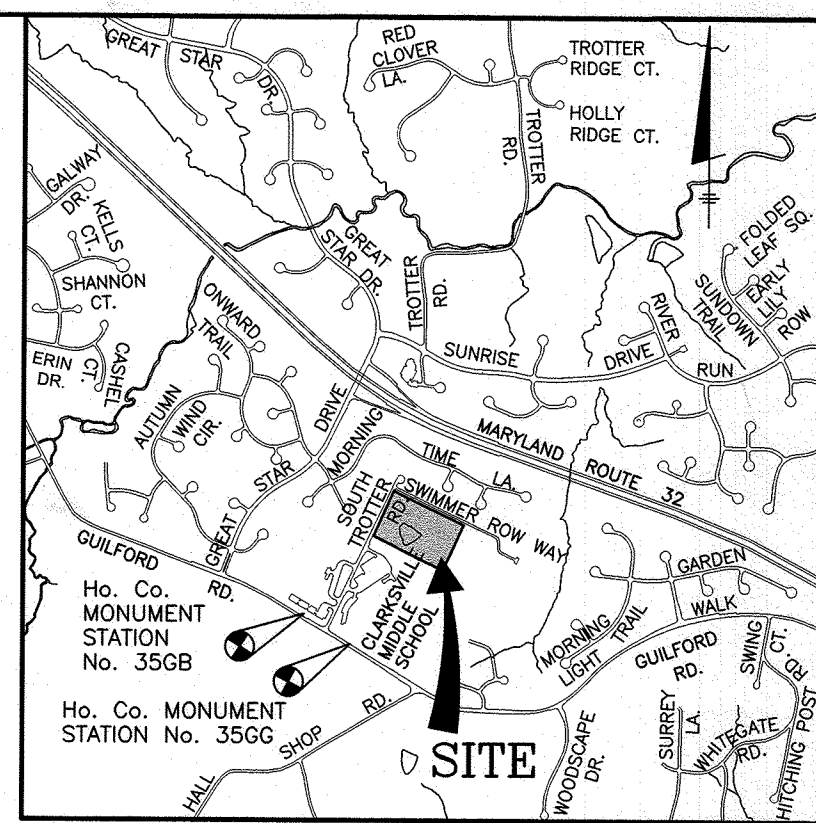


# TROTTER'S RETREAT-PHASE 2 PUBLIC WATER AND SEWER DRAWINGS CONTRACT NO. 34-5244-D



VICINITY MAP  
SCALE: 1" = 2000'

**BENCH MARKS-(NAD'83)**

3656G	EL.477.962
DISC SET ON TOP OF CONCRETE COLUMN GILFORD ROAD NEAR TROTTER ROAD.	
N 554358.875	E 1333834.183
35GB	EL.464.651
DISC SET ON TOP OF CONCRETE COLUMN CORNER GILFORD ROAD AND TROTTER ROAD.	
N 554740.098	E 1333317.635

### 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.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED IN MARCH, 2022 BY BENCHMARK ENGINEERING, INC.
- 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. 3562 AND NO. 356A.  
ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE 0012 AND 16E1.
- 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:  

AT&T	1-800-252-1133
BGE (CONTRACTOR SERVICES)	410-637-8713
BGE (EMERGENCY)	410-685-0123
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO.	410-785-1390
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 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 TO BE PVC C-900 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 TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH 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 THE 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.
- 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 4.3.1 OF THE ANNA 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 WARNERSSES. 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 SPOUT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTIONLINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPOUT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPOUT INTO THE BELL OF PVC PIPE.
- 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 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 ANNA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 8-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
- 5-DEGREE SWEEPS SHALL BE BELL BY SPOUT, RATED FOR A MINIMUM 225 PSI, DR18 MEETING THE REQUIREMENTS OF ANNA C900 AND SHALL BE MULTI FITTINGS (PEP) 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 ANNA C-900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPOUTS 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.
- ALL WATER HOUSE CONNECTIONS ARE TO BE 1.5" WITH 1" METER. SINGLE WHC'S SHALL COMPLY WITH W-3.28 AND TWIN WHC'S SHALL COMPLY WITH W-3.32.

