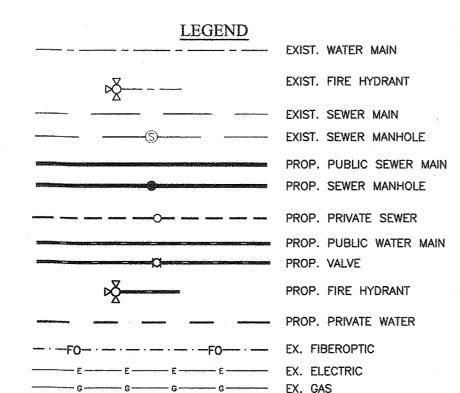
	ESTIMATED QUANTITIES	AS-BUILT		
ITEMS		QUANTITIES	TYPE	MANUF./SUPPLIER
16"WATER (PVC C900 DR14)	644 L.F.	702	C900	NATIONAL PIPE
8"WATER (PVC C900 DR14)	-995- L.F.	90	C900 🚐 .	NATIONAL PIPE
6"WATER (PVC C900 DR14)	141 L.F.	44	C900	NATIONAL PIPE
FIRE HYDRANT	-4 EACH	q	A423	MUELLER
8"X6" TEE & VALVE	3 EACH			
-8"x8" TS&V	1-EACH		ξ	
8"x8" TEE	1 EACH	and the state of t		
16"x8" TEE	2 EACH	2	C153	TYLER/UNION
16"x6" TEE & VALVE	1 EACH	Question .	C153	TYLER/UNION
16" CAP & BUTTRESS	1 EACH	Questin	C153	TYLER/UNION
16" VALVE	2 EACH	2	A236123	MUELLER
8" VALVE	4 EACH	2	A236123	MUELLER
8" CAP & BUTTRESS	2 EACH	· •	C153	TYLER/UNION
8" SEWER (PVC)	910 L.F.			
MH (G-5.12)	5 EACH			
			Parameter and the second secon	and the state of t

	·	SHEET INDEX							
NO. DESCRIPTION									
	1	WATER AND SEWER TITLE SHEET							
	2	WATER AND SEWER PLAN							
	3	WATER AND SEWER PROFILES							
	4	SEDIMENT AND EROSION CONTROL PLAN							
	5	MAINTENANCE OF TRAFFIC PLAN							

PROJECT DESCRIPTION

THE PURPOSE OF THIS PLAN IS FOR CONSTRUCTION MAIN AND A 16" PUBLIC WATER MAIN AND ASSOCIATED APPURTENANCES.

CONSTRUCTION NOTE: (CONT. FROM SHEET VOLUME II WATER AND SEWER AND VOLUME IV. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, APPROVED AND ADOPTED MAY 30, 2017. 10. THE COMPLETED WATER MAINS MUST BE DISINFECTED AND TESTED IN ACCORDANCE WITH THE LATEST VERSION OF AWWA STANDARD C65 11. AFTER DISINFECTION, A SAMPLE SHALL BE COLLECTED AFTER THE REQUIRED MINIMUM TIME PERIOD. SAMPLES MUST BE COLLECTED BY A STATE-CERTIFIED SAMPLER AND ANALYZED AT A STATE-CERTIFIED LABORATORY, THE SAMPLE RESULTS MUST BE REVIEWED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT WATER SUPPLY PROGRAM, WHICH WILL GIVE AUTHORIZATION TO PLACE THE MAINS INTO SERVICE. A COPY OF THE SAMPLE RESULTS MAY BE SENT VIA EMAIL TO: STEPHANIE.EATINGER@MARYLAND.GOV..

