

**INDEX OF SHEETS**

- 1 TITLE SHEET
- 2 WATER & SEWER PART PLAN AND PROFILE
- 3 WATER & SEWER PART PLAN AND PROFILE
- 4 WATER PART PLAN AND PROFILE
- 5 WATER PART PLAN AND PROFILE
- 6 WATER PART PLAN AND PROFILE
- 7 WATER PART PLAN AND PROFILE
- 8 WATER & SEWER DETAILS AND PROFILE
- 9-11 8-INCH AND 12-INCH PVC WATER MAIN CORROSION CONTROL LAYOUTS 1-3

# DORSEY RUN ROAD WATER AND SEWER EXTENSIONS ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND CAPITAL PROJECT W-8292 CONTRACT NO. 14-4679

**GENERAL NOTES**

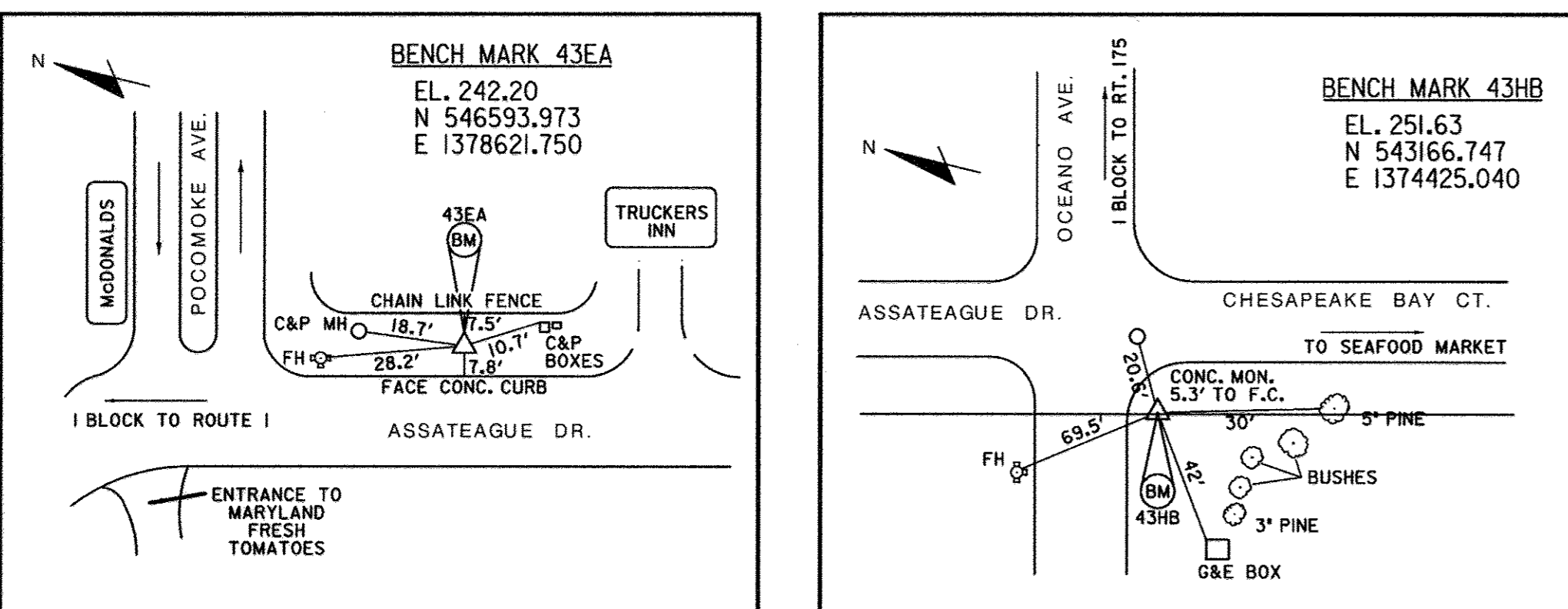
1. APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON JUNE 2005 BY URS CORPORATION. SEE DORSEY RUN ROAD PROJECT J-4148-B FOR TRAVERSE RECOVERY SKETCHES.
3. HORIZONTAL AND VERTICAL SURVEY CONTROLS: HORI: MARYLAND NAD83 (ADJ 1991)  
VERT: NAV88 NAVD 88

THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROLS STATIONS NO. 43EA AND NO. 43HB. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE CONCRETE MONUMENTS WITH CROSS CUTS.

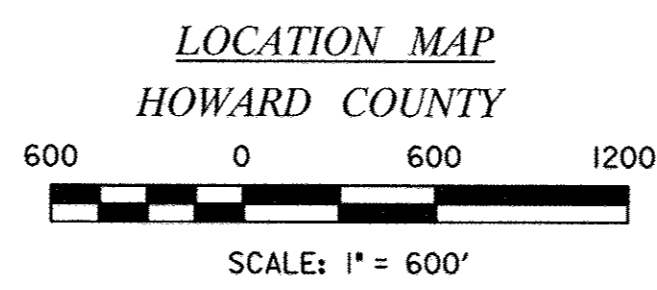
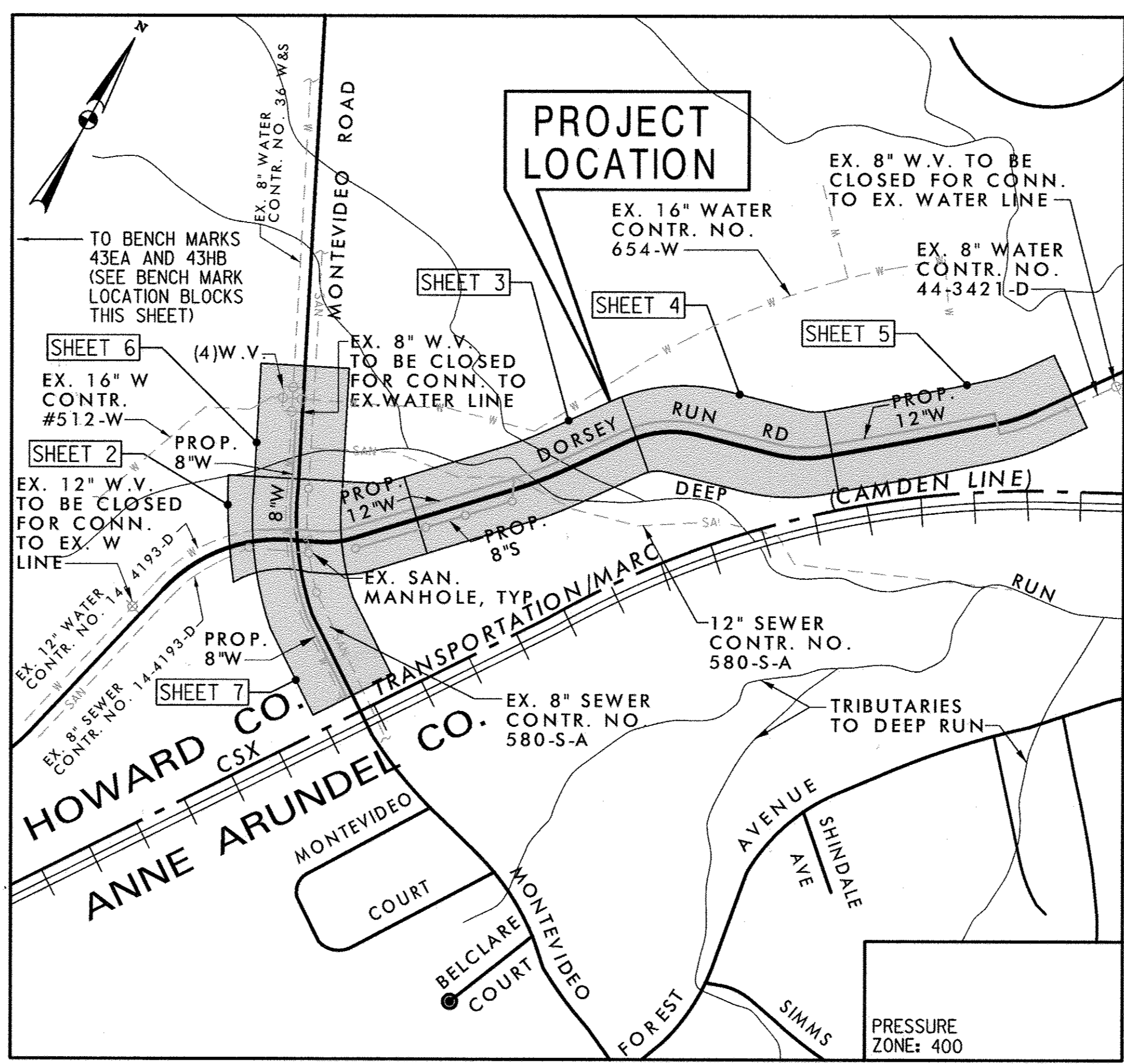
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UNDERGROUND UTILITIES BY MINIMUM OF 12 INCHES EXCEPT WHERE NOTED OTHERWISE. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
6. FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. WHERE TEST PITS ARE REQUIRED ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL . TEST PITS PERFORMED BY THE COUNTY WILL BE INCLUDED WITH THE SPECIFICATIONS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

AT&T	1-800-252-1133
BGE (CONTRACTOR SERVICES)	410-850-4620
BGE (UNDERGROUND DAMAGE CONTROL)	410-685-1400
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO.	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033/410-224-9210

9. TREES AND SHRUBS SHALL BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
11. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)-313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OF ANY COUNTY ROAD FOR LAYING WATER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(g) OF THE HOWARD COUNTY CODE.
12. ALL WATER MAINS SHALL BE C900 PVC WITH DUCTILE IRON FITTINGS AND TRACER WIRE WITH CONTINUITY TEST STATIONS. THERE SHALL BE NO DEFLECTION OF PVC PIPE JOINTS OR BENDING OF AWWA C-900 PIPE.
13. ALL GRAVITY SEWER LINES SHALL BE C900 PVC.
14. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
15. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
16. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD HOWARD COUNTY DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
17. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED FROM THE TEE THROUGH TO THE HYDRANT AND INSTALLED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS.
18. HYDRANT VALVES SHALL BE LOCATED NEXT TO THE TEE ON ALL FIRE HYDRANT LEADS.
19. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM. CONTACT HOWARD COUNTY BUREAU OF UTILITIES TO SCHEDULE VALVE OPERATION.
20. SEE HOWARD COUNTY STANDARD DETAIL G-2.11 FOR TYPICAL WATER AND SEWER PIPE TRENCH REQUIREMENTS.
21. REFER TO CONTRACT PLANS FOR DORSEY RUN ROAD (J-4148B) FOR ROADWAY AND STORM DRAIN PLANS.
22. ADJUSTMENTS TO MANHOLES WILL REQUIRE THE ADDITION OR REMOVAL OF PRECAST CONCRETE RISER SECTIONS, CONE SECTIONS, TOP SLABS, BRICK WALL COURSES, STEPS, ETC. CONTRACTOR SHALL PROVIDE MATERIALS COMPATIBLE WITH EXISTING MATERIALS. DAMAGED MATERIALS SHALL BE REPLACED IN KIND. THE COMPLETED AND ADJUSTED MANHOLE SHALL MEET THE REQUIREMENTS OF DETAIL PLATES G-5.11 AND G-5.51 OR G-5.52.
23. THE CONTRACTOR SHALL NOTIFY HOWARD COUNTY DPW AS ANY UNKNOWN UTILITY SERVICES ARE ENCOUNTERED. CONTRACTOR SHALL RECONNECT ALL ACTIVE WATER AND SEWER SERVICES ENCOUNTERED.
24. AT CONNECTION LOCATIONS, THE CONTRACTOR SHALL VERIFY THAT EXISTING WATER LINES AND VALVES ARE RESTRAINED PRIOR TO REMOVAL OF EXISTING WATER LINE. CONTRACTOR SHALL PROVIDE THRUST PROTECTION.
25. THE CONTRACTOR SHALL ABANDON EXISTING WATERLINE IN PLACE UNLESS OTHERWISE INDICATED ON THE PLANS. CONTRACTOR SHALL CAP ALL CUT OR OPEN ENDS, REMOVE EXISTING VALVE ROADWAY BOXES AND ABANDON EXISTING VALVES IN PLACE. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF EXISTING WATER LINE WHERE INDICATED TO BE REMOVED.



QUANTITIES				
ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
<b>WATER</b>				
12" C900 PVC WATER	LF.	4,300	4,243	NATIONAL PIPE & PLASTIC
12" GATE VALVE & BOX	EA.	5	5	MUELLER-COMPANY
12" x8" M.J. CROSS	EA.	1	4	TYLER / UNION FOUNDRY
12" x8" M.J. REDUCER	EA.	1	-	-
12" M.J. SOLID SLEEVE & SPACER	EA.	1	0	-
12" x6" F.H. TEE	EA.	12	-	-
12"-45°/22-12° M.J. BEND	EA.	14	-	-
12"-11 1/4° M.J. BEND	EA.	5	-	-
8" C900 PVC WATER	LF.	2,150	2,140	NATIONAL PIPE & PLASTIC
8" GATE VALVE & BOX	EA.	4	4	MUELLER-COMPANY
8" M.J. SOLID SLEEVE & SPACER	EA.	3	2	TYLER / UNION FOUNDRY
8"-45°/22-1/2° M.J. BEND	EA.	5	-	-
8"-11 1/4° M.J. BEND	EA.	3	-	-
8" x6" F.H. TEE	EA.	6	-	-
6" C900 PVC WATER	LF.	500	541	NATIONAL PIPE & PLASTIC
6" GATE VALVE & BOX	EA.	18	18	MUELLER-COMPANY
FIRE HYDRANT	EA.	18	18	MUELLER-COMPANY
2" AIR RELEASE VALVE AND MANHOLE	EA.	2	2	VAL-MATIC
1.5 INCH WHC	LF.	100	0	-
1 INCH WHC	LF.	400	392	MUELLER-COMPANY
RELOC. WATER METER VAULT TO R/W LINE	EA.	11	10	-
REMOVE EX. F.H.	EA.	2	2	-
REMOVE EX. 8" WATER	LF.	600	631	-
<b>SANITARY</b>				
8" PVC SEWER	LF.	950	944	NATIONAL PIPE & PLASTIC
6" PVC SEWER	LF.	70	84	NATIONAL PIPE & PLASTIC
6" SANITARY CLEANOUT	EA.	2	2	HORNE CONCRETE / MALLIANS / NAT. PIPE & PLASTIC
ADJUST EX. SAN. MH	EA.	7	7	-
4 INCH SHC	LF.	300	195	NATIONAL PIPE & PLASTIC
4 INCH CLEANOUT	EA.	12	5	FOX FOUNDRY / HORNE CONCRETE PRODUCTS
STANDARD 4" DIA MIN 6" DEPTH SANITARY MANHOLE	EA.	4	4	ATLANTIC CONC. PRODUCTS
STANDARD 4" DIA SANITARY MANHOLE BEYOND 6" MIN. DEPTH	V.L.F.	30	30	ATLANTIC CONC. PRODUCTS



26. FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO THE APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECLINED.

