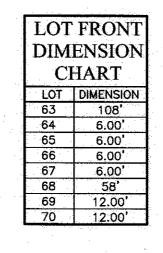
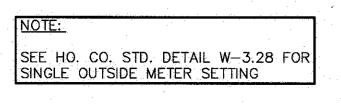
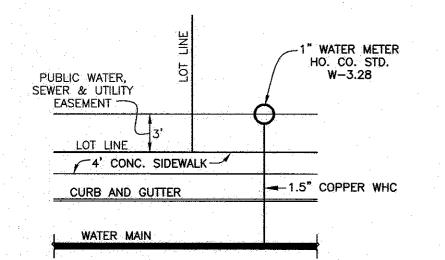
QUANTITIES AS-BUILT ITEMS ESTIMATED QUANTITIES TYPE MANUF./SUPPLIER 129 LF. C-900 NORTHAMERICAN PIPE " PVC C900 WATER DR-14 | 129 LF FIRE HYDRANTS (INCLUDES 8"x6" TEE & 6"VALVE) 8"x6" TAPPING SLEEVE & VALVE GG855/T-2860 SMITH BLAIR/MUELLER PRECAST HORNE CONCRETE 129 L.F. TYPE K SOFT COPPSE CECCO FLOW PRODUCTS PRECAST HORNE CONCRETE 3 EA. PRECAST ATLANTIC PRECAST G8 L.F. SDR 35 NATIONAL PIPE 105 L.F. SDR 35 NATIONAL PIPE NAME OF UTILITY CONTRACTOR: SURVEY AND DRAFTING DIVISION AS-BUILT DATE

63 WOODCRE 64 WOODCRE		SMH I		SMH 9	71.
	ST DBIVE				
	31 DIVIVE	SMH 1	25'	1-12	72.5
65 WOODCRE	ST DRIVE	SMHI	17'	1-12	106.
66 WOODCRE	ST DRIVE	IHMB	23.5'	1-12	125'
67 WOODCRE	ST DRIVE	SMH 1	28'	1-12	130'
68 WOODCRE	ST DRIVE	SMH 1	87'	SMH 9	71'

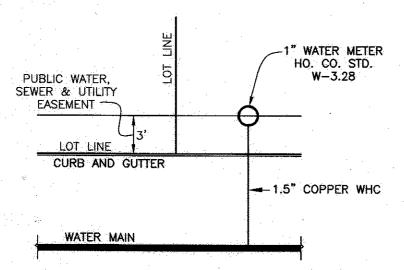
SEW	ER HOUSE CONNE	CTION AS-BUILT LO	OCATION TABLE	
LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2	
63	WOODCREST DRIVE	SMH 1 90'	5MH 9 62'	
64	WOODCREST DRIVE	SMHII IG'	1-12 24	
65	WOODCREST DRIVE	SMH 1 22.5'	1-12 107'	
66	WOODCREST DRIVE	SMH 1 25'	3-12 119'	
67	WOODCREST DRIVE	SMH 1 17.	1-12 124'	
68	WOODCREST DRIVE	SMH 95.5'	SMH 9 59'	
69	WOODCREST DRIVE	SMH9 AT	SMH 2 58.5'	
70	WOODCREST DRIVE	SMH 9 46'	SMH 2 50'	







TYPICAL SINGLE WATER HOUSE CONNECTION w/FRONT SIDEWALK (OUTSIDE METER SETTING) NOT TO SCALE



TYPICAL SINGLE WATER HOUSE CONNECTION NO SIDEWALK (OUTSIDE METER SETTING)

NOT TO SCALE BENCH MARKS HORIZONTAL: MARYLAND NAD83

> HO. CO. #37AB STAMPED DISC ON CONCRETE MONUMENT. CORNER MD. RT. 108 & OLD MONTGOMERY N 561,137.376 E 1,369,891.847 ELEV. 390.452'

VERTICAL: NAVD88

STAMPED DISC ON CONCRETE MONUMENT. CORNER MD. RT. 108 & MAYFIELD AVENUE N 557,526.362 E 1,370,661.967 ELEV. 348.044'