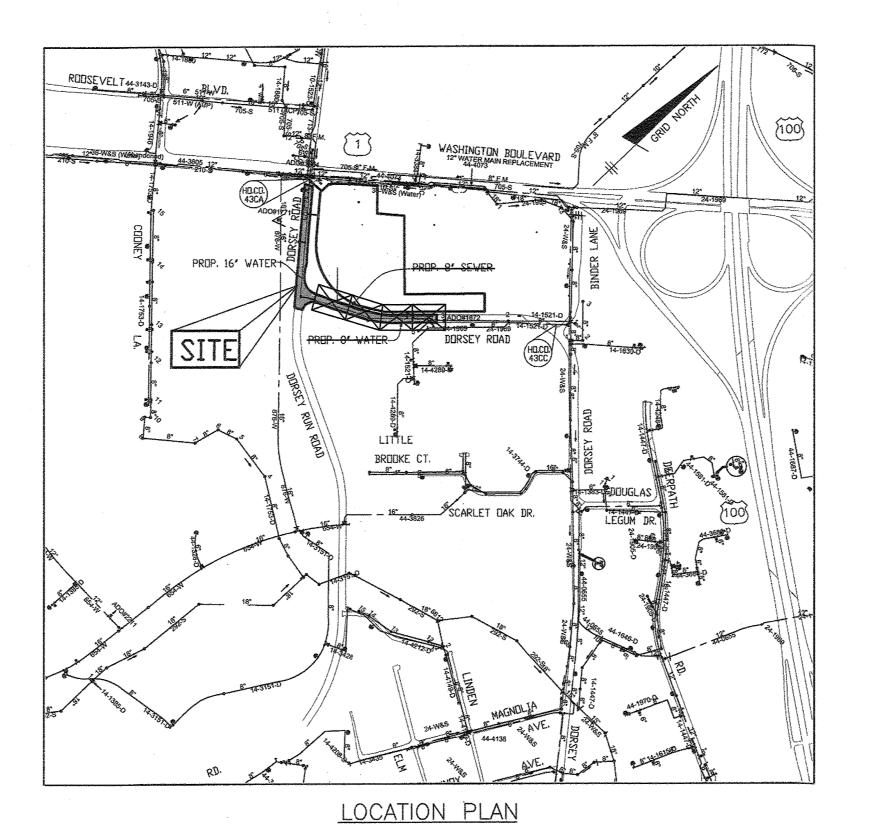


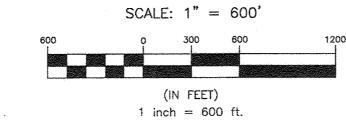
PUBLIC WATER AND SEWER CORRIDOR SQUARE

PARCEL A

1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CONTRACT NO.: 14-5029-D 44-5116





TYPE OF BUILDING:NO. OF BUILDABLE PARCELS:	APARTMENT 1
NUMBER OF SHC'S: NUMBER OF WHC'S: DRAINAGE AREA	4 1 2 DEEP_RUN
TREATMENT PLANT:	PATAPSCO WWTP
WATER ZONE: TEST GRADIENT: TEST PRESSURE: TEST PRESSURE:	400 677(8") 631 586 (16") 222(8") 198(16")

CORRIDOR SQUARE, LLC

6800 DEERPATH ROAD

ELKRINGE, MØ 21075

410.57,9.2442

MURN DEVELOPMENT

6800 DEERPATH ROAD ELKRIDGE, MD 27075

410.579.2442

OWNER'S / DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF TRAINING AT A MARYLAND DEPARTMENT THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO THE BEGINNING OF THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

CONSTRUCTION NOTES:

. ALL JOINTS AND CONNECTIONS LOCATED WITHIN STRUCTURAL FILL AREAS SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION)

. TESTING SHALL MEET SHA COMPACTION STANDARDS AND REQUIREMENTS AND DONE BY A MARTCP CERTIFIED TECH.

3. IF PLATES ARE TO BE USED THEY NEED TO BE MILLED IN WITH 6" PINS IN EACH CORNER. TOTAL OF 4 PINS PER PLATE WITH COLD IPATCH AROUND THEM. IF MORE THAN ONE IPLATE IS NEEDED THEY WILL NEED TO BE WELDED BY A CERTIFIED WELDER PER SHA SPECS. IF PLATES ARE NOT USED THEN SIGNS WILL BE NEEDED TO INDICATE NO PLATES.

4. COLD PATCH MAY BE USED AND GOOD FOR 21 DAYS, HOT MIX ASPHALT WILL NEED TO BE INSTALLED UNTIL THE MILLING AND OVERLAY IS

5. ANY DISTURBANCE IN THE GRASSY AREAS FROM THE INSTALLATION OF THE FIRE HYDRANTS WILL NEED TO BE STABILIZED USING SEED/MULCH OR CURLEX MATTING.

6. IF THERE ARE ANY SIDEWALK CLOSURES A DETOUR PLAN WILL NEED TO BE IN PLACE.

'. CONTRACTOR SHALL OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF THE TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY SILT FENCE SHALL BE PLACED BELOW (DOWN SLOPE OF) THE TRENCH.

I. PLACE ALL EXCAVATED MATERIAL ON THE UPHILL SIDE OF THE TRENCH

NOT IN THIS CONTRACT

BLOCK23 & 05

ELEVATION N. 552742.5052 E. 1380706.3780 169.98 N. 552373.9839 E. 1380259.2000 N. 552089.3228 E. 1379901.6930

185.58

TRAVERSE CHART

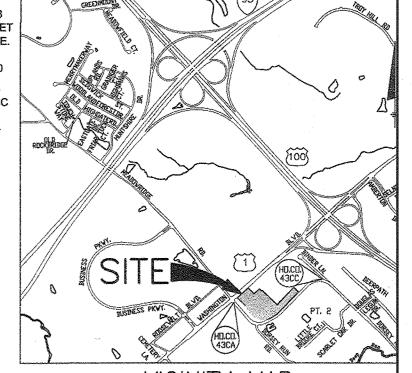
N. 552395.0730 E. 1379503.5100

R/C

4

HO.CO. No.43CA STAMPED (BRASS OR ALUMINUM) DISC SET TOP OF A 3' DEEP COLUMN OF CONCRETE. AT CORNER US-1 AND DORSEY ROAD E 13793880380 N 5526860129

HO.CO. No.43CC CONCRETE MONUMENT WITH BRASS DISC AT RT-103(DORSEY ROAD)1/3 MI.E.US-29 N 553201.462 E 1381152.814



GENERAL NOTES

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.

