QUANTITIES							
1777.10	ESTIMATED QUANTITIES	AS-BUILT					
ITEMS		QUANTITIES	TYPE	MANUF./SUPPLIER			
8"WATER (PVC C900 DR18)	591 L.F.						
6"WATER (FH LEADS-DIP)	20 L.F.						
1.5" WHC	310 L.F.						
8" 1/8HB	4 EACH			÷			
FIRE HYDRANT	2 EACH						
FH TEE & VALVE	2 EACH						
8"x8" TS&V	1 EACH						
8" SEWER (DIP)	27 L.F.						
8" SEWER (PVC)	552 L.F.						
MH (G-5.15)	1 EACH						
MH (G-5.12)	4 EACH						
MH (S-1.31)	1 EACH						
4" SHC	354 L.F.						
NAME OF UTILITY CONTRACTO	OR:						

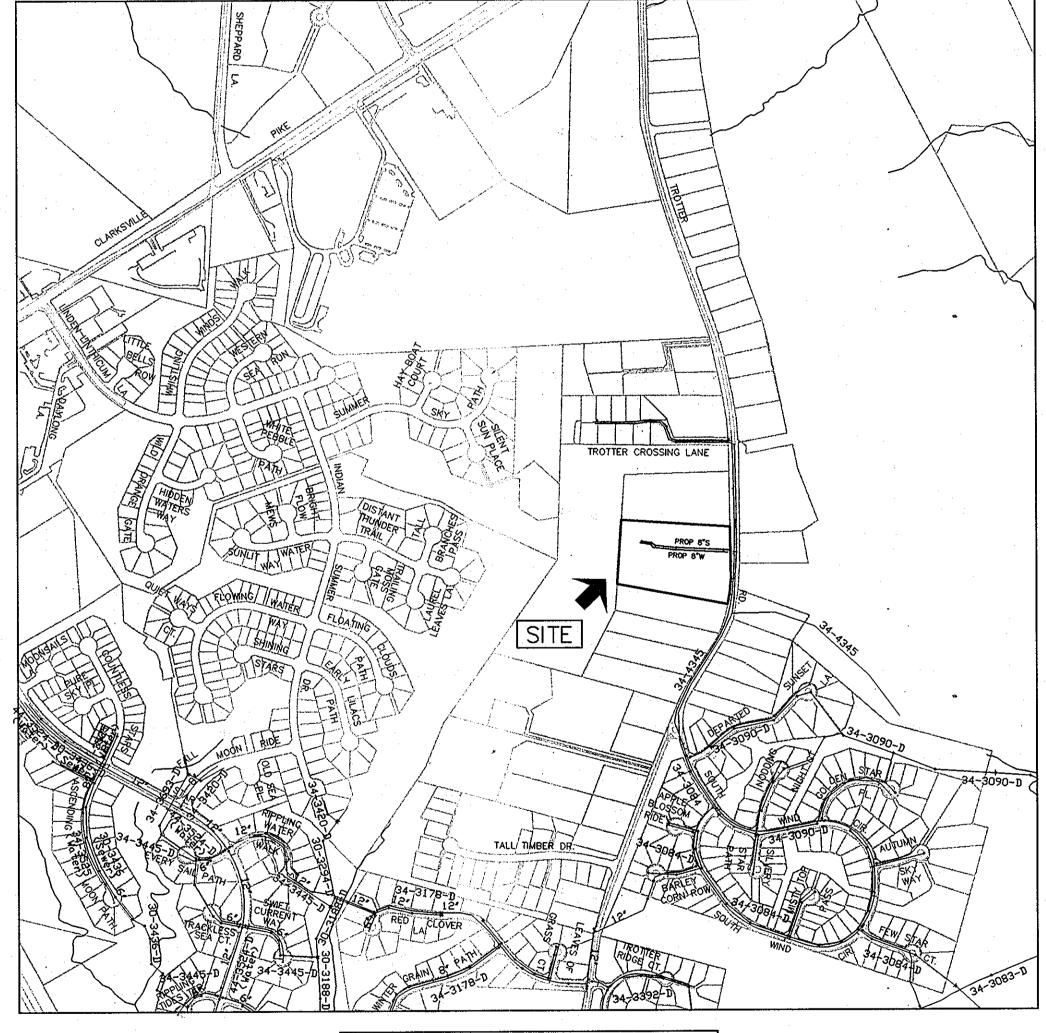
PUBLIC WATER AND SEWER MAIN EXTENSIONS

TROTTER POINT

LOTS 1-14 AND OPEN SPACE LOTS 15-18

TAX MAP 43; PARCELS 8, 9 & 135; GRID 2 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CONTRACT NO.: 34-4728-D



TYPE OF BUILDING: NO. OF BUILDABLE LOTS: NUMBER OF SHC'S:. NUMBER OF WHC'S: MIDDLE PATUXENT DRAINAGE AREA_ <u>MIDDLE</u> PATUXENT WRP TEST GRADIENT:.