RECORD DRAWINGS TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON INFORMATION PROVIDED BY OTHERS, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

URS (AN AECOM COMPANY)

BY: *David T. Moriconi*

TYPE OF BUILDING	-
NUMBER OF PARCELS	-
NO. OF WATER CONNECTIONS	0
SEWER DRAINAGE AREA	PATAPSCO

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MD

*Cam J. ...* 2/6/17  
DIRECTOR OF PUBLIC WORKS DATE

*Thomas R. ...* 2/6/17  
CHIEF, BUREAU OF ENGINEERING DATE

*...* 2/6/17  
CHIEF, BUREAU OF UTILITIES DATE

*...* 2/6/17  
CHIEF, UTILITY DESIGN DIVISION DATE

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

Professional Certification  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 16156  
Expiration Date: 8/28/2014

DES: RER	
DRN: CLD	
CHK: DTM	
DATE: 8/2013	
DTM	AS BUILT
BY NO.	REVISION
	DATE

TITLE SHEET

DORSEY RUN ROAD  
WATER AND SEWER EXTENSIONS  
CAPITAL PROJECT W-8292  
CONTRACT NO. 14-4679

SCALE  
AS SHOWN

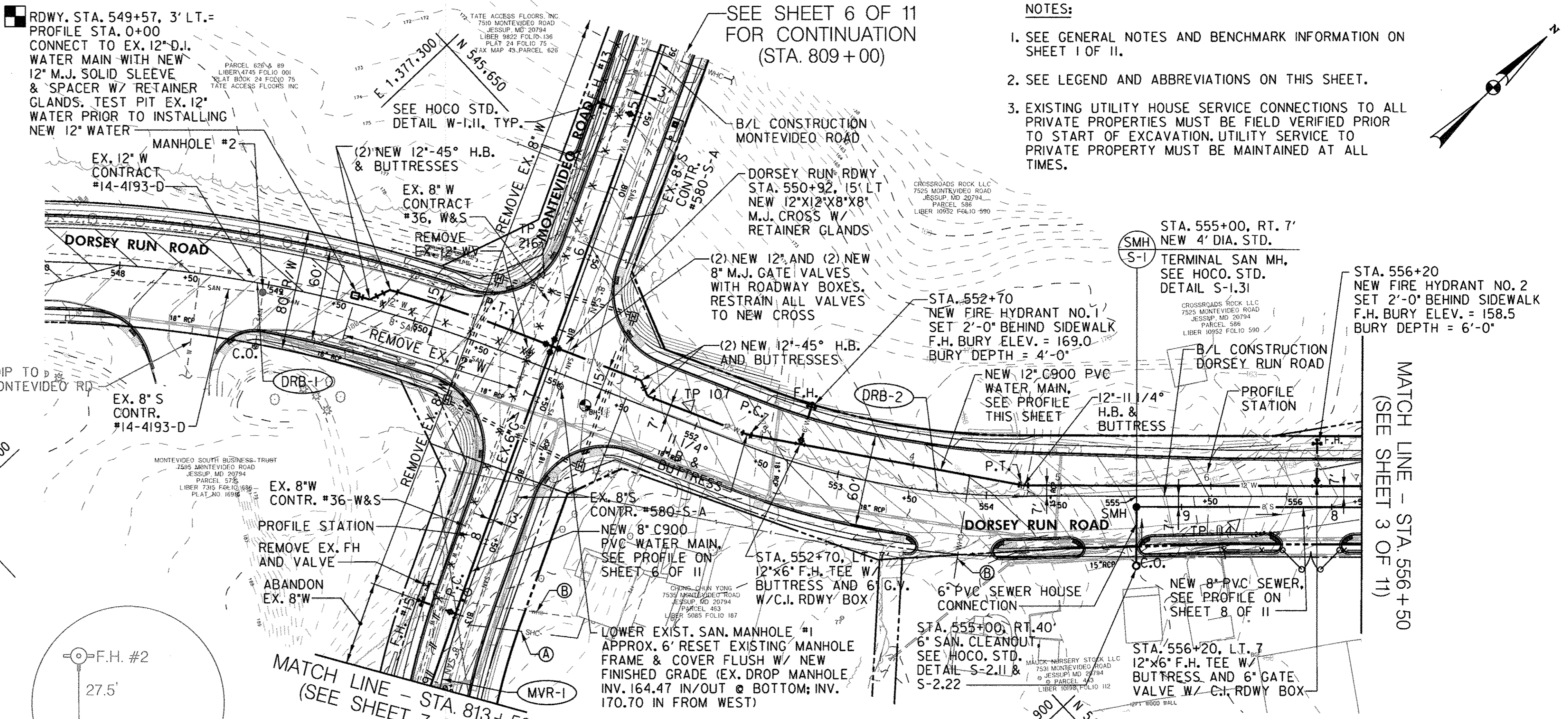
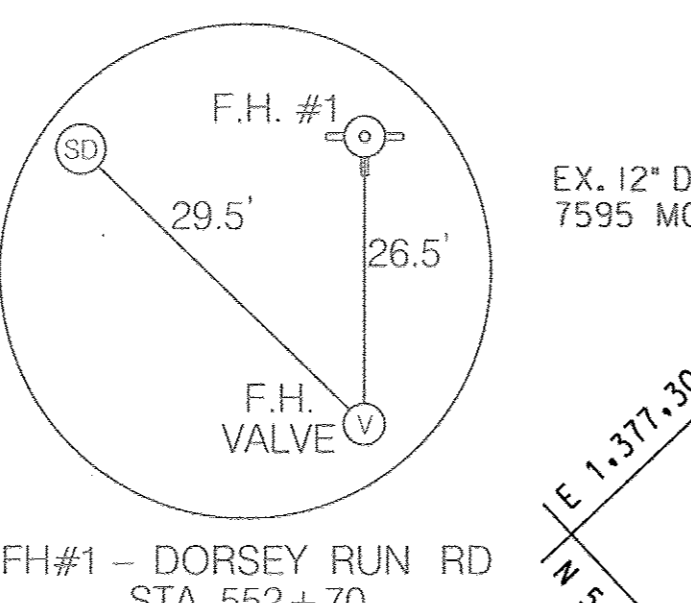
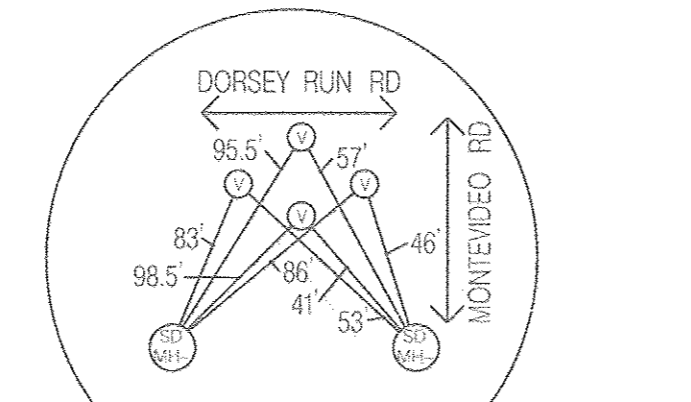
SHEET  
1 OF 11

600 SCALE MAP NO. 43 BLOCK NO. 10 & 11 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND



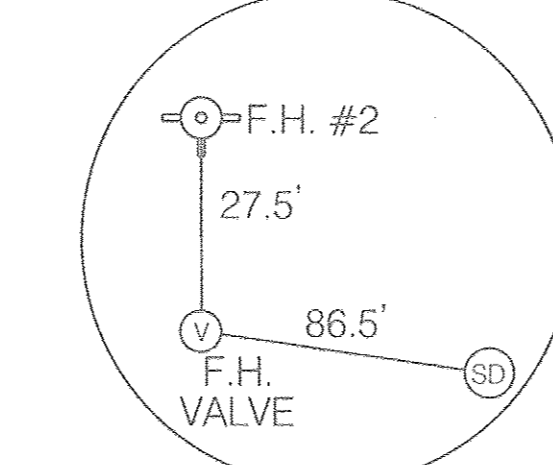
**LEGEND AND ABBREVIATIONS**

NEW WORK		EXISTING	
	REMOVE EX. WATER		DECIDUOUS TREE
	ABANDON EX. WATER		CONIFEROUS TREE
	WATER MAIN		WATER
	THRUST BLOCK		GAS
	FIRE HYDRANT		STORM DRAIN
	WATER VALVE & BOX		EX. RCP
	PIPE REDUCER		SANITARY SEWER
	GRAVITY SEWER		UNDERGROUND ELECTRICAL/TEL. SERVICE
	SANITARY MANHOLE		PROPERTY LINE
	SANITARY CLEANOUT		R/W LINE
	PROPOSED CONTOUR		POLE
	TEST PIT REQUIRED		CLEANOUT
	MECHANICAL JOINT		TRAVERSE POINT
	CAST IRON		CONTOUR
	DIAMETER		EXISTING
	DUCTILE IRON PIPE		CONTRACT
	GATE VALVE		RIGHT OF WAY
	HORIZONTAL BEND		WATER
	ROADWAY		
	PAVEMENT		
	LEFT		
	RIGHT		
	WITH		
	INVERT		
	BASELINE		
	POLYVINYL CHORIDE PLASTIC PIPE		
	HOWARD COUNTY STANDARD		
	SOIL BORING LOCATION (SEE BORING LOGS ON SHEETS 119-121 OF CAPITAL PROJECT J-4148-B)		
	REINFORCED CONCRETE PIPE		
	ROADWAY		
	SANITARY		
	TRAVERSE POINT		



**DRAWING NOTES:**

- ① REMOVE EXISTING 4" OR 6" SEWER HOUSE CONNECTION (SHC) CLEANOUT AND REPLACE WITH NEW CLEANOUT OF SIMILAR MATERIAL LOCATED AT PROPOSED RIGHT-OF-WAY LINE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS S-2.11 & S-2.22.
- ② CONNECT NEW 3/4" OR 1" TYPE K COPPER WATER HOUSE CONNECTION (WHC) TO NEW WATER MAIN WITH TAPPING SLEEVE AND CORPORATION STOP ASSEMBLY (VERIFY LOCATION AND SIZE IN FIELD). RELOCATE EXISTING WATER METER AND BOX TO PROPOSED RIGHT-OF-WAY LINE AND RECONNECT TO EXISTING WATER HOUSE SERVICE LINE. SEE HOWARD COUNTY STANDARD DETAILS W-3.11 & W-3.27.



FH#2 - DORSEY RUN RD STA. 556+20

**CURVE DATA**

CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
<b>DORSEY RUN ROAD</b>						
DRB-1	50°42'39.00" RT	6°21'58.31"	900.00'	426.49'	796.56'	95.94
DRB-2	20°50'19.10" LT	11°14'04.08"	510.00'	93.78'	185.49'	8.55
<b>MONTEVIDEO ROAD</b>						
MVR-1	29°54'03.77" LT	12°43'56.62"	450.00'	120.16'	234.84'	15.77

**6"/8" SEWER DATA - DORSEY RUN ROAD**

NO.	PROFILE STATION	DESCRIPTION	NORTH	EAST	REMARKS
①	9+63	6" SAN. CLEANOUT	545,755.39	1,377,858.91	HOCO STD. DETAIL S-2.11 & S-2.22
②	9+30	TERMINAL SAN. MANHOLE S-1	545,775.98	1,377,837.09	HOCO STD. DETAIL S-1.31

**12" WATER LINE DATA - DORSEY RUN ROAD**

NO.	PROFILE STATION	DESCRIPTION	NORTH	EAST	REMARKS
①	0+00	12" SLEEVE & SPACER CONN. TO EX. 12" W	545,490.00	1,377,380.20	WITH RETAINER GLANDS
②	0+10	12"-1/8" H.B.	545,495.45	1,377,388.59	HOCO STD. DETAIL W-2.21
③	0+26	12"-1/8" H.B.	545,511.77	1,377,392.06	HOCO STD. DETAIL W-2.21
④	1+11	P.T.	545,539.06	1,377,473.80	
⑤	1+36	12"x8" CROSS	545,563.33	1,377,489.54	
⑥	2+04	12"-1/8" H.B.	545,592.64	1,377,550.15	HOCO STD. DETAIL W-2.21
⑦	2+16	12"-1/8" H.B.	545,588.85	1,377,560.70	HOCO STD. DETAIL W-2.21
⑧	2+92	P.C.	545,613.92	1,377,628.64	
⑨	2+92	12"-1/32" H.B.	545,619.71	1,377,624.52	HOCO STD. DETAIL W-2.21
⑩	3+22	12"x6" F.H.T. #1	545,636.31	1,377,656.12	HOCO STD. DETAIL W-2.23
⑪	4+75	P.T.	545,722.63	1,377,777.08	
⑫	4+75	12"-1/32" H.B.	545,730.86	1,377,775.23	HOCO STD. DETAIL W-2.21
⑬	6+72	12"x6" F.H.T. #2	545,872.82	1,377,909.28	HOCO STD. DETAIL W-2.23

**TRAVERSE POINTS**

TRAVERSE POINT	ELEVATION	NORTHING	EASTING
106	186.27	545419.2224	1377255.2176
107	178.49	545605.1291	1377583.9017
108	169.57	545765.5302	1377736.3413
114	158.65	545815.7079	1377890.1851
216	179.92	545592.7378	1377454.3017
250	--	545596.6342	1377495.0882

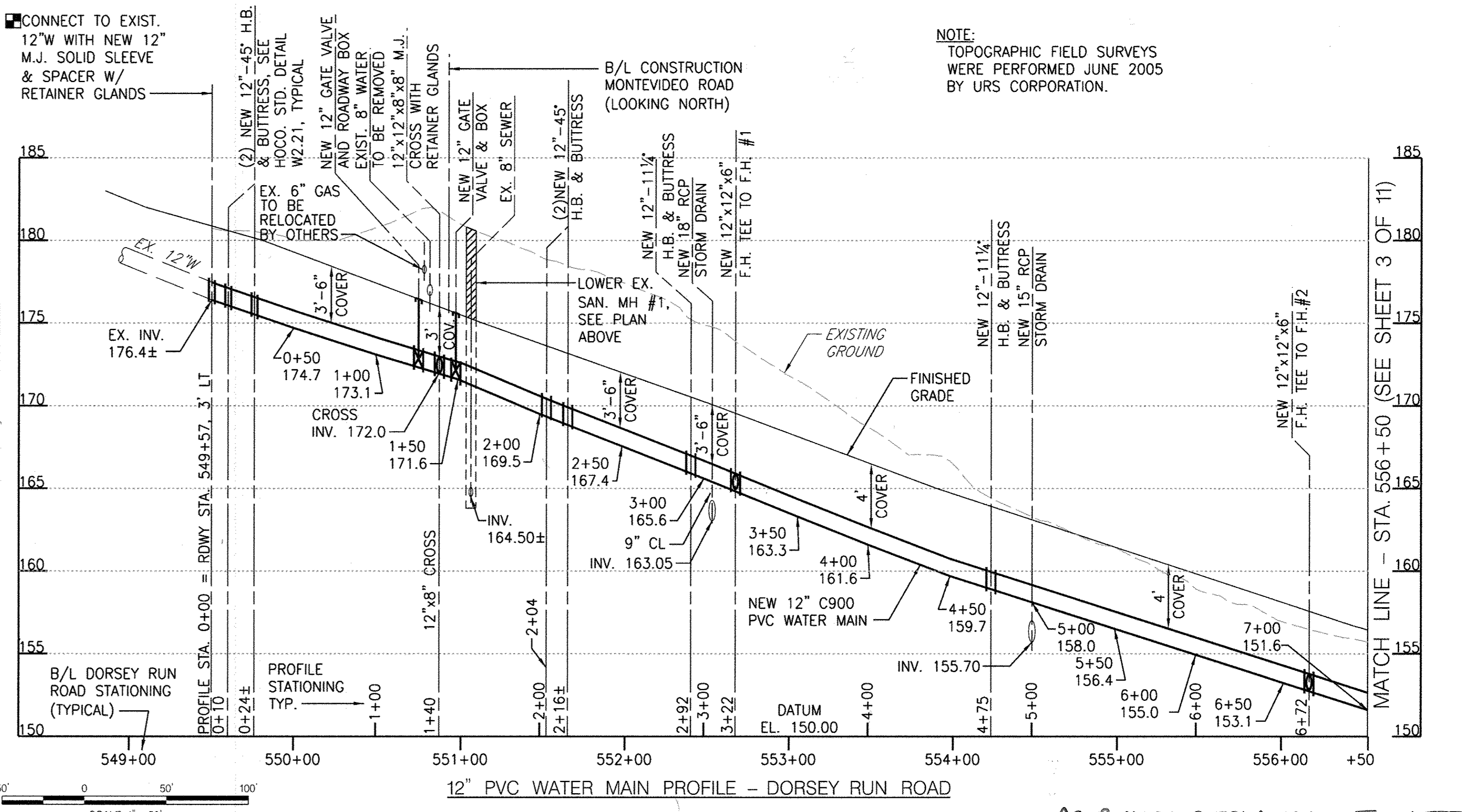
**ROADWAY BASELINE COORDINATE TABLE**

DESIGNATION	STATION	NORTHING	EASTING
<b>DORSEY RUN ROAD</b>			
PC CURVE DRB - 1	542+66.39	545,938.6619	1,376,990.3053
PI CURVE DRB - 1	546+92.88	545,353.3948	1,377,089.7707
PT CURVE DRB - 1	550+62.95	545,539.0357	1,377,473.7423
PC CURVE DRB - 2	552+34.82	545,613.8455	1,377,628.4757
PI CURVE DRB - 2	553+28.60	545,654.6655	1,377,712.9059
PT CURVE DRB - 2	554+20.31	545,722.8503	1,377,777.2921

RECORD DRAWINGS TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON INFORMATION PROVIDED BY OTHERS. THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

URS (AN AECOM COMPANY)

BY: *[Signature]*



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MD

*[Signature]*  
DIRECTOR OF PUBLIC WORKS

*[Signature]*  
CHIEF, BUREAU OF UTILITIES

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

Professional Certification  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 16156  
Expiration Date: 8/28/2014

*[Signature]*  
DATE: 8/20/13

DES: RER  
DRN: CLD  
CHK: DTM  
DATE: 8/20/13

DTM: AS BUILT  
BY: NO.

REVISION: 12/16

**WATER & SEWER PART PLAN AND PROFILE**

DORSEY RUN ROAD  
WATER AND SEWER EXTENSIONS  
CAPITAL PROJECT W-8292  
CONTRACT NO. 14-4679

SCALE: 1" = 50'  
SHEET 2 OF 11

600 SCALE MAP NO. 43 BLOCK NO. 10 & 11  
1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**NOTES:**

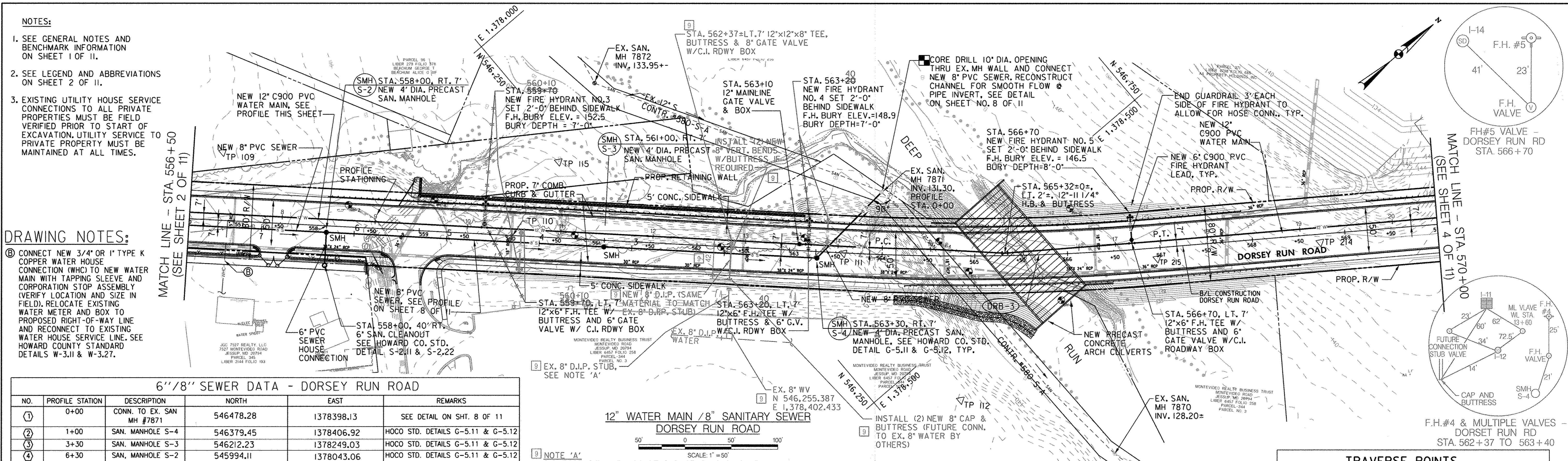
- SEE GENERAL NOTES AND BENCHMARK INFORMATION ON SHEET 1 OF 11.
- SEE LEGEND AND ABBREVIATIONS ON THIS SHEET.
- EXISTING UTILITY HOUSE SERVICE CONNECTIONS TO ALL PRIVATE PROPERTIES MUST BE FIELD VERIFIED PRIOR TO START OF EXCAVATION. UTILITY SERVICE TO PRIVATE PROPERTY MUST BE MAINTAINED AT ALL TIMES.

MATCH LINE - STA. 556+50 (SEE SHEET 3 OF 11)

MATCH LINE - STA. 556+50 (SEE SHEET 3 OF 11)

**AS-BUILT REPLACEMENT SHEET**





- NOTES:**
- SEE GENERAL NOTES AND BENCHMARK INFORMATION ON SHEET 1 OF 11.
  - SEE LEGEND AND ABBREVIATIONS ON SHEET 2 OF 11.
  - EXISTING UTILITY HOUSE SERVICE CONNECTIONS TO ALL PRIVATE PROPERTIES MUST BE FIELD VERIFIED PRIOR TO START OF EXCAVATION. UTILITY SERVICE PRIVATE PROPERTY MUST BE MAINTAINED AT ALL TIMES.

- DRAWING NOTES:**
- CONNECT NEW 3/4" OR 1" TYPE K COPPER WATER HOUSE CONNECTION (W/C) TO NEW WATER MAIN WITH TAPPING SLEEVE AND CORPORATION STOP ASSEMBLY (VERIFY LOCATION AND SIZE IN FIELD). RELOCATE EXISTING WATER METER AND BOX TO PROPOSED RIGHT-OF-WAY LINE AND RECONNECT TO EXISTING WATER HOUSE SERVICE LINE. SEE HOWARD COUNTY STANDARD DETAILS W-3.11 & W-3.27.

**6" / 8" SEWER DATA - DORSEY RUN ROAD**

NO.	PROFILE STATION	DESCRIPTION	NORTH	EAST	REMARKS
1	0+00	CONN. TO EX. SAN MH #7871	546478.28	1378398.13	SEE DETAIL ON SHT. 8 OF 11
2	1+00	SAN. MANHOLE S-4	546379.45	1378406.92	HOCO STD. DETAILS G-5.11 & G-5.12
3	3+30	SAN. MANHOLE S-3	546212.23	1378249.03	HOCO STD. DETAILS G-5.11 & G-5.12
4	6+30	SAN. MANHOLE S-2	545994.11	1378043.06	HOCO STD. DETAILS G-5.11 & G-5.12
5	6+30	6" SAN. CLEANOUT	545971.45	1378067.06	HOCO STD. DETAIL S-2.11 & S-2.22

**12" WATER LINE DATA - DORSEY RUN ROAD**

NO.	PROFILE STATION	DESCRIPTION	NORTH	EAST	REMARKS
1	10+20	12"x6" F.H.T. #3	546127.32	1378149.60	HOCO STD. DETAIL W-2.23
2	13+74	12"x6" F.H.T. #4	546381.79	1378389.90	HOCO STD. DETAIL W-2.23
3	14+50	P.C.	546403.70	1378410.58	
4	15+80	12"-1/32" H.B.	546537.03	1378534.21	HOCO STD. DETAIL W-2.21
5	17+20	12"x6" F.H.T. #5	546648.35	1378614.96	HOCO STD. DETAIL W-2.23
6	17+52	P.T.	546670.39	1378630.92	

**CURVE DATA**

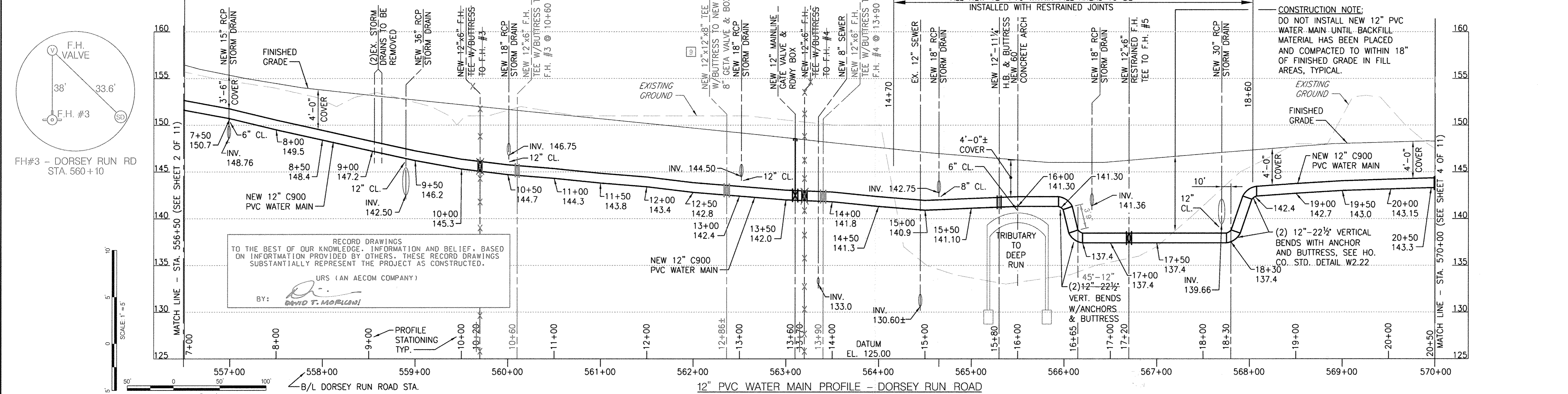
CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
DRB-3	7°41'44.83"	LT	2°17'30.59"	2,500.00'	168.15'	335.79'

**ROADWAY BASLINE COORDINATE TABLE**

DESIGNATION	STATION	NORTHING	EASTING
PC CURVE DRB-3	563+58.17	546,404.7422	1,378,421.1954
PI CURVE DRB-3	565+26.32	546,526.9982	1,378,536.6404
PT CURVE DRB-3	566+93.97	546,663.6125	1,378,634.6738

**TRAVERSE POINTS**

TRAVERSE POINT	ELEVATION	NORTHING	EASTING
109	158.14	545964.7628	1377905.0457
110	151.07	546141.1606	1378175.4259
111	150.20	546404.6191	1378421.5134
115	142.25	546234.0799	1378147.7618
214	146.93	546803.7669	1378745.8215
217	--	546291.9411	1377916.4187
226	136.25	546429.2665	1378295.0489



**AS-BUILT REPLACEMENT SHEET**

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MD

PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: (410) 765-7220

Professional Certification  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 16156  
Expiration Date: 8/28/2014

DES: RER  
DRN: CLD  
CHK: DTM  
DATE: 8/2013

DTM AS BUILT 12/16  
RER REDLINE NO. 9 5/21/15  
BY NO. REVISION DATE

**WATER & SEWER PART PLAN AND PROFILE**

DORSEY RUN ROAD  
WATER AND SEWER EXTENSIONS  
CAPITAL PROJECT W-8292  
CONTRACT NO. 14-4679

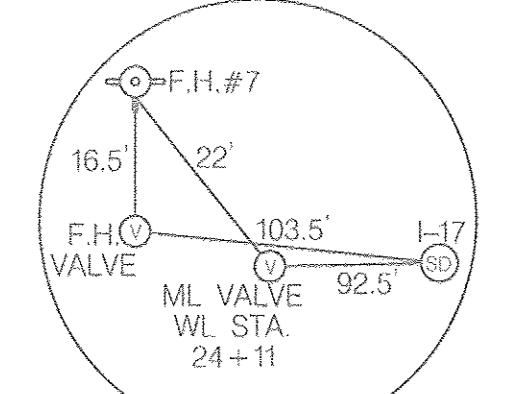
SCALE  
1" = 50'  
SHEET 3 OF 11

600 SCALE MAP NO. 43 BLOCK NO. 10 & 11 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

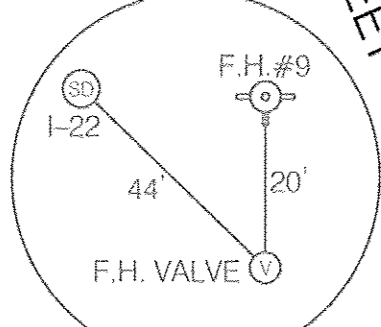


TRAVERSE POINTS			
TRAVERSE POINT	ELEVATION	NORTHING	EASTING
211	142.84	547322.7610	1379615.4862
212	136.30	547204.0439	1379181.6264
213	143.69	546981.9676	1378863.5997
221	--	547374.9436	1379962.6000

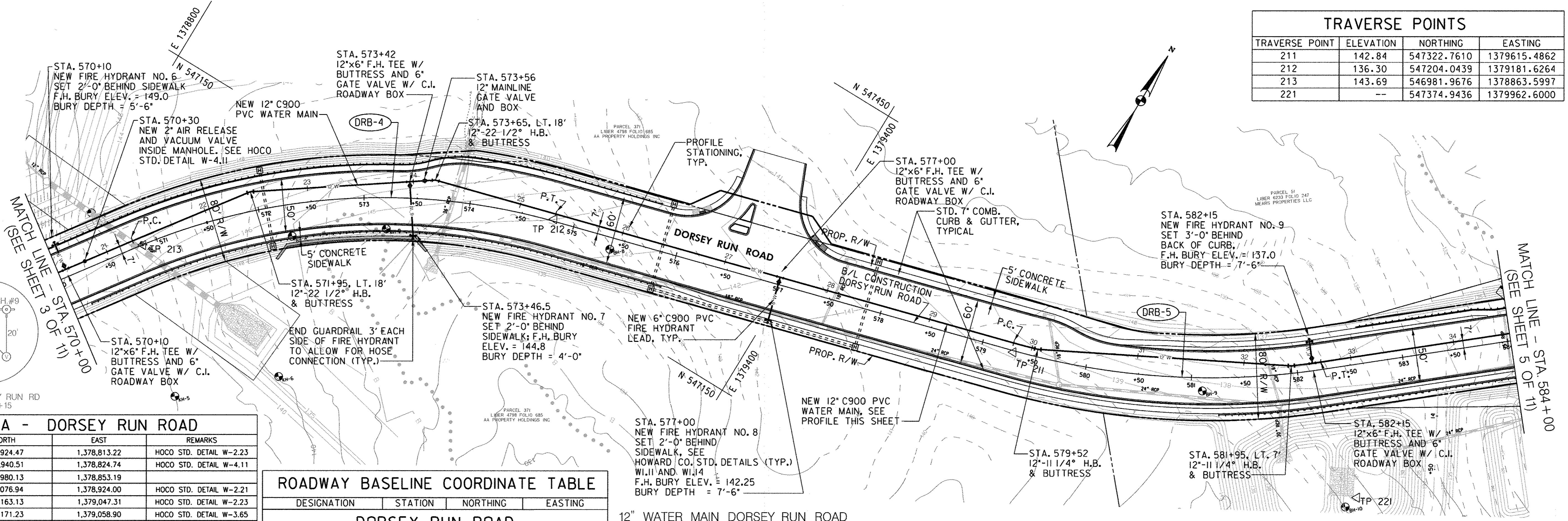
NOTES:  
 1. SEE GENERAL NOTES AND BENCHMARK INFORMATION ON SHEET 1 OF 11.  
 2. SEE LEGEND AND ABBREVIATIONS ON SHEET 2 OF 11.



FH#7 & ML VALVE - DORSEY RUN RD STA. 573+56 TO STA. 574+42



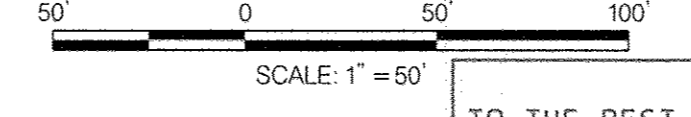
FH#9 - DORSEY RUN RD STA. 582+15



12" WATER LINE DATA - DORSEY RUN ROAD					
NO.	PROFILE STATION	DESCRIPTION	NORTH	EAST	REMARKS
1	20+57	12"x6" F.H.T. #6	546,924.47	1,378,813.22	HOCO STD. DETAIL W-2.23
2	20+77	AIR RELEASE VALVE MH	546,940.51	1,378,824.74	HOCO STD. DETAIL W-4.11
3	21+26	P.C.	546,980.13	1,378,853.19	
4	22+46	12"-1/16 H.B.	547,076.94	1,378,924.00	HOCO STD. DETAIL W-2.21
5	23+97	12"x6" F.H.T. #7	547,163.13	1,379,047.31	HOCO STD. DETAIL W-2.23
6	24+11	12" GATE VALVE & BOX	547,171.23	1,379,058.90	HOCO STD. DETAIL W-3.65
7	24+21	12"-1/16 H.B.	547,176.96	1,379,067.10	HOCO STD. DETAIL W-2.21
8	25+36	P.T.	547,248.94	1,379,180.61	
9	27+56	12"x6" F.H.T. #8	547,268.39	1,379,391.56	HOCO STD. DETAIL W-2.23
10	29+83	P.C.	547,330.31	1,379,611.29	
11	30+05	12"-1/32 H.B.	547,337.07	1,379,633.80	HOCO STD. DETAIL W-2.21
12	32+45	12"-1/32 H.B.	547,447.95	1,379,845.73	HOCO STD. DETAIL W-2.21
13	32+65	12"x6" F.H.T. #9	547,460.35	1,379,861.39	HOCO STD. DETAIL W-2.23
14	32+73	P.T.	547,465.53	1,379,867.66	

ROADWAY BASELINE COORDINATE TABLE			
DESIGNATION	STATION	NORTHING	EASTING
DORSEY RUN ROAD			
PC CURVE DRB - 4	570+76.62	546,974.5083	1,378,857.7703
PI CURVE DRB - 4	572+86.74	547,145.2167	1,378,980.2694
PT CURVE DRB - 4	574+80.84	547,202.2067	1,379,182.5057
PC CURVE DRB - 5	579+28.29	547,323.5716	1,379,613.1850
PI CURVE DRB - 5	580+77.99	547,364.1750	1,379,757.2711
PT CURVE DRB - 5	582+23.24	547,460.1585	1,379,872.1476

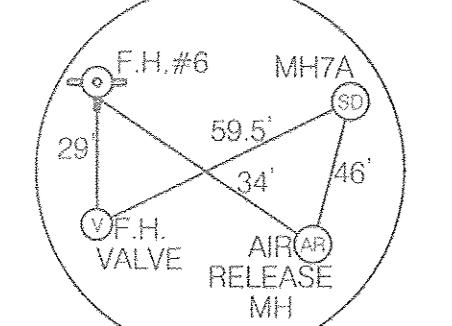
12" WATER MAIN DORSEY RUN ROAD



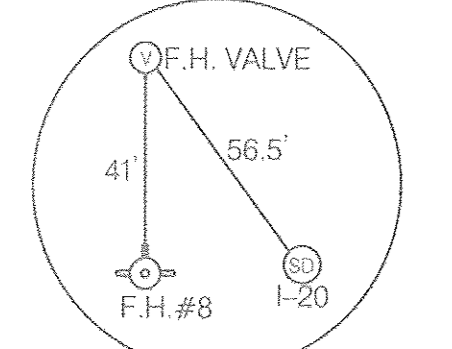
RECORD DRAWINGS TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON INFORMATION PROVIDED BY OTHERS. THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

URS (AN AECOM COMPANY)  
 BY: *[Signature]*

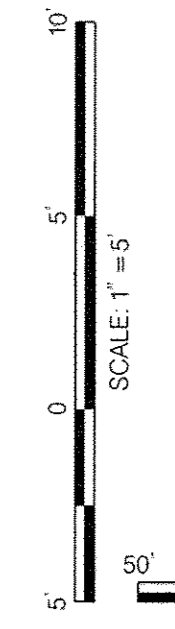
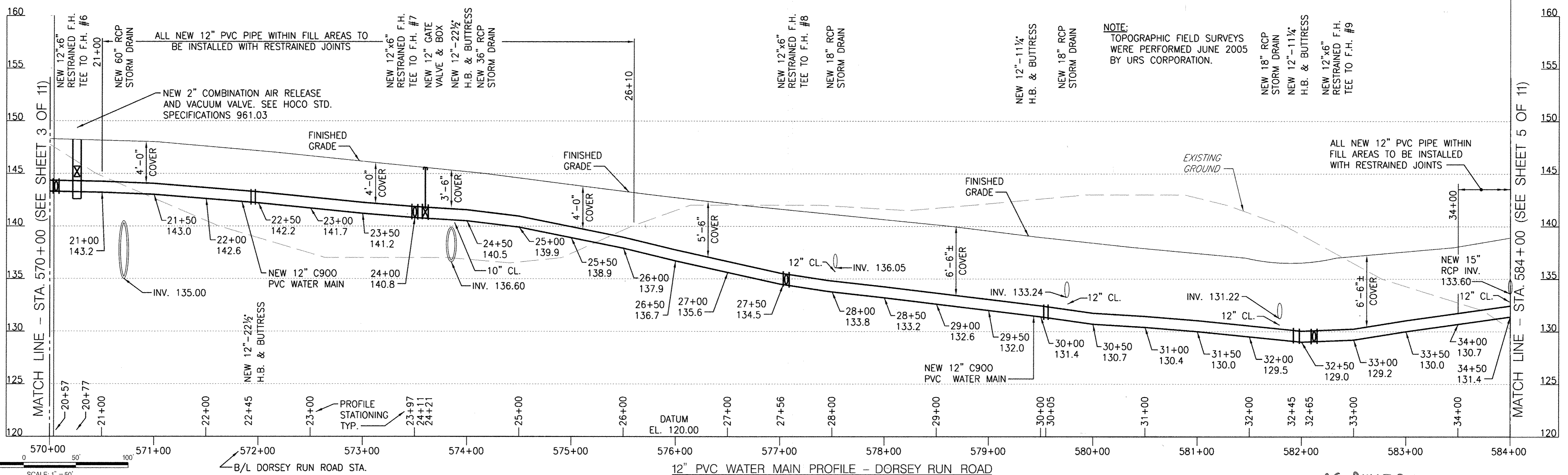
CURVE DATA						
CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
DORSEY RUN ROAD						
DRB-4	38°35'57.42" RT	9°32'57.47"	600.00'	210.11'	404.21'	35.73
DRB-5	24°08'32.00" LT	8°11'06.40"	700.00'	149.70'	294.95'	15.83



FH#6 & AIR RELEASE MH - DORSEY RUN RD STA. 570+10 TO STA. 570+30



FH#8 - DORSEY RUN RD STA. 577+00



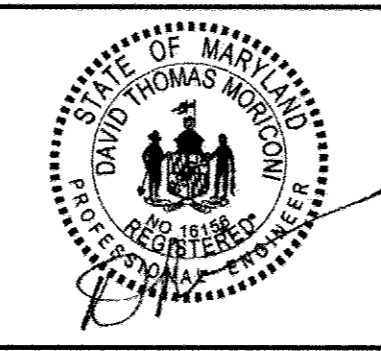
NOTE: TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED JUNE 2005 BY URS CORPORATION.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MD

*[Signature]* 2/16/17  
 DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 2/16/17  
 CHIEF, BUREAU OF UTILITIES DATE

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



DES: RER	DTM	AS BUILT	12/16
DRN: CLD	BY	NO.	
CHK: DTM	REVISION	DATE	
DATE: 8/2013			

**WATER PART PLAN AND PROFILE**

**DORSEY RUN ROAD WATER AND SEWER EXTENSIONS**

CAPITAL PROJECT W-8292  
 CONTRACT NO. 14-4679

1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE  
 1" = 50'  
 SHEET 4 OF 11

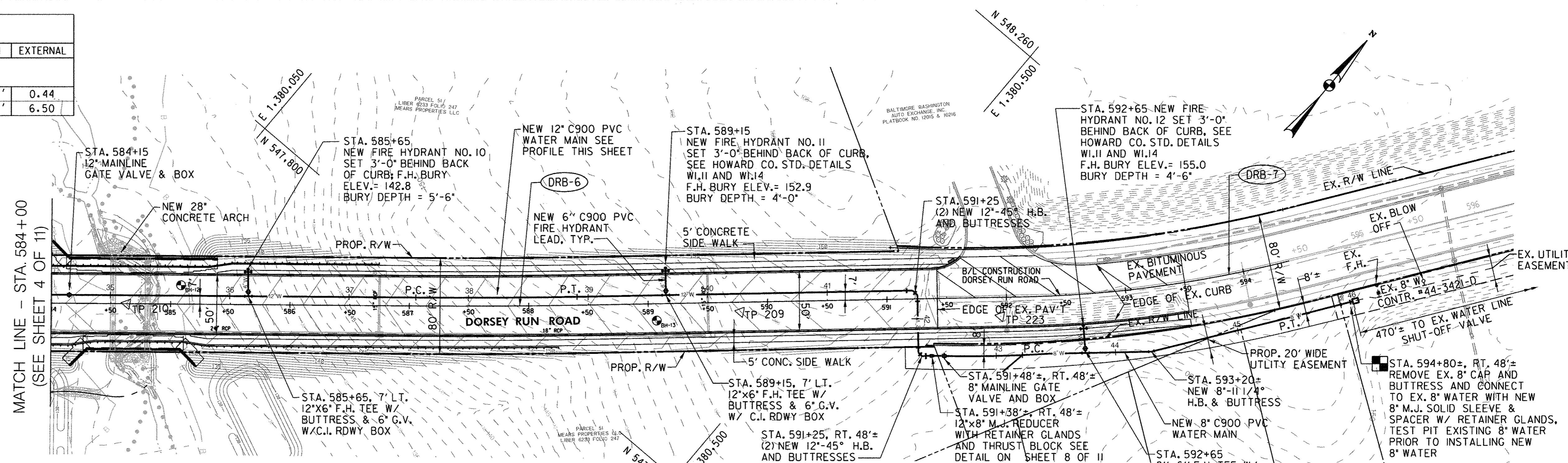


CURVE DATA						
CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
<b>DORSEY RUN ROAD</b>						
DRB-6	1°29'00.60" LT	1°05'06.53"	5,280.00'	68.36'	136.71'	0.44
DRB-7	13°01'30.89" LT	5°43'46.48"	1,000.00'	114.16'	227.33'	6.50

TRAVERSE POINTS			
TRAVERSE POINT	ELEVATION	NORTHING	EASTING
209	159.39	547941.5441	1380452.6025
210	127.82	547614.0468	1380056.4203
223	--	548079.7183	1380621.2076

ROADWAY BASELINE COORDINATE TABLE			
DESIGNATION	STATION	NORTHING	EASTING
<b>DORSEY RUN ROAD</b>			
PC CURVE DRB-6	587+06.50	547,770.0164	1,380,242.9964
PI CURVE DRB-6	587+74.86	547,813.8467	1,380,295.4540
PT CURVE DRB-6	588+43.21	547,859.0203	1,380,346.7593
POT	590+00.00	547,962.6316	1,380,464.4343
PC CURVE DRB-7	592+11.91	548,102.6700	1,380,623.4808
PI CURVE DRB-7	593+26.07	548,178.1100	1,380,709.1606
PT CURVE DRB-7	594+39.25	548,270.9195	1,380,775.6333

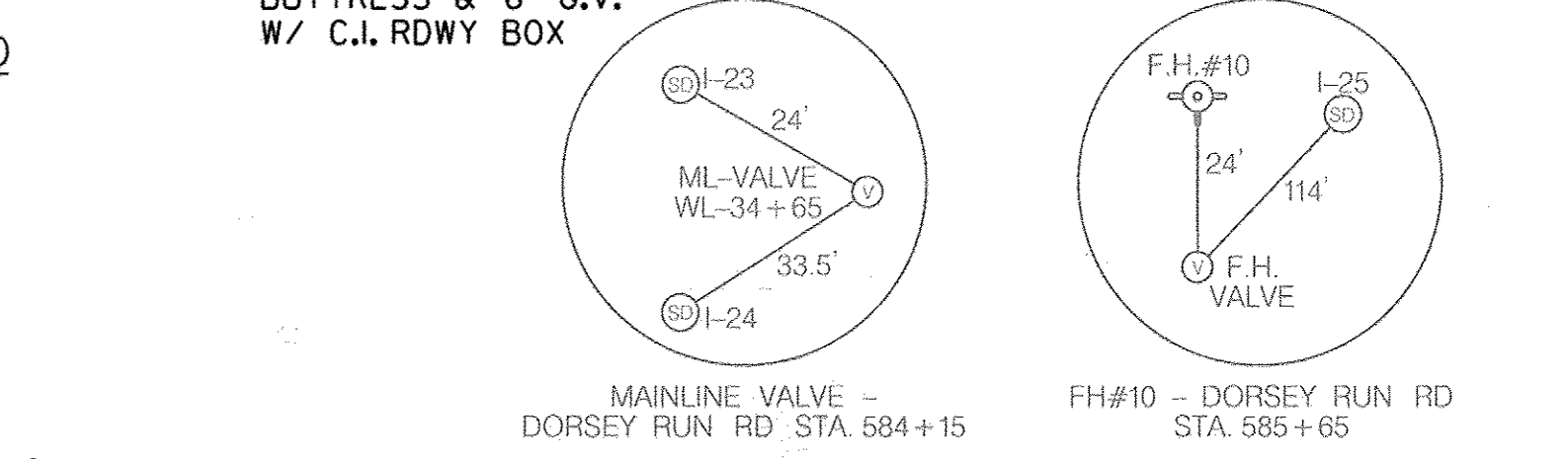
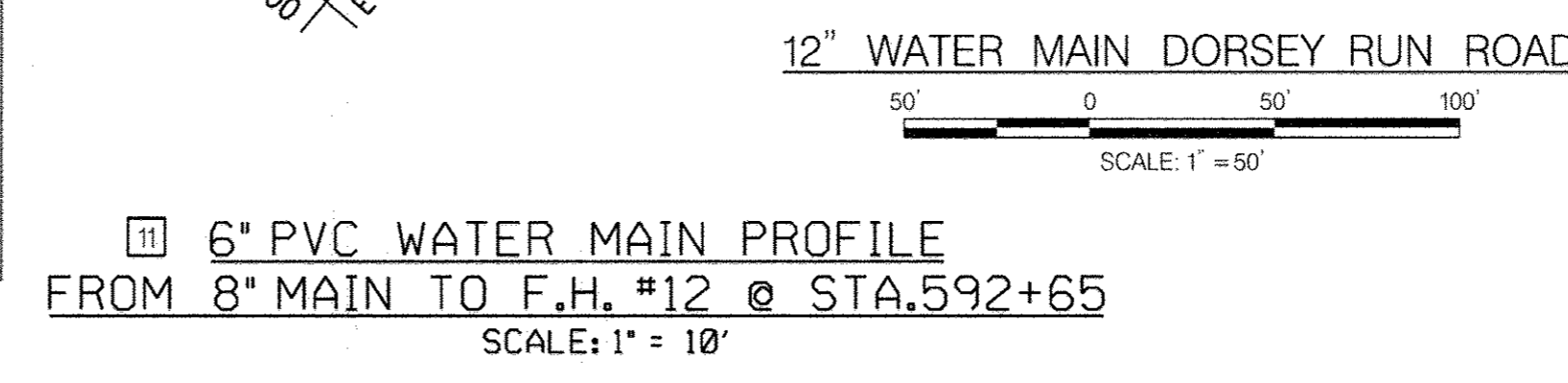
12"/8" WATER LINE DATA - DORSEY RUN ROAD					
NO.	PROFILE STATION	DESCRIPTION	NORTH	EAST	REMARKS
1	36+15	12"x6" F.H.T. #10	1,380,129.92	547,684.66	HOCO STD. DETAIL W-2.23
2	37+56	P.C.	1,380,237.68	547,774.70	
3	38+91	P.T.	1,380,345.10	547,857.56	
4	39+65	12"x6" F.H.T. #11	1,380,396.01	547,911.71	HOCO STD. DETAIL W-2.23
5	41+72	12"-1/8 H.B.	1,380,551.09	548,048.24	HOCO STD. DETAIL W-2.21
6	41+78	12"-1/8 H.B.	1,380,556.74	548,047.87	HOCO STD. DETAIL W-2.21
7	42+30	12"-1/8 H.B.	1,380,588.15	548,012.03	HOCO STD. DETAIL W-2.21
8	42+33	12"-1/8 H.B.	1,380,592.37	548,011.76	HOCO STD. DETAIL W-2.21
9	42+43	12"x8" REDUCER	1,380,597.40	548,016.46	WITH THRUST COLLAR SEE DETAIL ON SHEET 8 OF 11
10	43+22	P.C.	1,380,656.04	548,066.79	
11	43+72	8"x6" F.H.T. #12	1,380,693.96	548,103.64	HOCO STD. DETAIL W-2.23
12	44+30	8"-1/32" H.B.	1,380,736.54	548,138.80	HOCO STD. DETAIL W-2.21
13	45+52	P.T.	1,380,811.41	548,241.08	
14	46+00	8" SLEEVE & SPACER CONN. TO EX. 8" W	1,380,839.91	548,278.91	WITH RETAINER GLANDS



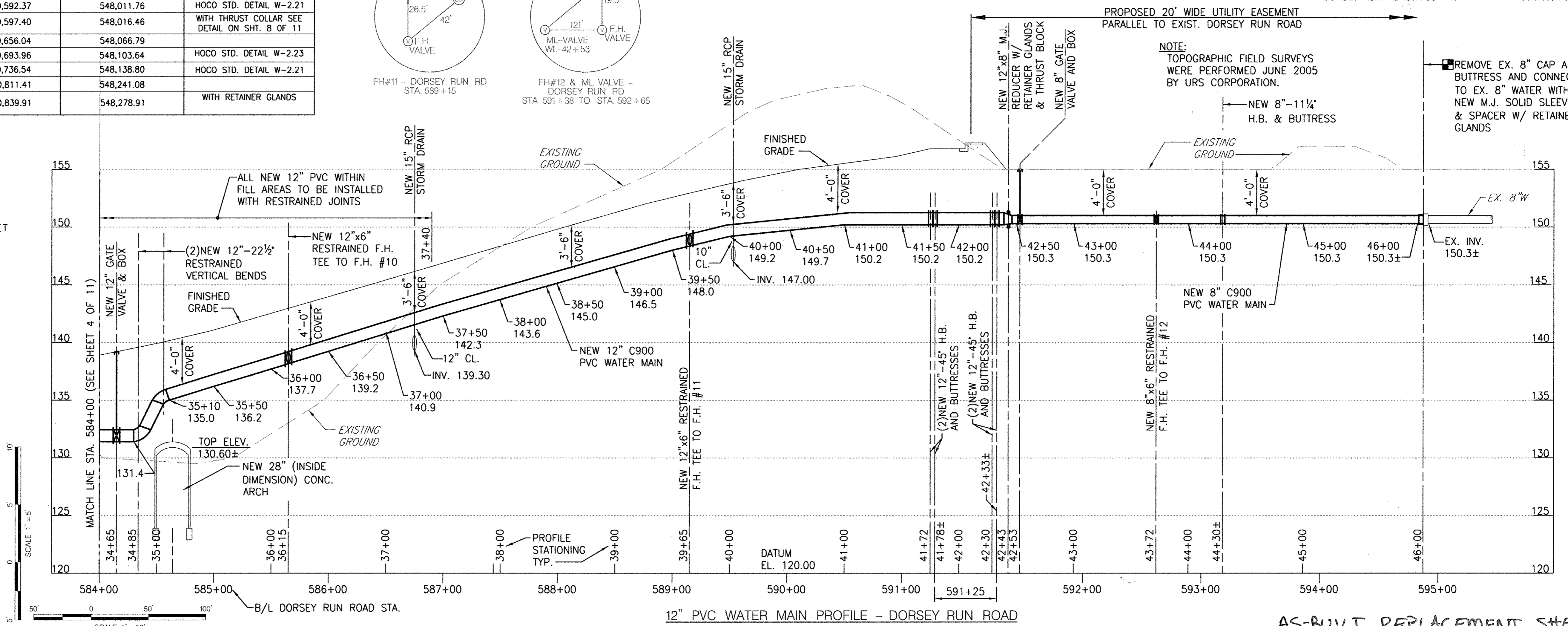
RECORD DRAWINGS TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON INFORMATION PROVIDED BY OTHERS. THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

URS (AN AECOM COMPANY)

BY: *David T. Morlock*



- NOTES:**
- SEE GENERAL NOTES AND BENCHMARK INFORMATION ON SHEET 1 OF 11.
  - SEE LEGEND AND ABBREVIATIONS ON SHEET 2 OF 11.



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MD

*James P. Conroy* 2/10/17  
DIRECTOR OF PUBLIC WORKS DATE

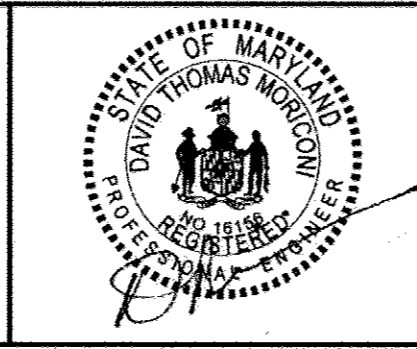
*Thomas G. Bollen* 2/10/17  
CHIEF, BUREAU OF ENGINEERING DATE

*Steve C. Conroy* 2/10/17  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 2/10/17  
CHIEF, UTILITY DESIGN DIVISION DATE

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

Professional Certification:  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 16156  
Expiration Date: 8/28/2014



DES: RER	
DRN: CLD	
CHK: DTM	DTM
DATE: 8/2013	BY: NO. REVISION DATE
	AS BUILT 12/16
	REVISION NO. II

**WATER PART PLAN AND PROFILE**

600 SCALE MAP NO. 43 BLOCK NO. 10 & 11

**AS-BUILT REPLACEMENT SHEET**

DORSEY RUN ROAD  
WATER AND SEWER EXTENSIONS

CAPITAL PROJECT W-8292  
CONTRACT NO. 14-4679

1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE 1" = 50'  
SHEET 5 OF 11



- NOTES:**
- SEE GENERAL NOTES AND BENCHMARK INFORMATION ON SHEET 1 OF 11.
  - SEE LEGEND AND ABBREVIATIONS ON SHEET 2 OF 11.
  - CENTER NEW WATER MAIN PIPE SEGMENT AT EX. 8" SEWER CROSSING. FIELD VERIFY THAT THERE ARE NO SEWER PIPE JOINTS WITHIN 5' EACH SIDE OF NEW WATER MAIN CROSSING. IF NECESSARY REPLACE EX. 8" SEWER SO THAT CENTER OF SEWER PIPE SEGMENT IS LOCATED AT THE CROSSING AS WELL. PROVIDE BYPASS SEWAGE PUMPING AS REQUIRED.
  - EXISTING UTILITY HOUSE SERVICE CONNECTIONS TO ALL PRIVATE PROPERTIES MUST BE FIELD VERIFIED PRIOR TO START OF EXCAVATION. UTILITY SERVICE TO PRIVATE PROPERTY MUST BE MAINTAINED AT ALL TIMES.

**8" WATER LINE DATA - MONTEVIDEO ROAD**

NO.	PROFILE STATION	DESCRIPTION	NORTH	EAST	REMARKS
①	0+00	8" SLEEVE AND SPACER CONN. TO EX. 8" W	-	-	WITH RETAINER GLANDS
②	0+10	8"-1/8" H.B.	-	-	HOCO STD. DETAIL W-2.21
③	0+20	8"-1/8" H.B.	-	-	HOCO STD. DETAIL W-2.21
④	1+53	8"x6" F.H.T. #13	-	-	HOCO STD. DETAIL W-2.23
⑤	5+03	8"x6" F.H.T. #14	-	-	HOCO STD. DETAIL W-2.23
⑥	6+64	12"x8" CROSS	-	-	WITH RETAINER GLANDS
⑦	8+37	P.C.	-	-	-
⑧	8+53	8"x6" F.H.T. #15	-	-	HOCO STD. DETAIL W-23

**CURVE DATA**

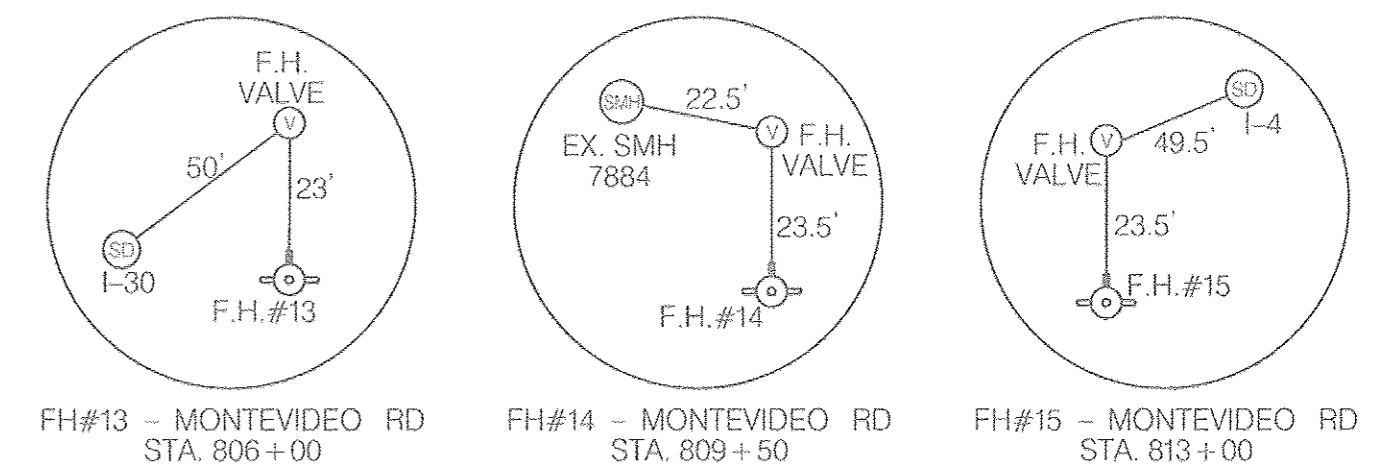
CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
<b>MONTEVIDEO ROAD</b>						
MVR-1	29°54'03.77" LT.	12°43'56.62"	450.00'	120.16'	234.84'	15.77'

**ROADWAY BASELINE COORDINATE TABLE**

DESIGNATION	STATION	NORTHING	EASTING
<b>MONTEVIDEO ROAD</b>			
POT	800+00.00	546,558.5788	1,376,993.6750
PC CURVE MVR	813+01.58	545,397.2664	1,377,581.4333
PI CURVE MVR	814+21.74	545,290.0549	1,377,635.6947
PT CURVE MVR	815.36.42	545,224.1641	1,377,982.9385
POT	819.30.01	545,006.5537	1,378,068.0356

**TRAVERSE POINTS**

TRAVERSE POINT	ELEVATION	NORTHING	EASTING
107	--	545605.1290	1377583.9020
253	--	545928.6232	1377266.0419



SCALE: 1" = 5'

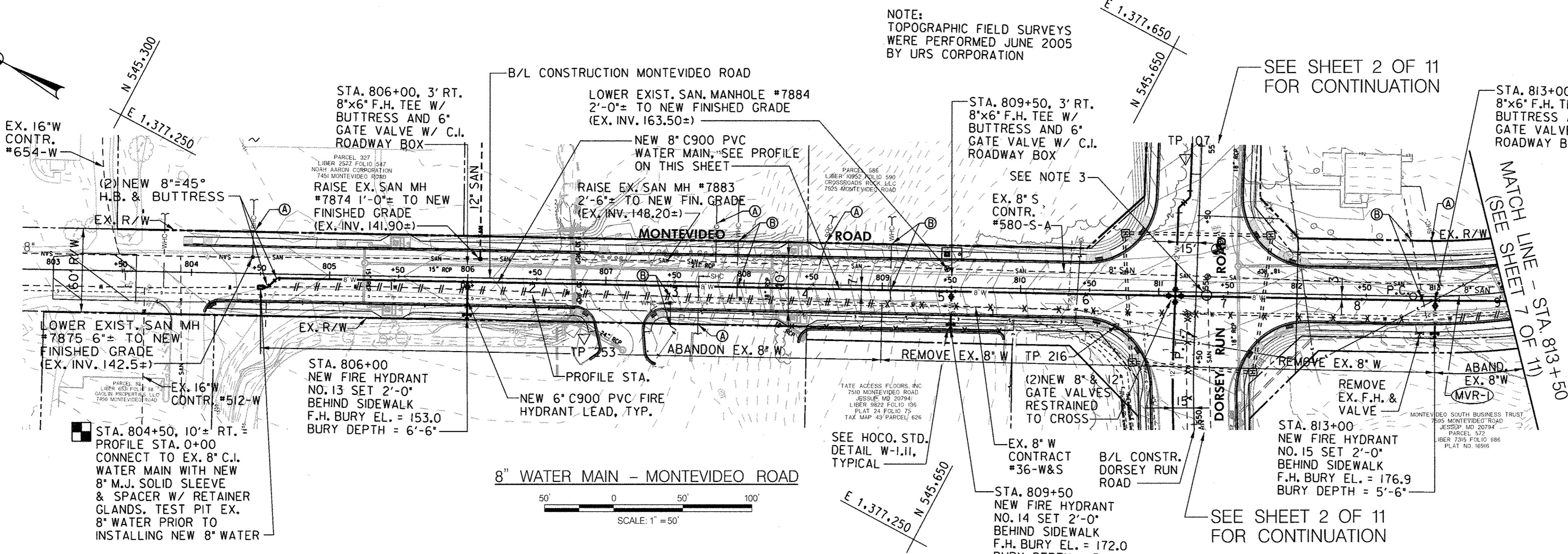
RECORD DRAWINGS TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON INFORMATION PROVIDED BY OTHERS. THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

URS (AN AECOM COMPANY)  
BY: *[Signature]*  
**AS-BUILT REPLACEMENT SHEET**

NOTE:  
TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED JUNE 2005 BY URS CORPORATION

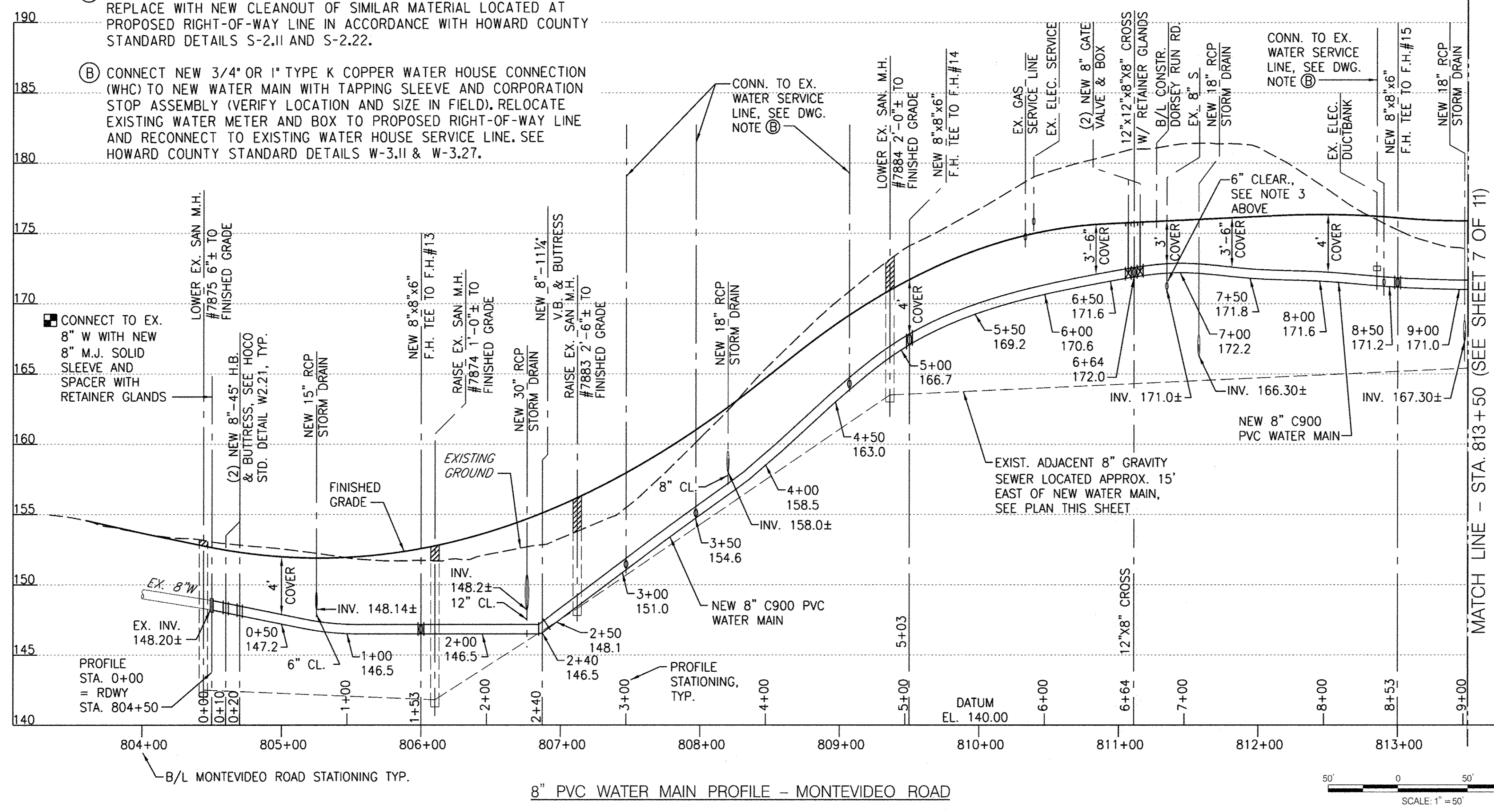
SEE SHEET 2 OF 11 FOR CONTINUATION

SEE SHEET 2 OF 11 FOR CONTINUATION



**DRAWING NOTES:**

- REMOVE EXISTING 4" OR 6" SEWER HOUSE CONNECTION (SHC) AND REPLACE WITH NEW CLEANOUT OF SIMILAR MATERIAL LOCATED AT PROPOSED RIGHT-OF-WAY LINE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS S-2.11 AND S-2.22.
- CONNECT NEW 3/4" OR 1" TYPE K COPPER WATER HOUSE CONNECTION (WHC) TO NEW WATER MAIN WITH TAPPING SLEEVE AND CORPORATION STOP ASSEMBLY (VERIFY LOCATION AND SIZE IN FIELD). RELOCATE EXISTING WATER METER AND BOX TO PROPOSED RIGHT-OF-WAY LINE AND RECONNECT TO EXISTING WATER HOUSE SERVICE LINE. SEE HOWARD COUNTY STANDARD DETAILS W-3.11 & W-3.27.



SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MD

*[Signature]* 2/6/17  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 2/6/17  
CHIEF, BUREAU OF UTILITIES DATE

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

Professional Certification  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 16156  
Expiration Date: 8/28/2014

DES: RER	DRN: CLD	CHK: DTM	DATE: 8/2013
DTM	AS BUILT	12/16	
BY NO.	REVISION	DATE	

**WATER PART PLAN AND PROFILE**

DORSEY RUN ROAD  
WATER AND SEWER EXTENSIONS

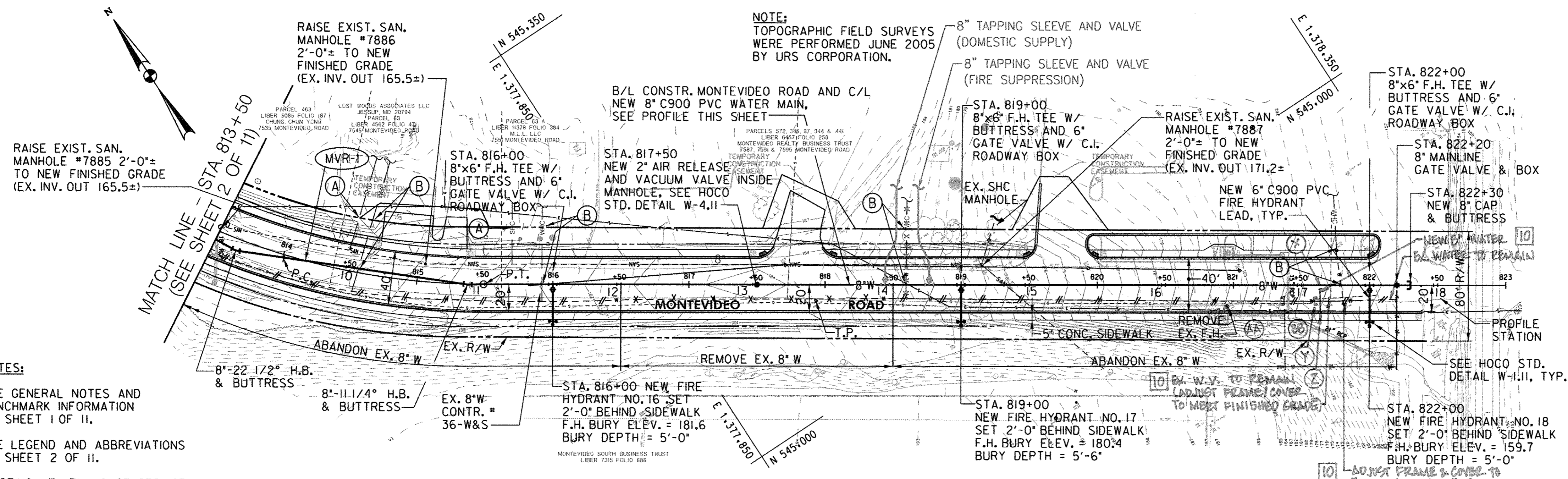
CAPITAL PROJECT W-8292  
CONTRACT NO. 14-4679

600 SCALE MAP NO. 43 BLOCK NO. 10 & 11  
1ST ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SCALE 1" = 50'  
SHEET 6 OF 11

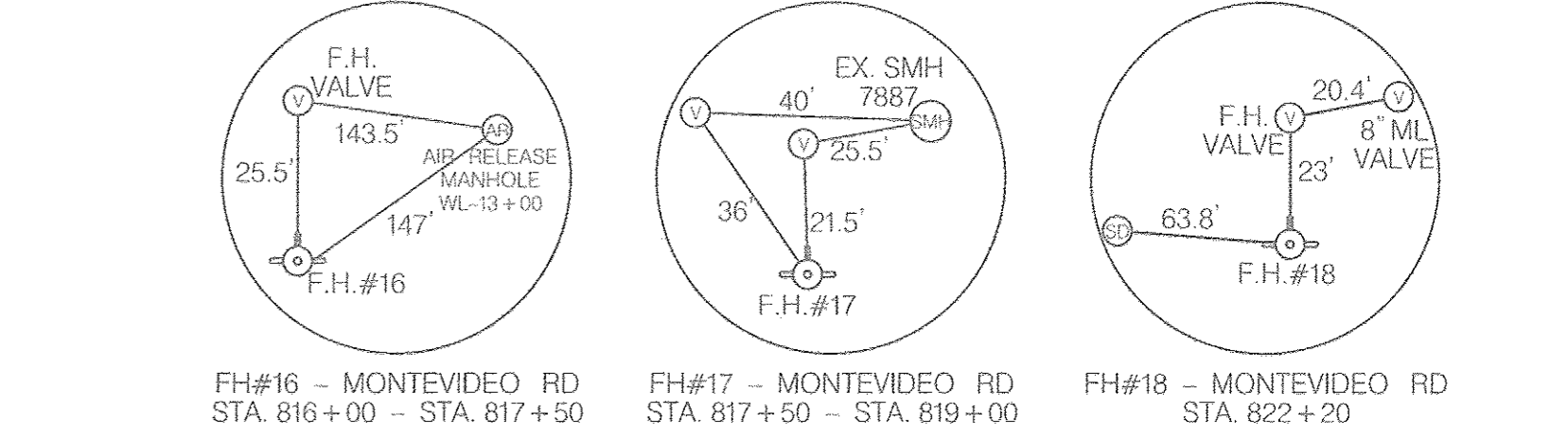




NO.	PROFILE STATION	DESCRIPTION	NORTH	EAST	REMARKS
1	9+20	8"-22 1/2" H.B.	545338.03	1377609.28	HOCO STD. DETAIL W-2.21
2	9+53	P.C.	545313.65	1377635.48	-
3	10+90	8"-11 1/2" H.B.	545223.63	1377738.08	HOCO STD. DETAIL W-2.21
4	11+03	P.T.	545216.86	1377748.75	-
5	11+53	8"x6" F.H.T. #16	545189.36	1377790.51	HOCO STD. DETAIL W-2.23
6	13+03	2" AIR RELEASE VALVE & MH	545106.85	1377915.78	HOCO STD. DETAIL W-4.11
7	14+53	8"x6" F.H.T. #17	545024.33	1378041.04	HOCO STD. DETAIL W-2.23
8	17+53	8"x6" F.H.T. #18	544859.30	1378291.59	HOCO STD. DETAIL W-2.23
9	17+83	8" CAP & BUTTRESS	544842.81	1378316.63	HOCO STD. DETAIL W-2.21

CURVE NO.	DELTA	DEGREE	RADIUS	TANGENT	LENGTH	EXTERNAL
<b>MONTEVIDEO ROAD</b>						
MVR-1	29°54'03.77" LT.	12°43'56.62"	450.00'	120.16'	234.84'	15.77'

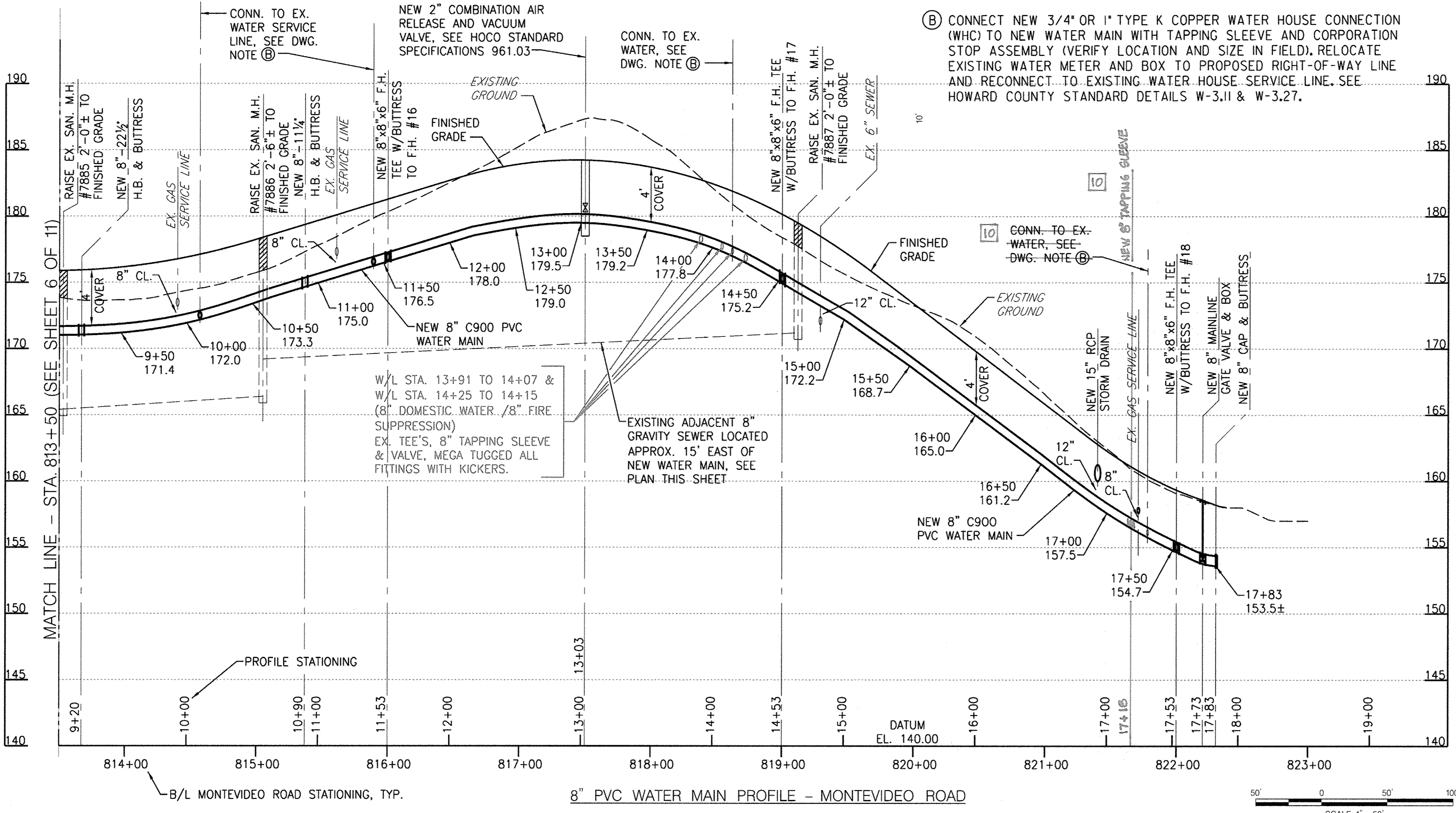
DESIGNATION	STATION	NORTHING	EASTING
<b>MONTEVIDEO ROAD</b>			
POT	800+00.00	546,558.5788	1,376,993.6750
PC CURVE MVR	813+01.58	545,397.2664	1,377,581.4333
PT CURVE MVR	814+21.74	545,290.0549	1,377,635.6947
PT CURVE MVR	815.36.42	545,224.1641	1,377,982.9385
POT	819.30.01	545,006.5537	1,378,068.0356



- DRAWING NOTES:**
- (A) NEW CAP & BUTTRESS
  - (B) REMOVE EXISTING WATER LINE
  - (X) NEW 8" TAPPING SLEEVE (STA. 821+65 +/-)
  - (Y) NEW 8" CAP & BUTTRESS (STA. 821+60 +/-, RT)
  - (Z) NEW 8"x8" TEE WITH CAP (STA. 821+65 +/-, RT)

- NOTES:**
- SEE GENERAL NOTES AND BENCHMARK INFORMATION ON SHEET 1 OF 11.
  - SEE LEGEND AND ABBREVIATIONS ON SHEET 2 OF 11.
  - EXISTING UTILITY HOUSE SERVICE CONNECTIONS TO ALL PRIVATE PROPERTIES MUST BE FIELD VERIFIED PRIOR TO START OF EXCAVATION. UTILITY SERVICE TO PRIVATE PROPERTY MUST BE MAINTAINED AT ALL TIMES.

- DRAWING NOTES:**
- (A) REMOVE EXISTING 4" OR 6" SEWER HOUSE CONNECTION (SHC) AND REPLACE WITH NEW CLEANOUT OF SIMILAR MATERIAL LOCATED AT PROPOSED RIGHT-OF-WAY LINE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS S-2.11 AND S-2.22.
  - (B) CONNECT NEW 3/4" OR 1" TYPE K COPPER WATER HOUSE CONNECTION (WHC) TO NEW WATER MAIN WITH TAPPING SLEEVE AND CORPORATION STOP ASSEMBLY (VERIFY LOCATION AND SIZE IN FIELD). RELOCATE EXISTING WATER METER AND BOX TO PROPOSED RIGHT-OF-WAY LINE AND RECONNECT TO EXISTING WATER HOUSE SERVICE LINE. SEE HOWARD COUNTY STANDARD DETAILS W-3.11 & W-3.27.

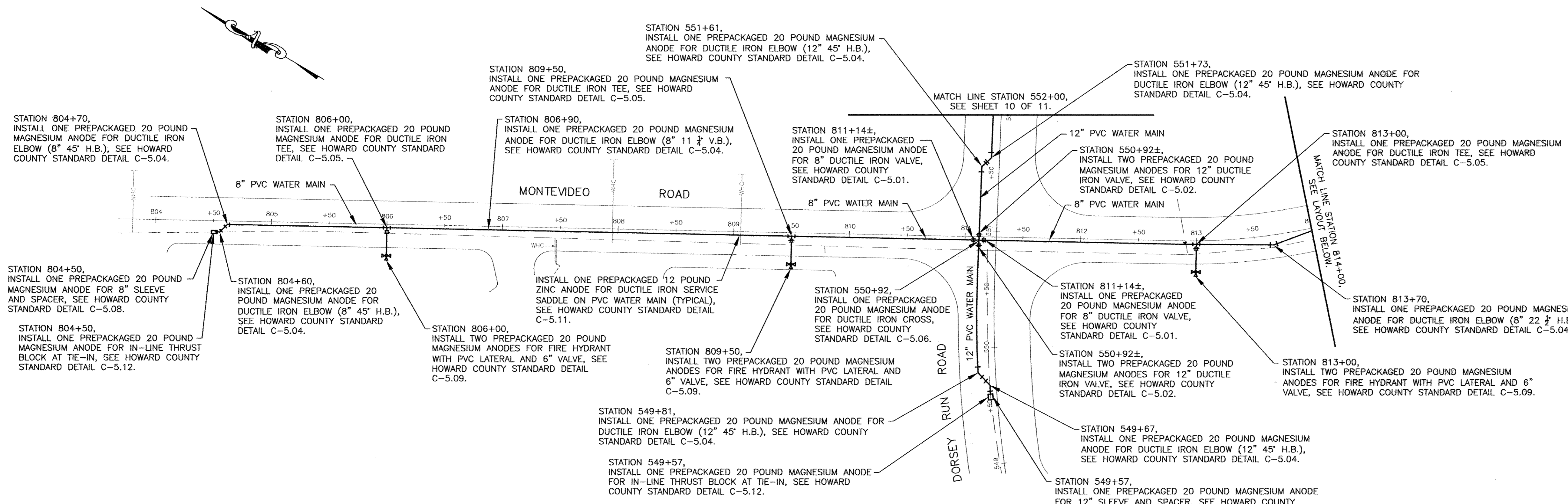


DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MD Director: <i>[Signature]</i> 2/16/17 Chief, Bureau of Engineering: <i>[Signature]</i> 2/17/17 Chief, Bureau of Utilities: <i>[Signature]</i> 2/16/17 Chief, Utility Design Division: <i>[Signature]</i> 2/17/17	PREPARED BY <b>URS</b> 4 NORTH PARK DRIVE HUNT VALLEY, MARYLAND TEL: (410) 765-7220	Professional Certification I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 16156 Expiration Date: 8/28/2014	DES: RER DRN: CLD CHK: DTM DATE: 8/2013	REVISION 10: BEGINNING NO. 10 - WATER CONNECTION ADDED 12/16: AS BUILT	<b>WATER PART PLAN AND PROFILE</b> 600 SCALE MAP NO. 43 BLOCK NO. 10 & 11	<b>DORSEY RUN ROAD WATER AND SEWER EXTENSIONS</b> CAPITAL PROJECT W-8292 CONTRACT NO. 14-4679 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1" = 50' SHEET 7 OF 11
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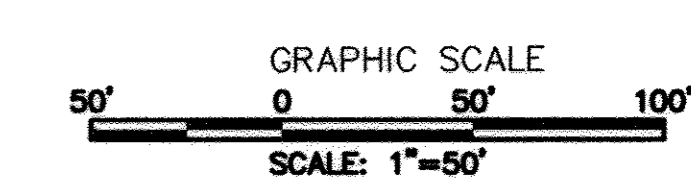








- NOTES:**
1. FOR HORIZONTAL THERMITE WELDS TO DUCTILE IRON PIPE, SEE HOWARD COUNTY STANDARD DETAIL C-3.04. FOR VERTICAL THERMITE WELDS TO DUCTILE IRON PIPE, SEE HOWARD COUNTY STANDARD DETAIL C-3.05.
  2. FOR ALL WATER SERVICE CONNECTIONS (QUANTITY, SIZE AND LOCATION TO BE FIELD DETERMINED) INSTALL ONE PREPACKAGED 12 POUND ZINC ANODE, INSULATING CORPORATION, AND SERVICE SADDLE, SEE HOWARD COUNTY STANDARD DETAILS C-4.05 AND C-5.11.
  3. FOR RESTRAINED JOINT PIPE, INSTALL ONE PREPACKAGED 12 POUND ZINC ANODE AT EACH RESTRAINED JOINT HARNESS, SEE HOWARD COUNTY STANDARD DETAIL C-5.10. RESTRAINED JOINT PIPE NOT SHOWN ON THIS DRAWING.
  4. FOR THERMITE WELD TO CONNECTOR PLATE, SEE HOWARD COUNTY STANDARD DETAIL C-5.13.
  5. FOR PLACEMENT OF ANODES, SEE HOWARD COUNTY STANDARD DETAILS C-5.14 OR C-5.15.
  6. DO NOT MAKE THERMITE WELDS TO PVC PIPE.
  7. POLYETHYLENE ENCASEMENT SHALL NOT BE INSTALLED ON NEW DUCTILE IRON WATER PIPING.
  8. DUCTILE IRON PIPE THAT WILL BE IN DIRECT CONTACT WITH POURED CONCRETE, SUCH AS AT THRUST BLOCKS, ETC., SHALL BE FIELD COATED WITH 20 MILS OF MASTIC (ROYSTON R28 OR APPROVED EQUAL). THE MASTIC COATING SHALL BE APPLIED IN TWO COATS, EACH COAT TO BE A MINIMUM OF 10 MILS IN THICKNESS.