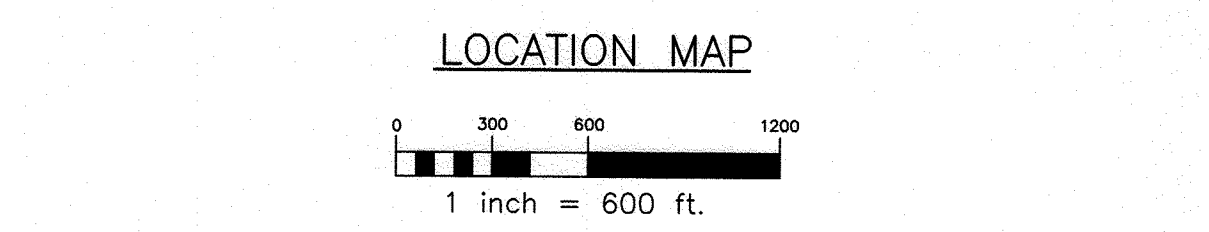
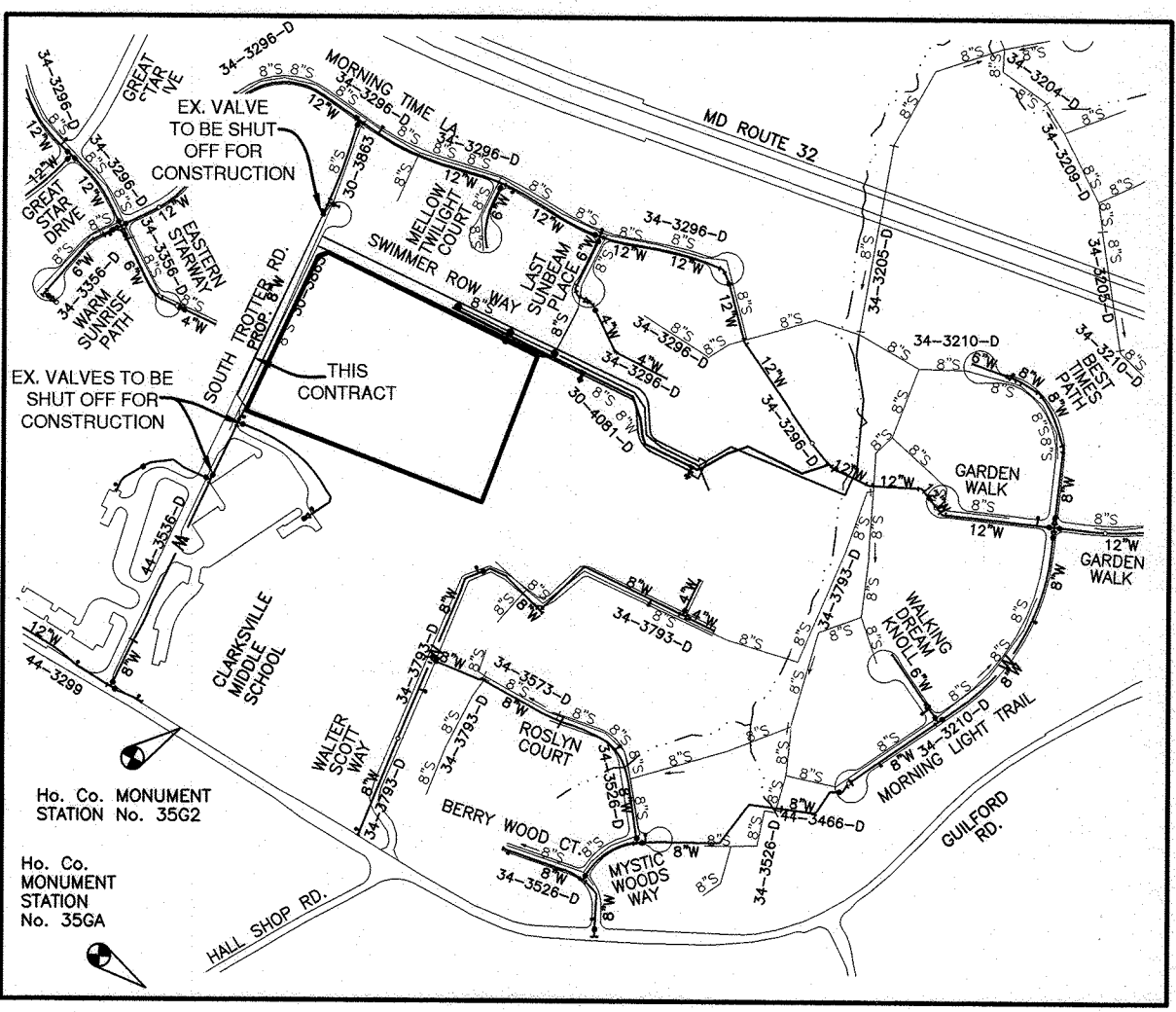
#### PART III SEWER