OVERHEAD LINES ALONG TROTTER ROAD

NOTE: CONTRACTORS TO EXERCISE EXTREME

CAUTION WHEN WORKING IN AREA OF EXIST.

NOTE: HOUSE CONNECTIONS TO BE SIZED ACCORDINGLY: SINGLE WHC = 1-1/2" SINGLE SHC = 4"

HOWARD COUNTY CONTROL STATION 29GB N 566,826.1347 E 1.333.265.8757 ELEV. 455.998 HOWARD COUNTY CONTROL STATION 29G5 N 568,341.1963 E 1,335,392.4511 ELEV. 387.398

> VICINITY MAP ADC MAP 4934, GRID C-6,7

GENERAL NOTES

- APPROXIMATE LOCATION 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 FEBRUARY 2003 BY WINGS AERIAL MAPPING AND SUPPLEMENTED
- PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 43R1 AND 43B2. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE HO.CO. GEODETIC CONTROL STA. 43R1 & 43B2
- 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 BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE
- OF THE TEST PITS. A NOTE OR NOTES CONTAINING THERESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG
- STARTING WORK SHOWN ON THESE PLANS HO. CO. DPW - BUREAU OF UTILITIES 410-795-1390 COLONIAL PIPELINE CO..
- STATE HIGHWAY ADMINISTRATIO .1-800-743-0033/410-224-9210 THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- 10. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG 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 OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.

PART 2 - WATER ALL WATER MAINS TO BE PVC C900 DR18 UNLESS OTHERWISE NOTED.

ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.

- 2. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- 4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- 5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED N ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- 6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM. TRACE WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL D.I.P. ANS P.V.C. WATER MAINS IN
- 8. FOR PVC WATER MAINS, ALL RECORDS FOR THE QUANTITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF MATERIAL FOR USE. TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORD RECEIVED.
- 9. UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SEVENTEEN (17) POUND SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSES. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC
- 10. FIRE SPRINKLER SYSTEMS FOR ALL SINGLE FAMILY DWELLINGS SHALL HAVE A MINIMUM OF A 1-1/2" CONNECTION WITH A 1" OUTSIDE METER SETTING.

PART 3 - SEWER

- 1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- 2. ALL MANHOLES SHALL BE 4' 0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G-5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED
- GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS. 6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

NOTE: HO. CO. STD. DETAILS C-5.01 THRU C-5.03 ARE NOT APPLICABLE; THIS PROJECT IS NOT WITHIN AN AREA IDENTIFIED AS HAVING CORROSIVE SOILS

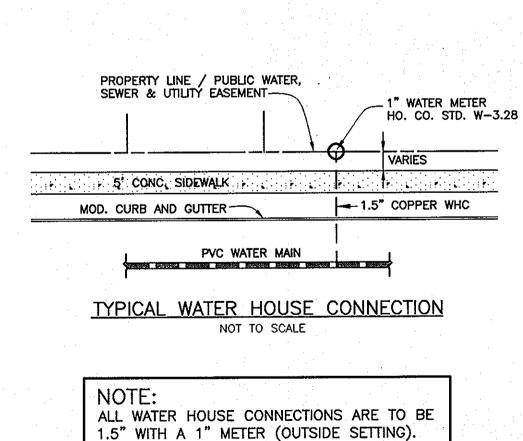
NOTE: ALL JOINTS AND CONNECTIONS LOCATED WITHIN STRUCTURAL FILL AREAS SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION)

TROTTER POINT LOTS 1-14 & OPEN SPACE LOTS 15-18

TAX MAP 43; PARCELS 8, 9 & 165; GRID 2 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

AS SHOWN SHEET NO.

