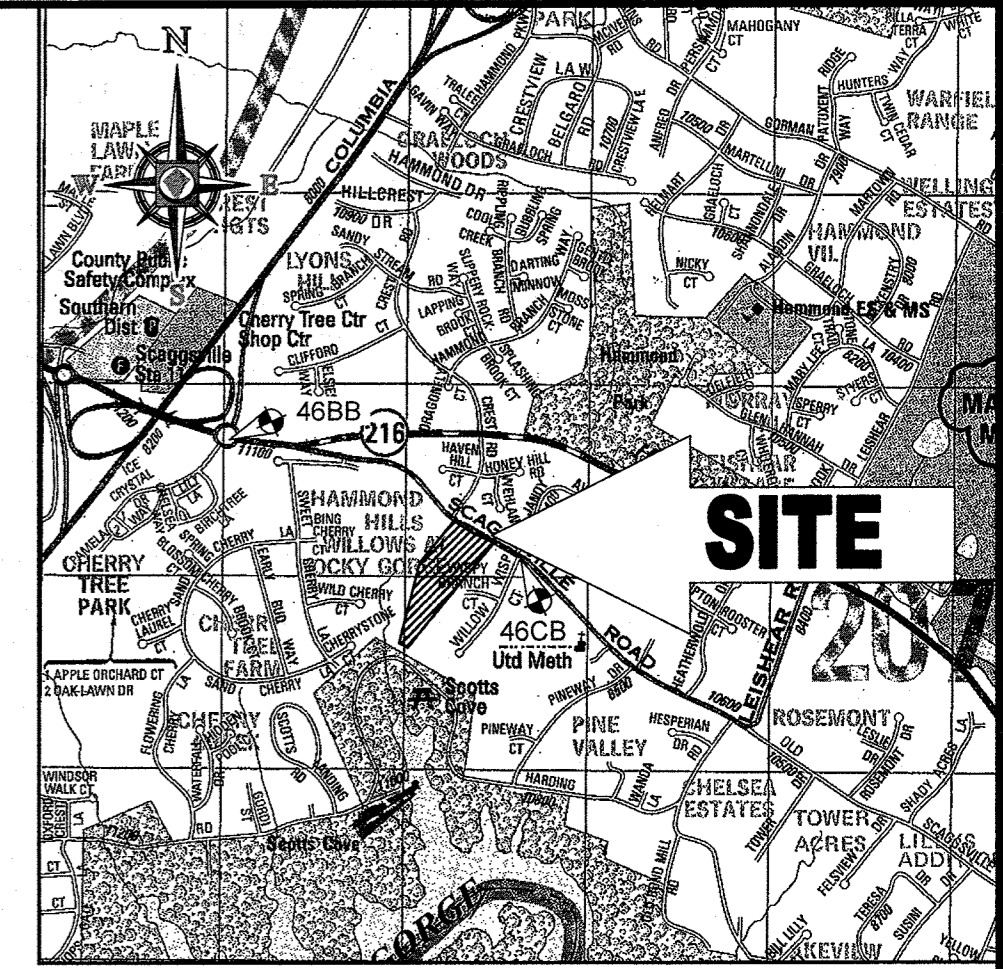


PUBLIC WATER & SEWER FINAL CONSTRUCTION PLANS FOR RESERVOIR ESTATES

LOCATION OF SITE

TAX MAP 46, GRID 11, TM PARCEL 56
HOWARD COUNTY, MARYLAND 20723
ZONING: R-20, 6TH ELECTION DISTRICT
CONTRACT NO. 24-4787-D



LOCATION MAP
COPYRIGHT ADC THE MAP PEOPLE
PERMIT USE NO. 20502153-5
SCALE: 1"=2000'
ADC MAP COORDINATES: 5169C1

LEGEND

	PROPOSED FIRE HYDRANT
	PROPOSED WATER MAIN
	PROPOSED SANITARY SEWER
	PROPOSED SANITARY MANHOLE
	PROPOSED TERMINAL SANITARY MANHOLE
	EXISTING WATER MAIN
	EXISTING SANITARY SEWER
	EXISTING SANITARY MANHOLE
	PROPOSED WATER VALVE
	EXISTING WATER VALVE
	PROPOSED WATER BEND
	PROPOSED SEWER HOUSE CONNECTION
	PROPOSED WATER HOUSE CONNECTION
	DOMESTIC WATER METER
	SEWER CLEANOUT

SHEET INDEX

SHEET TITLE	SHEET NUMBER
TITLE SHEET	1
PUBLIC UTILITY PLAN	2
PUBLIC SEWER PROFILE	3
PUBLIC WATER PROFILE	4

BENCHMARK

GEODETIC SURVEY CONTROL - 46BB ELEV. 422.444' N 538,306.4913 E 1,341,329.1023	GEODETIC SURVEY CONTROL - 46CB ELEV. 394.623' N 537,123.0429 E 1,344,291.3854
--	--

QUANTITIES TABLE

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	AS-BUILT TYPE	MANUFACTURER / SUPPLIER
1/8" V. BEND 1/8" V. BEND	3 EA 3 EA	3	D.I. FITTING	STAR PIPE
HIGH DEFLECTION COUPLING HIGH DEFLECTION COUPLING	3 EA 3 EA	3	PVC	CERTAIN TEED
1/32 BEND	7 EA	9	D.I. FITTING	STAR PIPE
1 1/2" WHC	20 EA	21	BRASS BALL CORP. VALVE	MUELLER
1 1/2" COPPER WATERLINE	418 LF	438 LF	K COPPER	CAMBRIDGE-LEE
1 1/2" HDPE WATERLINE 1 1/2" HDPE WATERLINE	424 LF 424 LF	21	CONCRETE PRE-CAST	HORNE
6" DR 18 C900 PVC WATER	414 LF	424 LF	C900	JM EAGLE
8" VALVE	2 EA	2	GATE VALVE	MUELLER
FIRE HYDRANTS	2 EA	2	CENTURION	MUELLER
6" PLUG & BUTTRESS	1 EA	1	D.I. FITTING	STAR PIPE
12" X 8" WET TAP	1 EA	1	S.S. FAST STYLE	FORD
6" VALVE	2 EA	2	GATE VALVE	MUELLER
8" DR 18 C900 PVC WATER	1585 LF	585 LF	C900	JM EAGLE
SEWER CLEANOUTS SEWER CLEANOUTS	20 EA 20 EA	20	CONCRETE PRE-CAST	HORNE
4" SCH. 40 PVC SHC	505 LF	505 LF	SDR 35	JM EAGLE
8" SDR 35 PVC SANITARY LINE	1332 LF	1332 LF	SDR 35	JM EAGLE
SANITARY MANHOLE	9 EA	9	CONCRETE PRE-CAST	SUPERIOR STRUCTURES
8"X6" REDUCER	1 EA	1	D.I. FITTING	STAR PIPE
8"X6" TEE	2 EA	2	D.I. FITTING	STAR PIPE
TYPE 'A' SANITARY DROP MANHOLE	1 EA	1	CONCRETE PRE-CAST	SUPERIOR STRUCTURES
TYPE 'B' SANITARY DROP MANHOLE	1 EA	1	CONCRETE PRE-CAST	SUPERIOR STRUCTURES

