

FINAL WATER AND SEWER PLAN

TPC RACING

7869 DORSEY RUN ROAD

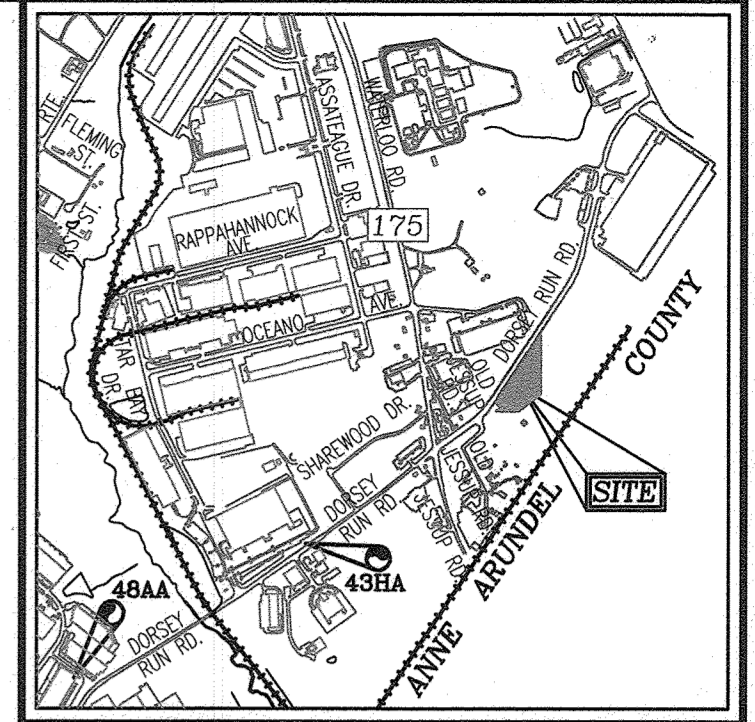
TAX MAP 43 GRID 22

PARCEL 108-B

1ST ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

CONTRACT NO. 24-5124-D



VICINITY MAP
SCALE: 1"=2000'
ADC MAP: 5054 G4

BENCHMARKS
HOWARD COUNTY BENCHMARK 48AA
N 539,314.900 E 1,371,539.251 ELEV: 240.78'
HOWARD COUNTY BENCHMARK 43HA
N 540,761.716 E 1,373,837.365 ELEV: 224.99'

GENERAL NOTES

- PART I**
- 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.
 - THE EXISTING TOPOGRAPHY SHOWN HEREON IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT INTERVALS, PREPARED BY SHANBERGER AND LINE DATED OCTOBER 30, 2001. ADDITIONAL EXISTING TOPOGRAPHY SHOWN TAKEN FROM AN AERIAL TOPOGRAPHICAL SURVEY PREPARED BY POTOMAC AERIAL SURVEYS, DATED JANUARY 2008 AND FROM RECENTLY FINISHED GRADING PLANS.
 - HORIZONTAL AND VERTICAL SURVEY CONTROLS, COORDINATES AND ELEVATIONS ARE BASED ON MARYLAND COORDINATE SYSTEM - NAD83 (1981) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 43HA AND 48AA.
 - THE PROJECT BOUNDARY SHOWN HEREON ARE BASED ON A PLAT BY ROBERT H. VOGEL ENGINEERING, INC., DATED MARCH 2013.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.
 - 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 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 LOCATION OF THE TEST PIT. A NOTES 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 OPERATION AT HIS OWN EXPENSE.
 - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:

AT&T	1-800-252-1133
BGE (CONTRACTOR SERVICE)	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	1-800-743-0033/410-224-9210
 - 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 THE CONSTRUCTION OF THE MAIN.
 - THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUTTING OR BORING/LACKING 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 II - 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 ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE IN ACCORDANCE WITH THE 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.
- 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 QUALIFICATIONS TEST REQUIREMENTS, NOTED IN SECTION 5.1 OF THE ANNA STANDARD C900 FOR PVC PRESSURE PIPES SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO THE APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PIPES 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 THE PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. 17 POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. 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 JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINES SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC 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 OF THE 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 ON 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 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.