SCALE:



LEGEND

EXIST. WATER MAIN EXIST. SEWER MAIN

PROP. SEWER MAIN

PROP. STORM DRAIN (BY OTHERS)

PROP. VALVE

PROP. PLUG & BUTTRESS

PROP. SEWER MANHOLE PROP. TERMINAL MANHOLE

PROP. SEWER HOUSE CONNECTION

PROP. DROP SEWER HOUSE CONN.

PROP. WATER HOUSE CONNECTION

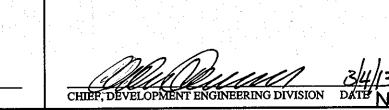
(SEE PLAN VIEW FOR TYPE)

EXIST. SEWER MANHOLE EXIST. STORM DRAIN

> SHEET INDEX DESCRIPTION TITLE SHEET PUBLIC WATER & SEWER MAINS PLAN VIEW PUBLIC WATER & SEWER MAINS PROFILE VIEWS PUBLIC WATER & SEWER MAINS

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER APPROVED DEVELOPMENT PLANS F-13-004

DEPARTMENT OF PLANNING AND ZONING DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND HOWARD COUNTY, MARYLAND



BENCHMARK ENGINEERS A LAND SURVEYORS A PLANNERS ENGINEERING, INC 8480 BALTIMORE NATIONAL PIKE▲SUITE 418▲ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644

OWNER/DEVELOPER

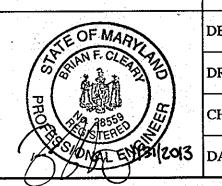
TROTTER POINT, L.L.C.

9695 NORFOLK AVENUE

LAUREL, MD 20723

(410) 792-2565

(P) 301-371-3505 (F) 301-371-3506



PROFESSIONAL CERTIFICATION:

I hereby certify that these documents were prepared or proved by me, and that I am a duly licensed profession

engineer under the laws of the State of Maryland License No. 28559; Expiration Date: 7-22-2013

