

**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.
  - TOPOGRAPHY FIELD SURVEYS WERE PERFORMED IN AUGUST, 2004, BY ROBERT H. VOGEL ENGINEERING, INC. AND OFFSITE TOPOGRAPHY FROM HOWARD COUNTY GIS AND DRAWINGS OF RECORD.
  - THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 301B AND 316B. ALL VERTICAL CONTROLS ARE BASED ON (NAVD '88) VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:
    - GEODETIC SURVEY CONTROL 301B (N 566937.926/E 1366270.75)
    - BRASS DISC SET ON TOP OF A CONCRETE MONUMENT, LOCATED AT SOUTH SIDE OF INTERSECTION OF ROUTE 108 AND 100. 2' OFF THE ROUTE 108 GUARD RAILS, AND 26.6' WEST OF GUARD RAIL ENDPOINT.
    - GEODETIC SURVEY CONTROL 316B (N 567567.473/E 1367353.38)
    - BRASS DISC SET ON TOP OF A CONCRETE MONUMENT, LOCATED AREA BETWEEN MACADAM RD, ROUTE 108, AND BARRINGTON COURT. 24' SOUTH OF MACADAM RD AND 46.6' WEST OF CENTER LINE OF ROUTE 108.
  - 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 LOCATIONS OF THE TEST PIT. 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 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
BOE (CONTRACTOR SERVICE)	410-850-4620
BOE (EMERGENCY)	410-685-1400
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO	410-795-1390
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/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**
- ALL WATER MAINS SHALL BE C900 PVC-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 IN 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 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 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.
  - 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 HARNESSSES. 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 SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF 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 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 AWWA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 8-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE RATED MEETING PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
    - 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 (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 AWWA 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 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.
  - SPRINKLER SYSTEM FOR SINGLE RESIDENTIAL DWELLING UNITS SHALL HAVE WATER HOUSE CONNECTIONS AND WATER METERS THAT ARE SIZED IN ACCORDANCE WITH THE DESIGN OF THE SPRINKLER SYSTEMS. SPRINKLER SYSTEMS FOR SINGLE RESIDENTIAL DWELLINGS SHALL HAVE A MINIMUM OF 1.5" SERVICE CONNECTION WITH A 1" OUTSIDE METER SETTING.

- 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 D.I.P. ONLY.
  - MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
  - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERIGHT FRAME AND COVERS IS 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 DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

*Alexander Bratchio* 06/07/21  
SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN SDP-20-027.

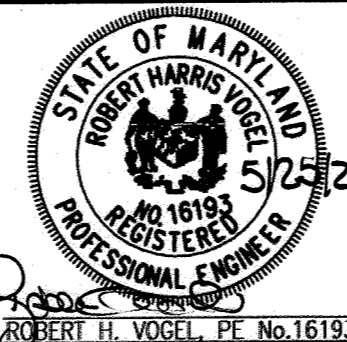
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

**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



DES: RHW/DZE

DRN: LRC/KG/MP

CHK: RHW

DATE: MAY 2021

W.R.A.	1	AS BUILT QUANTITIES	3/9/23
BY	NO.	REVISION	DATE

**FINAL WATER AND SEWER PLAN  
COVER SHEET**

**CONTRACT NO. 14-5126-D**

**ELLICOTT GARDENS II**  
HOUSING COMMISSION HOUSING DEVELOPMENT: 70 APARTMENTS  
5511 & 5513 WATERLOO ROAD  
ZONED: POR  
PARCEL: W48, 467  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 2

# FINAL WATER & SEWER PLAN

## ELLICOTT GARDENS II

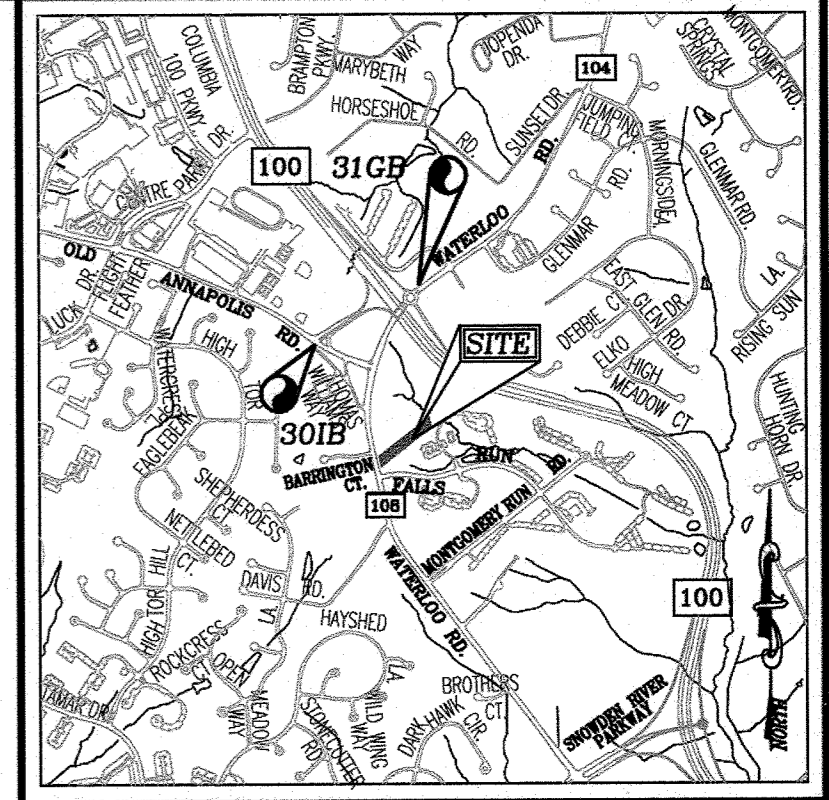
### HOUSING COMMISSION HOUSING DEVELOPMENT: 70 APARTMENTS

#### 5511 & 5513 WATERLOO ROAD

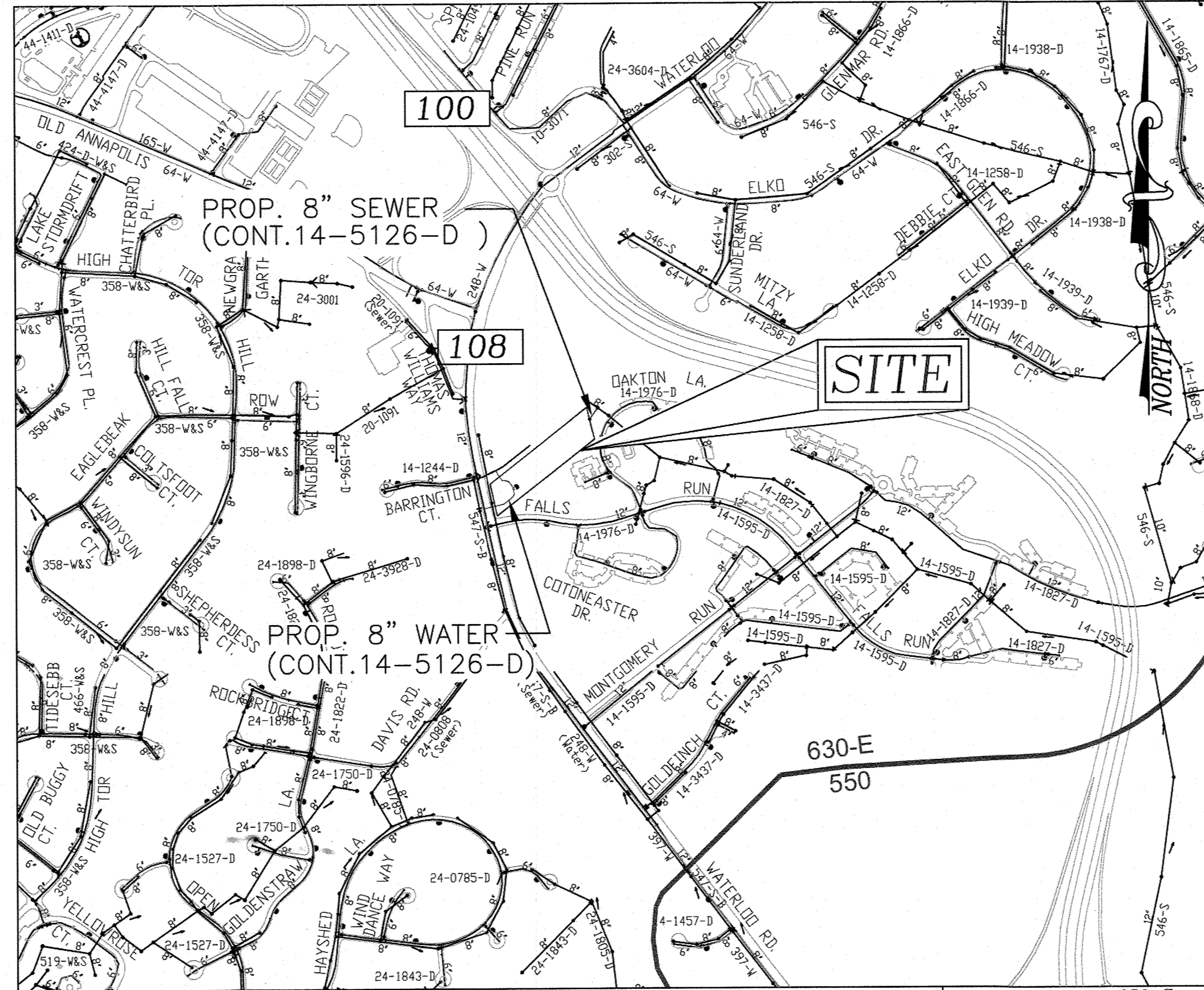
## CONT. NO. 14-5126-D

**BENCHMARKS**

HOWARD COUNTY BENCHMARK 301B  
N 566937.926 E 1366270.75 ELEV. 526.868  
HOWARD COUNTY BENCHMARK 316B  
N 567567.473 E 1367353.38 ELEV. 512.080