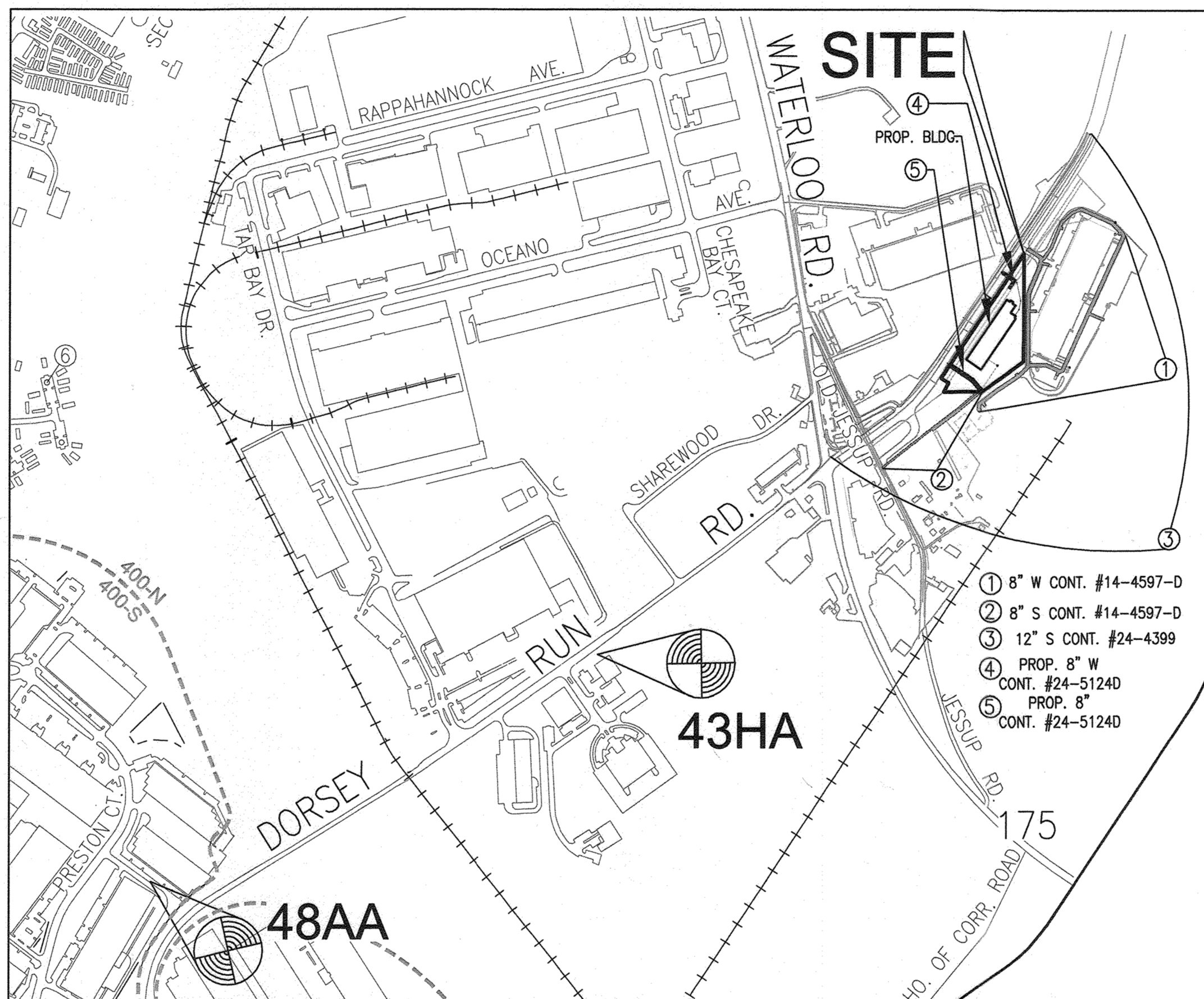
FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, OR 18 MEETING THE REQUIREMENTS OF ANNA C900 AND SHALL BE MULTI FITTINGS (PEX) BLUE BRUTE DR18 OR EQUAL.

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 SPIGOTS OR PLAIN ENDS INTO THE 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 INCORPORATES AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBA IRON, INC. OR APPROVAL EQUAL.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN SDP-20-050.