DES: MCR/BFC DRN: MCR/BF DATE: 2/01/2013 REVISIONS

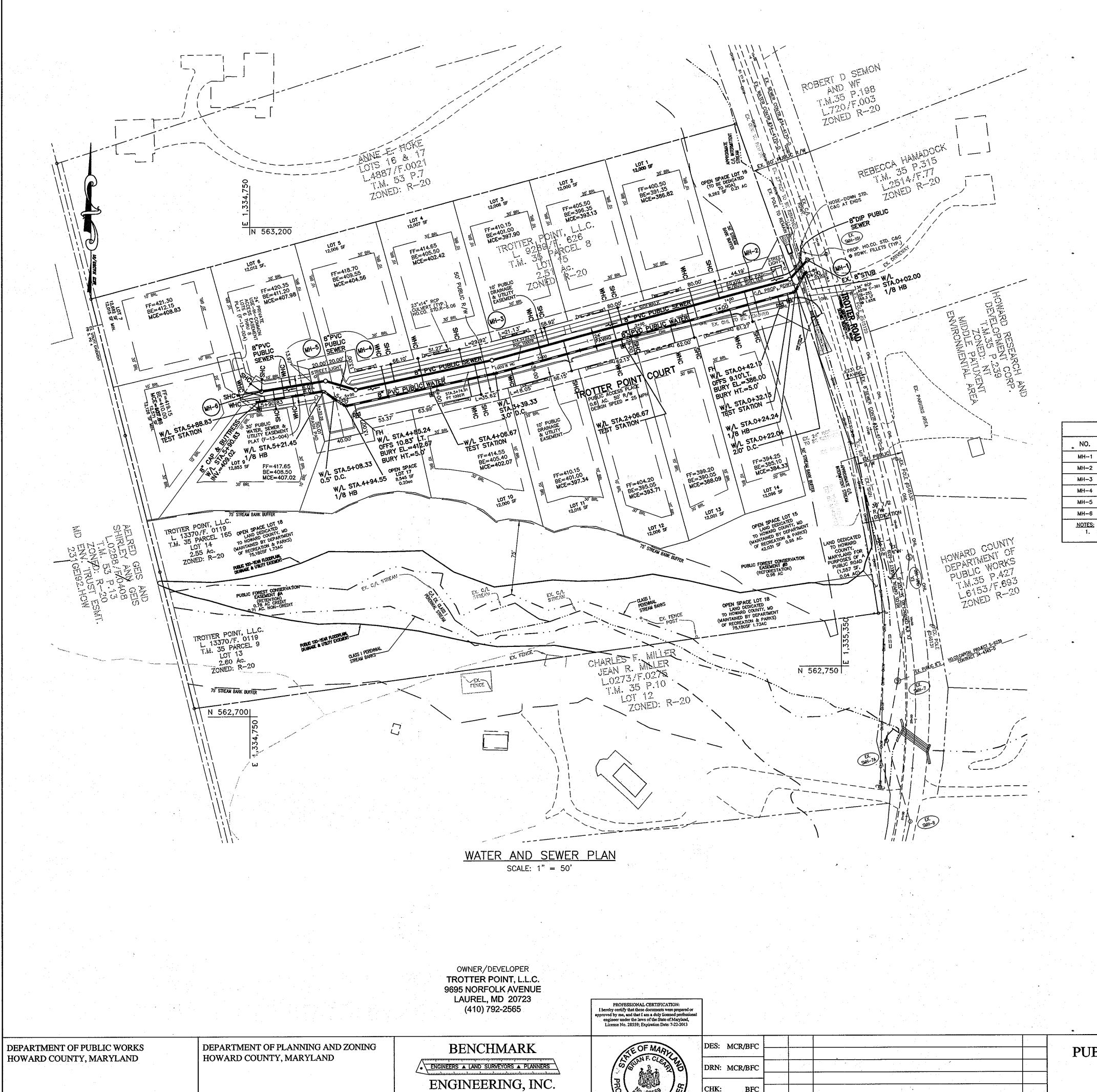
PUBLIC WATER AND SEWER TITLE SHEET

DATE 600 SCALE MAPS: 35

WWW.BEI-CIVILENGINEERING.COM P:\2283 Trotters Point\dwg\6046V3-Final.dwg, TITLE, 1/31/2013 8:39:28 AM, mcr

BLOCKS: 2

CONTRACT No.34-4728-D



8480 BALTIMORE NATIONAL PIKE A SUITE 418

DATE: 2/01/2013

	WATER	SERVICE AS-BUILT LOCATIO	N TABLE				
LOT	ADDRESS	LOCATION DIMENSION #1	LOCATION DIMENSION #2				
. 1	- TROTTER POINT COURT						
2	- TROTTER POINT COURT						
3	- TROTTER POINT COURT						
4	- TROTTER POINT COURT						
5	- TROTTER POINT COURT						
6	- TROTTER POINT COURT						
7	- TROTTER POINT COURT						
8	- TROTTER POINT COURT						
9	- TROTTER POINT COURT						
10	- TROTTER POINT COURT						
- 11	- TROTTER POINT COURT						
12	- TROTTER POINT COURT						
13	- TROTTER POINT COURT						
14	- TROTTER POINT COURT						

SEWER SERVICE AS-BUILT LOCATION TABLE							
LOT	ADDRESS	LOCATION DIMENSION #1	LOCATION DIMENSION #2				
1	- TROTTER POINT COURT						
2	- TROTTER POINT COURT						
3	- TROTTER POINT COURT						
4	- TROTTER POINT COURT						
5	- TROTTER POINT COURT						
6	- TROTTER POINT COURT						
7	- TROTTER POINT COURT						
8	- TROTTER POINT COURT						
9	- TROTTER POINT COURT	*					
10	- TROTTER POINT COURT						
11 .	- TROTTER POINT COURT						
12	- TROTTER POINT COURT						
13	- TROTTER POINT COURT						
14	- TROTTER POINT COURT						

, NO.	TYPE	LOCATION	INVERT IN	SHC INV.	INVERT OUT	TOP ELEV.	HO.CO. STD.	REMARKS
MH1	4.0'ø "DOGHOUSE"	TROTTER POINT COURT STA.0+12.63 OFFS 21.33' RT.	376.28	=	376.28	385.02	G5.15	EX. CONTR. #34-4170-D
MH2	STD. 4.0'Ø PRE-CAST	TROTTER POINT COURT STA.0+35.16 OFFS 7.0', RT.	376.90	_	376.80	384.87	G5.12	
MH-3	STD. 4.0'ø PRE-CAST	TROTTER POINT COURT STA.3+48.73 OFFS 6.7' RT.	396.25		396.15	407.05	G-5.12	<u>-</u>
MH-4	STD. 4.0'Ø PRE-CAST	TROTTER POINT COURT STA.4+90.28 OFFS 7.0' RT.	400.60	400.93	400.50	412.78	G-5.12	-
мн-5	STD. 4.0'Ø PRE-CAST	TROTTER POINT COURT STA.5+18.28 OFFS 22.3' RT.	401.35	<u> </u>	401.25	412.95	G-5.12	
мн6	TERMINAL	UIC DRIVEWAY N 563,031.8 E 1,334,761.9	· - ·	(3)402.98	402.65	415.40	S-1.31	- - 1 - 1