2. A TOPOGRAPHIC FIELD SURVEY WAS PERFORMED ON NOVEMBER 2016 BY BENCHMARK ENGINEERING, INC. ON NAVO 88, VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE HO.CO. GEODETIC CONTROL STA. 0070 & 41C2.

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 BI DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES

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

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.

OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE PRAWINGS. 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

BG&E (CONTSTRUCTION SERVICES)
BG&E (EMERGENCY).... . 410-685-0123 410-313-4900

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.

ALL WATER MAINS TO BE PVC C900 DR14 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

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 N 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

8. 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

THE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING 9. UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALIC 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 10. PROPER ASSEMBLY OF GASKETED P.V.C. PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GAKETED PVC PIPE JOINTS

INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE NSERTION 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

11. 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 (HD) 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 (HD) COUPLINGS OR 5-DEGREE SWEEP, THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPRÔVED MEANS TO THOROUGHLY COMPACT THE THE #57 STONE ON BOTH SIDES OF THE HIGH-DEFLECTION (HD) COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING

P.V.C. HIGH-DEFLECTION (HD) COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLETION 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 LÉNGTH 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 (IPEX) BLUE BRUTE DR-18 OR EQUAL.

12. 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 PLAIN ENDS INTO THE PUSH ON 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 XPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR EQUAL.

13. FIRE SPRINKLER SYSTEMS FOR ALL SINGLE FAMILY DWELLINGS SHALL HAVE A MINIMUM OF A 1-1/2" CONNECTION WITH A 1" OUTSIDE METER SETTING.

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.

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 G-5.52. 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.

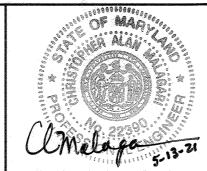
AS-BUILTS

DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

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

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. 22390. Expiration Date: 6-30-2021

.100					
					WATER A
T: JCO					WAILK
CAM					
ALICUST	BEI	1	AS BUILT	5/2021	***************************************
2018	BY	NO.	REVISIONS	DATE	600 SCALE MAP #37 & 43
	JCO T: JCO CAM AUGUST 2018	T: JCO CAM BEI	T: JCO CAM BEI 1	T: JCO CAM BEI 1 AS BUILT	T: JCO