NAME OF UTILITY CONTRACTOR: HTI CONTRACTORS

CHECKBOX	
AS-BUILT DATE	2-1-16
SURVEY AND DRAFTING DIVISION	

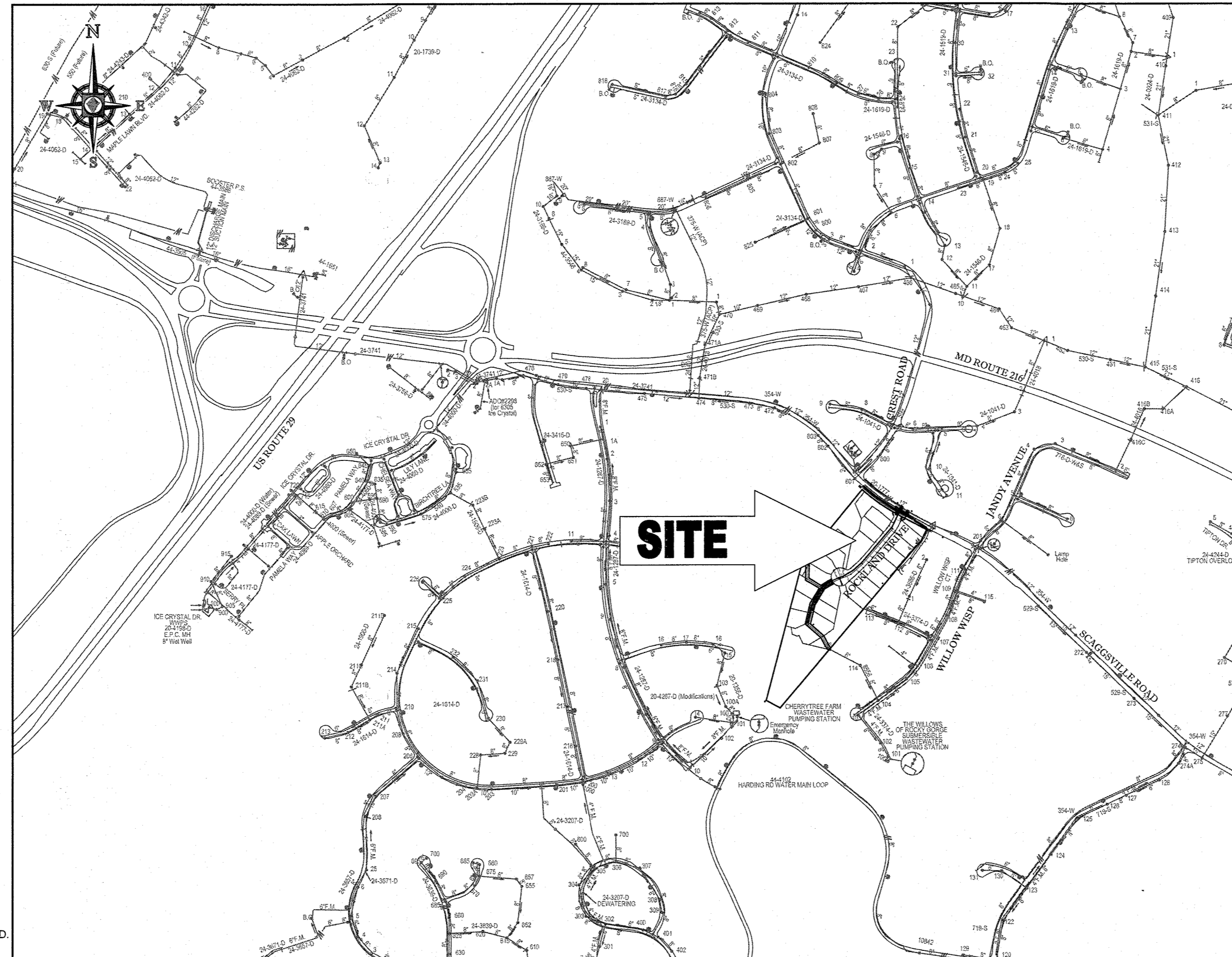
WELL & SEPTIC SYSTEM SCHEDULE

ADDRESS	WELL	SEPTIC	REMAIN/ABANDON
10887	NO	YES	TO BE ABANDONED*

*EX. SEPTIC SYSTEM TO BE ABANDONED IN ACCORDANCE WITH LOCAL, COUNTY, AND STATE REQUIREMENTS. DEMOLITION PERMIT #13000479 HAS BEEN ISSUED TO COMPLETE THIS ABANDONMENT. WATER METERS WILL NOT BE ISSUED UNTIL SEPTIC SYSTEM HAS BEEN PROPERLY ABANDONED.

SEWER NOTES

- ALL SEWER MAINS SHALL BE SDR 35 OR SCH. 40 PVC UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- 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 COVERS, STANDARD DETAIL G5.52 WHERE WATERTIGHT FRAME AND COVER IS USED. SET TOP OF FRAME 1'-0" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.



VICINITY MAP
SCALE: 1"=600'

REFERENCE DRAWINGS
SP-13-008
WP-13-048
F-14-003

TYPE OF BUILDING: RESIDENTIAL
DRAINAGE AREA: LITTLE PATUXENT TREATMENT PLANT: LITTLE PATUXENT WATER QUALITY MANAGEMENT CENTER, SAVAGE, MD.
NUMBER OF LOTS/PARCELS/SUITS: 20
AREA OF RESIDENTIAL LOT/PARCEL: 11.36 AC
NUMBER OF W.H.C.: 20 (PROPOSED)
NUMBER OF S.H.C.: 20 (PROPOSED)
WATER ZONE: 550
TEST GRADIENT: 700 PSI

GENERAL NOTES

- 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.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON AUGUST, 2004 BY JOHN C. MELLEMA SR. INC.
- HORIZONTAL AND VERTICAL CONTROLS:
- THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/91' AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 47 E4 AND NO. 47AC.
ALL VERTICAL CONTROLS ARE BASED ON NAVD83. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE 42IB.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. 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 BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- 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.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATIONS OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS 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 SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- 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 (CONSTRUCTION SERVICES) 410-637-8713
BGE (EMERGENCY) 410-685-3123
BUREAU OF UTILITIES 410-313-4000
COLONIAL PIPELINE COMPANY 410-795-1390
MISS UTILITY 1-800-257-7777
STATE HIGHWAY ADMINISTRATION 410-531-5533
VERIZON 1-800-743-0033
- TREES AND SHRUBS ARE TO 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.
- 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.
- 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 OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE.

WATER NOTES

- ALL WATER MAINS TO BE P.V.C. C900 UNLESS OTHERWISE NOTED.
 - TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-0" OF COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 - ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
 - FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
 - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
 - TRACER WIRES AND CONTINUITY TEST STATION SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL.
 - FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATIONS TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH PIPE MATERIALS CERTIFICATIONS OR SHOP DRAWING PRIOR TO 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 RECEIVED.
 - UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS SACRIFICIAL ANODES SHALL BE ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. SEVENTEEN (17) POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINS AND HARNESSSES. TWELVE (12) POUND ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.
 - PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF PVC PIPE.
 - ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.
- PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 1/2-DEGREE ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWWA C900. SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTIEED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
- FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR18 OR EQUAL.
- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C-900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5 DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATE AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Roberts
HOWARD SCD
DATE: 6/17/14

OWNER
CM HIGDON LC
1355 BEVERLY ROAD, SUITE 330
MCLEAN, VA 22101
CONTACT: DAVID KAUFMAN
PHONE: (703) 734-6855

DEVELOPER
ELMS AT FELLOWS POINT II, L.C.
5074 DORSEY HALL DRIVE, SUITE 205
ELICOTT CITY, MD 21043
CONTACT: JASON VAN KIRK
PHONE: (410) 720-3021

PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 42088. EXPIRATION DATE: 7/31/2015

BOHLER ENGINEERING
901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21284
Phone: (410) 821-7900
Fax: (410) 821-7987
www.BohlerEngineering.com

B.R. ROWE
PROFESSIONAL ENGINEER
DATE: 6/21/14

DES. C.W.A.	DRN. R.L.B.	CHK. B.R.R.	DATE: 6/21/14	REV.	DATE	DESCRIPTION	BY

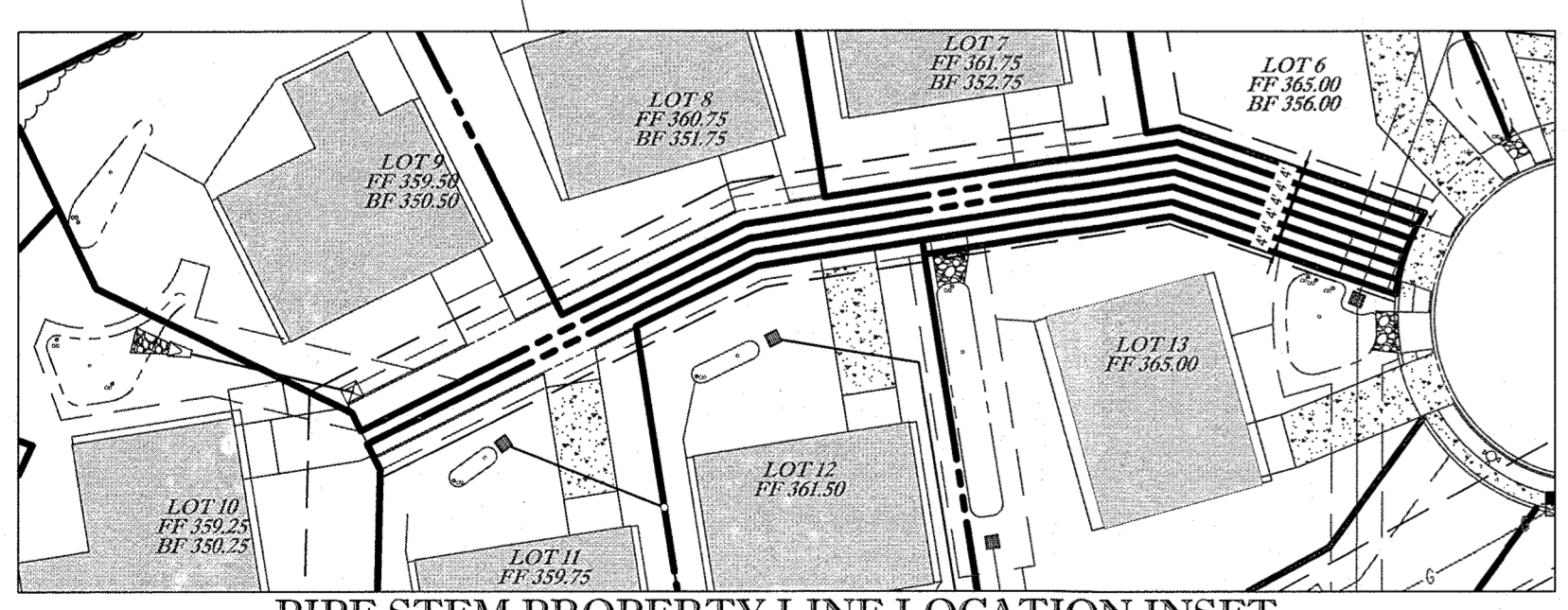
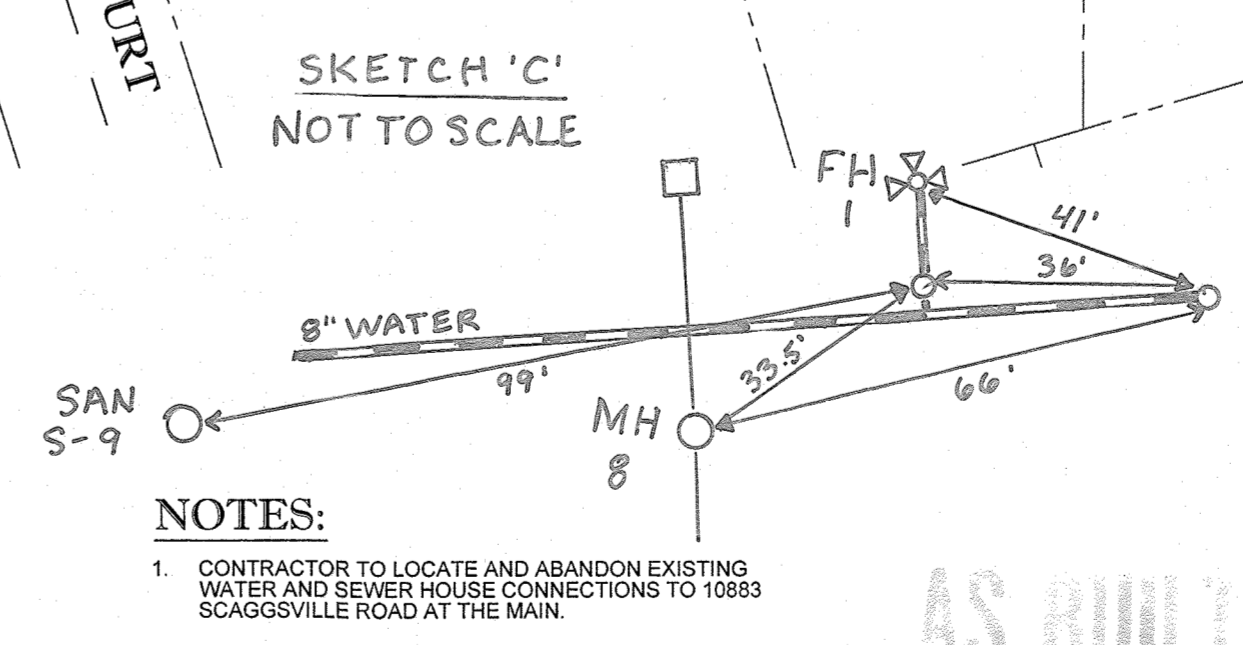
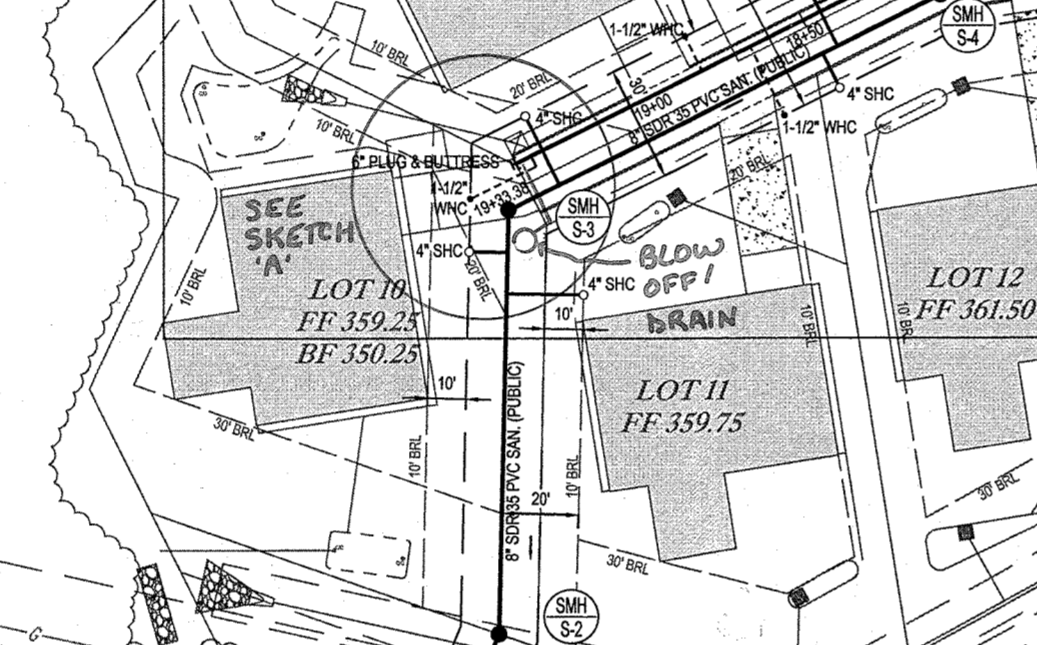
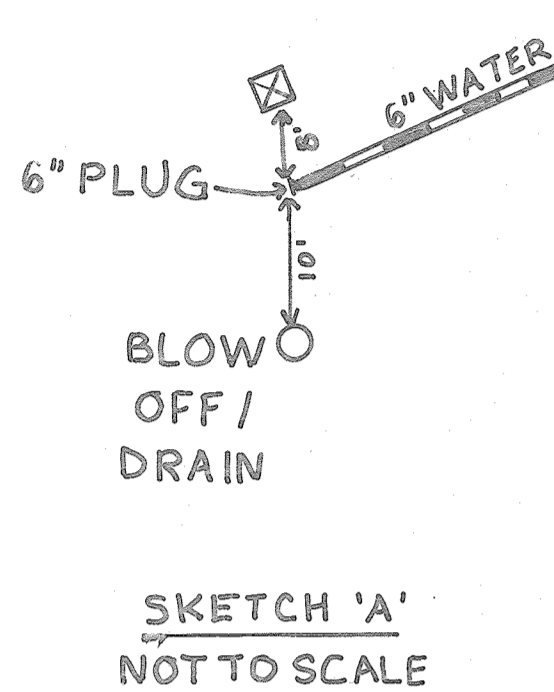
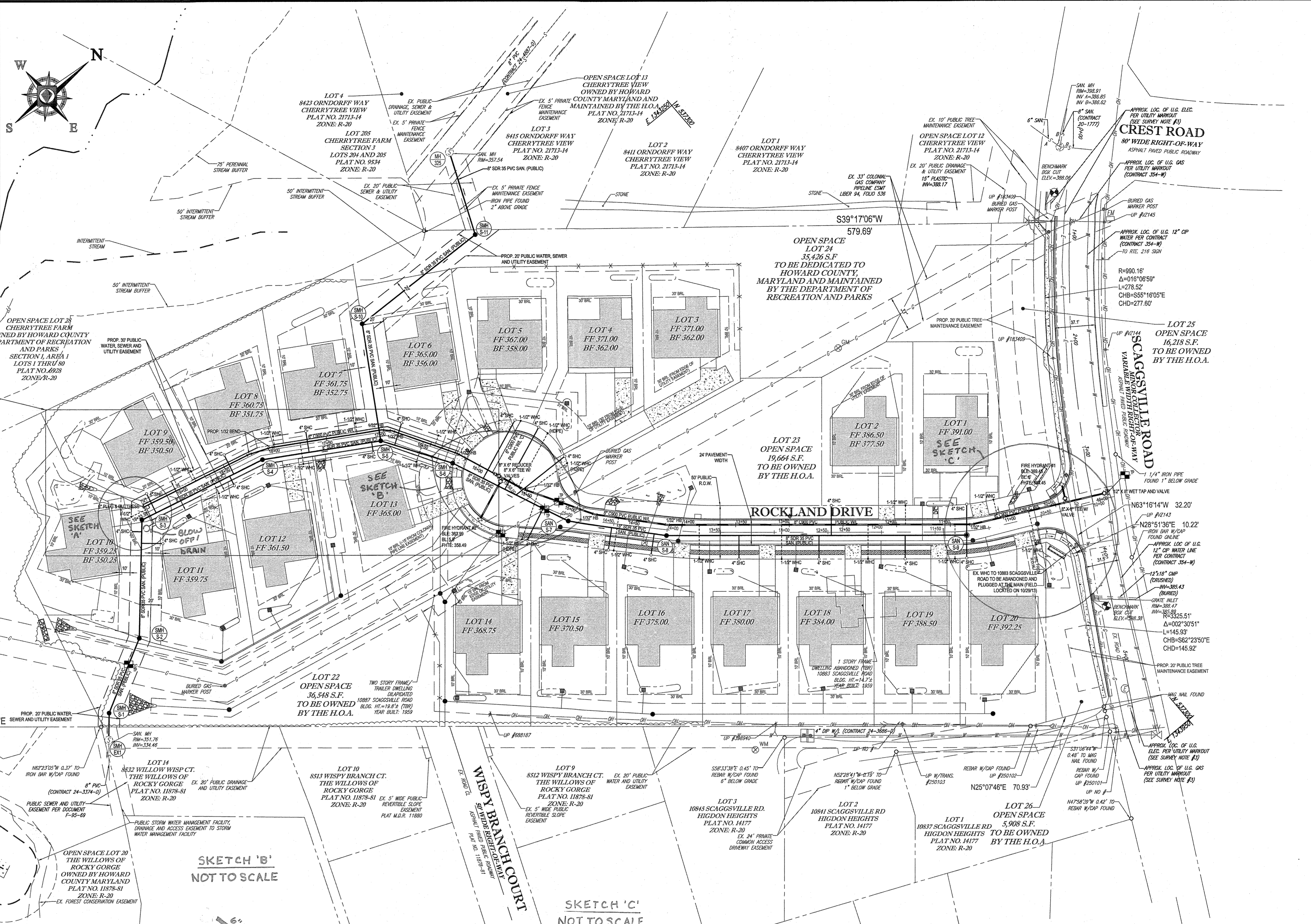
TITLE SHEET

