GENERAL NOTES

PART]

3. HORIZONTAL AND VERTICAL SURVEY CONTROLS:

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. THE EXISTING TOPOGRAPHY ON-SITE IS TAKEN FROM FIELD SURVEY WITH 2 FOOT CONTOUR INTERVALS PREPARED BY BENCHMARK ENGINEERING, INC. DATED FEBRUARY, 2019. SURROUNDING TOPOGRAPHY IS TAKEN FROM HOWARD COUNTY GIS. THE EXISTING UTILITIES SHOWN ARE TAKEN FROM FIELD SURVEY, CONTRACT DRAWINGS, AND COUNTY GIS INFORMATION.

THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM AS ESTABLISHED FROM GIS

4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

5. 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.

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.

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.

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

BGE (CONTRACTOR SERVICES) ..410-637-8713 BGE (EMERGENCY) .. BUREAU OF UTILITIES410-795-1390 1-800-257-7777 COLONIAL PIPELINE (MISS UTILITY... STATE HIGHWAY ADMINISTRATION. ...410-531-5533

9. 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 10. THE 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

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

1. ALL WATER MAINS TO BE PVC C900 DR-18 UNLESS OTHERWISE NOTED.

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

3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES. 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

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 PVC C900 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 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. 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 (1

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

POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS

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 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

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 DEFLECTION (HD) STOP COUPLINGS OR EQUAL.

5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.

5-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. 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

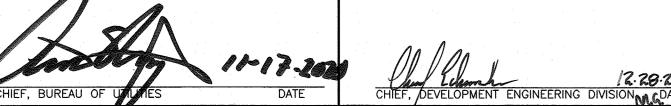
- 1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- 2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- 3. FORCE MAINS SHALL BE D.I.P. ONLY.
- 4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY. 5. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER. STANDARD DETAIL C5.52. 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.

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



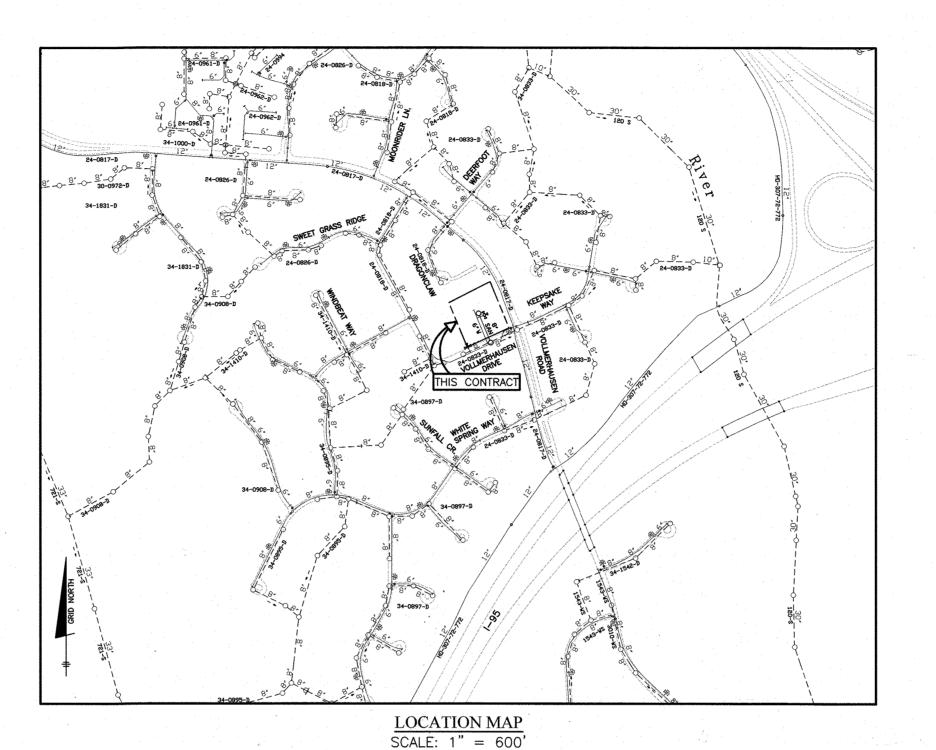
SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER F-20-061.

