

# CEDARS EXTENDED

## LOTS 1 thru 6 AND OPEN SPACE LOT 7

### A RESUBDIVISION OF LOT 'R' OF THE CEDARS EXTENDED

#### PB 3 / P 16

## CONTRACT 24-4969-D

#### 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 SEPTEMBER, 2015 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. 43EB AND NO. 43EC.  
ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE 43EC AND 43EB.
  - 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 ADVISED 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 TO 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 DONE 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:  

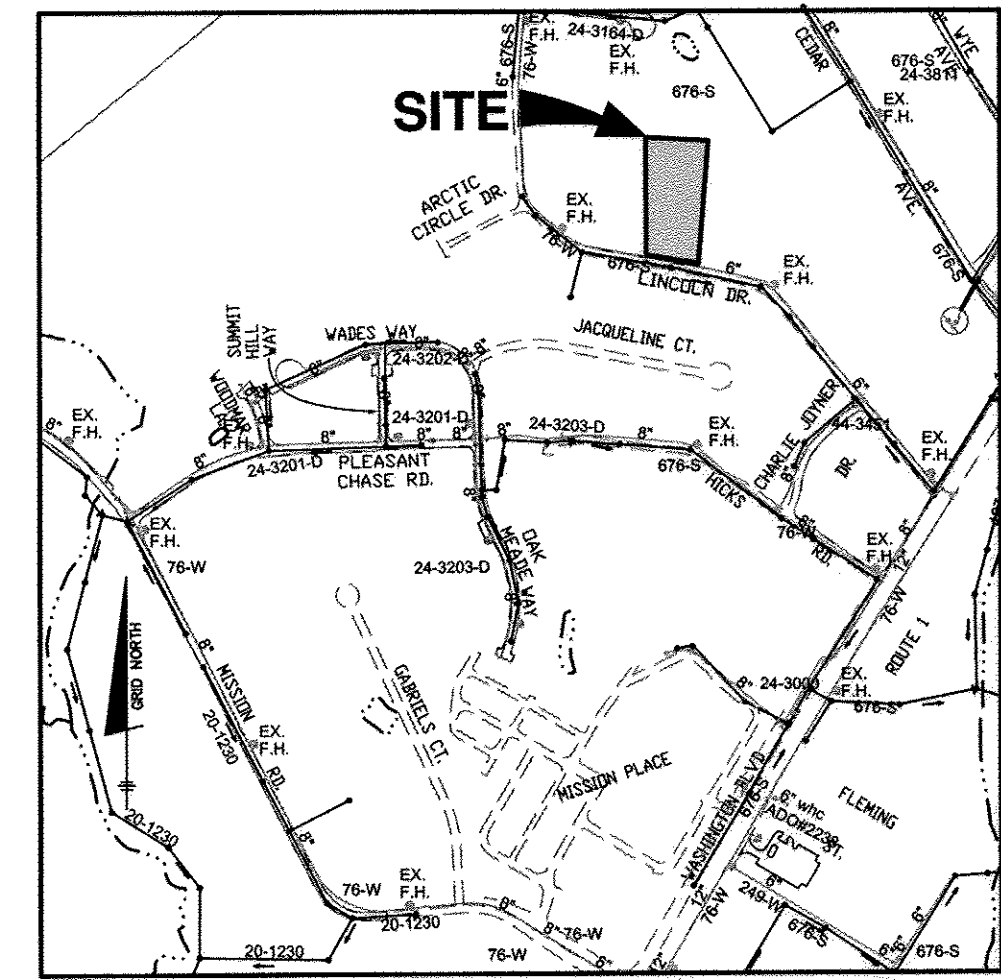
AT&T	1-800-252-1133
BOE (CONTRACTOR SERVICES)	410-637-8713
BGE (EMERGENCY)	410-685-0123
BUREAU OF UTILITIES	410-313-6000
COLUMBIA PIPELINE CO.	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY AND MARRIAGES	410-531-6633
VERIZON	1-800-743-0033
  - TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE 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 LIVING 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 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 5.1 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 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 FORCE THE SPIGOT 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 PIPE JOINTS IS PERMITTED, WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (40-FOOT OR LONGER) OF 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 COMPACTOR 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 CERTAINTIEQ 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 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 DEPRESSOR FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE INTO THE BELL STOP 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 EBM IRON, INC. OR APPROVED EQUAL.