- 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 PVC ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER TIGHT FRAME AND COVER, STANDARD DETAIL 05.52. WHERE WATER TIGHT 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 CELLAR CANNOT BE SERVED.

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

*Howard Soil Conservation District* 10/02/24  
DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER SDP-24-017



TYPE OF BUILDING: \_\_\_\_\_ SINGLE FAMILY DETACHED  
 \_\_\_\_\_ CONDOMINIUM STYLE SENIOR HOUSING

NUMBER OF UNITS: \_\_\_\_\_ 9  
 NUMBER OF SHC'S: \_\_\_\_\_ 7\*  
 NUMBER OF WHC'S: \_\_\_\_\_ 1  
 NUMBER OF TWHC'S: \_\_\_\_\_ 4

DRAINAGE AREA \_\_\_\_\_ MIDDLE PATUXENT  
 TREATMENT PLANT \_\_\_\_\_ LITTLE PATUXENT WRP  
 WATER ZONE \_\_\_\_\_ 630 WEST  
 TEST GRADIENT \_\_\_\_\_ 907  
 TEST PRESSURE \_\_\_\_\_ 201

\* 2 EXISTING SHC'S WITHIN SOUTH TROTTER ROAD SHALL BE UTILIZED

DESIGN MANUAL WAIVER DMV2-24-002 TO VOLUME II SECTION 4.3.B.3.b TO WAIVE CELLAR SERVICE VIA GRAVITY TO UNITS 17 thru 25 HAS BEEN GRANTED BY THE HOWARD COUNTY DPW DATED AUGUST 31, 2023.

**NOTES:**

- ALL WATER HOUSE CONNECTIONS ARE TO BE 1.5" WITH A 1" METER (OUTSIDE SETTING), PER DETAIL W-3.28.
- ALL TWIN WHC'S SHALL COMPLY WITH W-3.32
- THESE PROPERTIES WERE INCORPORATED INTO THE METROPOLITAN DISTRICT ON MAY 1, 2023.

**SHEET INDEX**

NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE

**TEMPORARY WATER SERVICE INTERRUPTION CHART**

ADDRESS	WATER CONTRACT #
6535 S. TROTTER ROAD	44-3536-0

**LEGEND**

— W — W —	EXIST. WATER MAIN
— W — W —	EXIST. FIRE HYDRANT
— S — S —	EXIST. SEWER MAIN
— — — —	PROP. STORM DRAIN
— — — —	PROP. SEWER MAIN
— — — —	PROP. SEWER MANHOLE
— C/O —	PROP. SEWER HOUSE CONNECTION
— — — —	PROP. WATER MAIN
— — — —	PROP. WATER HOUSE CONNECTION
— — — —	PROP. FIRE HYDRANT
— — — —	PROP. VALVE

**QUANTITIES**

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
8" PVC C900 DR-18 WATER	686 LF			
6" FIRE HYDRANT, TEE, & VALVE	1 EA			
1.5" COPPER WHC	175 LF			
TWHC	4 EA			
WHC	1			
4" PVC SHC	168 LF			

NAME OF UTILITY CONTRACTOR: \_\_\_\_\_  
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE: \_\_\_\_\_

OWNER/DEVELOPER:  
 SOUTH TROTTER LLC  
 9693 GERWIG LANE, SUITE L  
 COLUMBIA, MD 21046  
 410-792-2565

*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. 28376.  
 Expiration Date: 1-1-2025

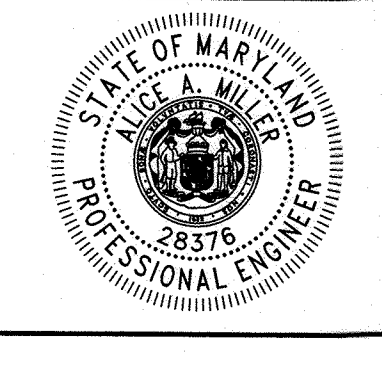
DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*Chief, Bureau of Utilities* 8/20/24  
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY, MARYLAND

*Chief, Development Engineering Division* 10.10.24  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**BENCHMARK**  
 ENGINEERS & LAND SURVEYORS & PLANNERS  
 ENGINEERING, INC.  
 3300 N. RIDGE ROAD SUITE 140 A ELICOTT CITY, MARYLAND 21043  
 (P) 410-465-8105 (F) 410-465-8644  
 WWW.BE-CIVLENGINEERING.COM



DES: AAM/JCO					
DRAFT: AAM/JCO					
CHK: AAM					
DATE: AUG 2024					
BY	NO.	REVISIONS	DATE		

**FINAL PUBLIC WATER AND SEWER PLANS**

600 SCALE MAP #16 BLOCK:11&17

**TROTTER'S RETREAT-PHASE 2**  
 A RESUBDIVISION OF  
 SCOTT PROPERTY, LOTS 1 AND 2  
 6479 & 6485 SOUTH TROTTER ROAD

TAX MAP: 35 - GRID: 20 - PARCEL: 338 8 - ZONED: R-20 - ELECTION DISTRICT NO. 53

**CONTRACT NO. 34-5244-D**

SCALE: AS SHOWN  
 SHEET NO. 1 OF 2



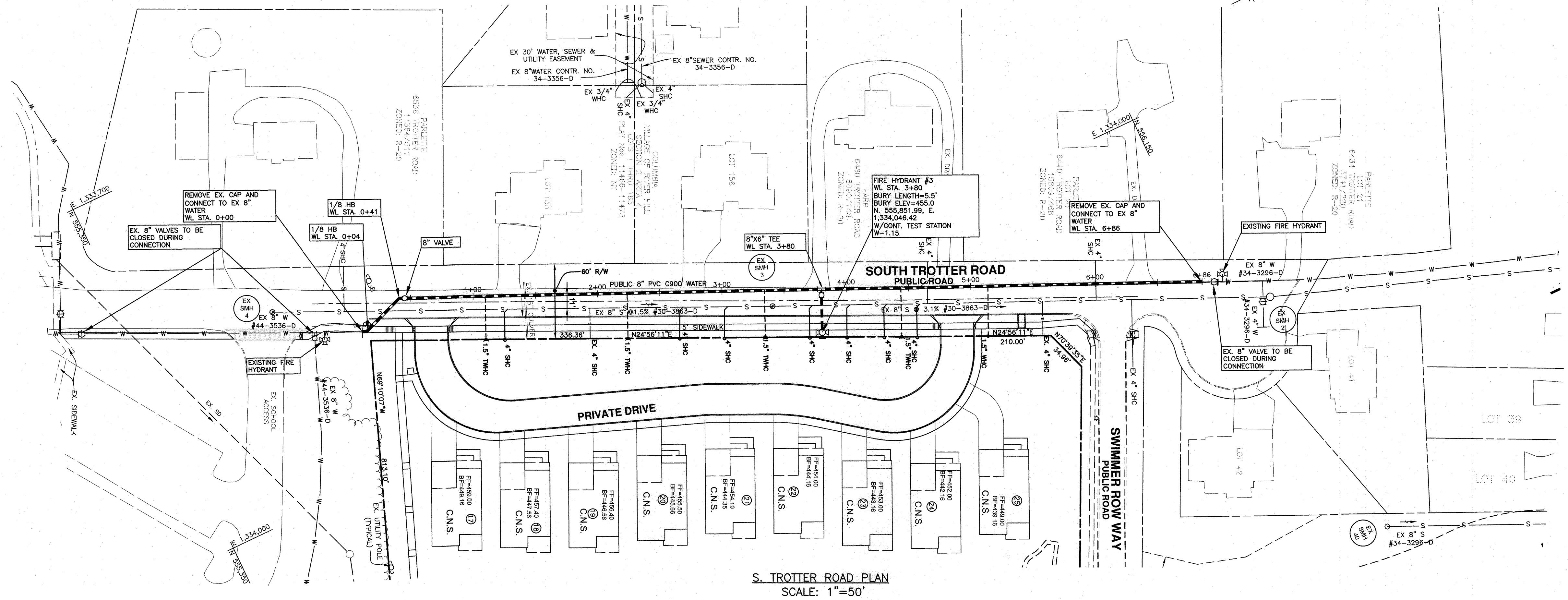
WATER LINE DATA CHART			
APPURTENANCE	WATERLINE STATION	LOCATION	COMMENT
1/8 HB	0+04	N 555521.49 E 1333889.24	
1/8 HB	0+41	N 555556.21 E 1333876.40	
8"x6" TEE FOR FH	3+80	N 555865.90 E 1334015.42	

WATER SERVICE AS-BUILT LOCATION TABLE			
LOT	ADDRESS	LOCATION DIMENSION #1	LOCATION DIMENSION #2
17	6503 S. TROTTER ROAD		
18	6499 S. TROTTER ROAD		
19	6495 S. TROTTER ROAD		
20	6491 S. TROTTER ROAD		
21	6487 S. TROTTER ROAD		
22	6483 S. TROTTER ROAD		
23	6479 S. TROTTER ROAD		
24	6475 S. TROTTER ROAD		
25	6471 S. TROTTER ROAD		

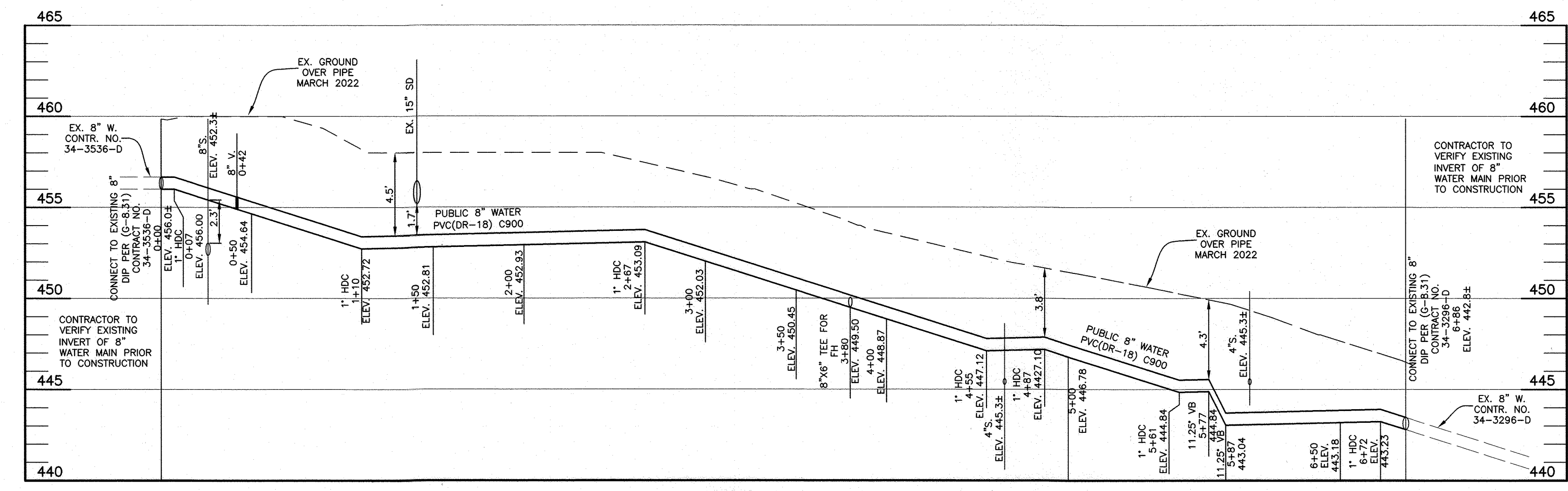
**SEQUENCE OF CONSTRUCTION FOR INLINE WATER MAIN INSTALLATION:**

1. NOTIFY ADDRESS OF TEMPORARY SERVICE INTERRUPTION.
2. SHUT OFF VALVES AS INDICATED ON PLAN.
3. REMOVE EXISTING CAP AND BUTTRESS AND MAKE CLEAN CONNECTION.
4. WITH CONNECTION COMPLETE FLUSH AND OPEN EXISTING VALVE.

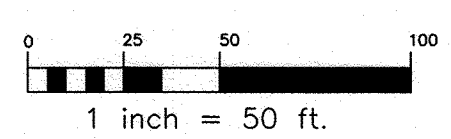
SEWER HOUSE CONNECTION CHART							
LOT	CONNECTION STA.	INV. AT MAIN	SLOPE	TYPE	INVERT AT EASEMENT/ROW	MCE	BASEMENT ELEVATION
17	SEE PLAN	450.31	2%	SHC	450.79	456.41	449.16
18	SEE PLAN	449.31	1%	SHC	449.55	455.29	447.56
19	SEE PLAN	448.17	2%	SHC	448.66	454.56	446.56
20	SEE PLAN	447.03	2%	SHC	448.12	453.74	445.56
21	SEE PLAN	445.99	2%	SHC	446.50	452.16	444.35
22	SEE PLAN	445.06	2%	SHC	445.57	451.03	444.16
23	SEE PLAN	444.14	2%	SHC	444.66	450.26	443.16
24	SEE PLAN	443.31	2%	SHC	443.84	449.62	442.16