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

Alexander Butchic 11/10/21
SOIL CONSERVATION DISTRICT DATE



LOCATION MAP
SCALE: 1"=600'

WATER ZONE: 400-N
TEST GRADIENT: 677
TEST PRESSURE: 197.94

TYPE OF BUILDING :	FLEX WAREHOUSE
NO. OF LOTS/PARCELS :	1
NO. OF SINGLE WATER HOUSE CONNECTIONS :	1
NO. OF TWIN WATER HOUSE CONNECTIONS :	0
NO. OF SEWER HOUSE CONNECTIONS :	1
DRAINAGE AREA:	LITTLE PATUXENT RIVER

QUANTITIES				
NAME OF UTILITY CONTRACTOR : Prasants Construction				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE : 8/17/24				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
PUBLIC WATER				
12"x8" TAPPING SLEEVE & VALVE	1 EA		C-228	Ford Meter Box
8" WATER - C900 (DR-18)	92 LF	90	C-400	North American Pipe
6" WATER - C900 (DR-18)	42 LF	41	C-400	North American Pipe
6" 3" COUPLING (DN)	1 EA		C-400	North American Specialty
2" VERT. COUPLING (UP)	1 EA		C-153	North American Specialty
8" X 6" TEE	1 EA		C-153	Star Pipe
6" VALVE	1 EA		C-515	American Flow Control
6" FIRE HYDRANT	1 EA		C-515	American Flow Control
8" VALVE	1 EA		C-515	Star Pipe
8" TEMP. CAP AND BUTTRESS	1 EA		C-153	Star Pipe
PUBLIC SEWER				
8" PVC SEWER	176 LF	170	S02-35	National Pipe
8" DIP (CLASS S2) SEWER	228 LF	220	S02-35	National Pipe
STANDARD MANHOLES	2 EA			Contractor Precast
SHALLOW MANHOLE	1 EA			Contractor Precast
TYPE "B" DROP MANHOLE	1 EA			Contractor Precast
8" PVC CAP	1 EA		C502	GPR Products

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Chris 11-3-21
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Chad
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

STATE OF MARYLAND
ROBERT H. VOGEL, PE No. 18193

PROFESSIONAL CERTIFICATE	1	As-built	DF1	8-29-24
DES: GAH				
DRN: GAH				
CHK: RHV				
DATE: SEPTEMBER 2021	NO.	REVISION	DATE	