**LOCATION MAP**  
SCALE: 1"=200'  
ADC MAP 27, GRID F8



**VICINITY MAP**  
SCALE: 1"=600'

WATER ZONE: 630-E  
TEST PRESSURE: 177.29 PSI  
TEST GRADIENT: .907

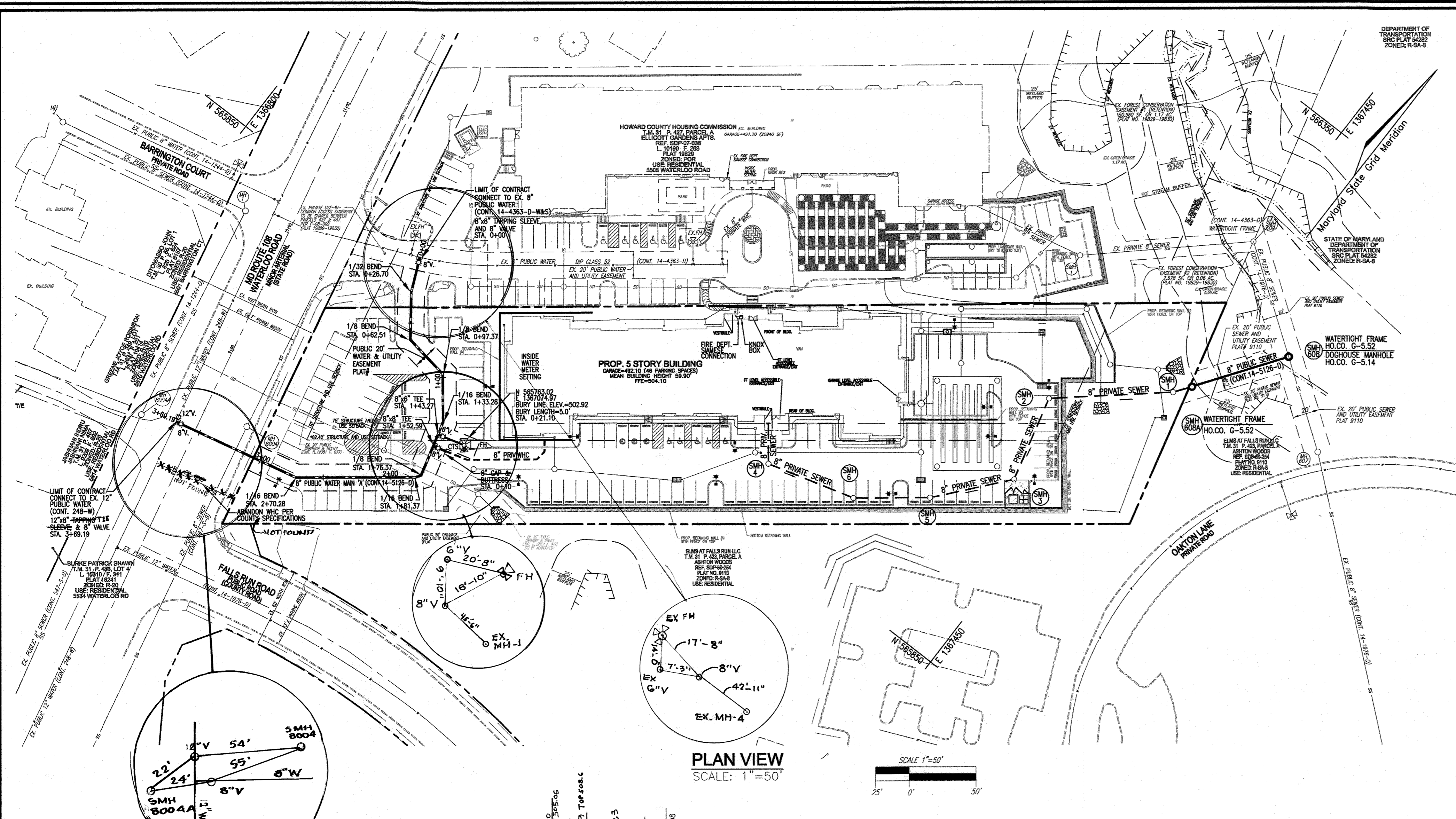
**NOTES:**

- UNLESS OTHERWISE APPROVED BY THE FIRE DEPARTMENT, THE FOLLOWING PROVISIONS SHALL APPLY TO A FIRE DEPARTMENT CONNECTION FOR FIRE PROTECTION SYSTEMS:
  - A FIRE DEPARTMENT CONNECTION FOR FIRE PROTECTION SYSTEMS SHALL BE LOCATED:
    - ON THE SIDE OF THE STRUCTURE DISPLAYING THE ADDRESS CLEARLY VISIBLE TO THE RESPONDING UNITS;
    - WITHIN 100FT OF A FIRE HYDRANT;
  - THE APPROPRIATE SIGN SHALL BE MOUNTED ON THE BUILDING'S WALL BETWEEN 8 AND 12 FEET ABOVE THE FIRE DEPARTMENT CONNECTION;
  - A FREE-STANDING FIRE DEPARTMENT CONNECTION SHALL HAVE THE SIGN MOUNTED ON A POLE DIRECTLY BEHIND THE CONNECTION APPROXIMATELY 6 FEET HIGH; BORDER, RED REFLECTIVE LETTERS AND A RED REFLECTIVE ARROW. THE BORDER SHALL HAVE A 3/8" STROKE. THE LETTERS SHALL BE 6" HIGH WITH A 1" STROKE. THE ARROW SHALL HAVE A STROKE LESS THAN 2". THE OVERALL SIGN MEASUREMENTS SHALL BE 12" BY 18";
  - ANY OBSTRUCTION OR CONDITION THAT DETERS OR HINDERS ACCESS TO A FDC IS PROHIBITED. A MINIMUM CLEAR SPACE OF 15 FEET (7.5 FEET ON ALL SIDES) SHALL BE MAINTAINED.
- REF. DMV2-21-016, APPROVED MAY 4, 2021 TO WAIVE SECTION 3.3.B.2.b.1 OF THE WATER AND SEWER DESIGN MANUAL, VOLUME II, WHICH REQUIRES A WATER SUPPLY MAIN TO BE LOOPED WHEN IT IS EITHER LONGER THAN 2,500 FEET OR SERVES MORE THAN 50 UNITS. APPROVAL IS SUBJECT TO FOLLOWING CONDITIONS:
  - DESIGNING THE COUNTY PREFERRED WATER MAIN ALIGNMENT WHICH SHORTENS THE PIPE RUN AND, ALSO ENHANCE THE RELIABILITY OF THE WATER SUPPLY TO PROPOSED ELLICOTT GARDENS II AND EXISTING ELLICOTT GARDENS I.
  - ABANDONING OF THE EXISTING WATER HOUSE CONNECTION LOCATED JUST SOUTH OF THE NEW TIE IN ON MD ROUTE 108.

TYPE OF BUILDING :	RESIDENTIAL APARTMENTS
NO. OF UNITS:	70 APARTMENT UNITS
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
TREATMENT PLANT :	LITTLE PATUXENT (WRP)

**QUANTITIES**

NAME OF UTILITY CONTRACTOR : ROSLEY CONSTRUCTION INC.		SURVEY AND DRAFTING DIVISION AS-BUILT DATE : 3/1/2023	
ITEMS	QUANTITIES ESTIMATED	AS-BUILT	
		QUANTITIES	MANUFACTURER/SUPPLIER
<b>WATER</b>			
8" WATER PVC C-900 (DR-18)	379 LF	342	C-900/DR-18 J.M. EAGLE/BEAIR ROAD SUPPLY
8" x 8" TAPPING SLEEVE & V.	21 LF	20	C-900/DR-18 J.M. EAGLE/...
8" x 8" 45 DEGREE SWEEP & V.	1 EA	1	SST'S J.M. EAGLE/...
12" x 8" 45 DEGREE SWEEP & V.	1 EA	1	MJM/MJ SIP IND./...
8" x 8" TEE	1 EA	1	MJM/MJ STAR PIPE/...
12" VALVE	1 EA	1	MJ GATE-RS MUELLER/...
8" VALVE	1 EA	2	MJ GATE-RS MUELLER/...
FIRE HYDRANT & TEST STATION	1 EA	1	MJ GATE-RS MUELLER/...
8" - 1/8 BEND	3 EA	5	MJ STAR PIPE/BEAIR ROAD SUPPLY
8" - 1/16 BEND	3 EA	4	MJ STAR PIPE/...
8" - 1/32 BEND	1 EA	1	MJ STAR PIPE/...
8" GAP AND BUTTRESS	1 EA	1	C-900/DR-18 GALAXY PLASTICS/...
<b>SEWER</b>			
4" STANDARD MANHOLE	2 EA	2 EA	48" PRECAST ATLANTIC CONCRETE
8" PVC SEWER-SUB 35	78 LF	78 LF	3 DR - 35 J.M. EAGLE/BEAIR ROAD SUPPLY
*FROM HOWARD COUNTY DESIGN MANUAL VOLUME II-SECTION 4.3, TABLE 4.3D.			
8" SLEEVE	3	MJ	STAR PIPE / BEAIR ROAD SUPPLY
12" SLEEVE	1	MJ	STAR PIPE / BEAIR ROAD SUPPLY