SECTION 2

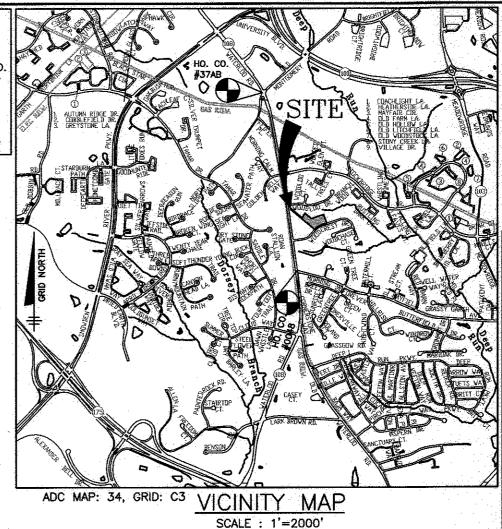
CONTRACT NO. 14-4912-D

1. COACHLIGHT LA. 2. HEATHERSIDE LA.

3. MAYFAIR CIR. 4. OLD FARM LA 5. OLD HOLLOW LA. 6. OLD LITCHFIELD LA. 7. OLD WOODSTOCK LA

	
TYPE OF BUILDING:	SFD
NO. OF LOTS/PARCELS/UNITS:	8
NUMBER OF SHC'S:	8 NEW
NUMBER OF WHC'S:	8 NEW
AREA OF COMMERCIAL LOT/PARCEL:	
SEWER SHED:PATAPSC	
PUMPING STATION:	
WATER ZONE:	
TEST GRADIENT	

STAMPED DISC ON CONCRETE MONUMENT. WOODBROOK CORNER MD. RT. 108 & OLD MONTGOMERY F E 1,370,661.967



	SHC TABLE			
LOT NO.	INVERT AT MH OR MAIN	INVERT AT RW/ESMT.	MCE	REMARKS
63	334.1	334.2	338.2	SHC
64	335.9	336.1	339.8	DSHC
65	336.0	336.3	340.2	SHC
66	336.0	336.3	340.5	SHC
67	335.9	336.3	340.1	DSHC
68	335.0	335.4	339.4	SHC
69	340.3	340.9	346.6	TSHC - PRIVATE SHC TO HOUSE AT 1.7%
70	340.3	340.9	346.9	TSHC



ALL WATER HOUSE CONNECTIONS ARE TO BE 1.5" WITH A 1" METER (OUTSIDE SETTING).

ALL SINGLE SEWER HOUSE CONNECTIONS SHALL BE 4" PVC. TWIN SEWER HOUSE CONNECTIONS CALL FOR 6" TO MAIN, SEE DETAIL S-2.14.

	SHEET INDEX	
NO.	DESCRIPTION	
1	TITLE SHEET	
2	PLAN VIEW AND PROFILE, PUBLIC WATER & SEWER MAINS	

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 IN FEBRUARY, 2014 BY BENCHMARK ENGINEERING, INC.

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. 37AB AND NO.

5. CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OF TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY 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, ANY COST INCURRED BY THE OWNER FOR THE 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.

USE HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR

7. 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

8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

AT&TBGE (CONTRACTOR SERVICES)	1-800-252-1133
BGE (EMERGENCY)	
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO	
MISS UTILITY	
VERIZON	

). TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES ANI

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 OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.

PART II WATER

. ALL WATER MAINS TO BE C900 PVC, DR-14 UNLESS OTHERWISE NOTED.

2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE

4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH 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 THE STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.

6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM. 7. TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.

8. FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD COOD FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS 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

9. UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS SACRIFICIAL ANODES SHALL BE INSTALLED 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 RESTRAINTS AND HARNESSES. 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.

10. 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 INSERTIONLINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE HE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO

11. ALL CHANGES IN HORIZONTAL AND 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 DEFLECTION 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 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 CERTAINTEED PVC HIGH

5—DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR18 MEETING THE REQUIREMENTS OF AWWA COOD AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR18 OR EQUAL. 12. 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 DEVICESFOR 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.

PART III SEWER

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.

3. FORCE MAINS SHALL BE D.I.P. ONLY.

STANDARD DETAIL G5.52. 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.

WOODBROOK

SECTION 2 PHASE 1, LOTS 63-65 & PHASE 2, LOTS 66-70

SHEET NO. 1 OF 2

SCALE:

AS SHOWN

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

SPECIFICATIONS AND AS PER F-15-096.

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND

JOHN R. & CHARLES E.

NEIGHOFF, ET AL

4936 WHARFF ROAD

ELLICOTT CITY, MARYLAND 21043

BENCHMARK ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS ENGINEERING, INC. 480 BALTIMORE NATIONAL PIKE A SUITE 315 A ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644

DEVELOPER:

SECURITY DEVELOPMENT, LLC

P.O. BOX 417

ELLICOTT CITY, MARYLAND 21041

410-465-4244



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. 45577,

Expiration Date: 06-08-2016.

REVISE SHE & WHE OULSTS 64/70 TO MUOID GAS AND ELECTRIC CONFLICTS, ADD MANHOLES -MAIN. 6-1-16 BY NO. REVISIONS DATE 600 SCALE MAP #37 BLOCK: 14 200 SCALE MAP #-

TITLE SHEET

TAX MAP: 37 - BLOCK: 14 - PARCELS: 126, 488 AND 530 - ZONED: R-SC - ELECTION DISTRICT: 1

CONTRACT NO. 14-4912-D

J:\2370 WOODBROOK SECT!ON 2\dwg\6046_V2.dwg, Sheet 1, 10/22/2015 10:54:25 AM, bdodson

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 275 OF THE HOWARD COUNTY STANDARD

