/07

Chief, Bureau of Highways: *William T. Kelly* 5/30/07  
 Date: 5/30/07

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STORMDRAIN PROFILES

WORTHINGTON AREA DRAINAGE  
IMPROVEMENTS  
CAPITAL PROJECT NO. D-1131

SCALE

SHEET  
5 OF 5

2ND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND