


GENERAL NOTES

PART I

- 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.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON AERIAL TOPOGRAPHY PERFORMED BY WINGS AERIAL SURVEYING, INC. IN DECEMBER 2009, AND FIELD TOPOGRAPHY COMPILED BY ROBERT H. VOGEL ENGINEERING, INC., DATED AUGUST 2014.
- THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED BY MILDENBERG, BOENDER, AND ASSOCIATES, ON OR ABOUT JANUARY 2012.
- HORIZONTAL AND VERTICAL SURVEY 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. 378A AND 378B.
ALL VERTICAL CONTROLS ARE BASED ON (NAVD' 88).
VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE:
HOWARD COUNTY BENCHMARK 378A (CONC. MON.)
N 563785.64 E 1376343.21 ELEV. 393.94
LOCATION: MONTGOMERY ROAD, 0.4 MILES EAST OF MEADOWRIDGE ROAD
HOWARD COUNTY BENCHMARK 378B (CONC. MON.)
N 563663.45 E 1378040.51 ELEV. 373.01
LOCATION: MONTGOMERY ROAD BY ROCKBURN ELEMENTARY SCHOOL
- 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 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:
A&T 800-252-1133
BOE (CONTRACTOR SERVICES) 410-637-8713
BOE (EMERGENCY) 410-685-0123
BUREAU OF UTILITIES 410-313-4900
COLONIAL PIPELINE COMPANY 410-795-1390
MISS UTILITY 800-257-7777
STATE HIGHWAY ADMINISTRATION 410-531-5533
VERIZON 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(g) OF THE HOWARD COUNTY CODE.

PART II - WATER

- ALL WATER MAINS SHALL BE C-900 PVC (DR-18) UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TREES SHALL BE STRAPPED TO TREES.
- 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 INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- FOR SPRINKLER SYSTEM, ALL SINGLE FAMILY DWELLINGS WILL HAVE A MINIMUM OF A 1-1/2" WHC WITH A 1" OUTSIDE METER SETTING.
- TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- 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 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 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 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 (1.5-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 CERTAINTEEED 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 (PEX) BLUE BRUTE DR18 OR EQUAL.

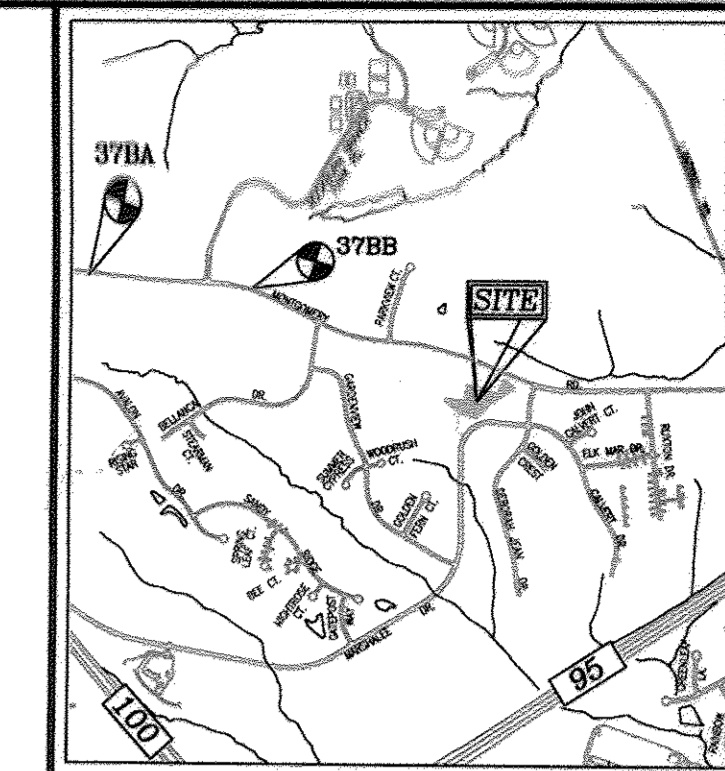
PART III - SEWER

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C 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 WATERIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.

FINAL WATER AND SEWER PLAN MONTGOMERY CROSSING - PHASE 2 LOTS 3-10 (SFD RESIDENTIAL) PARCELS 320 & 354 CONTRACT 14-4919-D HOWARD COUNTY, MARYLAND

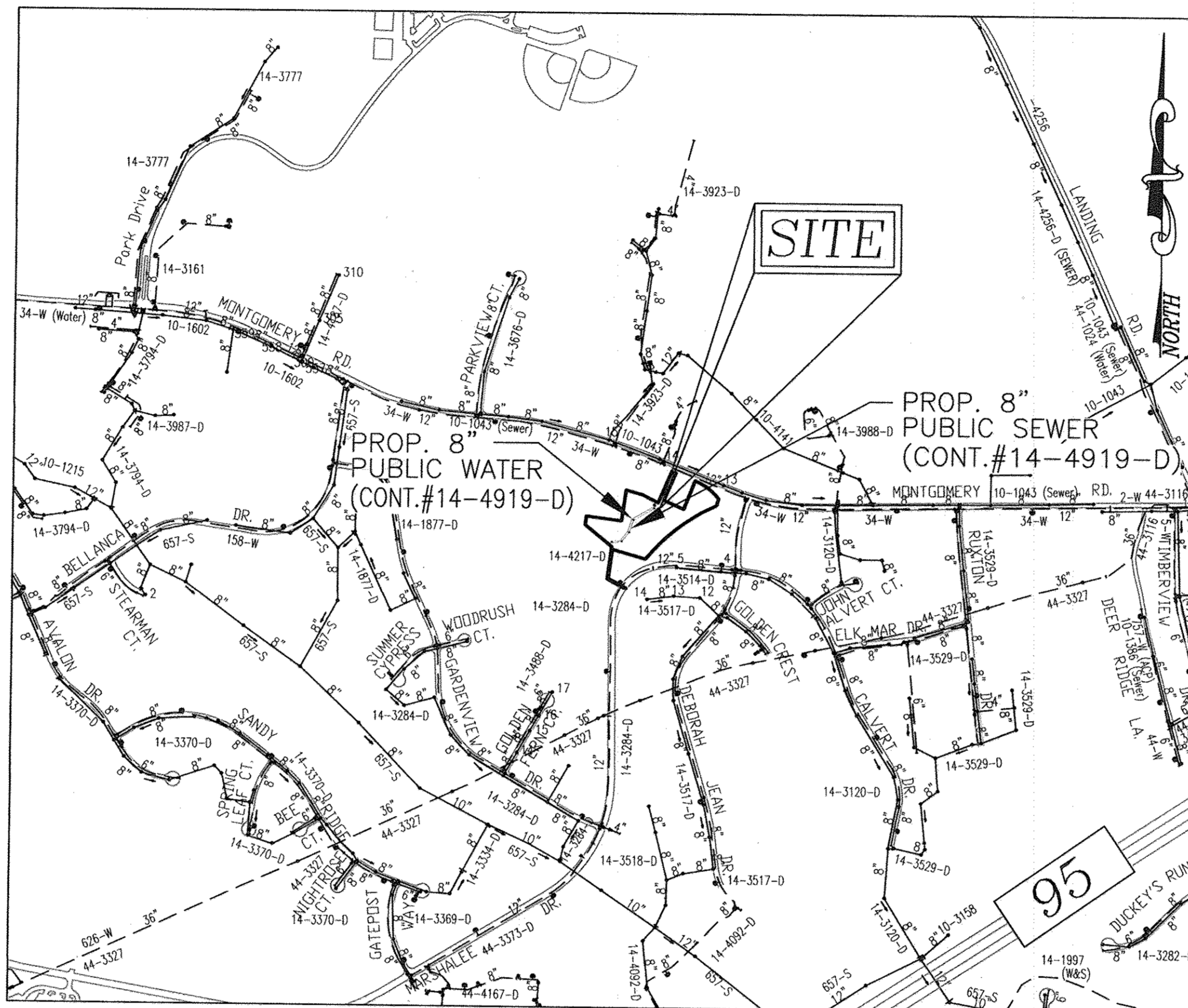
BENCHMARKS

HOWARD COUNTY BENCHMARK 378A
N 563785.6421 E 1376343.2088 ELEV. 393.94
HOWARD COUNTY BENCHMARK 378B
N 563663.4488 E 1378040.5059 ELEV. 373.01



VICINITY MAP

SCALE: 1"=2000'
ADC MAP COORDINATE: PG. 4936 J7



VICINITY MAP

SCALE: 1"=600'

WATER ZONE: 550
TEST GRADIENT: 700

TYPE OF BUILDING :	SFD RESIDENTIAL
NO. OF BUILDABLE LOTS :	8
NO. OF OPEN SPACE LOTS :	0
NO. OF SINGLE WATER HOUSE CONNECTIONS :	6
NO. OF SEWER HOUSE CONNECTIONS :	6
SEWER SHED :	LITTLE PATUXENT
TREATMENT PLANT :	LITTLE PATUXENT RIVER

QUANTITIES

NAME OF UTILITY CONTRACTOR : G C C				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE : 7-6-16 REV. 6-12-17				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
WATER				
8" WATER (C-900 PVC DR-18)	322 LF	342 L.F.	C-900	J.M. EAGLE
6" WATER (C-900 PVC DR-18)	7 LF	7 L.F.	C-900	J.M. EAGLE
8" WATER (DIP CLASS 54)	21 LF	21 L.F.	D.I.P.	U.S. PIPE
1.5" WHC	143 LF	145 L.F.	"K"	CAM BRIDGE LEE
8" TAPPING SLEEVE	1 EA	1 EA		FORD, METER BOX
8" VALVE	1 EA	1 EA	GATE	AMERICAN FLOW
8" VALVE	1 EA	1 EA	MJ GATE	AMERICAN FLOW
FIRE HYDRANT & TEST STATION	1 EA	1 EA		AMERICAN FLOW
SEWER				
8" PVC SEWER	317 LF	317 L.F.	SDR-35	NORTH AMERICAN PIPE
4" SDC	147 LF		SDR-35	NORTH AMERICAN PIPE
STANDARD MANHOLE	3 EA	3 EA	PRECAST	CONTRACTORS PRECAST CORP.
TYPE 'B' DROP MANHOLE	1 EA	1 EA	PRECAST	CONTRACTORS PRECAST CORP.

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

John R. Blunt 7/22/15
SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH FINAL PLAN F-14-077 AND SDP-14-082.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Shane Green 7/16/15
CHIEF, BUREAU OF UTILITIES DATE

Robert H. Vogel 7-24-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961



PROFESSIONAL CERTIFICATE
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.
EXPIRES DATE: 09-27-2016
DRN: JMR DES: EDS
CHK: RHV
DATE: JULY 2015

BY NO. 1 CORRECT NUMBER OF CONNECTIONS 5/20/16

FINAL WATER AND SEWER PLAN
CONTRACT 14-4919-D

COVER SHEET

MONTGOMERY CROSSING - PHASE 2
LOTS 3-10
(SFD RESIDENTIAL)

SCALE AS SHOWN

SHEET 1 OF 3

600' SCALE MAP NO. 37

BLOCK NO. 5

TAX MAP 37 GRID 5
1ST ELECTION DISTRICT

ZONING R-20, R-12
PARCELS: 320 & 354
HOWARD COUNTY, MARYLAND

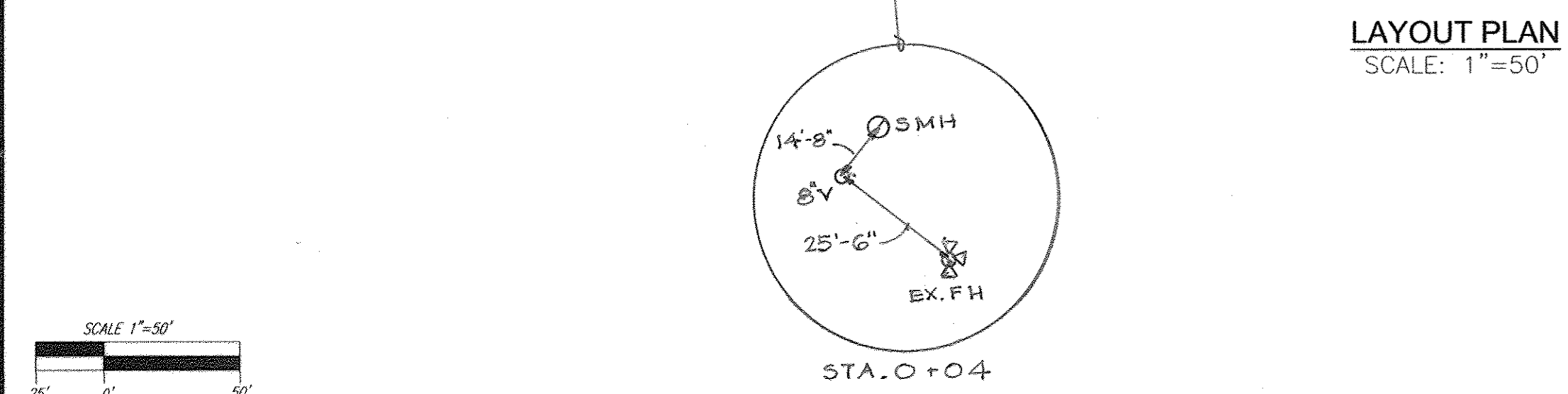
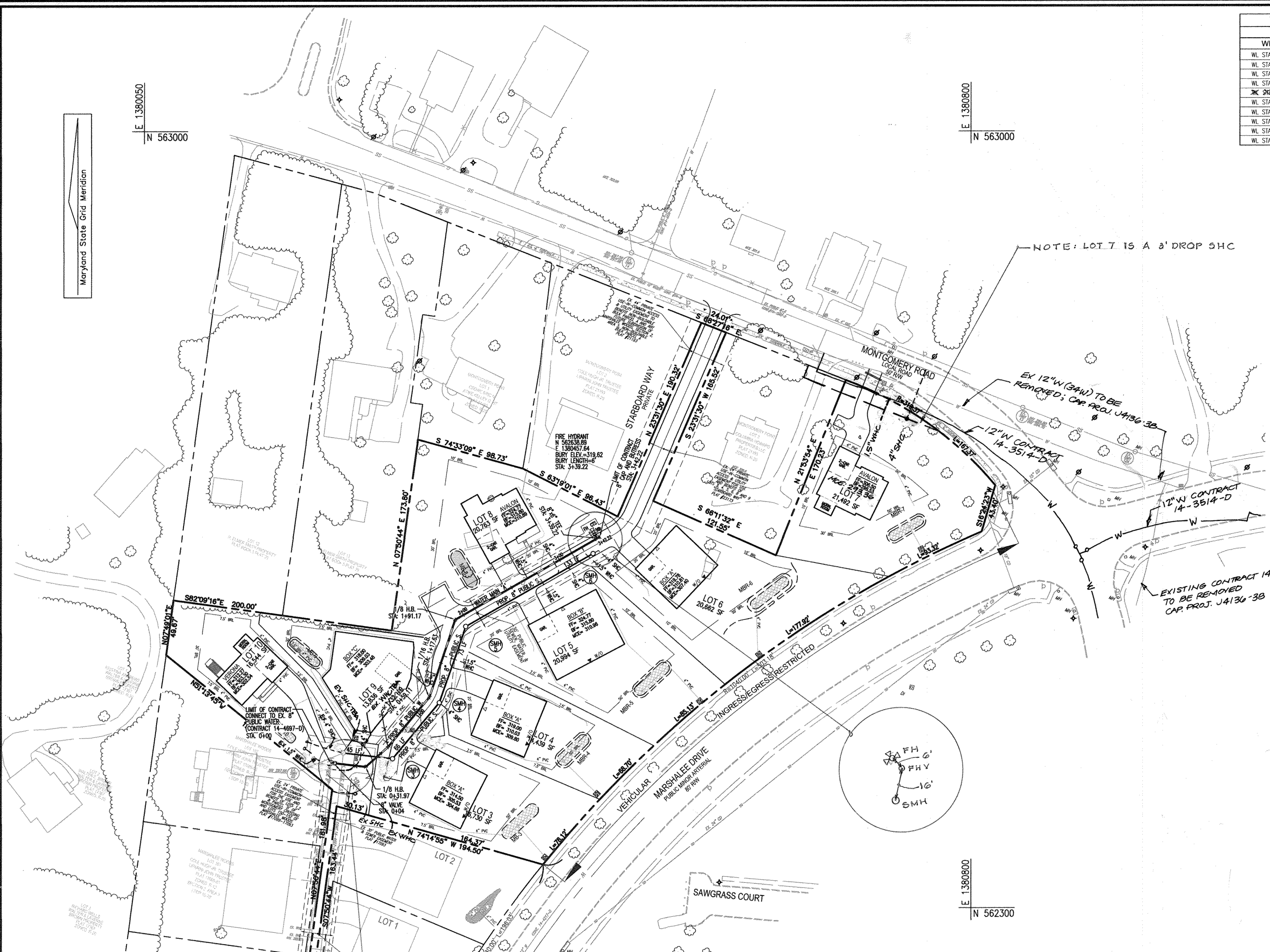
OWNER/DEVELOPER
MARSHALLEE WOODS LIMITED PARTNERSHIP
COLUMBIA HOWARD PROPERTIES, LLC
7310 ESQUIRE COURT, SUITE 14
ELKRIE, MARYLAND 21075
410-379-9681

AS-BUILT

John R. Blunt 7/6/16
Rev. 6/12/17

WATER MAIN LOCATION CHART	
PROP. WATER MAIN 'A'	
WL STA. 0+00.00	CONNECT TO EX. 8" WATER (8"x8" TAPPING SLEEVE)
WL STA. 0+04.00	8" VALVE
WL STA. 0+31.97	1/8 HORIZONTAL BEND (ROTATED 3.00' - UP)
WL STA. 0+42.66	1/32 VERTICAL BEND - UP
WL STA. 0+63.29	1/32 VERTICAL BEND - DOWN
WL STA. 1+17.63	1/16 HORIZONTAL BEND
WL STA. 1+91.17	1/8 HORIZONTAL BEND (ROTATED 2.94' - DOWN)
WL STA. 3+39.22	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)
WL STA. 3+42.22	8" CAP AND BUTTRISS

LEGEND:	
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREELINE
	EXISTING TREES
	EXISTING FENCE
	PROPOSED TREELINE
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	PROPOSED WATER MAIN
	FIRE HYDRANT
	PROPOSED VALVE
	PROPOSED TEE
	PROPOSED SEWER
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR



LAYOUT PLAN
SCALE: 1"=50'

AS-BUILT
7/6/16
Rev 6/12/17

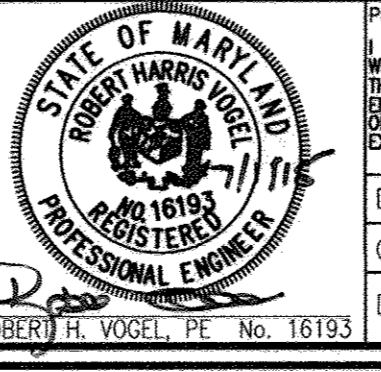
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 7/6/15
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

[Signature] 7-24-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELLCOTT CITY, MD 21043 FAX: 410.461.8961



PROFESSIONAL CERTIFICATE	
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. 16193, EXPIRATION DATE: 09-21-2016	
DRN: JMR	DES: EDS
CHK: RHV	
DATE: JULY 2015	
BY: NO.	REVISION
	1 / UPDATE EX. MONTGOMERY ROAD 12" W AMEND PLAN VIEW, REMOVE LOT 3, SHOW LOT 3 AND 10 AS EXISTING
	5/20/16

FINAL WATER AND SEWER PLAN
CONTRACT 14-4919-D
LAYOUT SHEET

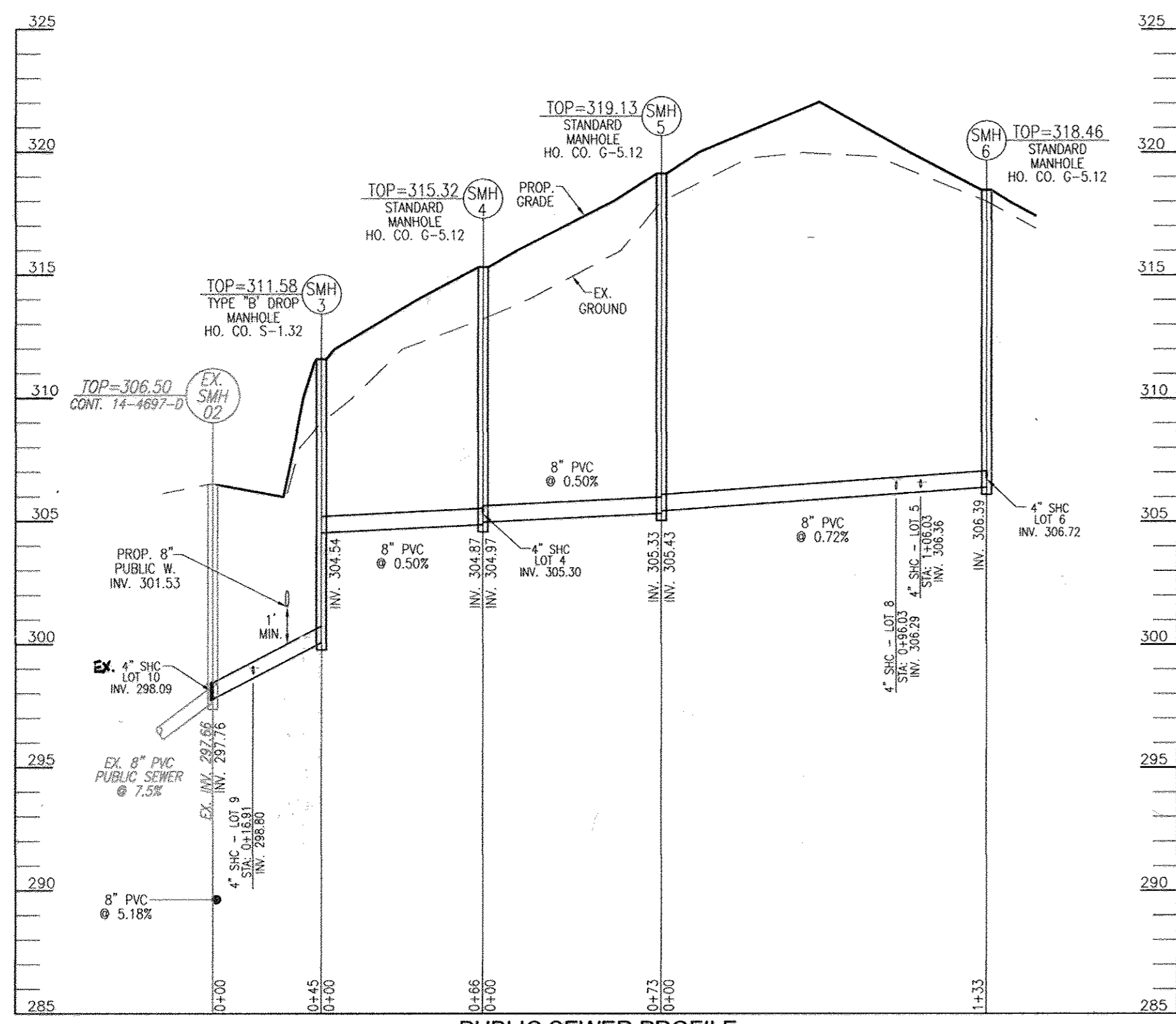
600' SCALE MAP NO. 37 BLOCK NO. 5

MONTGOMERY CROSSING - PHASE 2
LOTS 3-10
(SFD RESIDENTIAL)

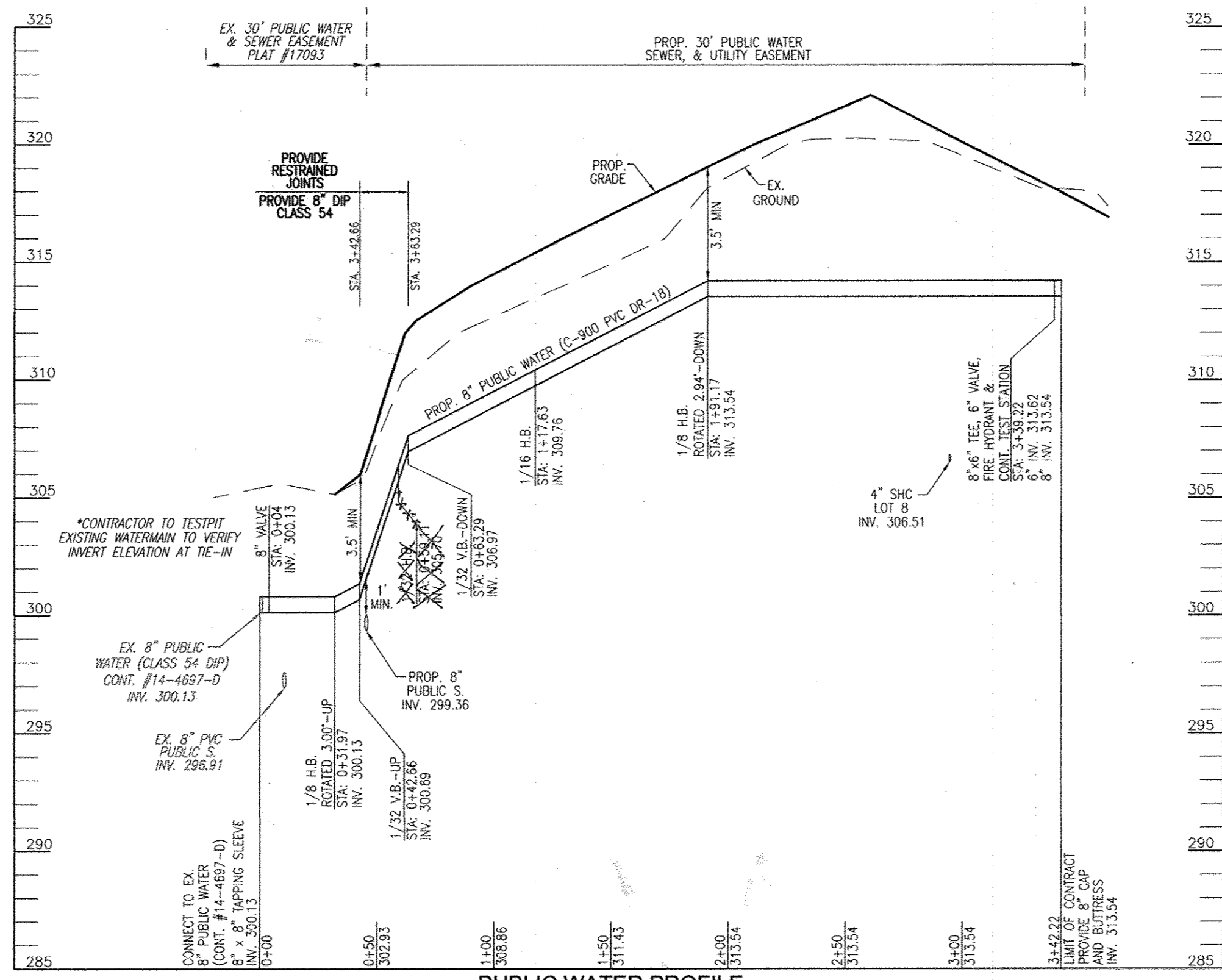
ZONING R-20, R-12
PARCELS: 320 & 354
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER
MARSHALEE WOODS LIMITED PARTNERSHIP
COLUMBIA, HOWARD PROPERTIES, LLC
7310 ESQUIRE COURT, SUITE 14
ELK RIDGE, MARYLAND 21075
410-379-8681

SCALE AS SHOWN
SHEET 2 OF 3



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



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

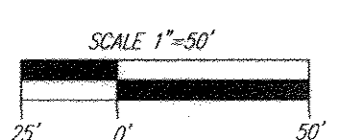
WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 3	REFER TO CONTRACT 14-4697-D		
LOT 4	6319 STARBOARD WAY	SMH ^m 4 43'	SMH ^m 5 31'-6"
LOT 5	6315 STARBOARD WAY	SMH ^m 5 82'-6"	SMH ^m 6 50'-6"
LOT 6	6311 STARBOARD WAY	SMH ^m 6 9'-8"	FH 31'
LOT 7	6418 MONTGOMERY RD.	EX.SD AC-ST 25'	SHC LOT ^m 7 19'
LOT 8	6314 STARBOARD WAY	SMH ^m 5 74'	SMH ^m 6 63'-6"
LOT 9	6320 STARBOARD WAY	SMH ^m 5 52'-5"	SMH ^m 4 29'-5"
LOT 10	REFER TO CONTRACT 14-4697-D		