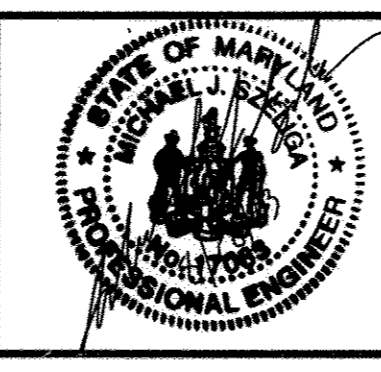
RECORD DRAWINGS  
 TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON THE INFORMATION PROVIDED BY OTHERS, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.  
 URS CORPORATION  
 BY: *[Signature]*  
 DAVID T. MARLUMI

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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MD	
<i>[Signature]</i> DIRECTOR OF PUBLIC WORKS DATE: 9/13/13	<i>[Signature]</i> CHIEF, BUREAU OF ENGINEERING DATE: 7/4/13
<i>[Signature]</i> CHIEF, BUREAU OF UTILITIES DATE: 9/13/13	<i>[Signature]</i> CHIEF, UTILITY DESIGN DIVISION DATE: 9/13/13

PREPARED BY  
 RUSSELL CORROSION CONSULTANTS, INC.  
 Columbia, Maryland

Professional Certification.  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland.  
 License No.: 17083  
 Expiration Date: 9/27/2014

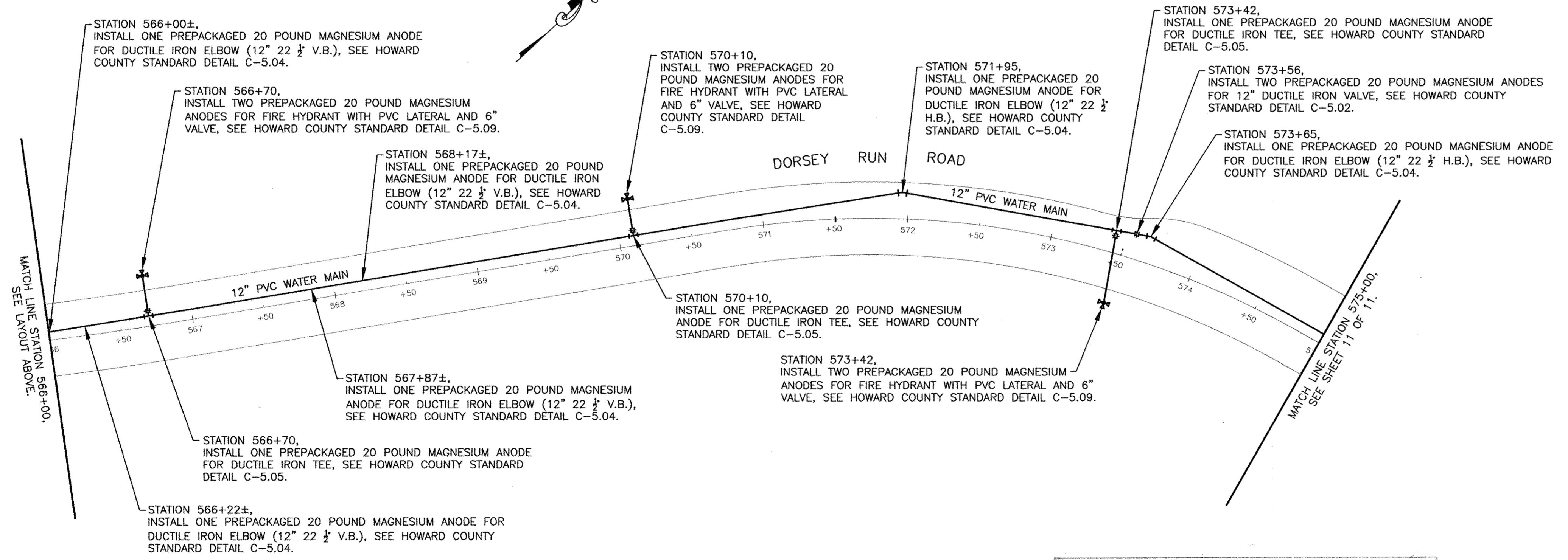
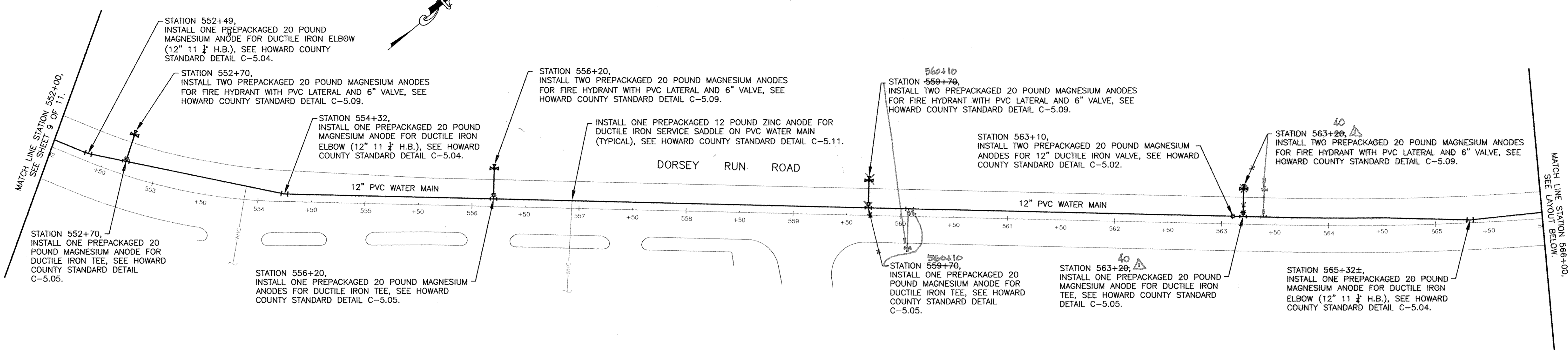


DES: MJS			
DRN: DJD			
CHK: MJS			
DATE: 8/2013	DTM	AS-BUILT	12/16
BY NO.		REVISION	DATE

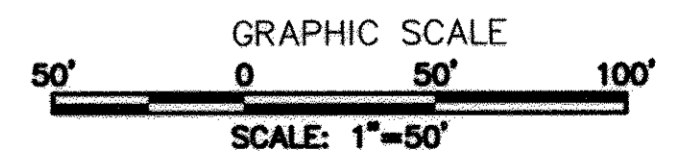
8-INCH AND 12-INCH  
 PVC WATER MAIN  
 CORROSION CONTROL  
 LAYOUT-1  
 600' SCALE MAP NO. 43 BLOCK NO. 10 & 11

DORSEY RUN ROAD  
 WATER AND SEWER EXTENSIONS  
 CAPITAL PROJECT W-8292  
 CONTRACT No. 14-4679  
 1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE AS SHOWN  
 SHEET 9 OF 11  
 AS-BUILT





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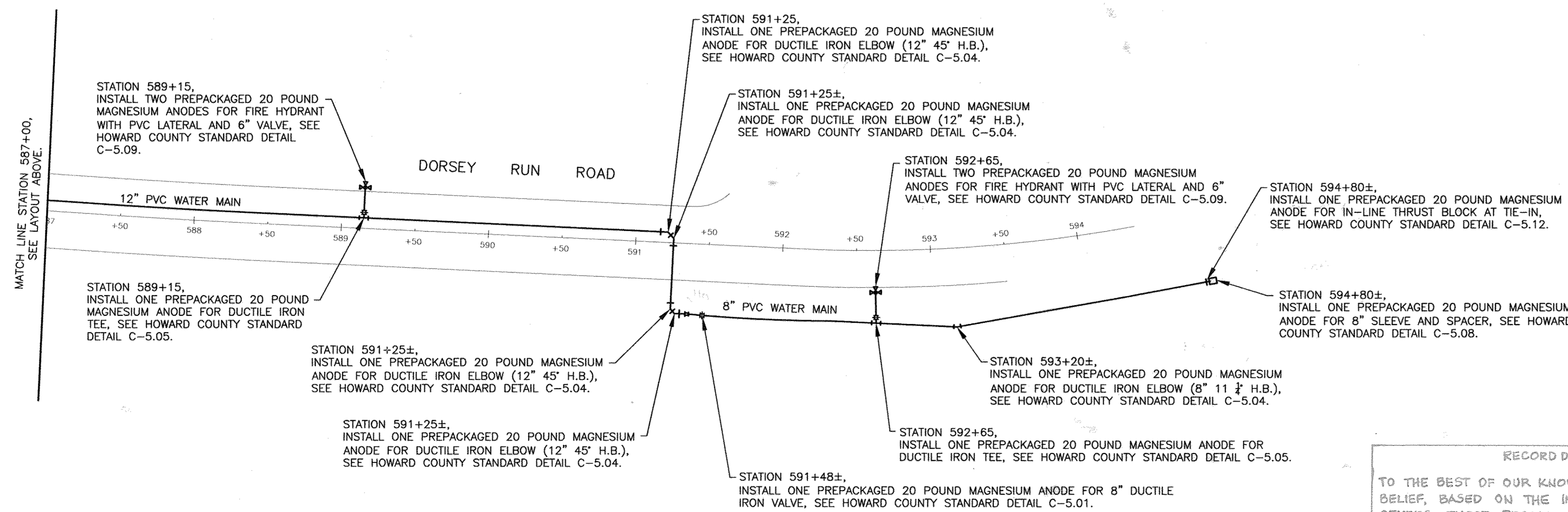
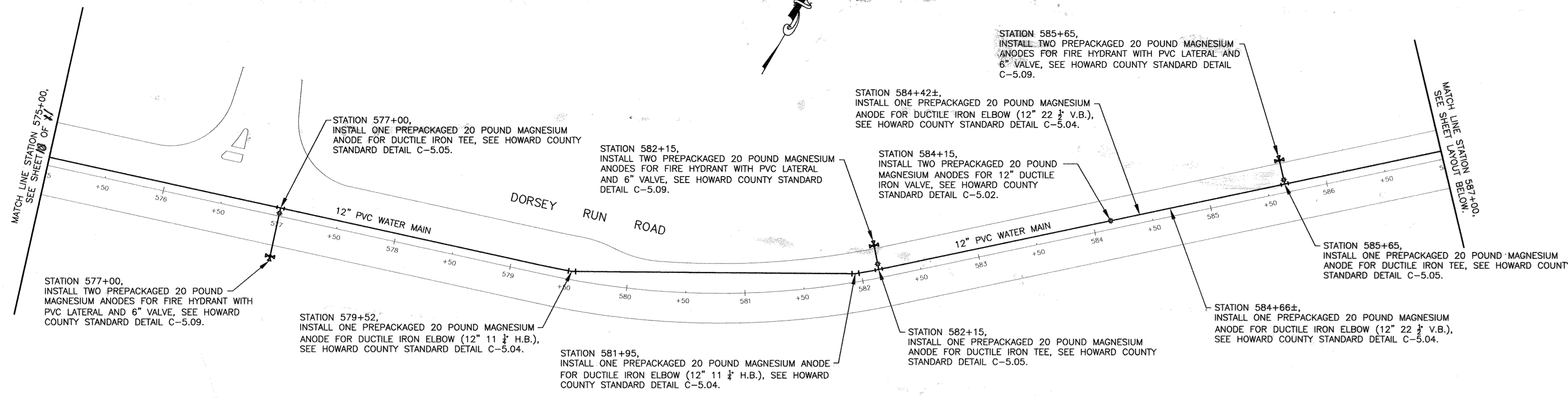


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URS CORPORATION  
BY: *David T. Morley*

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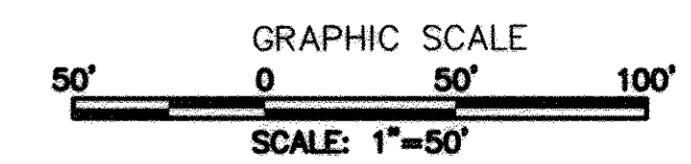
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MD <i>Joseph A. Blevins</i> 9/13 DIRECTOR OF PUBLIC WORKS DATE <i>Steve Chiles</i> 9/13 CHIEF, BUREAU OF UTILITIES DATE		PREPARED BY <i>Thomas E. Smith</i> 9/13 CHIEF, BUREAU OF ENGINEERING DATE <i>David P. Blevins</i> 9/13 CHIEF, UTILITY DESIGN DIVISION DATE		RUSSELL CORROSION CONSULTANTS, INC. Columbia, Maryland		Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland. License No.: 17083 Expiration Date: 9/27/2014				DES: MJS DRN: DJD CHK: MJS DATE: 8/2013 BY NO. AG-BUILT REVISION DATE		8-INCH AND 12-INCH PVC WATER MAIN CORROSION CONTROL LAYOUT-2 600' SCALE MAP NO. 43 BLOCK NO. 10 & 11		DORSEY RUN ROAD WATER AND SEWER EXTENSIONS CAPITAL PROJECT W-8292 CONTRACT No. 14-4679 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND		SCALE AS SHOWN SHEET 10 OF 11 AS-BUILT	
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URS CORPORATION

BY: *David T. Morland*

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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MD <i>Laurel Galt</i> 9/13 DIRECTOR OF PUBLIC WORKS DATE <i>Steve Chinn</i> 9/13 CHIEF, BUREAU OF UTILITIES DATE		PREPARED BY RUSSELL CORROSION CONSULTANTS, INC. Columbia, Maryland <i>Thomas J. Voth</i> 9/13 CHIEF, BUREAU OF ENGINEERING DATE <i>Debra King</i> 9/13 CHIEF, UTILITY DESIGN DIVISION DATE		Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland. License No.: 17083 Expiration Date: 9/27/2014	DES: MJS DRN: DJD CHK: MJS DATE: 8/2013	STATE OF MARYLAND PROFESSIONAL ENGINEER DAVID T. MORLAND	8-INCH AND 12-INCH PVC WATER MAIN CORROSION CONTROL LAYOUT-3	DORSEY RUN ROAD WATER AND SEWER EXTENSIONS CAPITAL PROJECT W-8292 CONTRACT No. 14-4679	SCALE AS SHOWN SHEET 11 OF 11
				DATE: 8/2013 BY NO. AS-BUILT REVISION DATE	600' SCALE MAP NO. 43 BLOCK NO. 10 & 11		1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND		

AS-BUILT