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



HUNTINGTON POINT

PUBLIC WATER AND SEWER CONSTRUCTION PLANS CONTRACT NO. 24-5125-D



	4
TYPE OF BUILDING:	S.F.D.
	8
NUMBER OF WHC'S:	8
DRAINAGE AREA:	PATAPSCO WATERSHED
TREATMENT PLANT:	PATAPSCO WWTP
WATER ZONE:	400
TEST GRADIENT:	828
TEST PRESSURE:	204

Γ	NUMBER OF SHC'S:	8
	NUMBER OF SHC'S (EXISTING):	0
	NUMBER OF TSHC'S:	0
ŀ	NUMBER OF TSHC'S (EXISTING):	
	TOTAL NUMBER OF SHC'S:	8
	NUMBER OF WHC'S:	8
l	NUMBER OF WHC'S (EXISTING):	0
	NUMBER OF TWHC'S:	0
	NUMBER OF TWHC'S (EXISTING):	0
	TOTAL NUMBER OF WHC'S:	8
ı		

NO	<u>TE:</u>	٠.
	WATER HOUSE CONNECTIONS ARE TO WITH A 1" METER (OUTSIDE SETTING	
ÄLL	SEWER HOUSE CONNECTIONS SHALL	BE

4" PVC.

		SHEET INDEX		
Γ	NO.	DESCRIPTION	•	
	. 1	PUBLIC WATER & SEWER TITLE SHEET		
	2	PUBLIC WATER & SEWER PLAN AND PROFILE	•	

TITLE SHEET

600 SCALE MAP #42

LOT FRONTAGE CHART

60.04

60.00

6.00

6.00

6.00

6.00

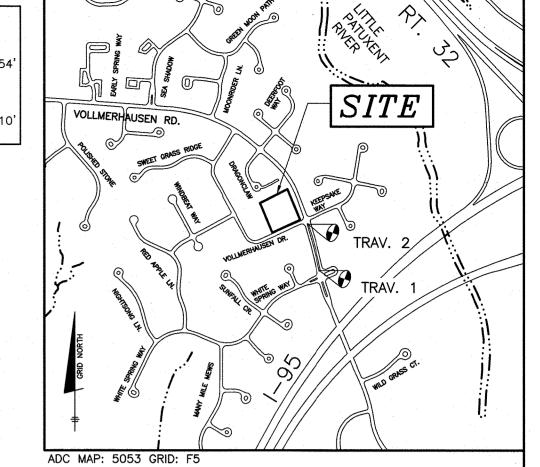
60.00

63.01

LOT NO. DISTANCE (In Feet)

BENCHMARKS NAD'83 HORIZONTAL TRAV. 1 REBAR AND CAP N542370.1616', E1358287.1054' ELEVATION: 361.128'

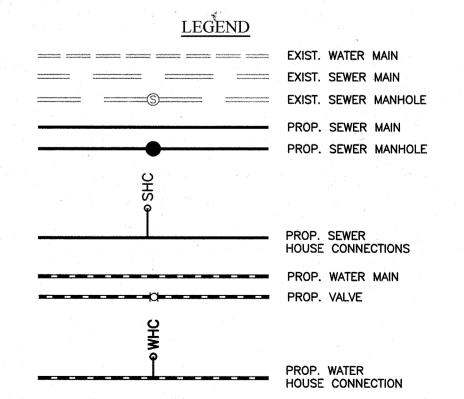
TRAV. 2 REBAR AND CAP N542808.3770', E1358170.8510 ELEVATION: 356.641'



QUANTI	TIES	1.1	
QUANTITIES ESTIMATED		ASBUI	LT
201111111121	QUANTITIES	TYPE	MANU./ SUPPLIER
259 LF	259 LF	C900	NATIONAL
2	2		AMERICAN DARLING
125 LF	158		CAMBRIDGE LES
8	8		HORNE
2	2		FORD
1	ľ		FORD
231 LF	229 LF		NATIONAL
1	+1 8		CONTRACTORS PRECAST
1	1		CONTRACTORS PRECAS
138 LF	138 LF		MATIONAL
		B	
	QUANTITIES ESTIMATED 259 LF 2 125 LF 8 2 1 231 LF 1	ESTIMATED QUANTITIES 259 LF 2	QUANTITIES ESTIMATED QUANTITIES TYPE 259 LF 2900 2 2 125 LF 158 8 8 2 2 1 1 231 LF 229 LF 1 1 1 1