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 3	REFER TO CONTRACT 14-4697-D		
LOT 4	6319 STARBOARD WAY	SMH ^m 4 11'	SMH ^m 5 76'
LOT 5	6315 STARBOARD WAY	FH 46'	SMH ^m 6 25'-6"
LOT 6	6311 STARBOARD WAY	SMH ^m 6 17'-6"	FH 30'-6"
LOT 7	6418 MONTGOMERY RD.	EX.SD AC-ST 35'	WHC LOT ^m 7 19'
LOT 8	6314 STARBOARD WAY	FH 44'-6"	SMH ^m 6 39'
LOT 9	6320 STARBOARD WAY	SMH ^m 4 76'	SMH ^m 3 28'-5"
LOT 10	REFER TO CONTRACT 14-4697-D		

MCE CHART							
LOT#	EL @ MAIN	TYPE	DIST. TO ESMT.	EL @ ESMT.	DIST. ESMT. TO HOUSE	EL @ HOUSE	MCE
4	305.30	SHC	10	305.50	90	307.30	309.80
5	306.36	SHC	11	306.58	94	308.46	310.96
6	306.72	SHC	16	307.04	98	309.00	311.50
7	287.80	SHC	53	288.86	100	290.86	293.86
8	306.29	SHC	21	306.71	84	308.39	310.89
9	298.80	SHC	12	299.04	97	300.98	303.48

*SEWER HOUSE CONNECTION AT 1% FROM EASEMENT TO HOUSE

SEWER MANHOLE SCHEDULE					
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT
SMH 3	TYPE 'B' DROP MH HO. CO. STD. DET. S-1.32	N 562434.85 E 1380275.26	311.58	304.54	300.09
SMH 4	PRECAST MH HO. CO. STD. DET. G-5.12	N 562485.28 E 1380317.73	315.32	305.30	304.87
SMH 5	PRECAST MH HO. CO. STD. DET. G-5.12	N 562554.05 E 1380341.76	319.13	305.43	305.33
SMH 6	PRECAST MH HO. CO. STD. DET. G-5.12	N 562619.53 E 1380457.13	318.46	306.72	306.39

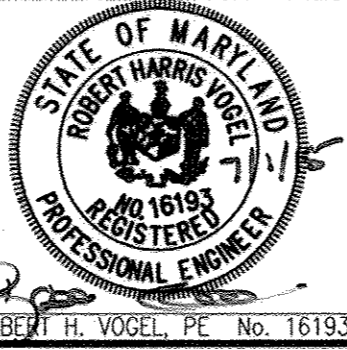


AS-BUILT
7/6/16
Rev 6/12/17

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Steve Coenen
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Chad Clark
CHIEF, DEVELOPMENT ENGINEERING DIVISION
7-24-15
DATE

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
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DRN: JMR	DES: EDS
CHK: RRV	
DATE: JULY 2015	
BY: NO.	REVISION
	1 AMEND SEWER PROFILE, REMOVE LOTS 3, LOT 10 EXISTING 5/20/16

FINAL WATER AND SEWER PLAN
CONTRACT 14-4919-D
WATER AND SEWER PROFILES

MONTGOMERY CROSSING - PHASE 2
LOTS 3-10
(SFD RESIDENTIAL)

SCALE AS SHOWN
SHEET 3 OF 3

OWNER/DEVELOPER
MARSHALEE WOODS LIMITED PARTNERSHIP
COLUMBIA HOWARD PROPERTIES, LLC
7310 ESQUIRE COURT, SUITE 14
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TAX MAP 37 GRID 5
1ST ELECTION DISTRICT
ZONING R-20, R-12
PARCELS: 320 & 354
HOWARD COUNTY, MARYLAND