PARCEL NO. 56
600' SCALE MAP NO. 46 BLOCK NO. --

RESERVOIR ESTATES
10883 SCAGGSVILLE ROAD
TAX MAP 46, PARCEL 11, PARCEL 56
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO.: 24-4787-D

SCALE
AS SHOWN
SHEET
1 OF 4

LOT	FF ELEV.	CELLAR ELEV.	INV. @ MAN.	SHC LENGTH TO ROW (FT)	SHC SLOPE WITHIN ROW	INVERT @ ROW	SHC SLOPE WITHIN LOT	MAX. SHC LENGTH (FT)	2.50 FT BELOW CELLAR	MIN. CELLAR ELEV. (MCE)	CONNECTION TYPE
1	391.00	382.00	376.00	29.00	2.0%	376.58	2.0%	129.00	2.50	381.66	STD SHC
2	386.50	377.50	369.30	28.00	2.0%	369.86	2.0%	140.00	2.50	375.16	STD SHC
3	371.00	362.00	353.05	61.00	2.0%	354.27	2.0%	220.00	2.50	361.17	STD SHC
4	371.00	362.00	352.94	68.00	2.0%	354.30	2.0%	150.00	2.50	359.80	STD SHC
5	367.00	358.00	352.72	64.00	2.0%	354.00	1.0%	122.00	2.50	357.72	STD SHC
6	365.00	356.00	350.38	22.00	2.0%	350.82	2.0%	120.00	2.50	355.72	STD SHC
7	361.75	352.75	343.37	20.00	2.0%	344.77	2.0%	120.00	2.50	349.67	DROP TYPE A
8	360.75	351.75	343.90	20.00	2.0%	344.30	2.0%	107.00	2.50	348.94	DROP TYPE A
9	359.50	350.50	343.50	20.00	2.0%	343.90	2.0%	93.00	2.50	348.26	STD SHC
10	359.25	350.25	343.26	10.00	2.0%	343.66	2.0%	95.00	2.50	347.86	STD SHC
11	359.75	350.75	343.21	10.00	2.0%	343.61	2.0%	99.00	2.50	347.89	DROP TYPE A
12	361.50	352.50	343.88	10.00	2.0%	344.08	2.0%	115.00	2.50	348.88	DROP TYPE A
13	365.00	356.00	344.67	10.00	2.0%	344.87	2.0%	112.00	2.50	349.61	DROP TYPE A
14	368.75	359.75	353.35	33.00	2.0%	354.01	2.0%	159.00	2.50	359.69	STD SHC
15	370.50	361.50	355.59	21.00	2.0%	356.01	2.0%	149.00	2.50	361.49	STD SHC
16	375.00	366.00	356.84	20.00	2.0%	357.24	2.0%	136.00	2.50	362.46	DROP TYPE A
17	380.00	371.00	364.41	22.00	2.0%	364.85	2.0%	132.00	2.50	369.99	STD SHC
18	384.00	375.00	368.61	22.00	2.0%	369.05	2.0%	133.00	2.50	374.21	STD SHC
19	388.50	379.50	373.22	22.00	2.0%	373.66	2.0%	133.00	2.50	378.82	STD SHC
20	392.25	383.25	376.00	22.00	2.0%	376.44	2.0%	139.00	2.50	381.72	STD SHC



TEST PIT NOTE
 CONTRACTOR TO TEST PIT FOR EXACT LOCATION OF EXISTING UTILITY AND SUBMIT ANY DISCREPANCIES TO BOHLER ENGINEERING IN WRITING.

NOTES:
 1. CONTRACTOR TO LOCATE AND ABANDON EXISTING WATER AND SEWER HOUSE CONNECTIONS TO 10883 SCAGGSVILLE ROAD AT THE MAIN.

PROFESSIONAL CERTIFICATION
 I, BRANDON R. ROWE, 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. 40888. EXPIRATION DATE: 7/29/2015

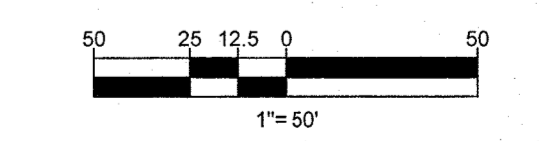
BOHLER ENGINEERING
 901 DULANEY VALLEY ROAD, SUITE 801
 TOWSON, MARYLAND 21284
 Phone: (410) 521-7900
 Fax: (410) 821-7987
 www.BohlerEngineering.com

B.R. ROWE
 PROFESSIONAL ENGINEER
 6/1/14

DES. C.W.A.	DRN. R.L.B.	CHK. B.R.R.	DATE 6/2/14	REV.	DATE	DESCRIPTION	BY	600' SCALE MAP NO.	46	BLOCK NO.	PARCEL NO.	56
PUBLIC UTILITY PLAN												
RESERVOIR ESTATES 10883 SCAGGSVILLE ROAD TAX MAP 46, PARCEL 11, PARCEL 56 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO.: 24-4787-D												

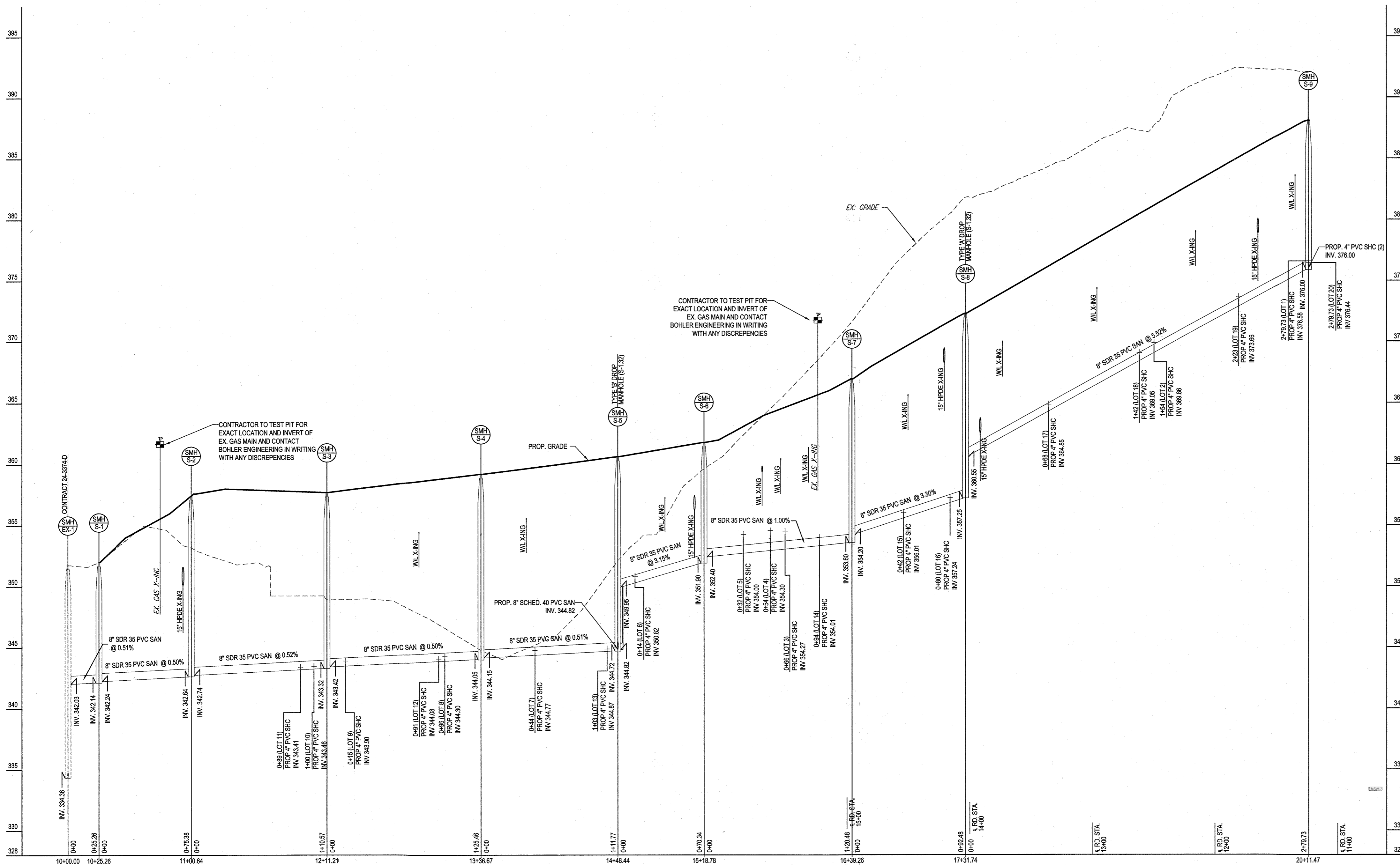
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 DATE 6/11/14

