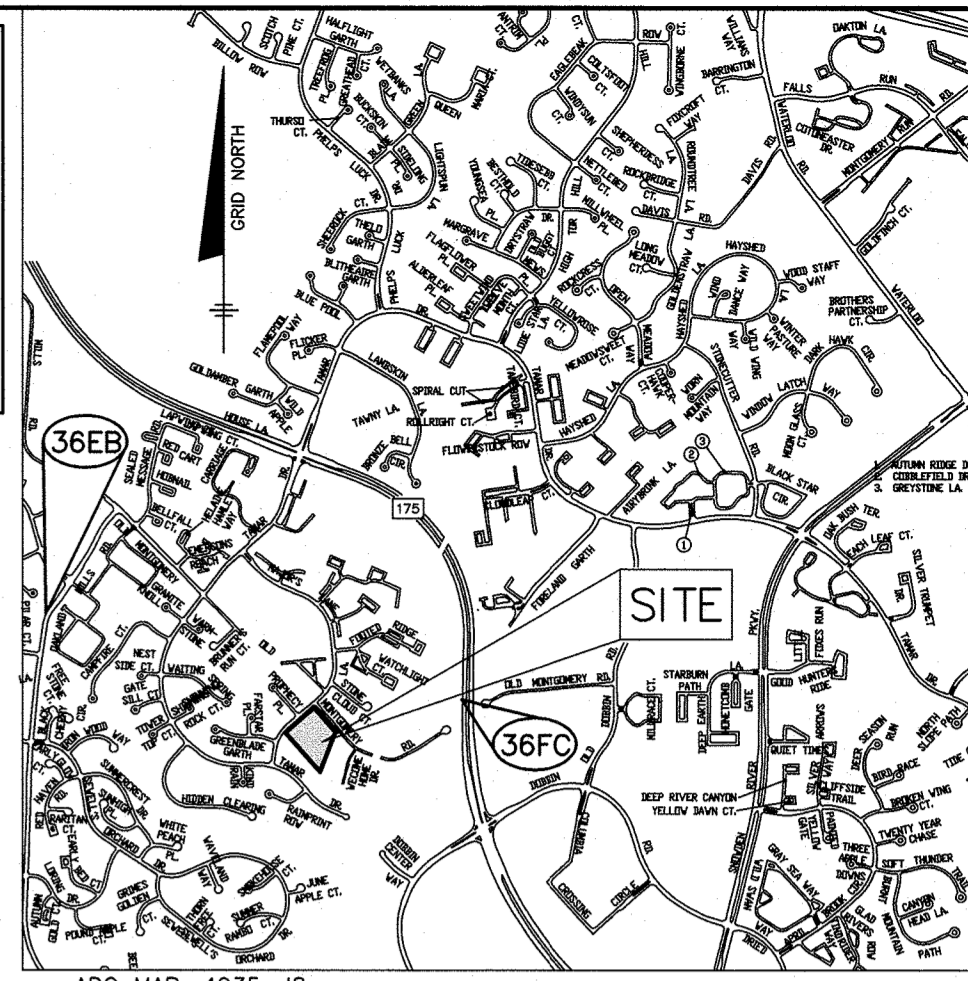


PUBLIC WATER & SEWER
OLD MONTGOMERY MEADOWS
11 RESIDENTIAL SINGLE FAMILY LOTS
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO.: 24-5222-D

BENCH MARKS--(NAD'83)
36E ELEVATION 375.747
DISC SET ON TOP OF CONCRETE COLUMN
SOUTH SIDE OF RTE 175, WEST OF
DOBBSIN ROAD.
N 559312.559 E 1363698.217
36E EL 411.469
DISC SET ON TOP OF CONCRETE COLUMN
OAKLAND MILLS RD. ±400'S OF
KILIMANJARO
N 560210.015 E 1359365.326



VICINITY MAP
SCALE: 1" = 2000'

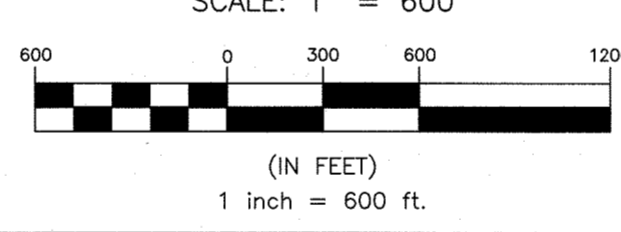
QUANTITIES		AS-BUILT		
ITEMS	ESTIMATED QUANTITIES	QUANTITIES	TYPE	MANUF./SUPPLIER
8" WATER (PVC C900 DR18)	268 L.F.			
FIRE HYDRANT	1 EACH			
6" DIP HYDRANT LEAN	9 L.F.			
8"x6" TEE	1 EACH			
12"x8" TS&V	1 EACH			
8" CAP & BUTTRESS	1 EACH			
1-1/2" WHC	5 EACH			
1-1/2" TWHC	3 EACH			
8" PVC SDR-35 SEWER	702 L.F.			
SEWER MANHOLE	5 EACH			
4" SHC	11 EACH			

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

SHEET INDEX	
NO.	DESCRIPTION
1	WATER AND SEWER TITLE SHEET
2	WATER AND SEWER PLAN AND PROFILES



LOCATION MAP
SCALE: 1" = 600'



TYPE OF BUILDINGS:	RESIDENTIAL
NO. OF BUILDABLE lots:	11
NUMBER OF SHC'S:	11
NUMBER OF WHC'S:	8 WHC (5 WHC, 3 TWHC)
DRAINAGE AREA:	LITTLE PATUXENT WATER RECLAMATION PLANT
TREATMENT PLANT:	LITTLE PATUXENT WATER RECLAMATION PLANT
WATER ZONE:	550
TEST GRADE:	927
TEST PRESSURE:	206

LEGEND	
---	EXIST. WATER MAIN
⊗	EXIST. FIRE HYDRANT
---	EXIST. SEWER MAIN
○	EXIST. SEWER MANHOLE
---	PROP. PUBLIC SEWER MAIN
○	PROP. SEWER MANHOLE
---	PROP. PRIVATE SEWER
---	PROP. PUBLIC WATER MAIN
⊗	PROP. VALVE
⊗	PROP. FIRE HYDRANT
---	PROP. PRIVATE WATER
FO	EX. FIBEROPTIC
E	EX. ELECTRIC
G	EX. GAS

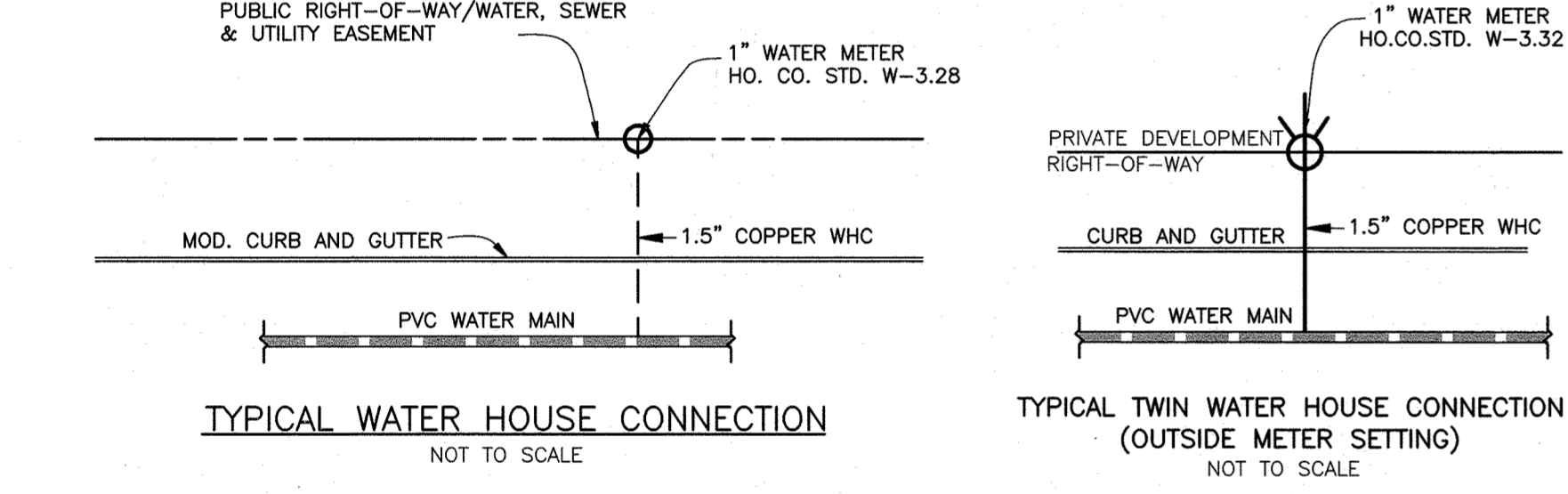
GENERAL NOTES

- PART 1 - GENERAL**
- APPROXIMATE LOCATION 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.
 - A TOPOGRAPHIC FIELD SURVEY WAS PERFORMED ON SEPTEMBER 2021 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 36E8 AND 36F; ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE NO. CO. GEODETIC CONTROL STA. 0070 & 41C2.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON PLANS.
 - CLEAR ALL UTILITIES BY A MINIMUM OF 12". 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 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 DRAWINGS, 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.
 - 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
BO&E (CONSTRUCTION SERVICES) 410-637-8713
BO&E (EMERGENCY) 410-685-0123
HD. CO. DPW - BUREAU OF UTILITIES 410-313-4900
COLONIAL PIPELINE CO. 410-799-1390
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 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(C) OF THE HOWARD COUNTY CODE.

- PART 2 - WATER**
- ALL WATER MAINS TO BE PVC C900 UNLESS OTHERWISE NOTED.
 - TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" 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 ELEVATION 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 1005 OF THE STANDARD SPECIFICATIONS.
 - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
 - TRACE WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL D.I.P. AND P.V.C. WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
 - FOR PVC WATER MAINS, ALL RECORDS FOR THE QUANTITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF MATERIAL FOR USE. 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 RECORD 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 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.
 - PROPER ASSEMBLY OF GASKETED P.V.C. 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 P.V.C. PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION INTO THE SPIGOT BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF THE P.V.C. PIPE.
 - ALL CHANGES IN HORIZONTAL AND VERTICAL DIRECTION OF P.V.C. WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS, OR HIGH-DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF P.V.C. PIPE JOINTS IS PERMITTED WHERE HIGH-DEFLECTION OR 5-DEGREE SWEEPS ARE PERMITTED. THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20'-FOOT LONG) ON EITHER SIDE OF THE HIGH-DEFLECTION (HD) COUPLINGS OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE THE #7 STONE ON BOTH SIDES OF THE HIGH-DEFLECTION (HD) COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTOR EQUIPMENT DIRECTLY OVER THE FITTING.
P.V.C. HIGH-DEFLECTION (HD) COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1-1/2 DEGREES ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM OF 200-PSI MEETING THE REQUIREMENTS OF AWWA-C900. SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. P.V.C. HIGH-DEFLECTION (HD) COUPLINGS SHALL BE CERTAIN-TEED P.V.C. HIGH-DEFLECTION (HD) COUPLINGS OR EQUAL.
5-DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225-PSI, DR-18 MEETING THE REQUIREMENTS OF AWWA-C900, AND SHALL BE MULTI-FITTING (PEX) BLUE BRUTE DR-18 OR EQUAL.
 - WHEN P.V.C. HIGH-DEFLECTION (HD) COUPLINGS OR P.V.C. 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA-C900 P.V.C. PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE P.V.C. SPIGOTS OR PUSH ENDS INTO THE BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION (HD) 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 EQUAL.
 - FIRE SPRINKLER SYSTEMS FOR ALL SINGLE FAMILY DWELLINGS SHALL HAVE A MINIMUM OF A 1-1/2" CONNECTION WITH A 1" OUTSIDE METER SETTING.