	SEWE	ER SERVICE AS-BUILT LOCATION TABLE	
LOT NO.	STREET ADDRESS	LOCATION DIMENSION #1	LOCATION DIMENSION #2
1	9456 VOLLMERHAUSEN DRIVE	TO ! NEW FHV= G2'	TO: NEW FH = 47'
2	9454 VOLLMERHAUSEN DRIVE	TO: DHMH#1 = 43'	TO : NEW 6" VALVE = 48"
3	9452 VOLLMERHAUSEN DRIVE	TO: NEW FH (ON-SITE) = 32'	TO: NEW FHY (ON-SITE) = 16'
4	9450 VOLLMERHAUSEN DRIVE	TO: 5MH # 2 (TERMINAL) = 22'	TO: NEW FHY (ON -SITE) = 34'
5	9448 VOLLMERHAUSEN DRIVE	TO : SMH # 2 (TERMINAL) = 8'	TO: NEW FH (ON- SITE) = 31'
6	9446 VOLLMERHAUSEN DRIVE	TO: NEW FH (ON-SITE) = 15'	TO: SMH #2 (TERMINAL) = 49
7	9444 VOLLMERHAUSEN DRIVE	TO: NEW G" VALVE = 56'	TO: DHMH #1 = 42'
8	9442 VOLLMERHAUSEN DRIVE	TO : EXISTING FH = 29'	TO: EXISTING FHY = 29'

	WATE	R SERVICE AS-BUILT LOCATION TABLE	
LOT NO.	STREET ADDRESS	LOCATION DIMENSION #1	LOCATION DIMENSION #2
1	9456 VOLLMERHAUSEN DRIVE	TO : NEW FHY = 51'	TO: NEW FH = 30'
2	9454 VOLLMERHAUSEN DRIVE	TO: PHMH #1 = 56'	TO: NEW 6" YALVE = 62"
3	9452 VOLLMERHAUSEN DRIVE	TO: NEW FH (ON-SITE) = 42'	TO: NEW FHY (ON-SITE) = 33'
4	9450 VOLLMERHAUSEN DRIVE	TO: 5MH #2 (TERMINAL) = 20'	TO: NEW FHY (ON-SITE) = 34'
5	9448 VOLLMERHAUSEN DRIVE	TO: 5MH # 2 (TERMINAL) = 16'	TO: NEW FH (ON-SITE) = 47'
6	9446 VOLLMERHAUSEN DRIVE	TO: NEW FH (ON-SITE) = 26'	TO: 5MH #2 (TERMINAL) = 59'
7	9444 VOLLMERHAUSEN DRIVE	TO: NEW 6" VALVE = 70"	TO: DHMH #1 = 58'
8	9442 VOLLMERHAUSEN DRIVE	TO: EXISTING FH = 39'	TO: EXISTING FHY = 34'



SCALE:

AS SHOWN

HUNTINGTON POINT PUBLIC WATER & SEWER

BLOCK 22

LOTS 1-8, OPEN SPACE LOT 9 TAX MAP: 42 - GRID: 22 - PARCEL: 167

ZONED: R-SC - ELECTION DISTRICT NO. 6 CONTRACT NO. 24-5125-D

SHEET NO. 1 OF 2

DEVELOPMENT PARTNERS, LLC 9693 GERWIG LANE, SUITE L COLUMBIA, MARYLAND 21046 410-792-2565

(P) 410-465-6105 (F) 410-465-6644

WWW.BEI-CIVILENGINEERING.COM

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: 6-08-2022.

BENCHMARK ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043

ES: MCR/JM(PRAFT:MCR/JM WRA / APPED QUANTITIES & WATER & SEWER TABLES DATE: 11/2020