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 DATE 6/25/14

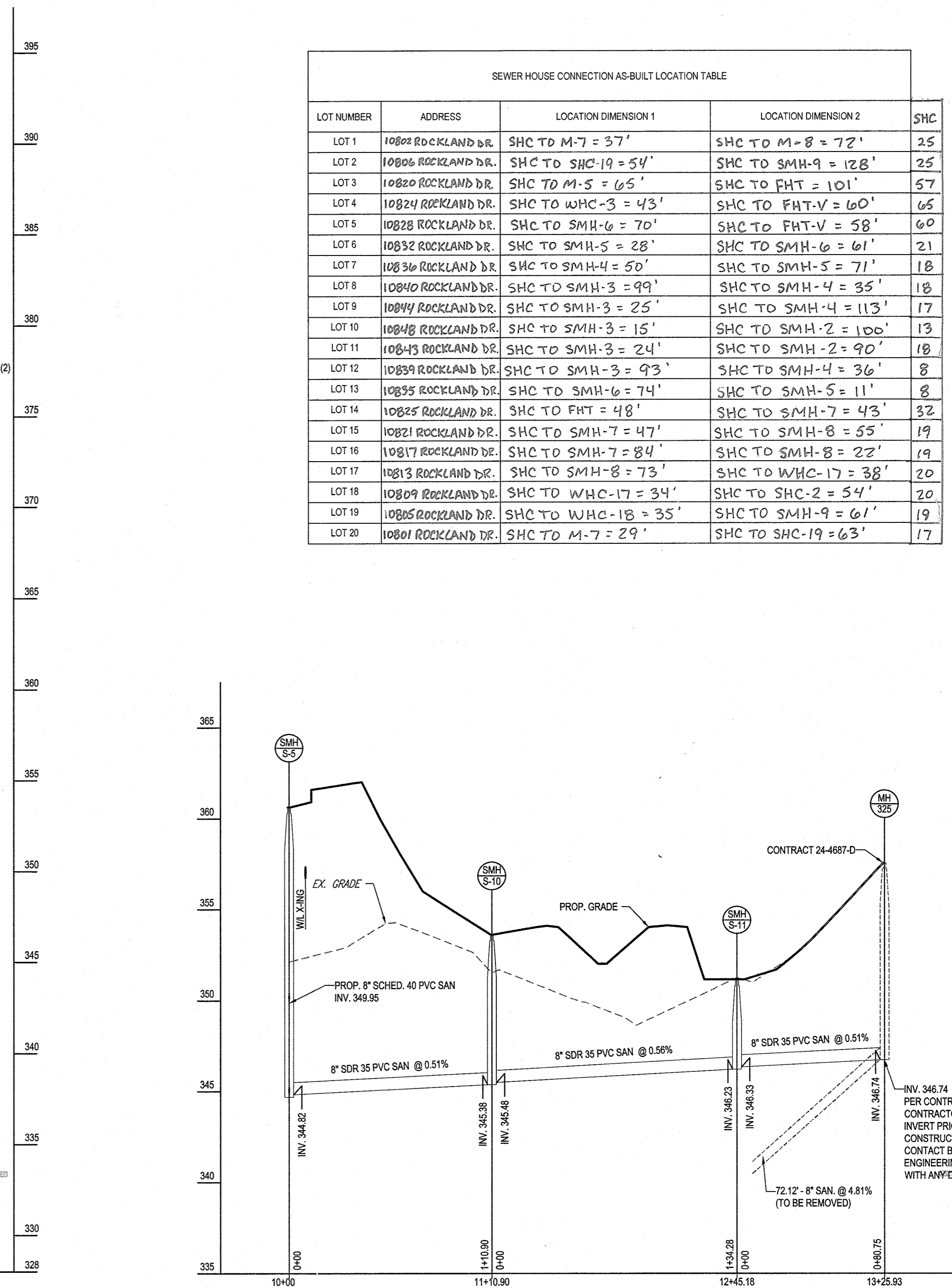


THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE IN VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND DELAWARE CALL 811 (WWW.811.CALL.811) (VA 1-800-246-4848) (PA 1-800-242-3776) (DC 1-800-257-7777) (DE 1-800-283-8559)

SCALE 1" = 50'
 SHEET 2 OF 4



PUBLIC 8" SEWER MAIN PROFILE
SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL



PUBLIC 8" SEWER MAIN PROFILE
SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2	SHC
LOT 1	10802 ROCKLAND DR.	SHC TO M-7 = 37'	SHC TO M-8 = 72'	25
LOT 2	10806 ROCKLAND DR.	SHC TO SHC-19 = 54'	SHC TO SMH-9 = 128'	25
LOT 3	10820 ROCKLAND DR.	SHC TO M-5 = 65'	SHC TO FHT = 101'	57
LOT 4	10824 ROCKLAND DR.	SHC TO WHC-3 = 43'	SHC TO FHT-V = 60'	65
LOT 5	10828 ROCKLAND DR.	SHC TO SMH-6 = 70'	SHC TO FHT-V = 58'	60
LOT 6	10832 ROCKLAND DR.	SHC TO SMH-5 = 28'	SHC TO SMH-6 = 61'	21
LOT 7	10836 ROCKLAND DR.	SHC TO SMH-4 = 50'	SHC TO SMH-5 = 71'	18
LOT 8	10840 ROCKLAND DR.	SHC TO SMH-3 = 99'	SHC TO SMH-4 = 35'	18
LOT 9	10844 ROCKLAND DR.	SHC TO SMH-3 = 25'	SHC TO SMH-4 = 113'	17
LOT 10	10848 ROCKLAND DR.	SHC TO SMH-3 = 15'	SHC TO SMH-2 = 100'	13
LOT 11	10843 ROCKLAND DR.	SHC TO SMH-3 = 24'	SHC TO SMH-2 = 90'	18
LOT 12	10839 ROCKLAND DR.	SHC TO SMH-3 = 93'	SHC TO SMH-4 = 36'	8
LOT 13	10835 ROCKLAND DR.	SHC TO SMH-6 = 74'	SHC TO SMH-5 = 11'	8
LOT 14	10825 ROCKLAND DR.	SHC TO FHT = 48'	SHC TO SMH-7 = 43'	32
LOT 15	10821 ROCKLAND DR.	SHC TO SMH-7 = 47'	SHC TO SMH-8 = 55'	19
LOT 16	10817 ROCKLAND DR.	SHC TO SMH-7 = 84'	SHC TO SMH-8 = 22'	19
LOT 17	10813 ROCKLAND DR.	SHC TO SMH-8 = 73'	SHC TO WHC-17 = 38'	20
LOT 18	10809 ROCKLAND DR.	SHC TO WHC-17 = 34'	SHC TO SHC-2 = 54'	20
LOT 19	10805 ROCKLAND DR.	SHC TO WHC-18 = 35'	SHC TO SMH-9 = 61'	19
LOT 20	10801 ROCKLAND DR.	SHC TO M-7 = 29'	SHC TO SHC-19 = 63'	17