- PART 3 - 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 18" WALLS ARE FOR BRICK MANHOLES ONLY.
 - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVER, STANDARD DETAIL G-5.52. 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.

OWNER/DEVELOPER:
DEVELOPMENT PARTNERS, LLC
9693 GERWIG LANE, SUITE L
COLUMBIA, MD 21046
443-676-2417



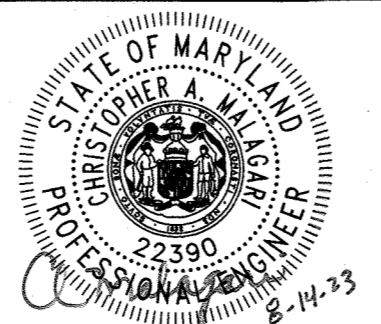
NOTE:
ALL WATER HOUSE CONNECTIONS ARE TO BE 1.5" WITH A 1" METER (OUTSIDE SETTING).

NOTE: HOUSE CONNECTIONS TO BE SIZED ACCORDINGLY:
SINGLE WHC = 1-1/2"
TWIN WHC = 1-1/2"
SINGLE SHC = 4"

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.
Alexander Britsch 08/23/23
HOWARD SOIL CONSERVATION DISTRICT DATE
SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS PER F-23-049.

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. 22390.
Expiration Date: 6-30-2025

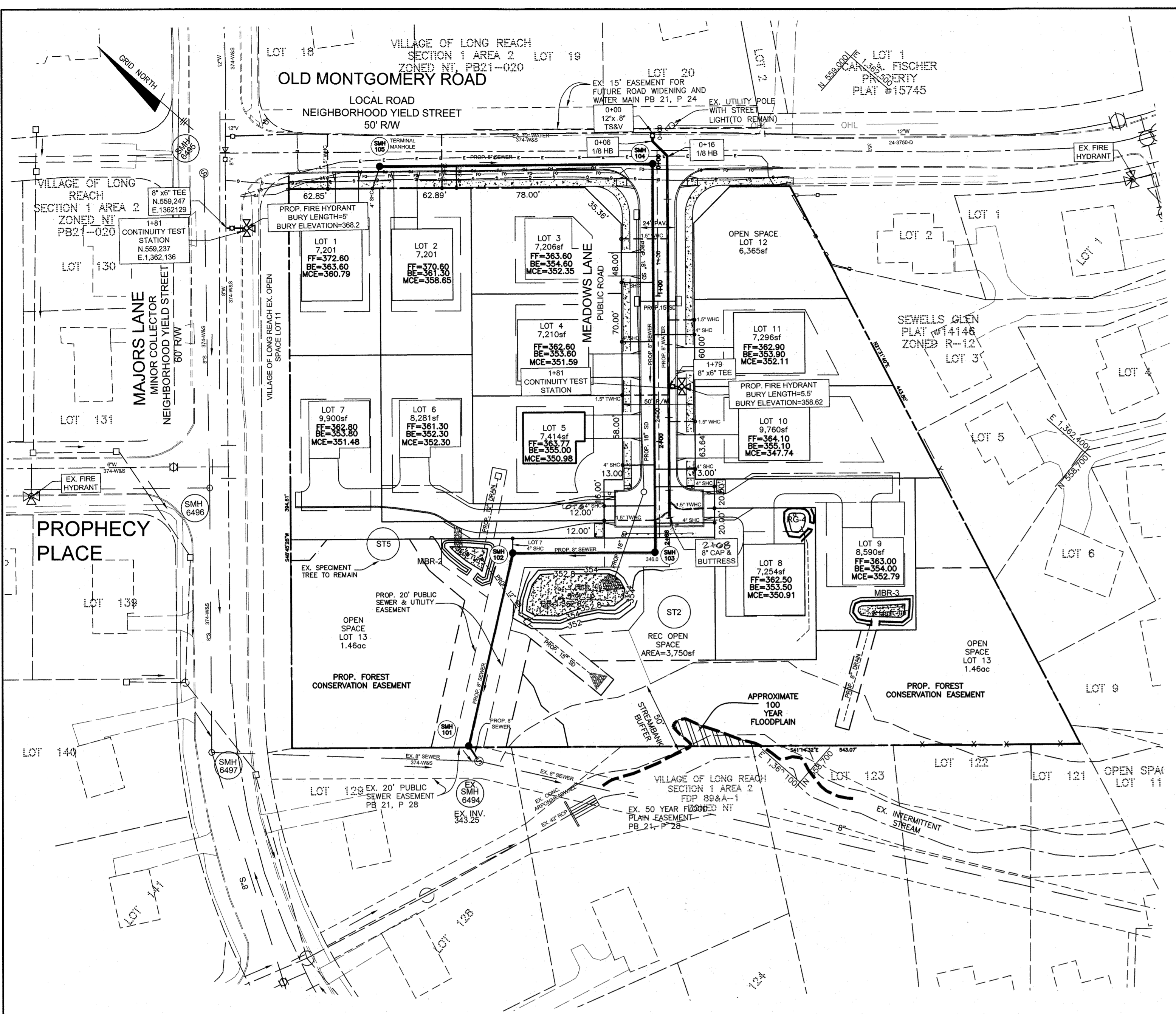
BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS
3300 NORTH ROSE ROAD & SUITE 140 & ELLICOTT CITY, MARYLAND 21043
(P) 410-465-8105 (F) 410-465-8644
WWW.BEI-CVLENGENRNG.COM



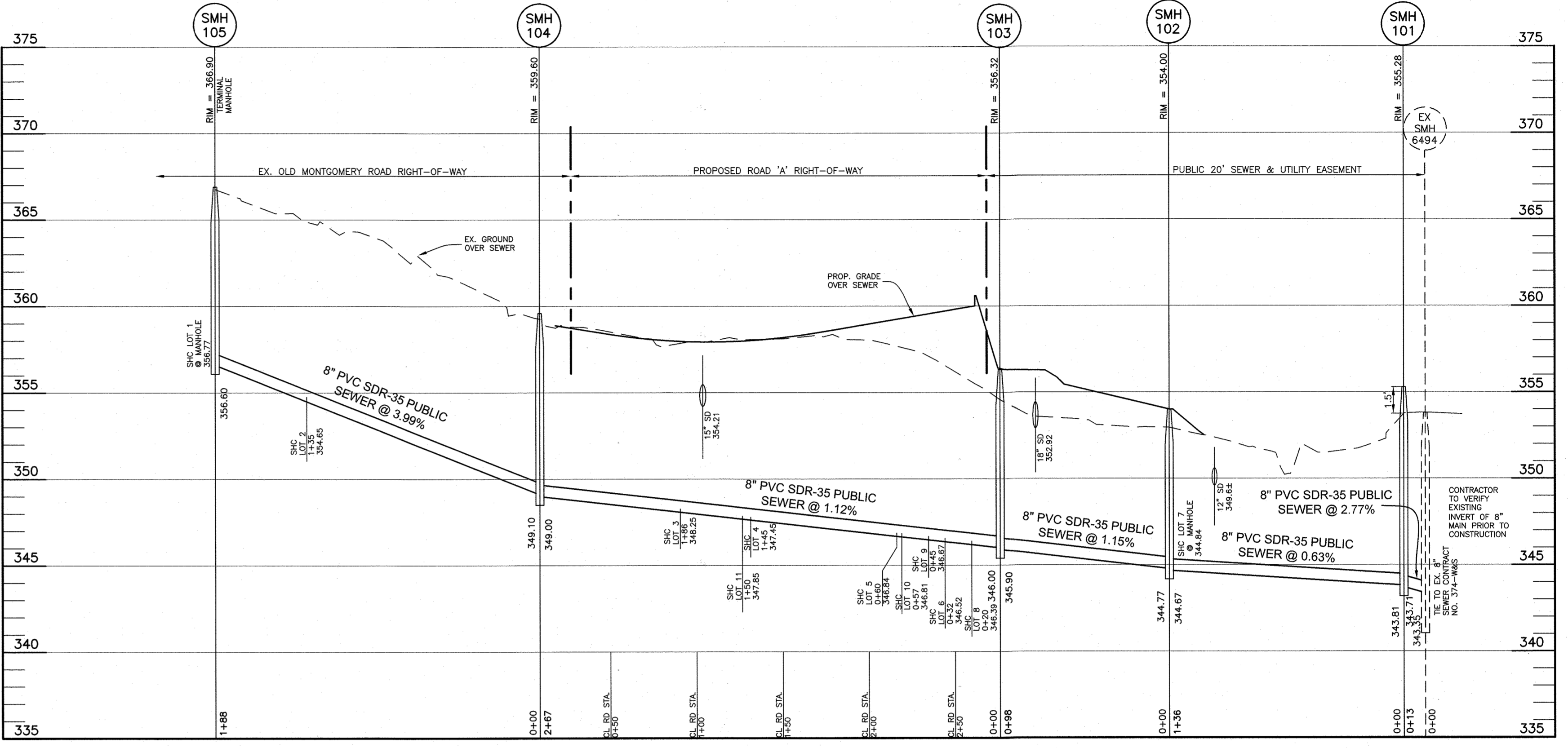
DES:	JCO	DATE:	AUGUST 2023
DRAFT:	JCO	BY NO.	
CHK:	CAM	REVISIONS	
DATE:	AUGUST 2023	DATE	

WATER & SEWER PLAN
TITLE SHEET
600 SCALE MAP # 36
BLOCK: 17

OLD MONTGOMERY MEADOWS
SIXTH ELECTION DISTRICT
CONTRACT NO. 24-5222-D
SCALE: AS SHOWN
SHEET NO. 1 OF 2

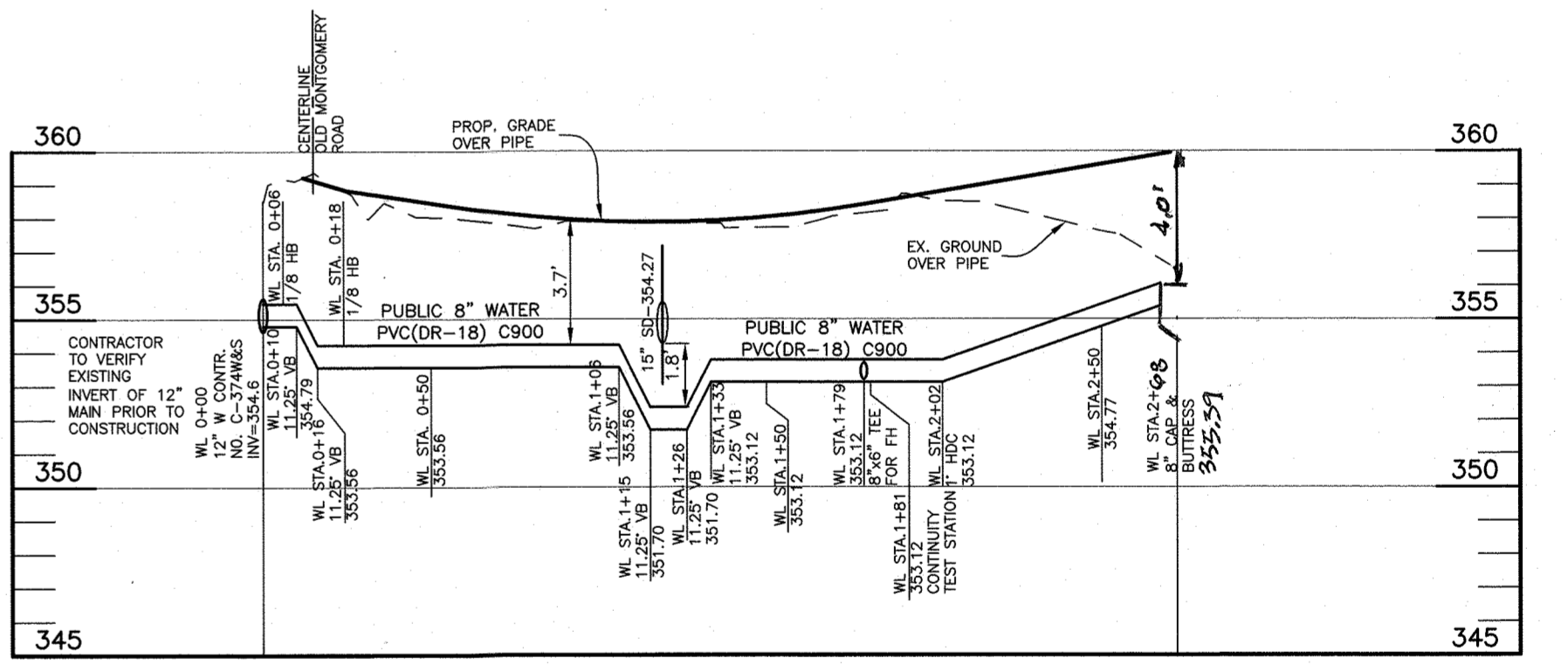


PLAN
SCALE: 1"=50'



SEWER PROFILE
SCALE: 1"=50' HORIZ., 1"=5' VERT.

NUMBER	TYPE	LOCATION	INVERT IN	INVERT OUT	TOP ELEV.	STD. DETAIL	REMARKS
101	48" MH	N 558888.4749 E 1361969.4689	343.81(8')	343.71(8')	355.28	G-5.12	