25	SEE PLAN	440.26	2%	SHC	440.81	446.37	439.16



S. TROTTER ROAD PLAN  
SCALE: 1"=50'



S. TROTTER ROAD WATERMAIN PROFILE  
SCALE: 1"=50' HORIZ., 1"=5' VERT.



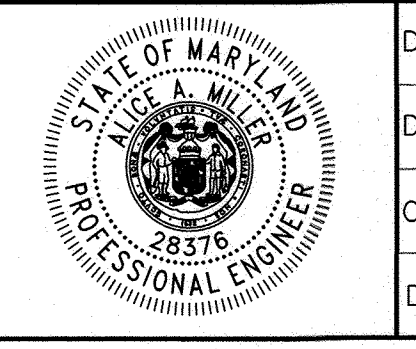
OWNER/DEVELOPER:  
SOUTH TROTTER LLC  
9693 GERWIG LANE, SUITE L  
COLUMBIA, MD 21046  
410-792-2565

*Benchmark*  
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. 28376.  
Expiration Date: 1-1-2025.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Wm. J. ...*  
8/30/24  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND  
*...*  
10.10.24  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**BENCHMARK**  
ENGINEERS & LAND SURVEYORS & PLANNERS  
**ENGINEERING, INC.**  
3300 N. RIDGE ROAD SUITE 140 ELLEOTT CITY, MARYLAND 21043  
(P) 410-465-6105 (F) 410-465-6644  
WWW.BE-CVLENGINEERING.COM



DES:	AAM/JCO				
DRAFT:	AAM/JCO				
CHK:	AAM				
DATE:	AUG 2024	BY	NO.	REVISIONS	DATE

**FINAL**  
**PUBLIC WATER AND SEWER**  
**PLAN**  
600 SCALE MAP # 16  
BLOCK: 11 & 17

**TROTTER'S RETREAT-PHASE 2**  
A RESUBDIVISION OF  
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SCALE:  
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SHEET NO.  
2 OF 2