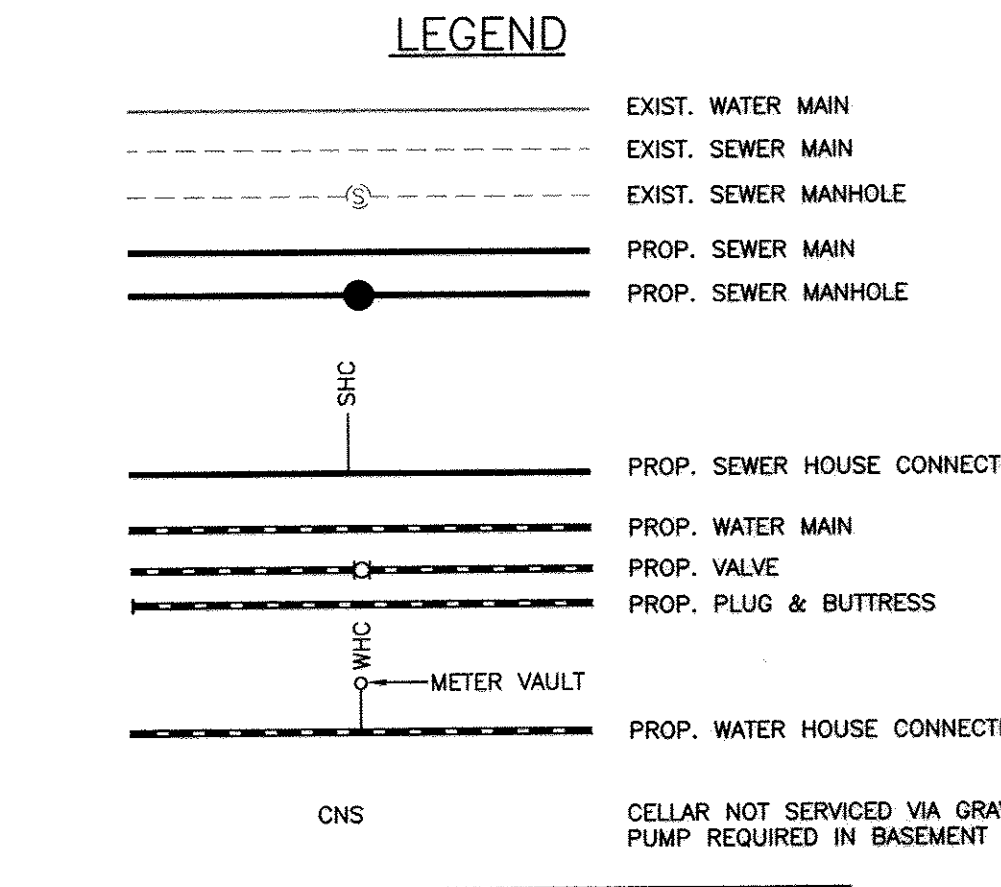
#### PART III SEWER

- 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 MANHOLES WITH FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-4" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