102	48" MH	N 558952.5178 E 1362089.3578	344.77(8')	344.67(8')	354.00	G-5.12	
103	48" MH	N 558878.8888 E 1362153.9947	346.00(8')	345.90(8')	356.32	G-5.12	
104	48" MH	N 559054.8452 E 1362354.6987	349.10(8')	349.00(8')	359.60	G-5.12	
105	48" MH	N 559195.5882 E 1362230.2201	356.60(8')	356.60(8')	366.90	S-1.31	TERMINAL MANHOLE

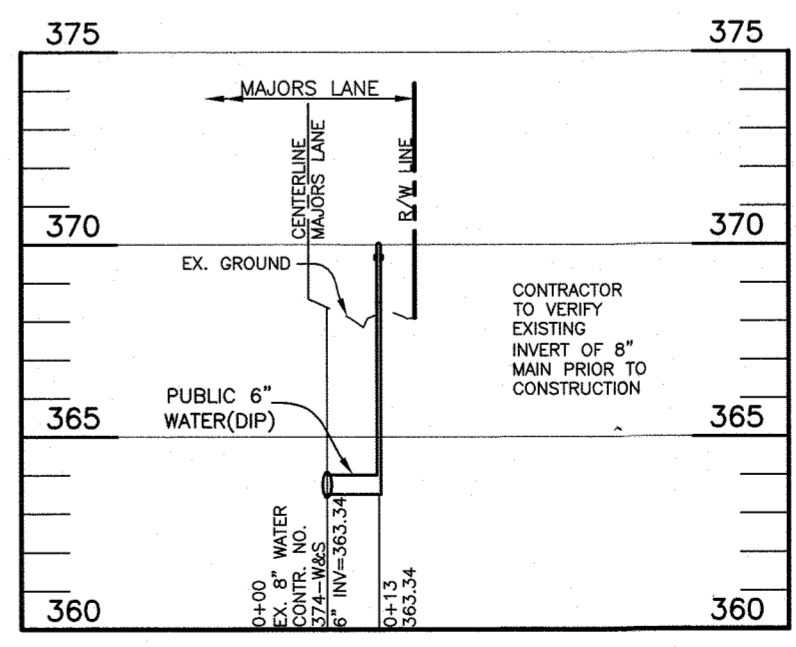


WATER PROFILE
SCALE: 1"=50' HORIZ., 1"=5' VERT.

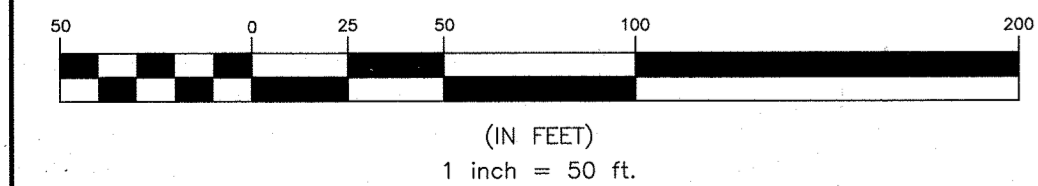
LOT	ADDRESS	LOCATION DIMENSION #1	LOCATION DIMENSION #2
1	OLD MONTGOMERY ROAD		
2	OLD MONTGOMERY ROAD		
3	MEADOWS LANE		
4	MEADOWS LANE		
5	MEADOWS LANE		
6	MEADOWS LANE		
7	MEADOWS LANE		
8	MEADOWS LANE		
9	MEADOWS LANE		
10	MEADOWS LANE		
11	MEADOWS LANE		

LOT	CONNECTION STA.	INV. AT MAIN	SLOPE	TYPE	INVERT AT EASEMENT/ROW	MCE	BASEMENT ELEVATION
1	SMH 105	356.77	2%	SHC	357.09	360.79	363.60
2	1+35.0	354.65	2%	SHC	354.95	358.65	361.30
3	1+85.5	348.25	2%	SHC	348.89	352.35	354.60
4	1+44.7	347.45	2%	SHC	347.89	351.59	353.00
5	0+59.9	346.84	2%	SHC	347.28	350.98	355.00
6	0+31.9	346.52	2%	SHC	347.20	352.30	352.30
7	SMH 102	344.24	2%	SHC	345.04	351.48	353.80
8	0+20.0	346.39	2%	SHC	347.21	350.91	353.50
9	0+45.0	346.67	2%	SHC	347.49	352.79	354.00
10	0+57.0	346.81	2%	SHC	347.37	347.74	355.10
9	1+49.5	347.85	2%	SHC	348.41	352.11	353.90

APPURTENANCE	WATERLINE STATION	LOCATION	COMMENT
12"x8" TS&V	0+00	N 559069.0350 E 1362370.8460	
1/8" HB	0+06	N 559055.0231 E 1362365.2750	
1/8" HB	0+16	N 559050.9108 E 1362365.3582	
8"x6" TEE FOR FH	1+79	N 558946.2714 E 1362246.1617	
8" C&B	2+05	N 558957.0212 E 1362171.5450	
8"x6" TEE FOR FH	0+00	N 559247 E 1362129	LOCATED IN MAJORS LANE



FIRE HYDRANT PROFILE
SCALE: 1"=50' HORIZ., 1"=5' VERT.



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. 22390, Expiration Date: 6-30-2025.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
8/21/2023
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
9/14/23
CHIEF, DEVELOPMENT ENGINEERING DIVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
3300 NORTH ROBE ROAD SUITE 104 • ELICOTT CITY, MARYLAND 21043
(P) 410-465-8102 (F) 410-465-8944
WWW.BE-ENGINEERING.COM



DES:	JCO						
DRAFT:	JCO						
CHK:	CAM						
DATE:	AUGUST 2023						
BY:	NO.	REVISIONS	DATE	600 SCALE MAP # 36	BLOCK: 17		

WATER & SEWER PLAN AND PROFILES

OLD MONTGOMERY MEADOWS
SIXTH ELECTION DISTRICT
CONTRACT NO. 24-5222-D

OWNER/DEVELOPER:
DEVELOPMENT PARTNERS, LLC
9693 GERWIG LANE, SUITE L
COLUMBIA, MD 21046
443-678-2417

SCALE:
AS SHOWN

SHEET NO.
2 OF 2