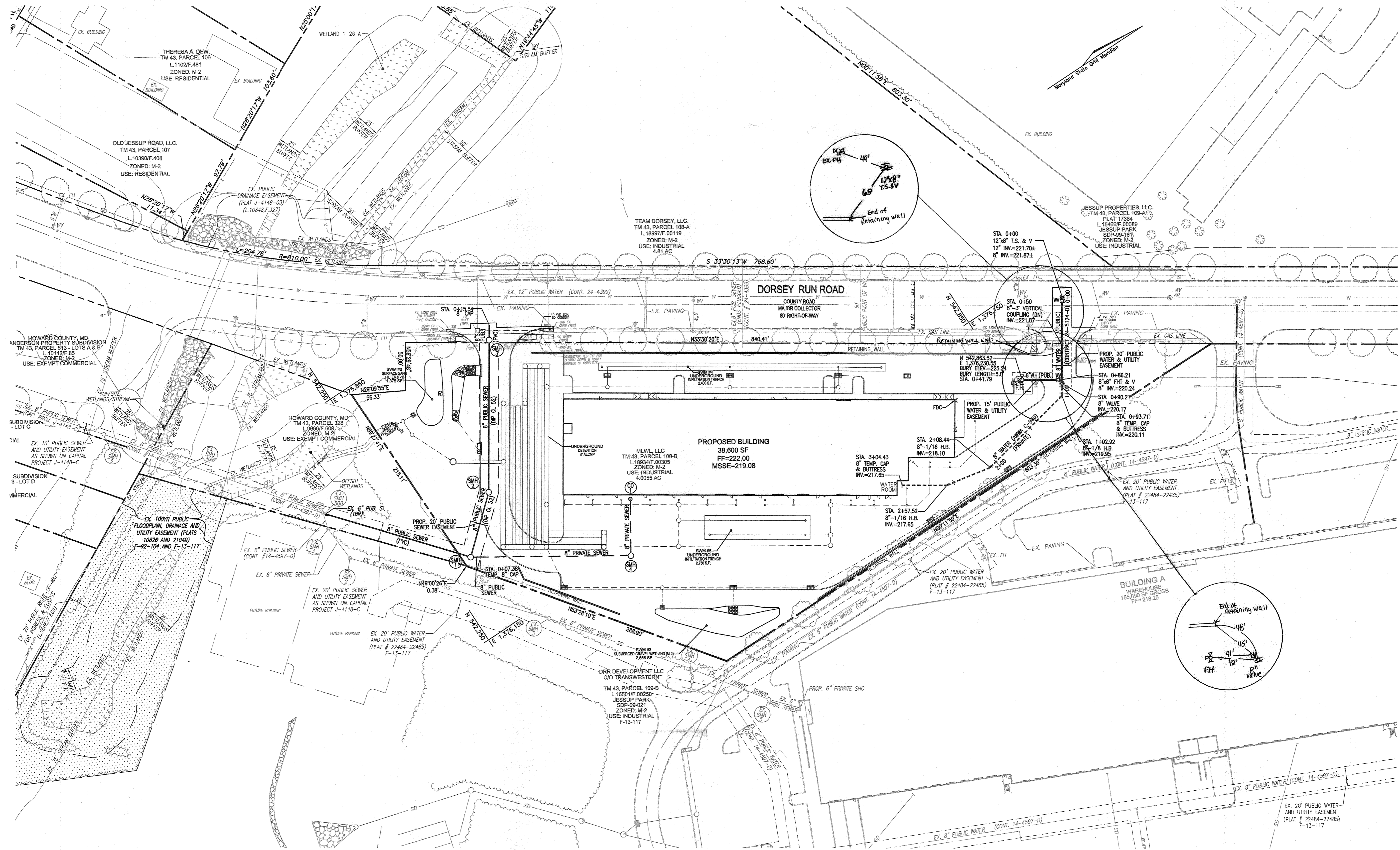
FINAL WATER AND SEWER PLAN

TPC RACING
7869 DORSEY RUN ROAD
CONTRACT NO. 24-5124-D

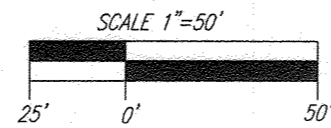
SCALE AS SHOWN
SHEET 1 OF 3

TAX MAP 43, GRID 22
1ST ELECTION DISTRICT

PARCEL 108-B
HOWARD COUNTY, MARYLAND



PUBLIC WATER & SEWER PLAN
SCALE: 1"=50' HORZ.

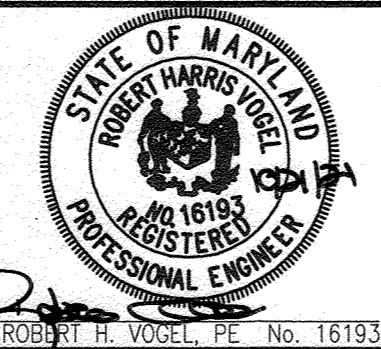


OWNER/DEVELOPER
MLWL, LLC
C/O MICHAEL LEVITAS
8040 WASHINGTON BLVD.
JESSUP, MD 20794
(410) 799-7223
TPCRACING@GMAIL.COM

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

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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: 09-27-2022

NO.	REVISION	DATE
1	AS-DRAWN	DFI
		9-29-24

FINAL WATER AND SEWER PLAN

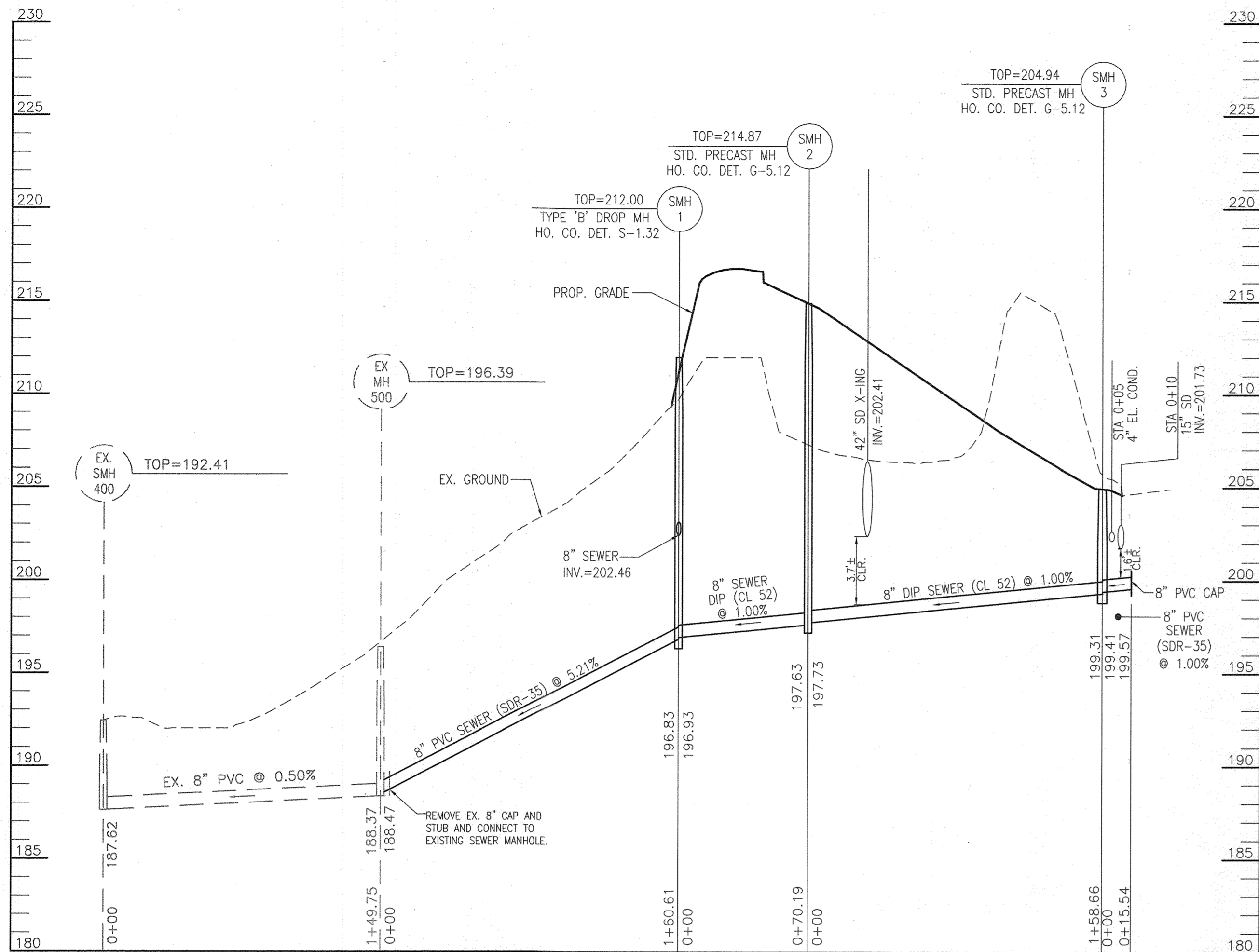
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SCALE
AS
SHOWN
SHEET
2 OF 3