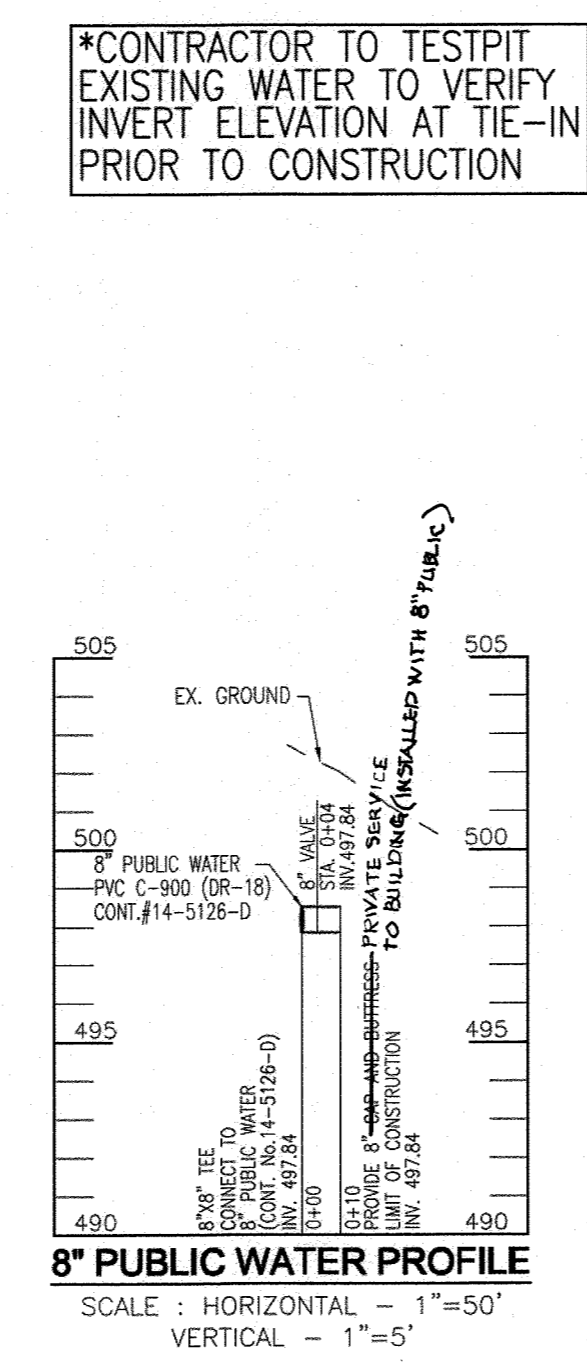
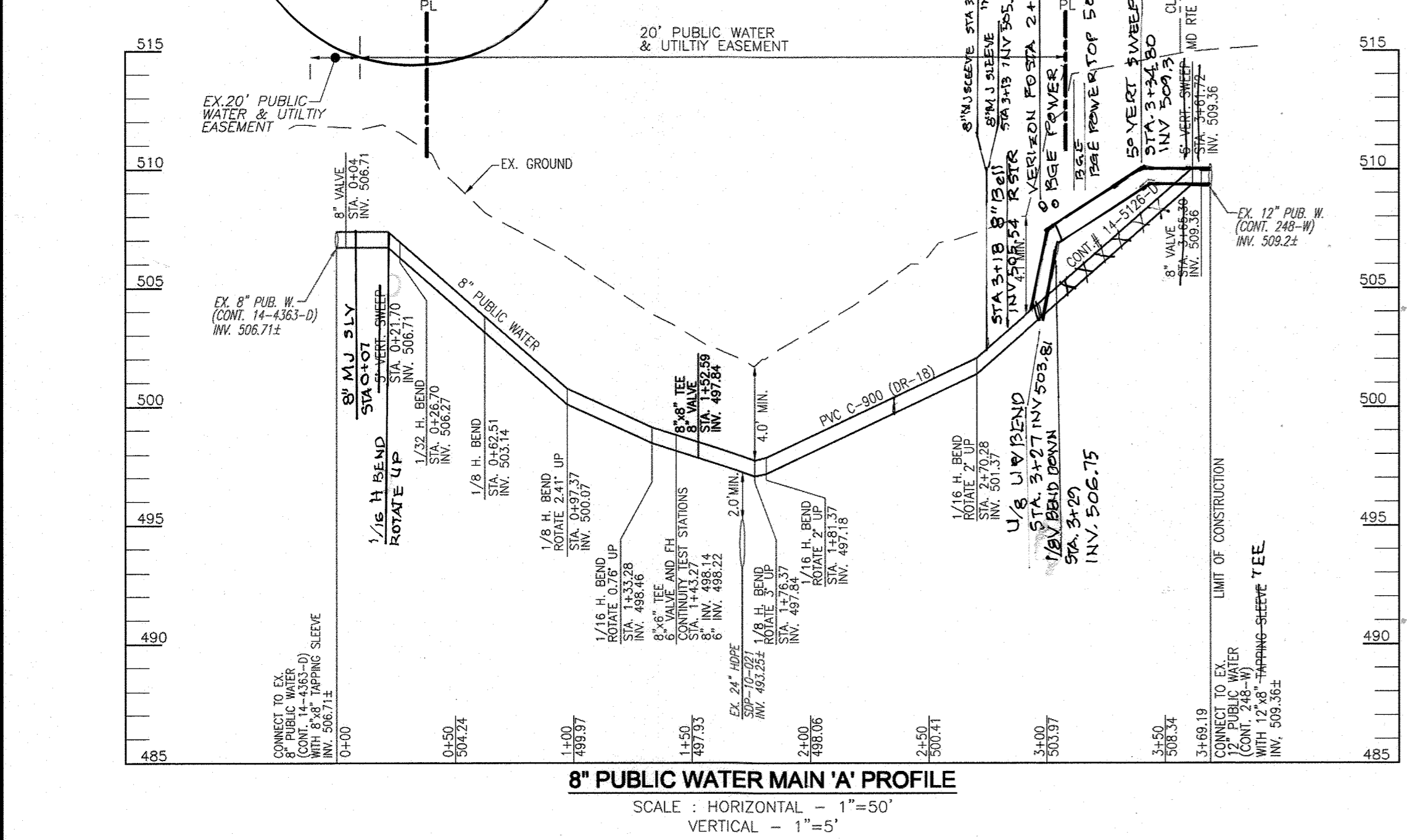