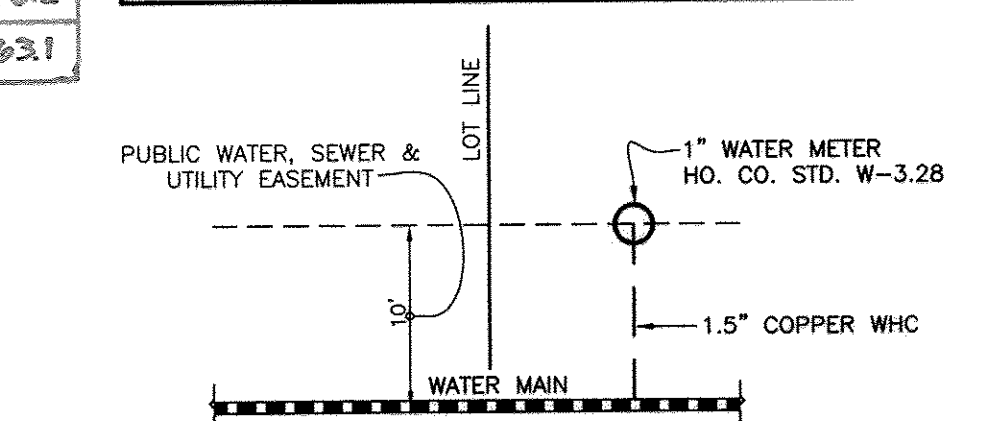


TYPE OF BUILDING:	SFD
NUMBER OF WHO'S:	6
NUMBER OF SHC'S:	6
DRAINAGE AREA:	DORSEY RUN
TREATMENT PLANT:	LITTLE PATUXENT WRP
WATER ZONE:	400
TEST GRADIENT:	550

FILE REFERENCES: ECP-16-009, S-16-002, F-16-093, WP-16-072



**NOTE:**  
ALL WATER HOUSE CONNECTIONS ARE TO BE 1.5" WITH A 1" METER (OUTSIDE SETTING).  
ALL SEWER HOUSE CONNECTIONS SHALL BE 4" PVC.  
CELLAR NOT SERVICED VIA GRAVITY, PUMP REQUIRED IN BASEMENT FOR LOTS 3, 4, 5 AND 6.



**NOTE:**  
SEE HO. CO. STD. DETAIL W-3.28 FOR SINGLE OUTSIDE METER SETTING

OWNER/DEVELOPER:  
CEDARS EXTENDED LOT 'R' LLC  
8369 OLD FREDERICK ROAD  
ELLCOTT CITY, MARYLAND 21043  
443-812-4808

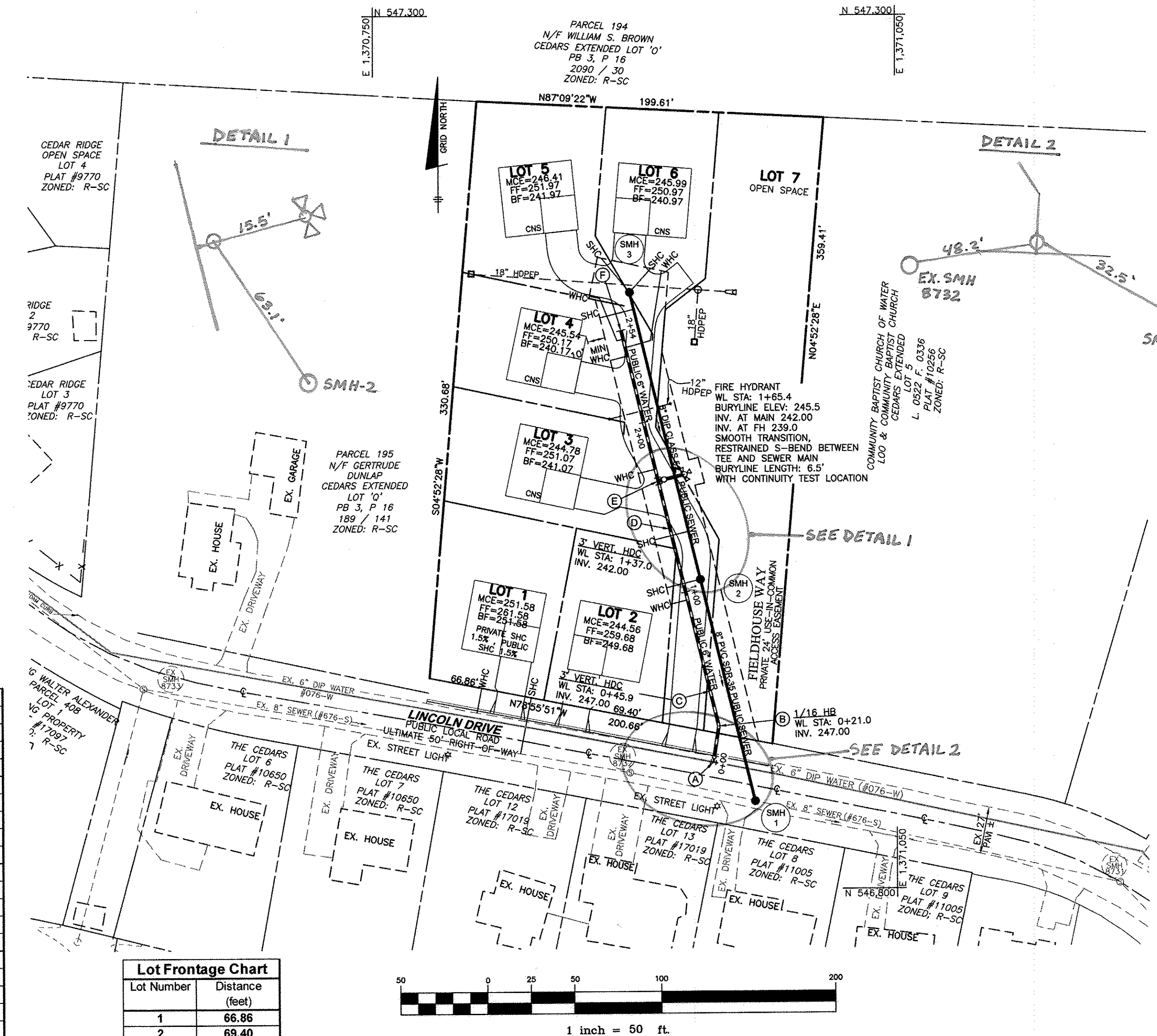
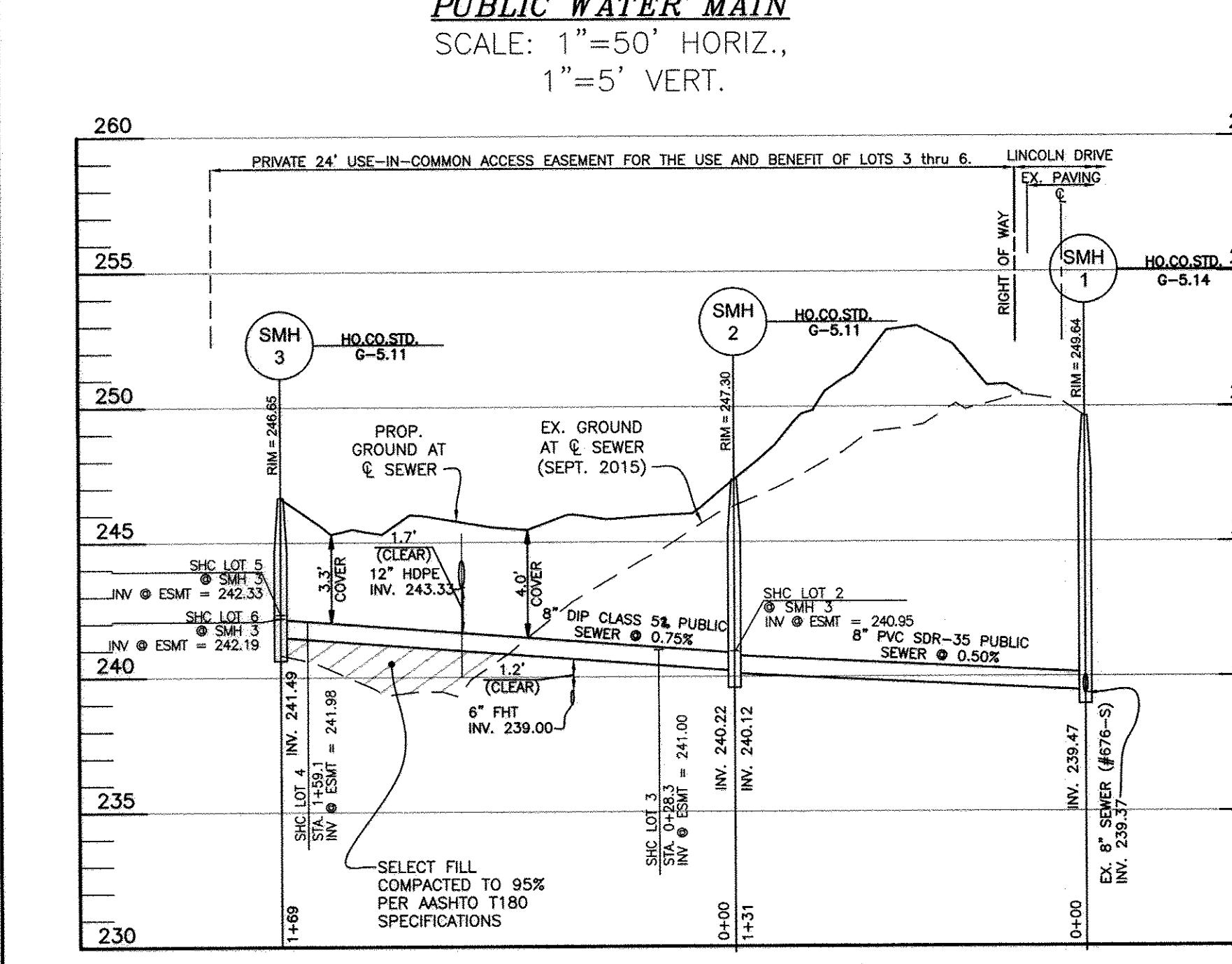
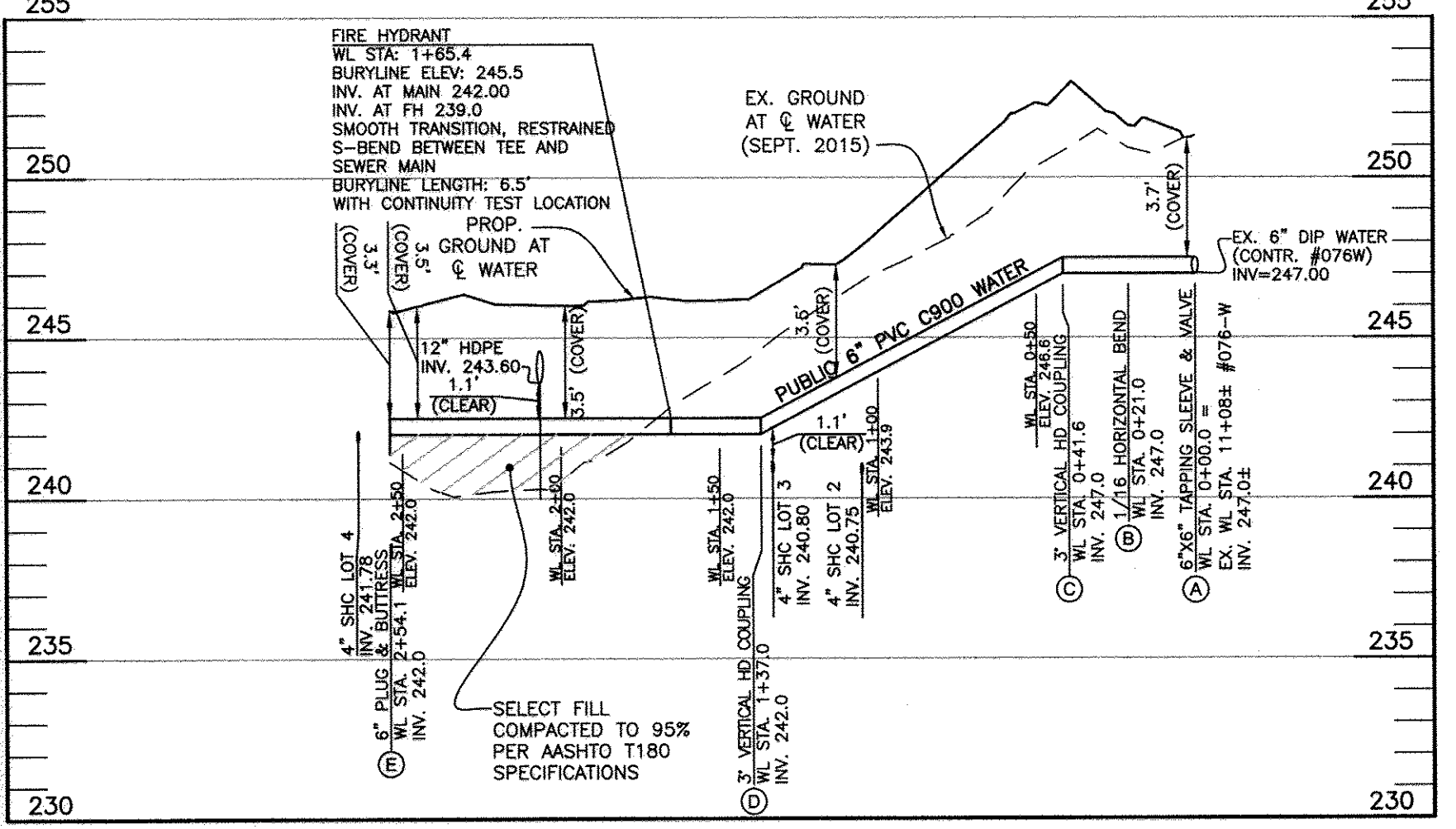
#### QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
6" PVC C900 DR-18 WATER	254 LF	254 LF	C900	NORTHAMERICAN PIPE
6"x6" TS&V	1 EA	1 EA	FT GATE	MUELLER COMPANY
1.5" WHC	135 LF	120 LF	K COFFER	MUELLER INDUSTRIES
1" METER VAULT	1 EA	1 EA	CONCRETE VAULT	HARBOUR CONTRACTORS
6" FIRE HYDRANT	1 EA	1 EA	CONCRETE VAULT	HARBOUR CONTRACTORS
8" PVC SDR-35 SEWER	131 LF	131 LF	KOR-2E	NORTH AMERICAN PIPE
8" DIP CLASS 52	169 LF	169 LF	CL 52 DFP	AMERICAN CAST IRON
MANHOLES	3 EA	2 EA	SANITARY	CONTRACTORS PRECAST
4" SHC	136 LF	136 LF	PVC SHC-35	NORTHAMERICAN PIPE
MANHOLE	1 EA	1 EA	SANITARY D6 G	CONTRACTORS PRECAST

NAME OF UTILITY CONTRACTOR: UTILITIES UNLIMITED  
SURVEY AND DRAFTING DIVISION AS-BUILT DATE: 6-15-17

#### WATER APPURTENANCE SCHEDULE

POINT #	APPURTENANCE	WATER LINE STATION	NORTHING	EASTING
A	6"x6" TAPPING SLEEVE & VALVE	11+08 (EX) = 0+00	546872.8318	1370944.6308
B	1/16" HORIZONTAL BEND	0+21.0	546893.5169	1370947.8151
C	3" VERTICAL HD COUPLING	0+41.6	546913.5955	1370942.9012
D	3" VERTICAL HD COUPLING	1+37.0	547006.2608	1370920.2227
E	6" X 6" FHT	1+65.4	547033.8711	1370913.4732
F	6" PLUG AND BUTTRISS	2+54.1	547119.9400	1370892.4139



#### Lot Frontage Chart

Lot Number	Distance (feet)
1	66.86
2	69.40
3	6.04
4	6.04
5	6.04
6	6.04
7	6.04

#### SHC CHART

Lot Number	Invert @ main	Invert @ RW/ or easmt line	Minimum Cellar Elevation
1*	247.46	247.94	261.58
2	240.55	240.95	244.56
3	240.60	241.00	244.78
4	241.58	241.98	245.54
5	241.82	242.33	246.41
6	241.82	242.19	245.99

\*Lot 1 SHC at 1.5% from main to house.

#### WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1	LINCOLN DRIVE	WHC SMH-1 121'	WHC Ex. SMH-8732 99'
2	LINCOLN DRIVE	WHC SMH-2 29.2'	WHC FH 78.3'
3	FIELDHOUSE WAY	WHC SMH-3 21.3'	WHC FH 27.1'
4	FIELDHOUSE WAY	WHC SMH-3 36'	WHC FH 71.1'
5	FIELDHOUSE WAY	WHC SMH-3 24'	WHC FH 115.5'
6	FIELDHOUSE WAY	WHC SMH-3 25'	WHC FH 117.5'

#### SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1	LINCOLN DRIVE	SHC SMH-1 142.5'	SHC Ex. SMH-8732 72'
2	LINCOLN DRIVE	SHC SMH-2 22.2'	SHC FH 67.9'
3	FIELDHOUSE WAY	SHC SMH-3 21.3'	SHC FH 42.3'
4	FIELDHOUSE WAY	SHC SMH-3 26.4'	SHC FH 103'
5	FIELDHOUSE WAY	SHC SMH-3 21.4'	SHC FH 121'
6	FIELDHOUSE WAY	SHC SMH-3 24.3'	SHC FH 120'

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

*John P. Robertson*  
HOWARD COUNTY CONSERVATION DISTRICT  
DATE: 6/15/17

#### SEWER MANHOLE SCHEDULE

NUMBER	LOCATION (NAD '83)	INVERT IN	INVERT OUT	TOP ELEV.	STD. DETAIL	OWNER	REMARKS
1	N 546850.5607 E 1370968.6206	239.47(8")	239.37(8")	249.64	Ho.Co. STD. G-5.14	PUBLIC	
2	N 546977.4942 E 1370937.5625	240.22(8")	240.12(8")	247.30	Ho.Co. STD. G-5.11	PUBLIC	
3	N 547141.7436 E 1370987.3739	241.49(8")	241.65(8")	246.65	Ho.Co. STD. G-5.11	PUBLIC	

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*John P. Robertson*  
DATE: 6/15/17

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

*John P. Robertson*  
DATE: 6/15/17

**BENCHMARK**  
ENGINEERING, INC.  
8400 BALTIMORE NATIONAL PIKE SUITE 315 ELLICOTT CITY, MARYLAND 21043  
(P) 410-465-8105 (F) 410-465-8644  
WWW.BE-CIVLENGINEERING.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. 45577.  
Expiration Date: 06-08-2018.

*John P. Robertson*  
DATE: 6/16/17

DES:	DBT
DRAFT:	NAF
CHK:	JMC
DATE:	8/2016
BY NO.	
REVISIONS	
DATE	

**TITLE SHEET, PLAN VIEW AND PROFILES**

600 SCALE MAP #18  
BLOCK: 032

**THE CEDARS EXTENDED**

LOTS 1 THROUGH 6 AND OPEN SPACE LOT 7

TAX MAP: 43 - GRID: 8 - PARCEL: 451 - ZONED: R-SC - ELECTION DISTRICT 3

**CONTRACT NO. 24-4969-D**

SCALE: AS SHOWN  
SHEET NO. 1 OF 1