WATER AND SEWER TITLE SHEET

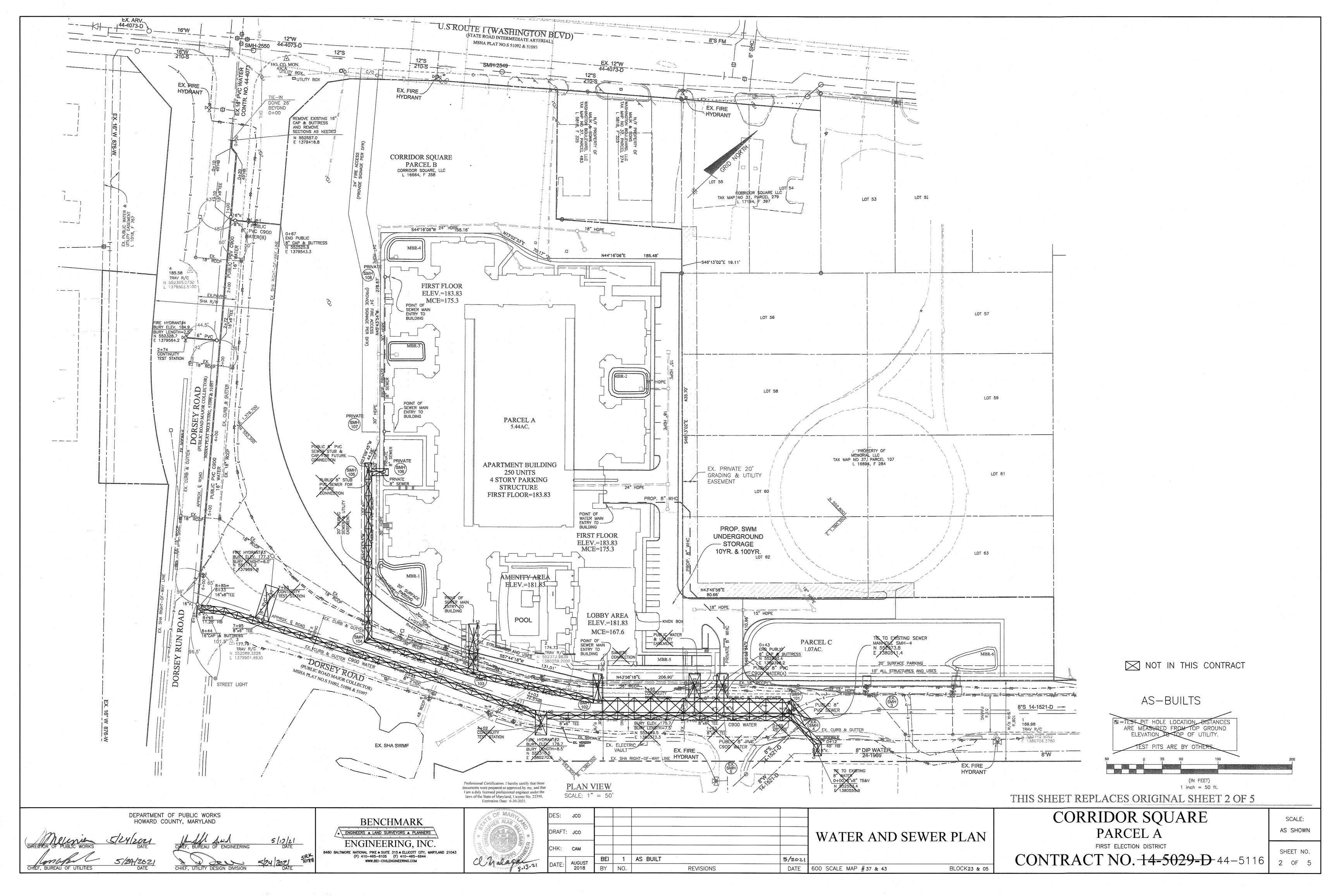
CORRIDOR SQUARE PARCEL A

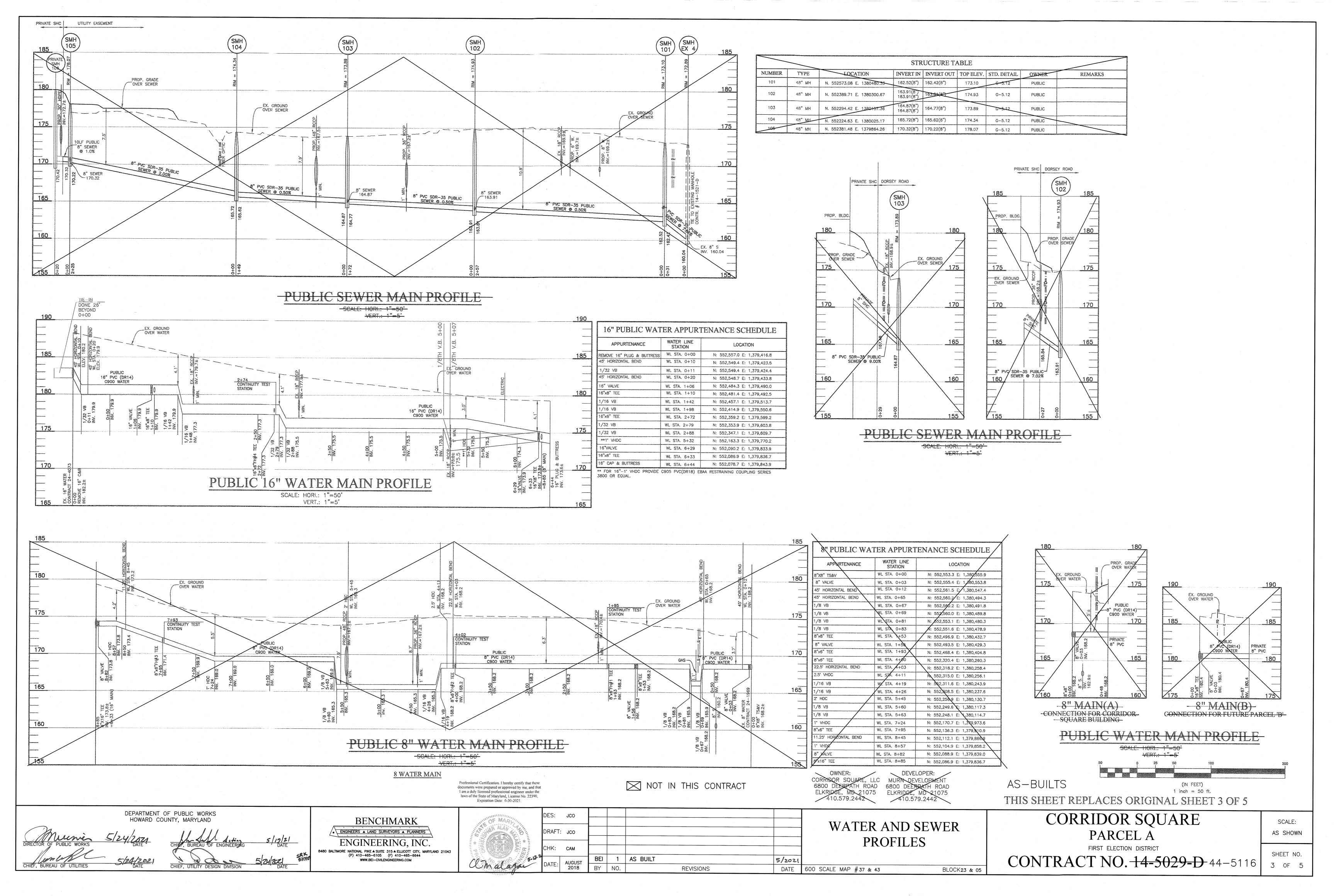
FIRST ELECTION DISTRICT CONTRACT NO. 14-5029-D 44-5116 SHEET NO.

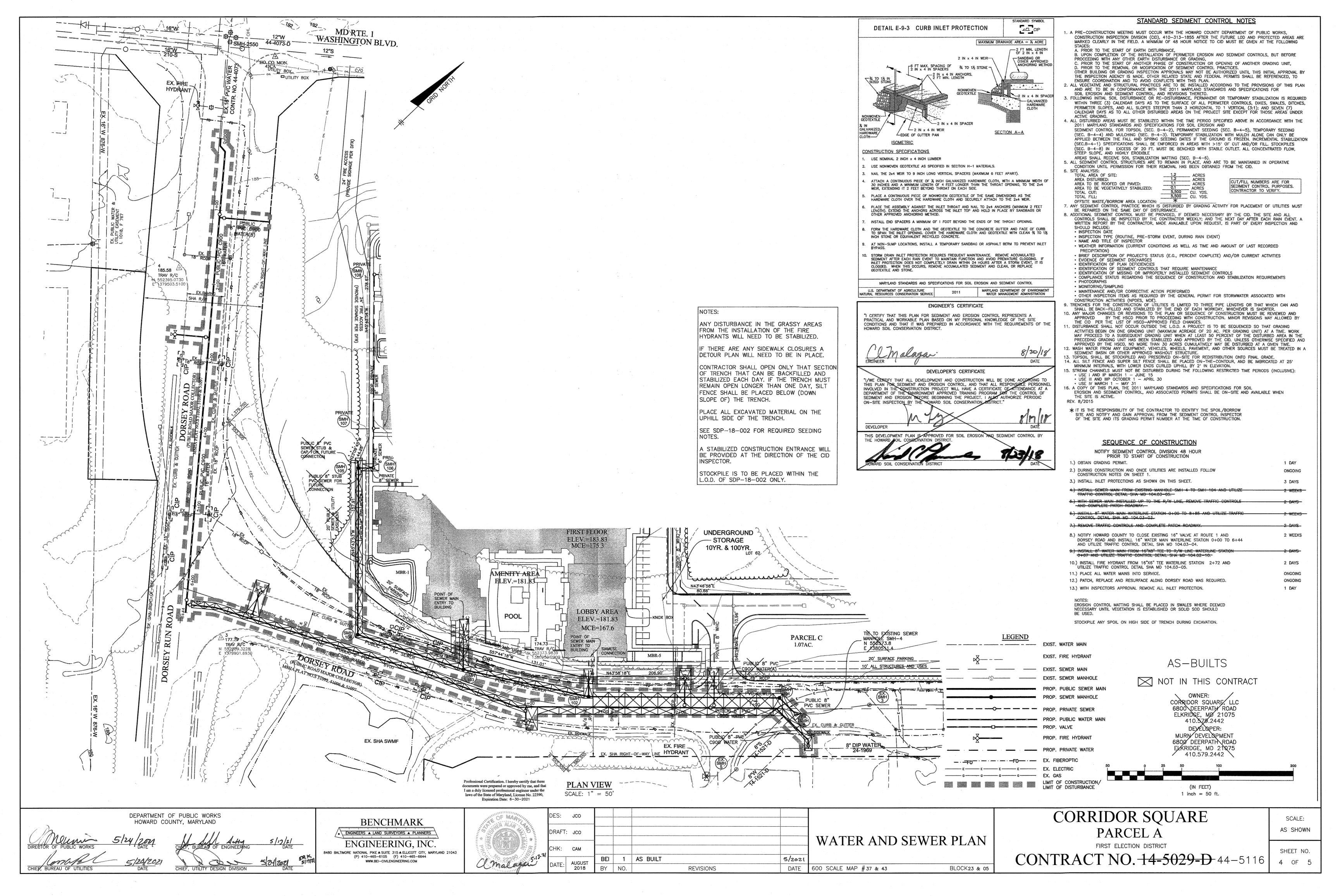
SCALE:

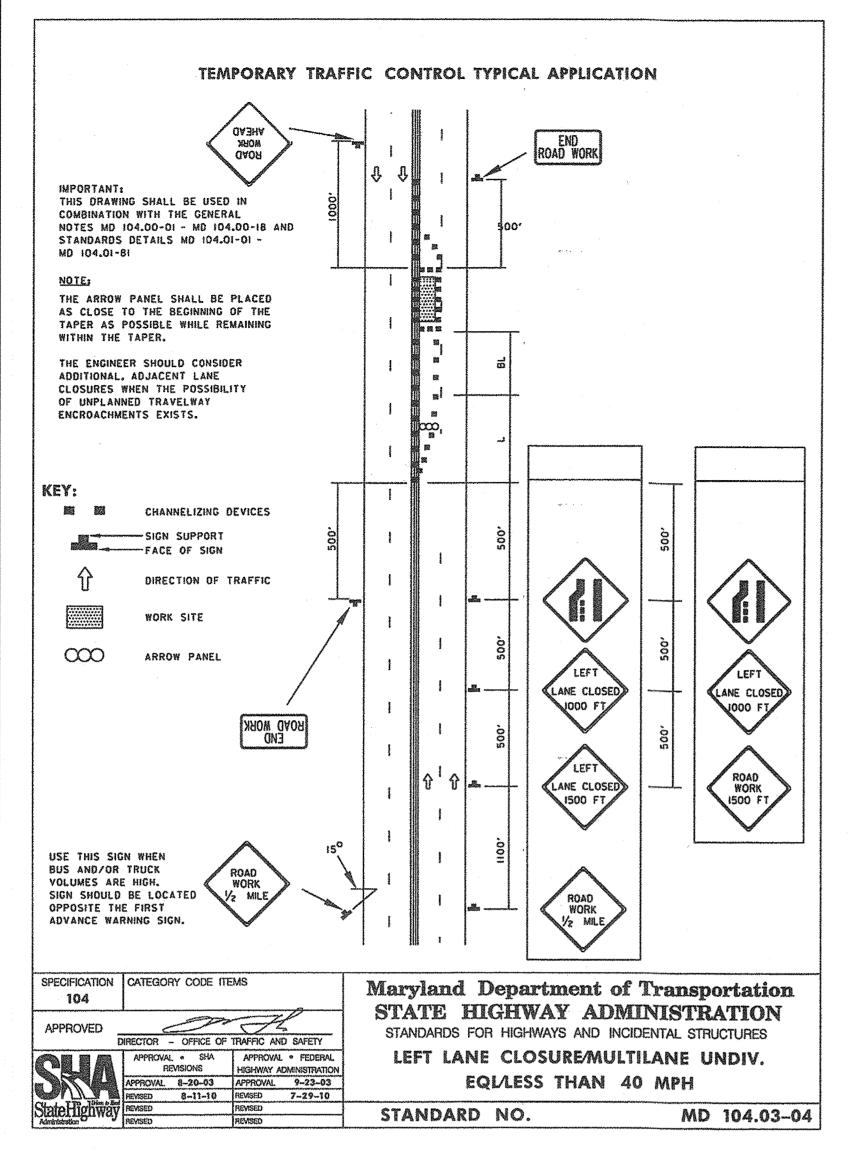
AS SHOWN

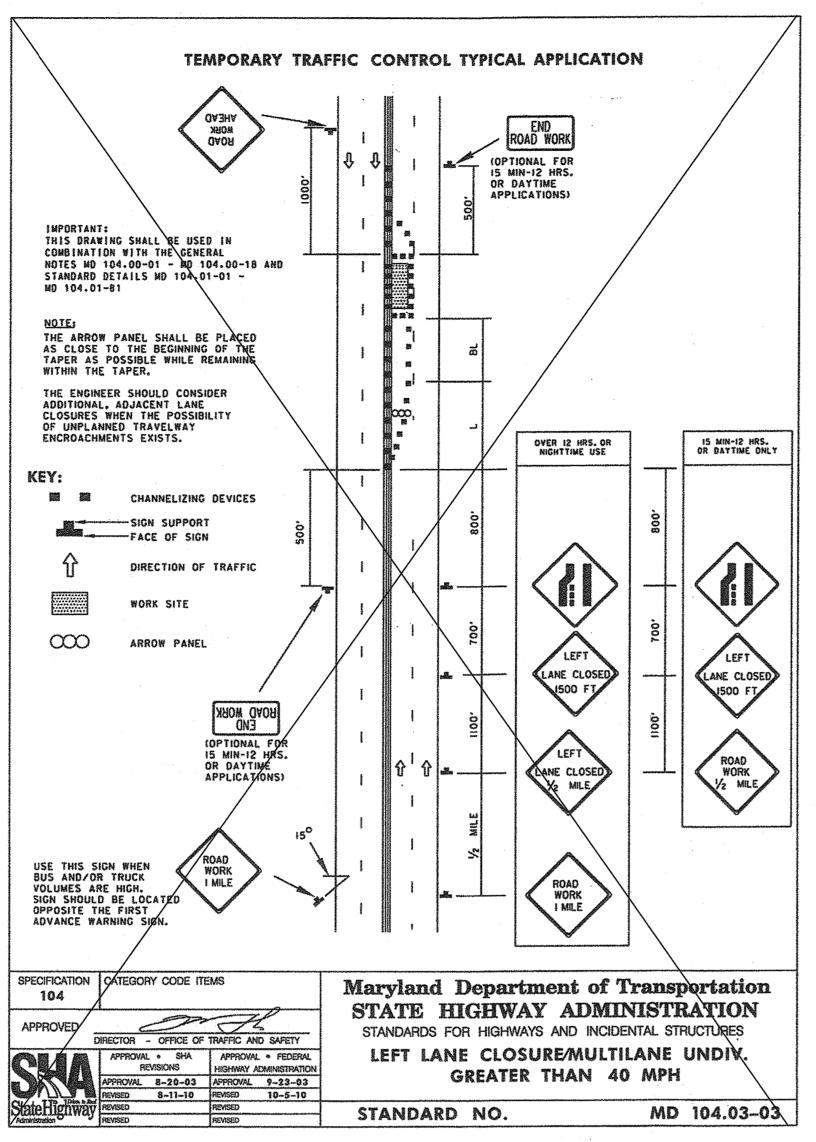
1 OF 5

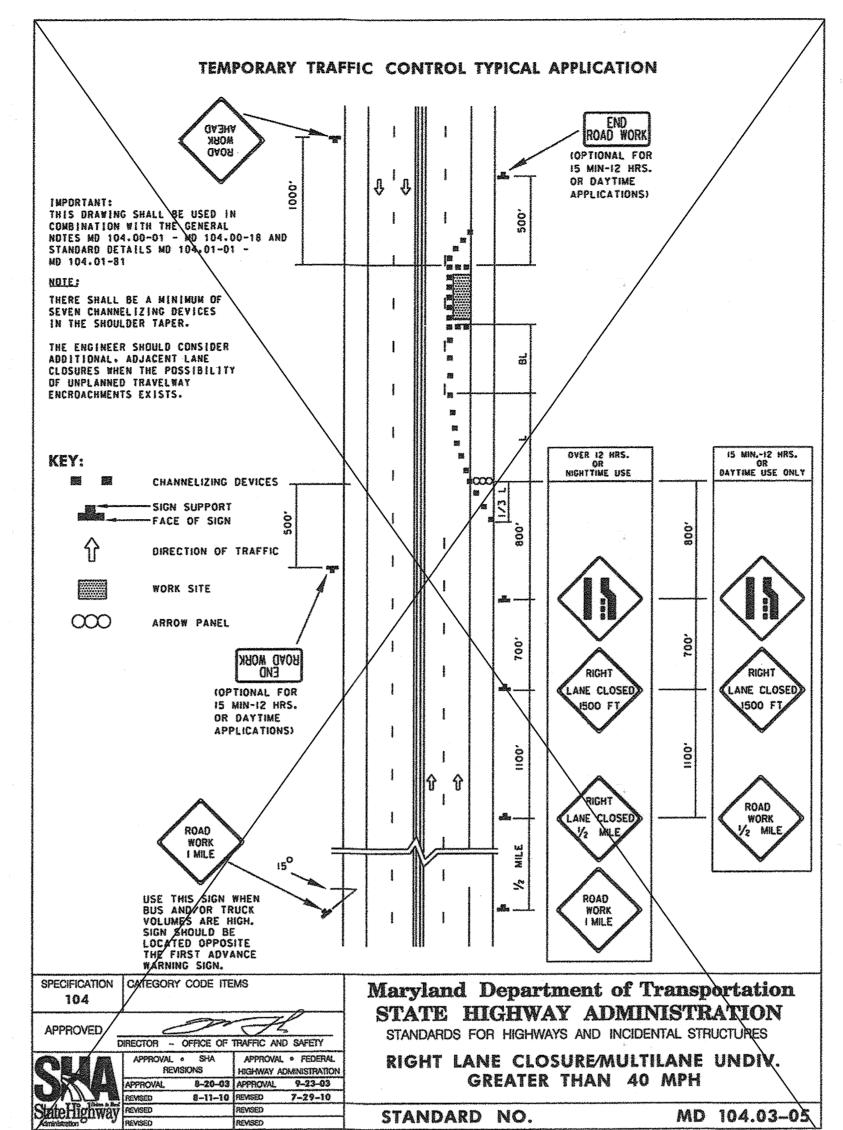


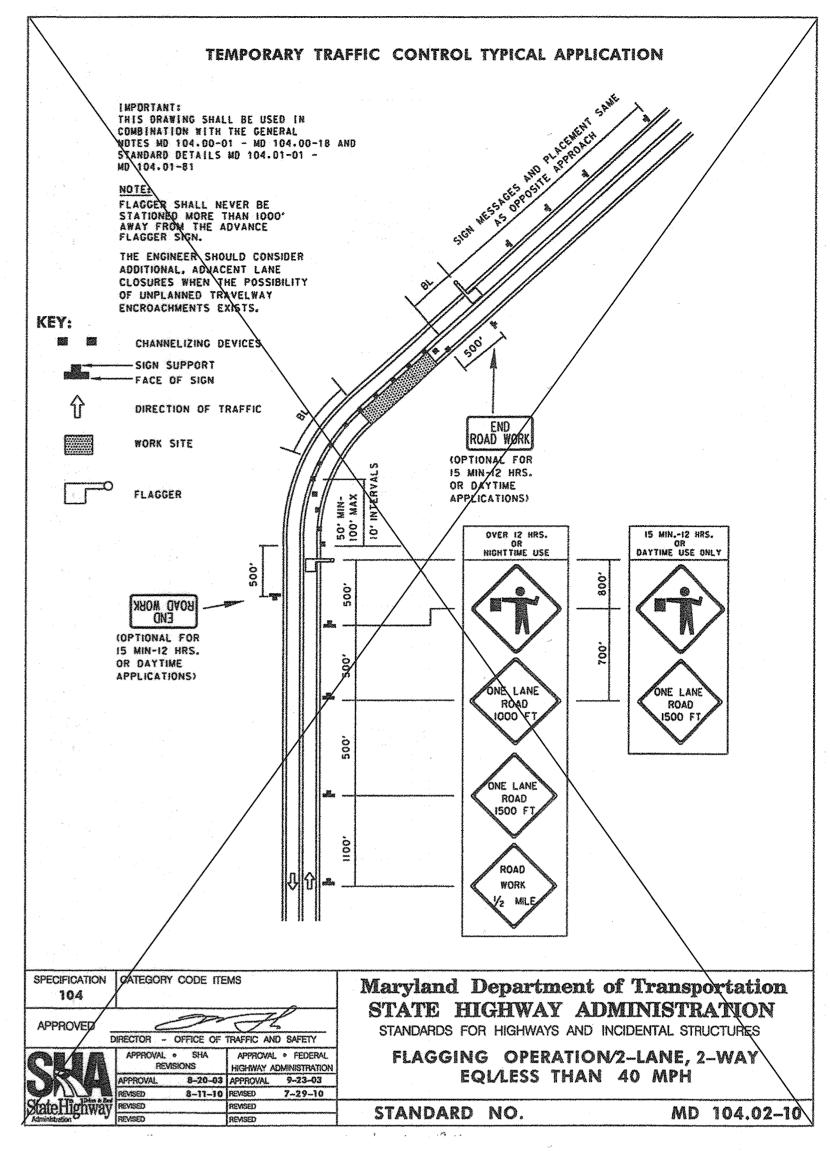












16" WATER MAIN WATER LINE STATION 0+00 TO 6+44

8" WATER MAIN WATER LINE STATION 0+00 TO 8+85

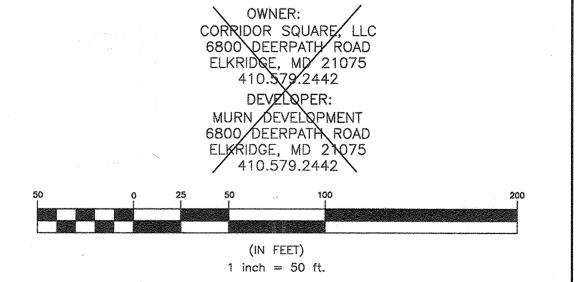
8" SEWER MAIN UP TO R/W LINE, 8" WATER MAIN FROM 8" TEE WATERLINE STATION 1+54 TO R/W LINE, FH TEE OFF 8" WATER MAIN WATERLINE STATION 1+94 TO FIRE HYDRANT AND FROM FH TEE OFF 16" WATER MAIN **WATERLINE STATION 2+72 TO FIRE HYDRANT**

600 SCALE MAP #37 & 43

8" WATER MAIN 'B' FROM 16"x8" TEE TO R/W LINE 8" WATER **LINE STATION 0+67**

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, NOT IN THIS CONTRACT AS-BUILTS

BLOCK23 & 05



DES: JCO MAINTENANCE OF DRAFT: JCO TRAFFIC PLAN PLAN 5/2021

CORRIDOR SQUARE PARCEL A FIRST ELECTION DISTRICT

AS SHOWN SHEET NO. 5 OF 5

SCALE:

CONTRACT NO. 14-5029-D 44-5116

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 5/19/2/ DATE

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 WWW.BEI-CIVILENGINEERING.COM

BEI 1 AS BUILT AUGUST 2018 BY NO.