Robert H. Vogel
11-3-21
CHIEF, BUREAU OF UTILITIES

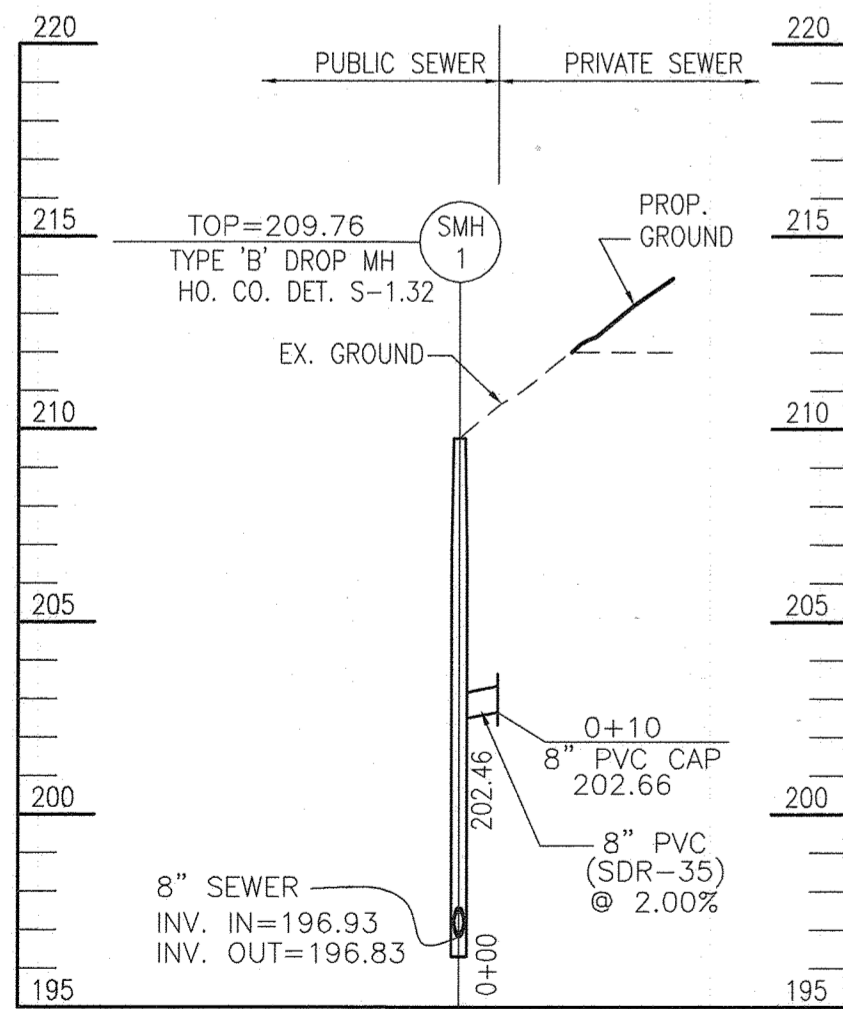
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PARCEL 108-B
HOWARD COUNTY, MARYLAND