SANITARY STRUCTURE SCHEDULE			
NAME	NORTHING	EASTING	RIM ELEV. (FT.)
EX-1	538516.93	1343367.36	351.76
S-1	538533.44	1343348.24	352.00
S-2	538599.91	1343312.71	357.44
S-3	538672.83	1343229.60	357.70
S-4	538794.85	1343258.80	359.20
S-5	538890.67	1343316.33	360.63
S-6	538928.66	1343375.52	361.80
S-7	538976.38	1343486.15	366.94
S-8	537037.86	1343555.23	372.29
S-9	537252.29	1343734.86	388.10
S-10	538847.75	1343221.25	353.59
S-11	537081.98	1343225.15	351.15

PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 40898, EXPIRATION DATE: 7/23/25

BOHLER ENGINEERING
901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21284
Phone: (410) 521-7900
Fax: (410) 521-7957
www.BohlerEngineering.com

B.R. ROWE
PROFESSIONAL ENGINEER
6/11/14

DES. C.W.A.			
DRN. R.L.B.			
CHK. B.R.R.			
DATE: 6/2/14			
REV.	DATE	DESCRIPTION	BY

PUBLIC SEWER PROFILE

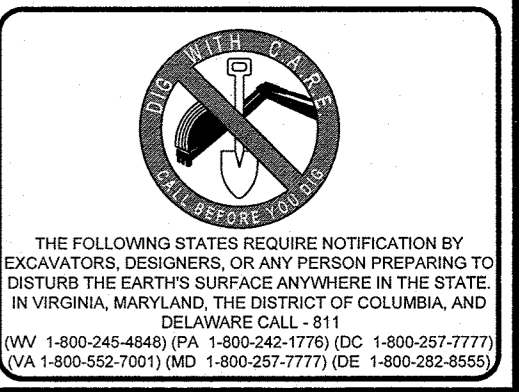
PARCEL NO. 56
600' SCALE MAP NO. 46 BLOCK NO. --

RESERVOIR ESTATES
10883 SCAGGSVILLE ROAD
TAX MAP 46, PARCEL 11, PARCEL 56
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO.: 24-4787-D

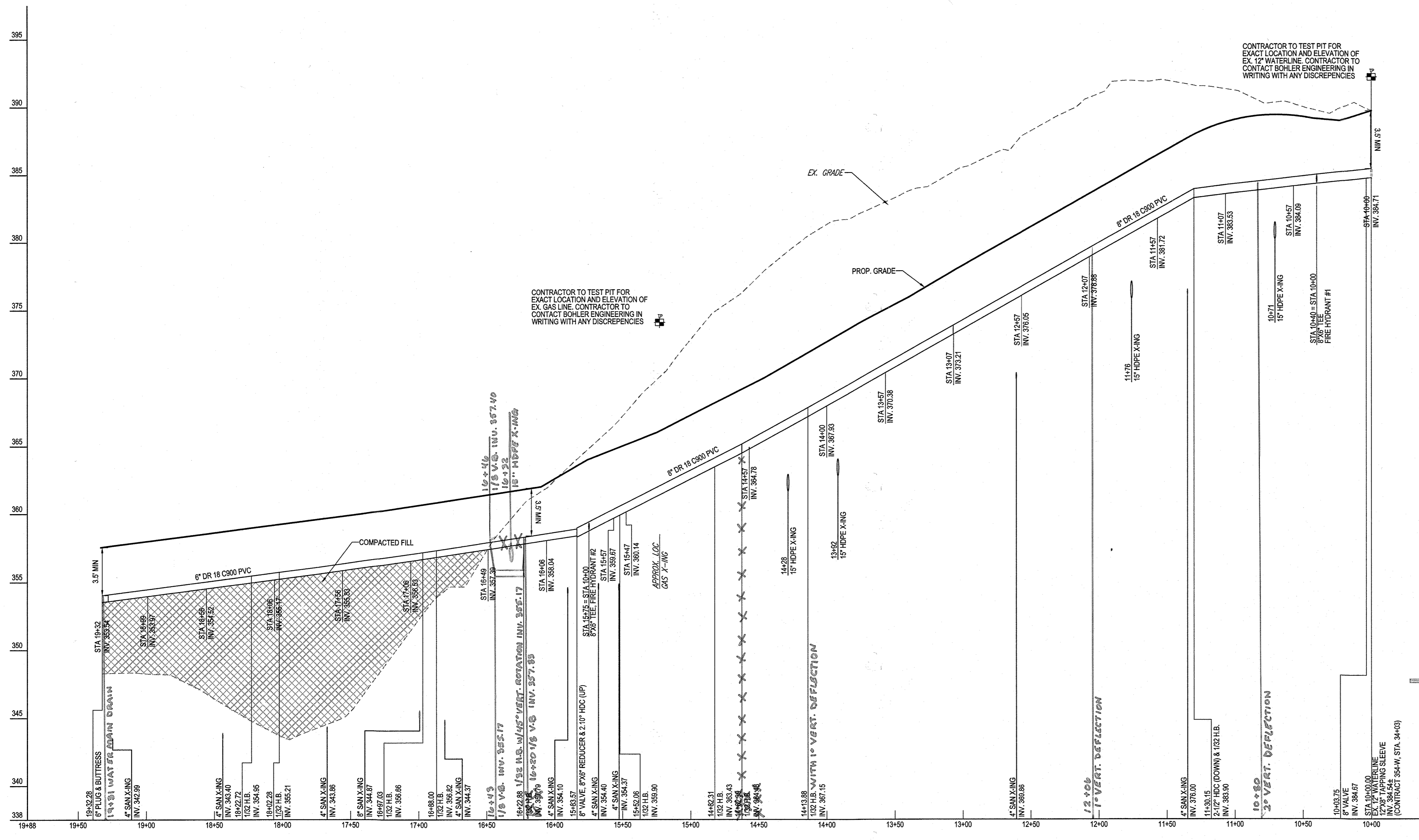
SCALE AS SHOWN SHEET 3 OF 4

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
S. C. CUMMINGS
CHIEF, BUREAU OF UTILITIES
6/11/14

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
6/3/14

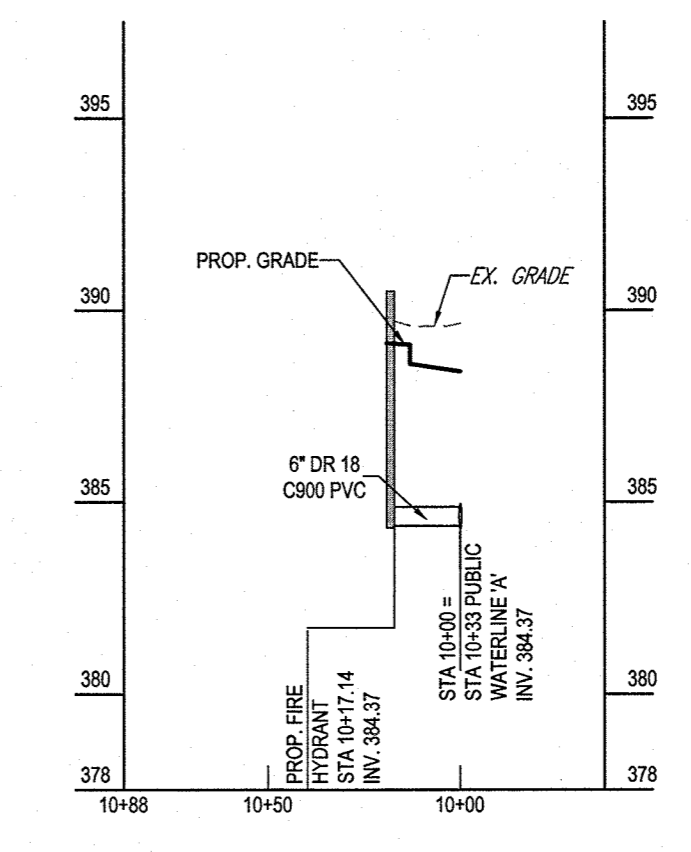


THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE OF VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND DELAWARE CALL - 811 (WV 1-800-245-4848) (PA 1-800-245-7776) (DC 1-800-251-7777) (VA 1-800-552-7001) (MD 1-800-257-7777) (DE 1-800-282-8555)

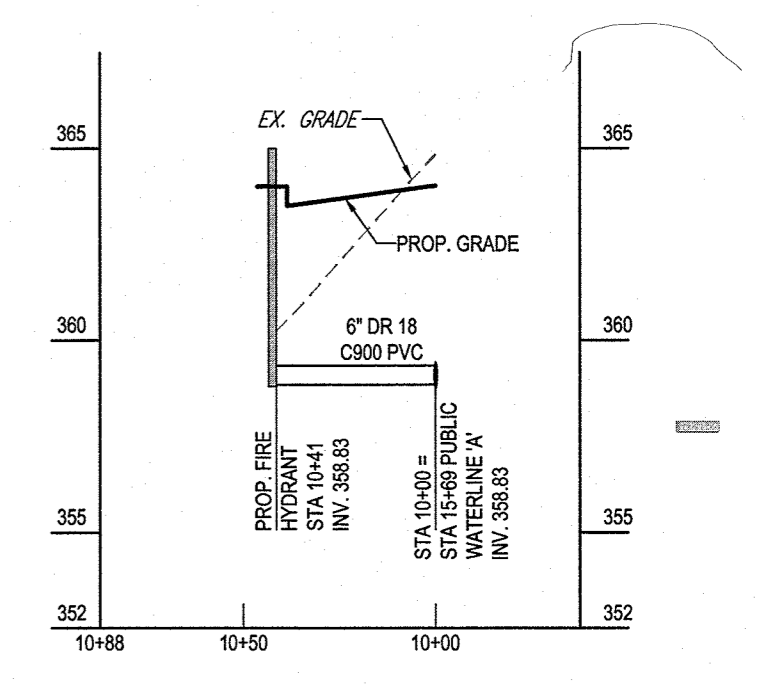


PUBLIC WATERLINE PROFILE
SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE				
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2	WHC
LOT 1	10802 ROCKLAND DR.	WHC TO M-7 = 41'	WHC TO M-8 = 54'	18
LOT 2	10806 ROCKLAND DR.	WHC TO SHC-2 = 68'	WHC TO M-7 = 72'	18
LOT 3	10820 ROCKLAND DR.	WHC TO FHT-V = 63'	WHC TO M-5 = 59'	40
LOT 4	10824 ROCKLAND DR.	WHC TO FHT-V = 61'	WHC TO M-5 = 87'	50
LOT 5	10828 ROCKLAND DR.	WHC TO SMH-6 = 75'	WHC TO FHT-V = 58'	54
LOT 6	10832 ROCKLAND DR.	WHC TO SMH-5 = 55'	WHC TO SMH-6 = 28'	8
LOT 7	10836 ROCKLAND DR.	WHC TO SHC-7 = 47'	WHC TO SMH-5 = 29'	6
LOT 8	10840 ROCKLAND DR.	WHC TO SMH-4 = 23'	WHC TO SHC-7 = 31'	9
LOT 9	10844 ROCKLAND DR.	WHC TO SMH-4 = 67'	WHC TO SMH-3 = 65'	9
LOT 10	10848 ROCKLAND DR.	WHC TO SMH-3 = 9'	WHC TO SHC-11 = 30'	22
LOT 11	10852 ROCKLAND DR.	WHC TO SMH-3 = 84'	WHC TO SMH-4 = 52'	17
LOT 12	10856 ROCKLAND DR.	WHC TO SMH-4 = 40'	WHC TO SMH-5 = 74'	18
LOT 13	10858 ROCKLAND DR.	WHC TO SMH-5 = 39'	WHC TO SMH-6 = 34'	18
LOT 14	10862 ROCKLAND DR.	WHC TO FHT = 43'	WHC TO M-5 = 38'	46
LOT 15	10866 ROCKLAND DR.	WHC TO M-5 = 57'	WHC TO M-6 = 60'	30
LOT 16	10870 ROCKLAND DR.	WHC TO SHC-16 = 45'	WHC TO M-6 = 26'	30
LOT 17	10874 ROCKLAND DR.	WHC TO M-6 = 97'	WHC TO SHC-2 = 70'	35
LOT 18	10878 ROCKLAND DR.	WHC TO SHC-18 = 47'	WHC TO SMH-9 = 93'	35
LOT 19	10882 ROCKLAND DR.	WHC TO SHC-19 = 46'	WHC TO M-7 = 24'	29
LOT 20	10886 ROCKLAND DR.	WHC TO M-7 = 59'	WHC TO M-8 = 20'	27



FIRE HYDRANT #1 PROFILE
SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL



FIRE HYDRANT #2 PROFILE
SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

W.M. STA.	APPURTENANCE	NORTHING	EASTING
10+00	12"X8" TAPPING SLEEVE	N 537378.55	E 1343788.83
10+03.75	8" VALVE	N 537375.77	E 1343787.43
10+40.00	8"X6" F.H. TEE	N 537342.89	E 1343770.85
11+30.15	2"X6" HDC, 1/32" H.B.	N 537262.34	E 1343730.24
14+13.88	1/32" H.B. WITH 1/8" VERT. DEFLECTION	N 537044.84	E 1343548.04
14+82.31	1/32" H.B.	N 536999.35	E 1343496.91
15+52.06	1/32" H.B.	N 536963.30	E 1343436.13
15+75	8"X6" F.H. TEE	N 536955.32	E 1343415.88
15+83.57	8" VALVE & 8"X6" REDUCER, 2-10" HDC	N 536952.08	E 1343407.68
16+88	1/32" H.B.	N 536904.91	E 1343316.09
16+97.03	1/32" H.B.	N 536897.76	E 1343308.92
18+02.28	1/32" H.B.	N 536807.52	E 1343254.74
18+22.72	1/32" H.B.	N 536788.80	E 1343247.01
19+32.28	6" PLUG & BUTTRESS	N 536682.05	E 1343221.51

16+20	1/8" V.B.
16+22.88	1/32" H.B. w/ 45° VERT. ROTATION
16+43	1/8" V.B.
16+46	1/8" V.B.

PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 42808, EXPIRATION DATE: 7/3/2015

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
Chief, Bureau of Utilities
6/18/14

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
Chief, Development Engineering Division
6/18/14

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B.R. ROWE
PROFESSIONAL ENGINEER
6/18/14

DES. C.W.A.	DRN. R.L.B.	CHK. B.R.R.	DATE: 6/2/14

REV.	DATE	DESCRIPTION	BY

PUBLIC WATER PROFILE

PARCEL NO. 56
600' SCALE MAP NO. 46 BLOCK NO. --

RESERVOIR ESTATES
10883 SCAGGSVILLE ROAD
TAX MAP 46, PARCEL 11, PARCEL 56
6TH ELECTION DISTRICT
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CONTRACT NO.: 24-4787-D

SCALE AS SHOWN SHEET 4 OF 4