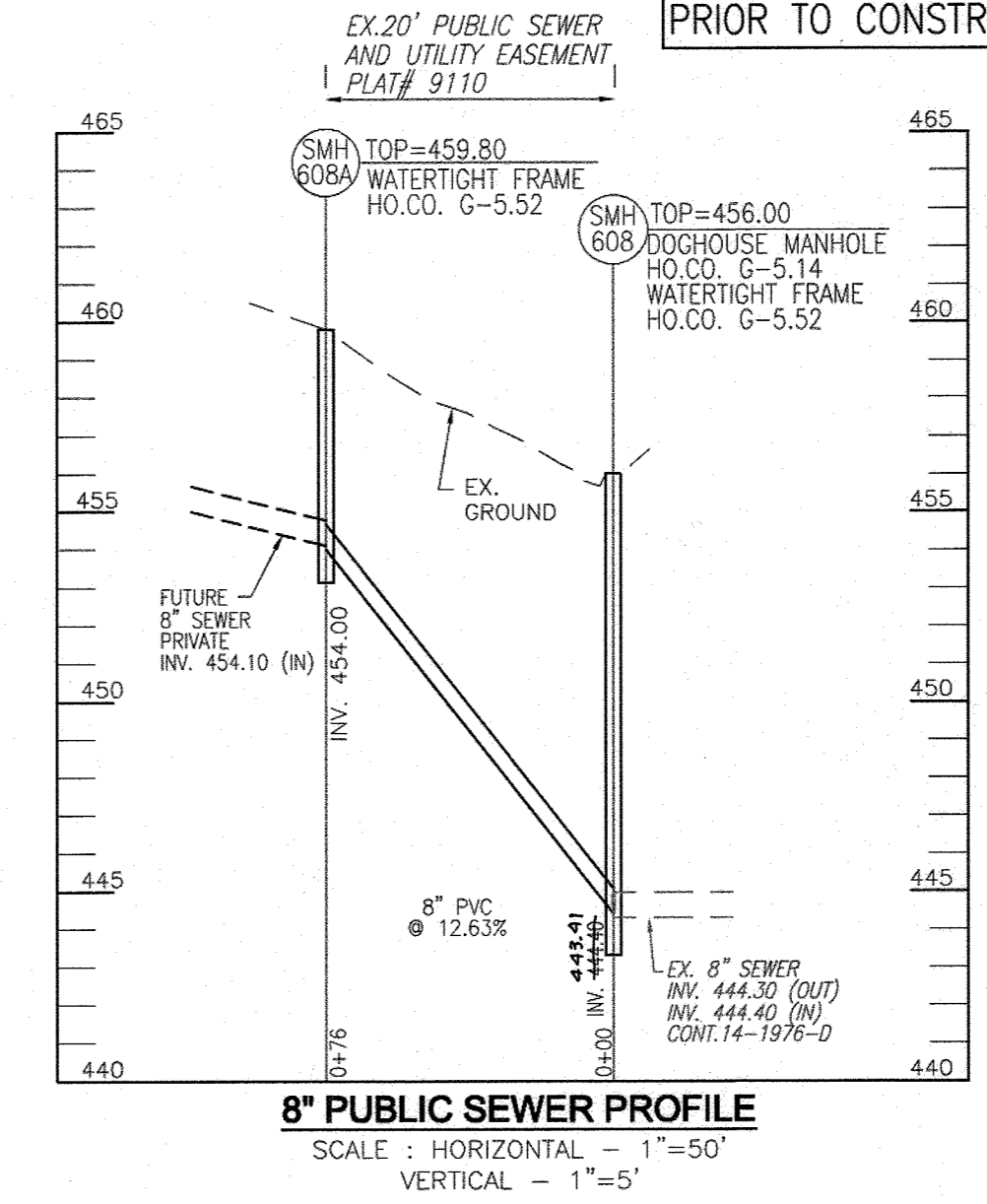


WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
UNIT	STREET ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
PARCELS 428 & 467	5511 & 5513 WATERLOO ROAD		

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
UNIT	STREET ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
PARCELS 428 & 467	5511 & 5513 WATERLOO ROAD		

SEWER MANHOLE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	COMMENT
SMH 608	PRECAST MH HO. CO. STD. DET. G-5.14	N 566194.00 E 1367521.69	456.00	444.40 444.40	444.30	DOGHOUSE MANHOLE G-5.14; WATERTIGHT FRAME
SMH 608-A	PRECAST MH HO. CO. STD. DET. G-5.12	N 566131.88 E 1367478.35	459.80	454.10 454.10	454.00	STANDARD MANHOLE; WATERTIGHT FRAME

\*CONTRACTOR TO TESTPIT EXISTING SEWER TO VERIFY INVERT ELEVATION AT TIE-IN PRIOR TO CONSTRUCTION



\*CONTRACTOR TO TESTPIT EXISTING WATER TO VERIFY INVERT ELEVATION AT TIE-IN PRIOR TO CONSTRUCTION

WATER MAIN 'A'		
WL STA	APPURTENANCE	LOCATION
WL STA: 0+00.00	8" TAPPING SLEEVE, CONNECT TO EX. 8" WATER	N 565853.15 E 1366962.79
WL STA: 0+04.00	8" VALVE	N 565849.49 E 1366984.42
WL STA: 0+21.70	1/16 H BEND	
WL STA: 0+26.70	1/32 H BEND	N 565828.75 E 1366973.65
WL STA: 0+62.51	1/8 H BEND	N 565800.11 E 1366995.13
WL STA: 0+97.47	1/8 H BEND, ROTATE 2.41' UP	N 565795.16 E 1367029.74
WL STA: 1+33.28	1/16 H BEND, ROTATE 0.76' UP	N 565766.95 E 1367051.95
WL STA: 1+43.27	8" TEE, 6" VALVE AND FH	N 565757.31 E 1367054.65
WL STA: 1+52.59	8" TEE, 8" VALVE	N 565748.36 E 1367057.17
WL STA: 1+76.37	1/8 H BEND, ROTATE 3' UP	N 565725.46 E 1367063.61
WL STA: 1+81.37	1/16 H BEND, ROTATE 2' UP	N 565721.24 E 1367080.94
WL STA: 2+70.28	1/16 H BEND, ROTATE 2' UP	N 565666.50 E 1366990.88
WL STA: 3+46.29	3+34.80 5' VERTICAL SWEEP	
WL STA: 3+56.50	8" VALVE	N 565645.16 E 1366898.28
WL STA: 3+68.19	12" TAPPING SLEEVE, CONNECT TO EX. 12" WATER	N 565644.28 E 1366894.49
WATER MAIN		
WL STA: 0+00.00	8" TEE, CONNECT 8" WATER	N 565748.36 E 1367057.17
WL STA: 0+04.00	8" VALVE	N 565749.44 E 1367061.02
WL STA: 0+10.00	8" CAP AND BUTTRESS	N 565751.06 E 1367066.80

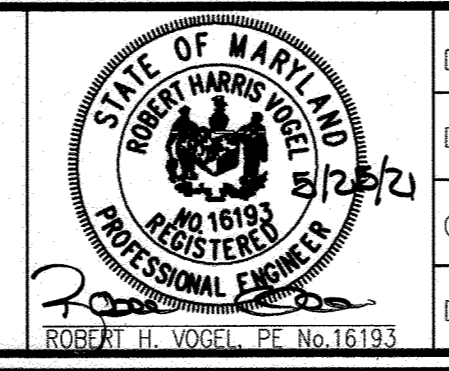
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Chris Slay*  
6-1-21  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*David Clark*  
6.10.21  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**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



DES: RHW/DZE			
DRN: LRC/KG/MP			
CHK: RHW			
DATE: MAY 2021			
WRA: 1 AS BUILT			
BY: NO.			
REVISION			
DATE: 3/10/23			

**FINAL WATER AND SEWER PLAN**  
**PLAN VIEW**

60' SCALE MAP NO. 31 BLOCK NO. 19

**OWNER/DEVELOPER**  
HOWARD COUNTY HOUSING COMMISSION  
9770 PATUXENT WOODS DRIVE  
COLUMBIA, MD 21046  
410-730-3725

**CONTRACT NO. 14-5126-D**

**ELLICOTT GARDENS II**  
HOUSING COMMISSION HOUSING DEVELOPMENT: 70 APARTMENTS  
5511 & 5513 WATERLOO ROAD

TAX MAP 31 BLOCK 19 PARCEL 428, 467 1ST ELECTION DISTRICT ZONED: POR HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 2