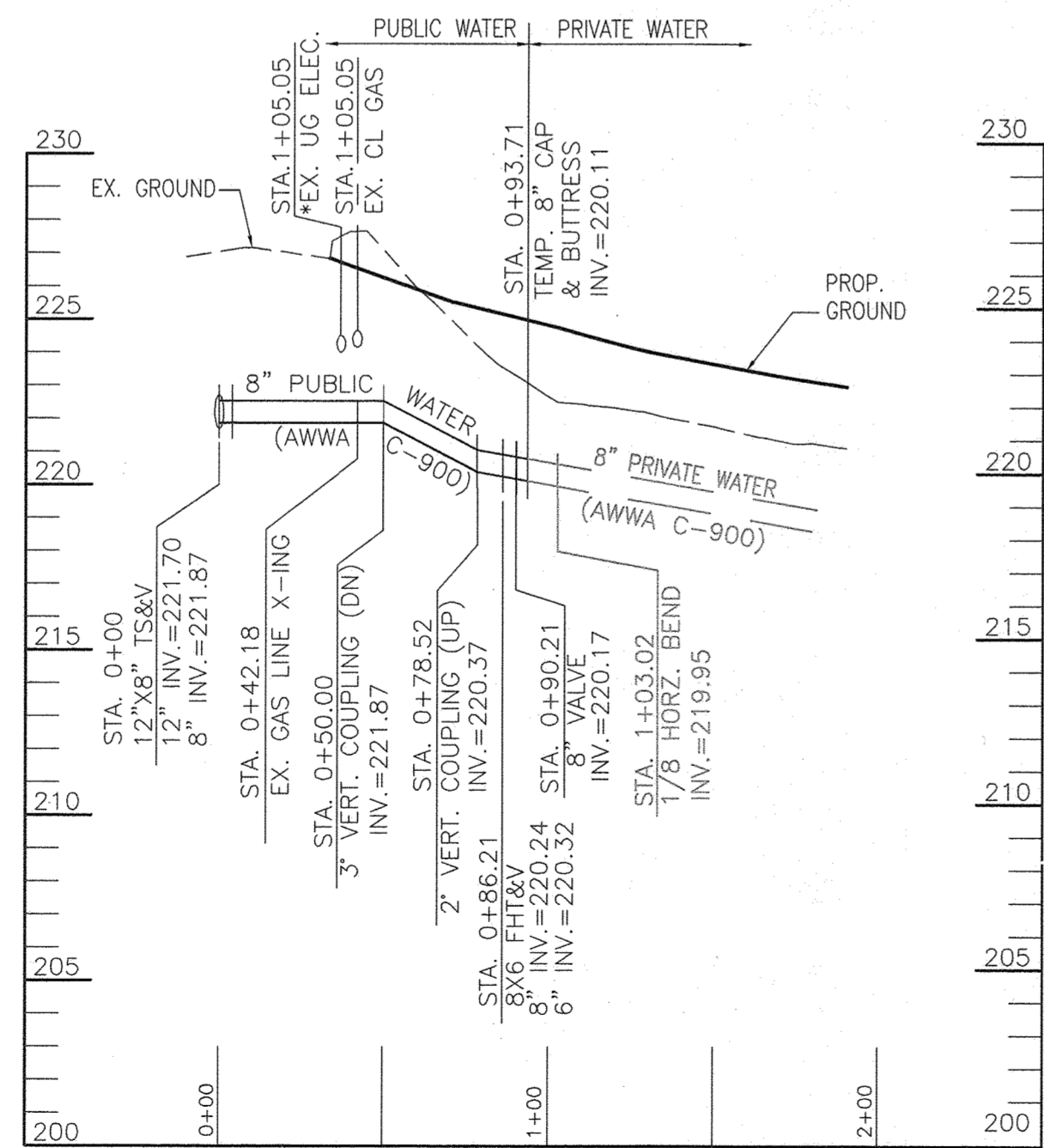
PUBLIC SEWER PROFILES

SCALE: 1"=50' HORZ.
1"=5' VERT.