NOTE: HOUSE CONNECTIONS TO BE SIZED ACCORDINGLY: SINGLE WHC = 1-1/2" SINGLE SHC = 4"

NOTE: CONTRACTORS TO EXERCISE EXTREME CAUTION WHEN WORKING IN AREA OF EXIST. OVERHEAD LINES ALONG TROTTER ROAD

NOTE: ALL JOINTS AND CONNECTIONS LOCATED WITHIN STRUCTURAL FILL AREAS SHALL BE

MECHANICALLY RESTRAINED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION)

TROTTER POINT LOTS 1-14 & OPEN SPACE LOTS 15-18

AS SHOWN SHEET NO. 2 OF 3

SCALE:

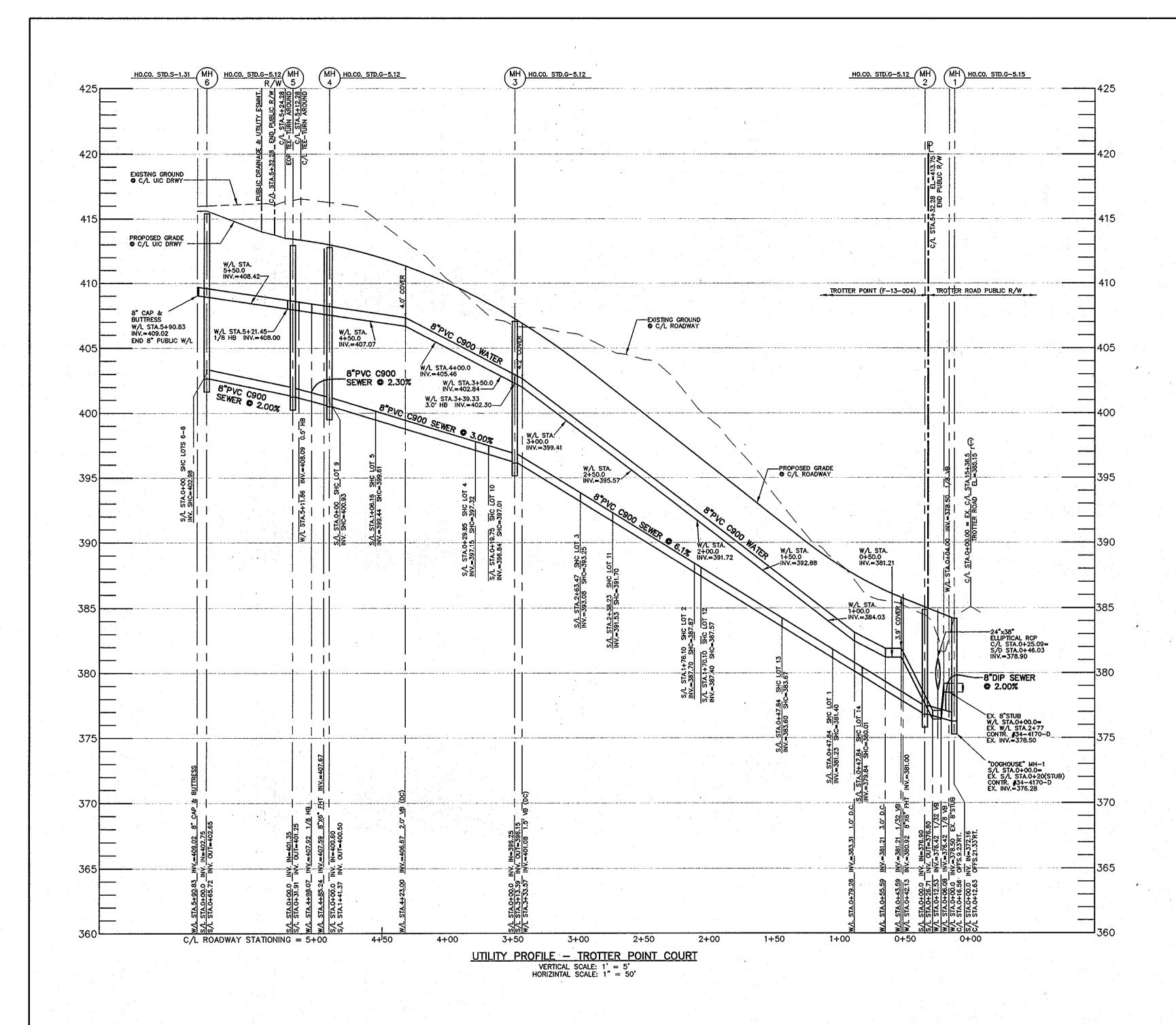
PUBLIC WATER AND SEWER **PLAN VIEW**

DATE 600 SCALE MAPS: 35

REVISIONS

BLOCKS: 2

TAX MAP 43; PARCELS 8, 9 & 165; GRID 2 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT No.34-4728-D



		WHC C	HART	
Lot	W/L	Invert @	invert @	Notes
Number	Sta.	W/M	RW/PUE	
1	1+26.54	388.52	388.82	
2	2+11.68	392.63	392.93	
3	2+89.04	398.58	398.88	
4	4+12.64	406.13	406.43	
. 5	4+50.86	407.08	407.38	
6	5+61.81	408.73	409.03	
7	5+81.83	408.89	409.19	,
- 8	5+86.83	408.96	409.26	
9	5+53.47	408.60	408.90	
. 10	3+67.78	403.78	404.08	
11	3+22.67	401.17	401.47	
12	2+17.00	393.04	393.34	
13	1+54.93	388.27	388.57	
14	0+92.43	383.47	383.77	

				S	HC CHART				
Lot	S/L	Invert @ main	Invert @	Drop House	Invert @ top	SHC	Invert @	Minimum	Notes
Number	Sta.	or manhole	SHC		of standpipe	Slope	RW/PUE	Cellar	
1	0+73.97	381.45	381.62	no		2.00%	381.98	386.82	
2	1+76.10	387.70	387.87	no		2.00%	388.23	393.13	1
3	2+53.47	392.63	392.80	no		2.00%	393.16	397.90	
4	0+29.85	397.15	397.32	no		2.00%	397.68	402.42	