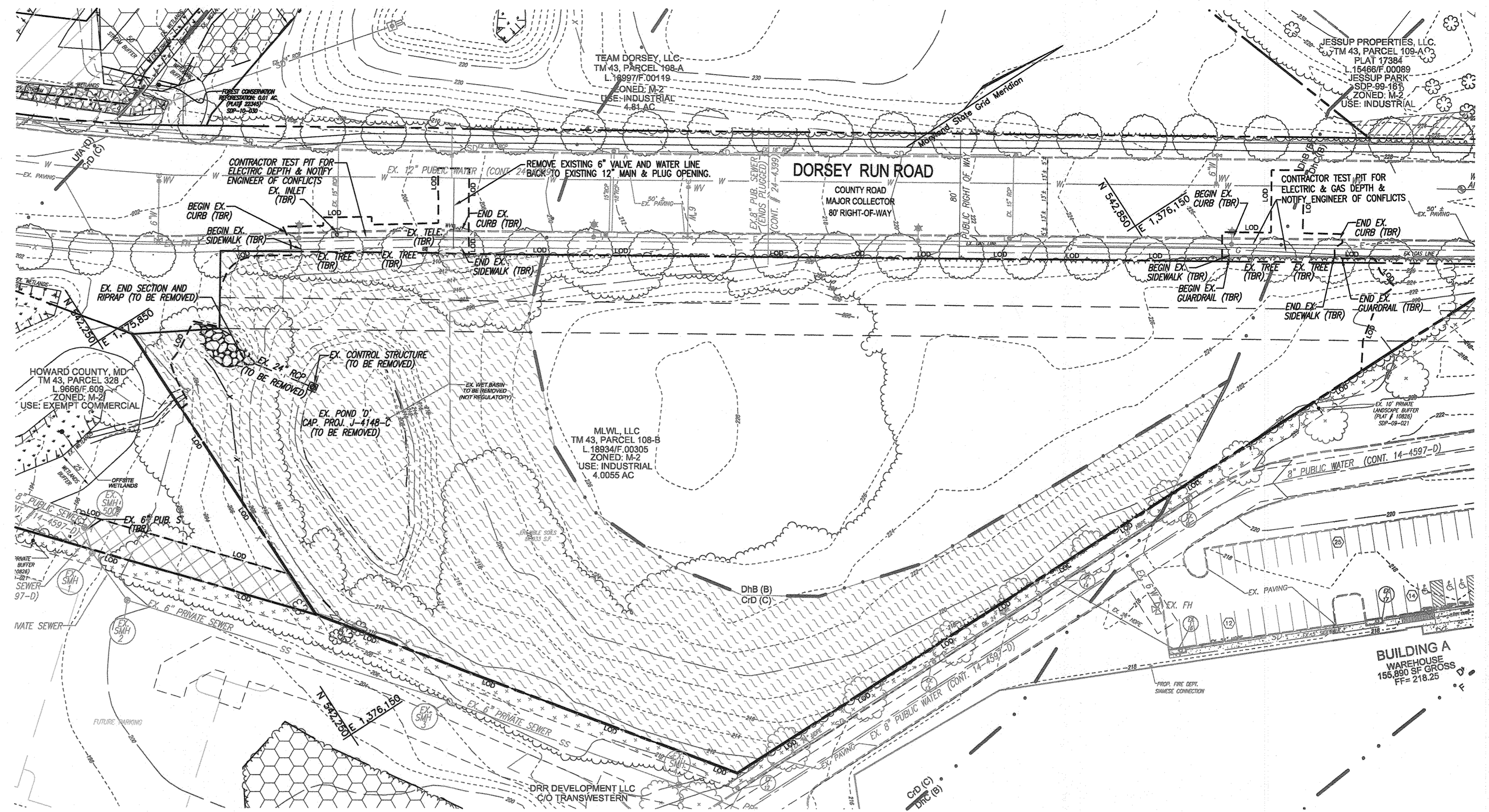
PUBLIC SEWER PROFILES

SCALE: 1"=50' HORZ.
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PUBLIC WATER PROFILES

SCALE: 1"=50' HORZ.
1"=5' VERT.



DEMOLITION PLAN

SCALE: 1"=50' HORZ.

PUBLIC SEWER STRUCTURE SCHEDULE							
STR #	TYPE	INV. IN	INV. OUT	TOP ELEV	DETAIL	LOCATION	REMARKS
MH-1	TYPE 'B' DROP MANHOLE	202.46 / 196.93	196.83	212.00	S-1.32	N 542281.61 E 1376067.98	(1)
MH-2	48" STANDARD MANHOLE	197.73	197.63	214.87	G 5.12	N 542334.56 E 1376021.91	(1)
MH-3	48" SHALLOW MANHOLE	199.41	199.31	204.94	G 5.12	N 542422.19 E 1375889.64	(1)

(1) Coordinate and Elevation for Proposed Structure = Centerline of Structure

PUBLIC WATER MAIN LOCATION CHART			
PROP. WATER MAIN 'A'			
WL STA.	APPURTENANCE	NORTHING	EASTING
WL STA. 0+00	12"x8" TAPPING SLEEVE AND VALVE	542,945.96	1,376,181.73
WL STA. 0+50.00	3" VERTICAL COUPLING (DN)	542,918.36	1,376,223.42
WL STA. 0+78.52	2" VERTICAL COUPLING (UP)	542,902.61	1,376,247.21
WL STA. 0+86.21	8"x6" FIRE HYDRANT TEE	542,898.37	1,376,253.62
WL STA. 0+90.21	8" VALVE	542,895.16	1,376,256.95
WL STA. 0+93.71	8" TEMPORARY CAP AND BUTTRESS	542,894.23	1,376,259.87
WL STA. 0+86.21-4'R	6" VALVE	542,895.03	1,376,251.41
WL STA. 0+86.21-41.79'R	FIRE HYDRANT	542,863.52	1,376,230.55

OWNER/DEVELOPER

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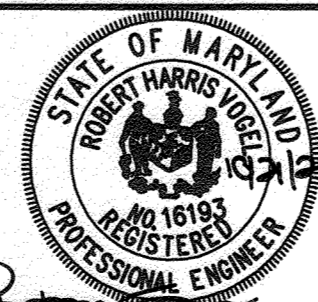
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FINAL WATER AND SEWER PLAN

600' SCALE MAP NO. 43

BLOCK NO. 22

TAX MAP 43, GRID 22
1ST ELECTION DISTRICT

TPC RACING
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SCALE
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