5	1+01.16	399.29	399.46	no		2.00%	399.82	404.56	
6	MH-6	402.98	N/A	no		2.00%	403.23	407.98	
7	MH-6	402.98	N/A	no		2.00%	403.26	408.83	
8	MH-6	402.98	N/A	no		2.00%	403.43	407.86	
9	0+53.85	402.43	402.60	no		2.00%	403.00	407.02	
10	0+18.10	396.80	396.97	no		2.00%	397.61	402.07	
11	2+38.23	391.53	391.70	no		2.00%	392.34	397.34	
12	1+71.10	387.40	387.57	no		2.00%	388.21	393.71	
13	1+09.10	383.60	383.77	no		1.00%	384.09	388.09	SHC @ 1.0%
14	0+47.84	379.84	380.01	no		1.00%	380.33	384.33	SHC @ 1.0%

OWNER/DEVELOPER TROTTER POINT, L.L.C. 9695 NORFOLK AVENUE LAUREL, MD 20723 (410) 792-2565

PROFESSIONAL CERTIFICATION:

I hereby certify that these documents were prepared or approved by me, and that I am a duly liceased professions engineer under the laws of the State of Maryland, Licease No. 28559; Expiration Date: 7-22-2013

NOTE: HOUSE CONNECTIONS TO BE SIZED ACCORDINGLY: SINGLE WHC = 1-1/2" SINGLE SHC = 4"

BLOCKS: 2

PROFILE VIEW

DATE 600 SCALE MAPS: 35

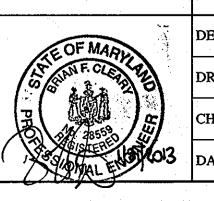
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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418 ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644



BY NO.

ACR/BFC				
CIGDIC				 PUB
ACR/BFC				
•				
BFC	• .			
2/01/0010				

REVISIONS

JBLIC WATER AND SEWER

TROTTER POINT LOTS 1-14 & OPEN SPACE LOTS 15-18

TAX MAP 43; PARCELS 8, 9 & 165; GRID 2 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT No.34-4728-D

SCALE: 1" = 20'

AS SHOWN SHEET NO. 3 OF 3

SCALE: