

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.
 - TOPOGRAPHY SHOWN HEREON IS OBTAINED FROM AERIAL PHOTOGRAMMETRY COMPILED BY POTOMAC AERIAL SURVEYS INC. JANUARY 12, 2012.
 - THE PROPERTY OUTLINE SHOWN HEREON IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING INC., DATED FEBRUARY 2012.
 - THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM MAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 47H2 AND 47G. ALL VERTICAL CONTROLS ARE BASED ON (NAVD' 88). VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:
 GEODETIC SURVEY CONTROL 47H2 (N 529706.4221 E 1355445.3364)
 BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
 GEODETIC SURVEY CONTROL 47G (N 528939.7281 E 1354223.5536)
 BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
 - 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 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 THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWNED BY 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.
 - 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 SERVICES) 410-637-8713
 BGE (EMERGENCY) 410-685-0123
 BUREAU OF UTILITIES 410-313-4900
 COLONIAL PIPELINE COMPANY 410-735-1300
 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 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(g) OF THE HOWARD COUNTY CODE.

- PART II - WATER**
- ALL WATER MAINS TO BE C-900 PVC (DR-18) UNLESS OTHERWISE NOTED.
 - TOPS OF ALL WATER MAINS TO 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 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 RESTRAINED AND BUTTRESSED WITH CONCRETE 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.
 - 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.
 - 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.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH FINAL PLAN F-14-022.

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

John R. Roberts 3/12/15
 SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

Steve C. Con 2/23/15
 CHIEF, BUREAU OF UTILITIES DATE

John C. Anderson 3-18-15
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FINAL WATER AND SEWER PLAN

HIGH RIDGE MEADOWS - SECTION 1-PHASE 1

LOTS 1-31 AND OPEN SPACE LOTS 55, 57-59 AND 63-68

(SFD RESIDENTIAL)

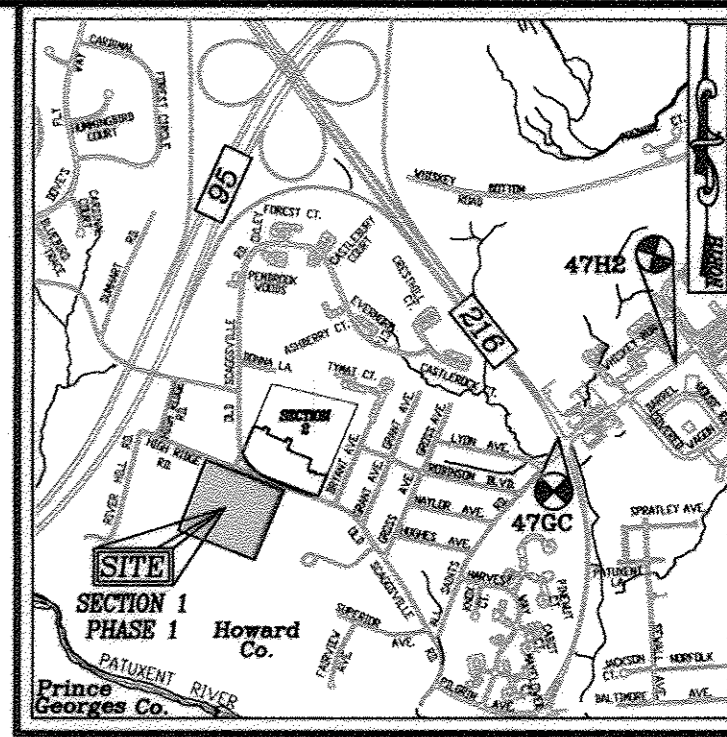
OLD SCAGGSVILLE ROAD
 PARCELS 542
 HOWARD COUNTY, MARYLAND

CONTRACT 24-4778-D

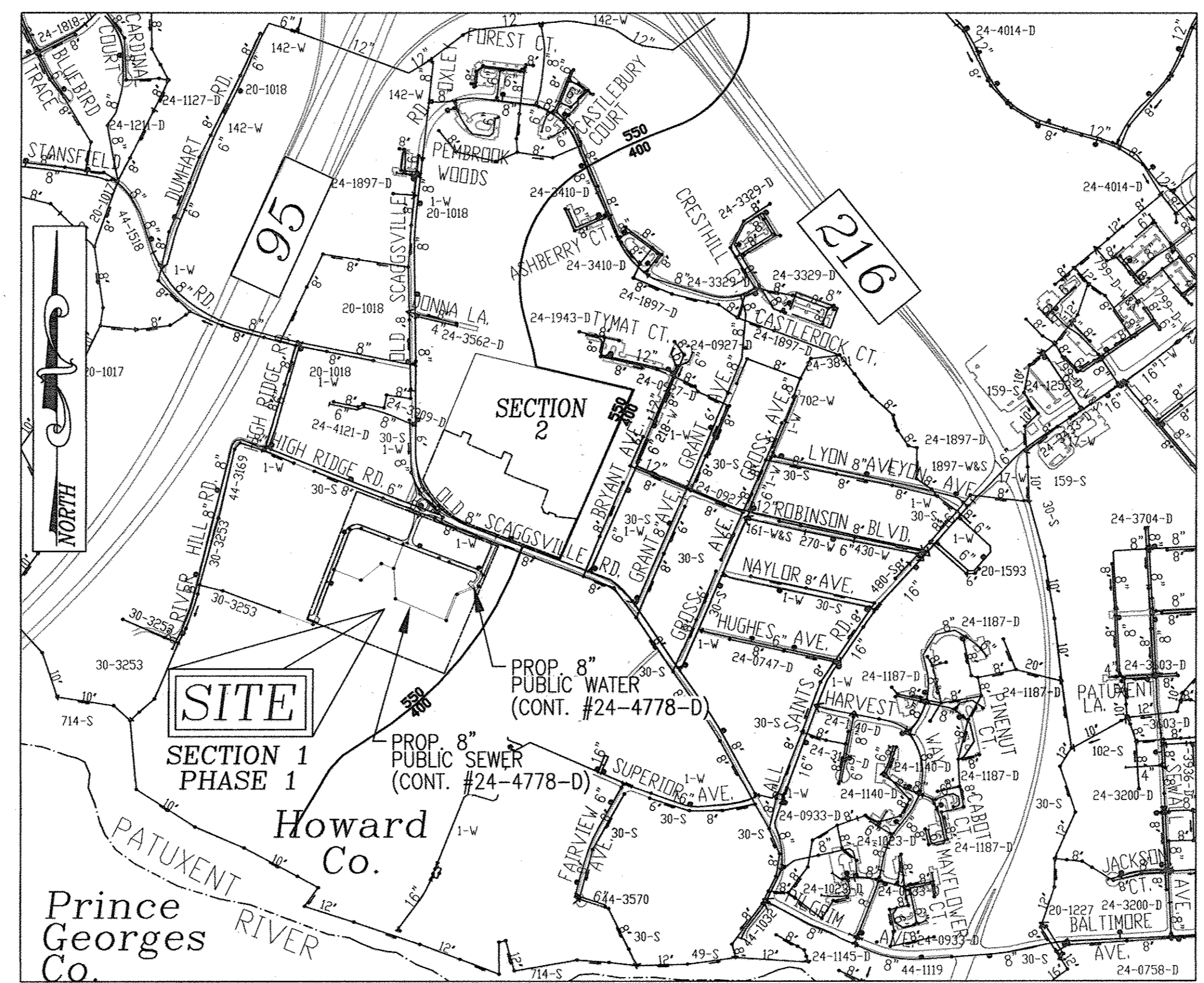
BENCHMARKS

HOWARD COUNTY BENCHMARK 47H2 (CONC. MON.)
 N 529706.4221 E 1355445.3364 ELEV. 256.068
 LOCATION: ALL SAINTS ROAD, 240' +/- SOUTH OF NORTH LAUREL ROAD 2.89 FEET FROM STORM DRAIN INLET; 1' EAST OF CURB, 0.6 BELOW SURFACE.

HOWARD COUNTY BENCHMARK 47G (CONC. MON.)
 N 528939.7281 E 1354223.5536 ELEV. 226.272
 LOCATION: MEDIUM ISLAND 29 FEET WEST OF ALL SAINTS RD RT 216 INTERSECTION; 1.4 FEET WEST OF SOUTHWEST INLET CORNER.



LOCATION MAP
 SCALE: 1"=2,000'
 ADC MAP COORDINATE: 5169 B2



VICINITY MAP
 SCALE: 1"=600'

WATER ZONE:	550
TEST GRADIENT:	700

- ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 3-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 BEST STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.
- | | |
|-----------------------------------------|-----------------|
| TYPE OF BUILDING : | SFD RESIDENTIAL |
| NO. OF BUILDABLE LOTS : | 31 |
| NO. OF OPEN SPACE LOTS : | 7 |
| NO. OF SINGLE WATER HOUSE CONNECTIONS : | 31 |
| NO. OF TWIN WATER HOUSE CONNECTIONS : | 0 |
| NO. OF SEWER HOUSE CONNECTIONS : | 31 |
| NO. OF TWIN SEWER HOUSE CONNECTIONS : | 0 |
| SEWER SHED : | PATUXENT RIVER |
| TREATMENT PLANT : | PATUXENT |
- PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1.5-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 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTIED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
- FIVE 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.

- 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 WATER-TIGHT FRAME AND COVERS, STANDARD DETAIL CS-52. WHERE WATER-TIGHT FRAME AND COVER 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.

TYPE OF BUILDING :	SFD RESIDENTIAL
NO. OF BUILDABLE LOTS :	31
NO. OF OPEN SPACE LOTS :	7
NO. OF SINGLE WATER HOUSE CONNECTIONS :	31
NO. OF TWIN WATER HOUSE CONNECTIONS :	0
NO. OF SEWER HOUSE CONNECTIONS :	31
NO. OF TWIN SEWER HOUSE CONNECTIONS :	0
SEWER SHED :	PATUXENT RIVER
TREATMENT PLANT :	PATUXENT

QUANTITIES					
NAME OF UTILITY CONTRACTOR :					
SURVEY AND DRAFTING DIVISION AS-BUILT DATE :					
ITEMS	QUANTITIES ESTIMATED	AS-BUILT			
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER	
WATER					
8" WATER (C-900 PVC) (DR-18)	1924 LF	1924 LF	C-900 DR18	NORTH AMERICAN	
6" WATER (C-900 PVC) (DR-18)	86.80 LF	87 LF	C-900 DR 18	NORTH AMERICAN	
1.5" WHC	611 LF	611 LF	COPPER	CAMBRIDGE LEE	
8"x6" TAPPING SLEEVE	1 EA	1 EA	MJ SLEEVE	STAR PIPE	
8"x6" TEE	2 EA	2 EA	MJ TEE	STAR PIPE	
8" VALVE	1 EA	1 EA	GATE	KENNEDY	
8"x6" TEE	5 EA	5 EA	MJ TEE	STAR PIPE	
6" VALVE	5 EA	5 EA	GATE	KENNEDY	
FIRE HYDRANT	5 EA	5 EA	MJ BEND	KENNEDY	
8" - 1/8" HORIZONTAL BEND	5 EA	5 EA	MJ BEND	STAR PIPE	
8" - 1/16" HORIZONTAL BEND	2 EA	2 EA	MJ BEND	STAR PIPE	
8" HORIZONTAL COUPLING	2 EA	2 EA	DEFLECTION	CERTAINTIED	
8" - 1/32" VERTICAL BEND	4 EA	4 EA	MJ BEND	STAR PIPE	
8" VERTICAL COUPLING	8 EA	8 EA	DEFLECTION	CERTAINTIED	
8" CAP AND BUTTRESS	3 EA	2 EA		STAR PIPE	
1" WHC	24 LF				
SEWER					
8" PVC SEWER	1,800 LF	1,800 LF	SDR 35	NORTH AMERICAN NATIONAL PIPE	
8" DIP SEWER	988.0 LF	988 LF	DIPAL 92	US PIPE GREEN	
4" SIC	785.4 LF	786 LF	SDR 35	NORTH AMERICAN NATIONAL PIPE	
MANHOLE	15 EA	15 EA	CONCRETE	CONCRETE PIPE & PRECAST	



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. MY LICENSE NO. IS 16195. MY EXPIRATION DATE IS 08-27-2016.

DRN:	JMR/KG	DES:	EDS
CHK:	RHV		
DATE:	DECEMBER 2014		

RHV	6	ADD W-3.27 CONNECTION FOR IRRIGATION	8/24/16
CLS	5	KCI AS-BUILTS	10/26/15
RVE	4	REMOVE 2 VALVES, OLD SCAGGSVILLE RD	7/13/15
	3	REVISE WATER MAIN C	3/13/15
KG	2	REVISED WATER AND SEWER MAINS PER PHASE 1.	12/2014
BY	NO.	REVISION	DATE

FINAL WATER AND SEWER PLAN
CONTRACT 24-4778-D
COVER SHEET

600' SCALE MAP NO. 50 BLOCK NO. 1

HIGH RIDGE MEADOWS SECTION 1-PHASE 1
 LOTS 1-31 AND OPEN SPACE LOTS 55, 57-59 AND 63-68
 (SFD RESIDENTIAL)
 OLD SCAGGSVILLE ROAD
 PARCELS 542
 HOWARD COUNTY, MD

OWNER: KATHY MESSE, PERSONAL REPRESENTATIVE, ESTATE OF ARTHUR P. KRUSKI, 9222 OLD SCAGGSVILLE ROAD, LAUREL, MD 20723-1730. ATTN: MR. DONALD R. REUWER 443-367-0422.

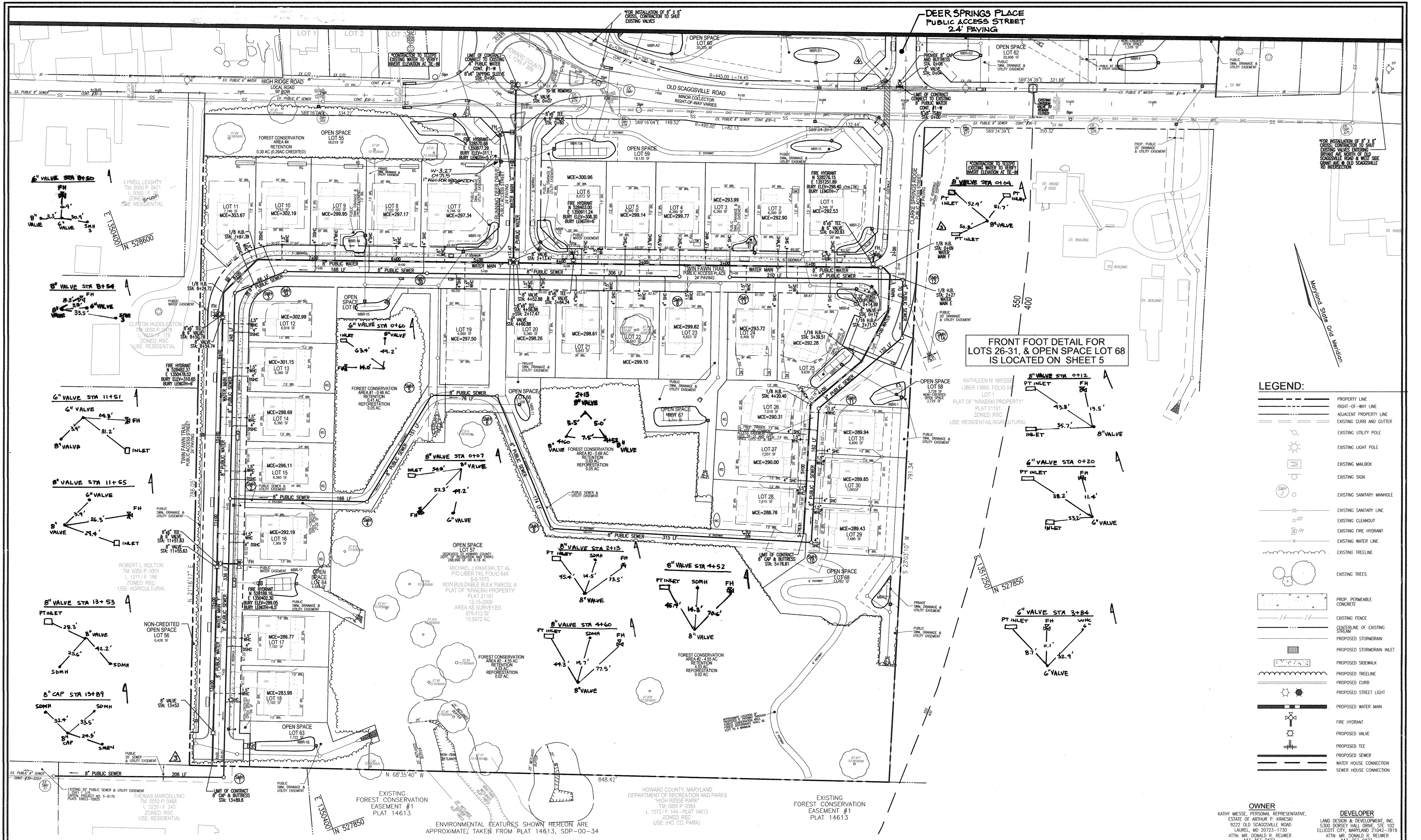
DEVELOPER: LAND DESIGN & DEVELOPMENT, INC., 5320 JORSELY HALL DRIVE, STE 102, ELLICOTT CITY, MARYLAND 21042-7819. ATTN: MR. DONALD R. REUWER 443-367-0422.

SCALE AS SHOWN

SHEET 1 OF 5

TAX MAP 50 GRID 1 2ND ELECTION DISTRICT

ZONING R-SC PARCELS: 542



FRONT FOOT DETAIL FOR LOTS 26-31, & OPEN SPACE LOT 68 IS LOCATED ON SHEET 5

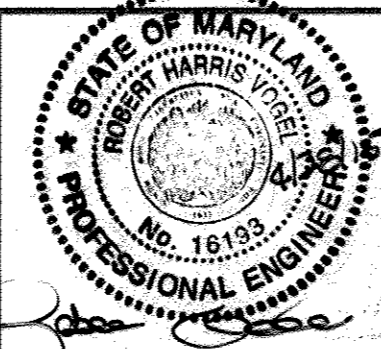
LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREE LINE
	EXISTING TREES
	PROP. PERMEABLE CONCRETE
	EXISTING FENCE
	CENTERLINE OF EXISTING STREAM
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	PROPOSED SIDEWALK
	PROPOSED TREE LINE
	PROPOSED CURB
	PROPOSED STREET LIGHT
	PROPOSED WATER MAIN
	FIRE HYDRANT
	PROPOSED VALVE
	PROPOSED TEE
	PROPOSED SEWER
	WATER HOUSE CONNECTION
	SEWER HOUSE CONNECTION

OWNER
KATHY MESSE, PERSONAL REPRESENTATIVE,
ESTATE OF ARTHUR P. KRASKI
9222 OLD SCAGGSVILLE ROAD
LAUREL, MD 20723-1730
ATTN: MR. DONALD R. REULER
443-367-0422

DEVELOPER
LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DRIVE, SUITE 102
ELICOTT CITY, MARYLAND 21042-7819
ATTN: MR. DONALD R. REULER
443-367-0422

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.8961



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. 18193, EXPIRATION DATE 08-27-2016.

DRN: JMR/KG DES: EDS
CHK: RHV
DATE: DECEMBER 2014

BY	NO.	REVISION	DATE
RHV	6	ADD W-327 CONNECTION FOR IRRIGATION	5/24/16
OLS	5	KCI AS-BUILTS	10-26-15
RVE	4	REMOVE 2 VALVES, OLD SCAGGSVILLE RD	7/13/15
RVE	3	REVISED WATER MAIN E	2/2015
KG	2	REVISED WATER AND SEWER MAINS PER PHASE 1.	12/2014
		REVISION	

FINAL WATER AND SEWER PLAN
CONTRACT 24-4778-D
LAYOUT PLAN

HIGH RIDGE MEADOWS SECTION 1-PHASE 1
LOTS 1-31 AND OPEN SPACE LOTS 55, 57-59 AND 63-68
(SFD RESIDENTIAL)
OLD SCAGGSVILLE ROAD
PARCELS 542
HOWARD COUNTY, MD

SCALE AS SHOWN
SHEET 2 OF 5

TAX MAP 50 GRID 1
2ND ELECTION DISTRICT

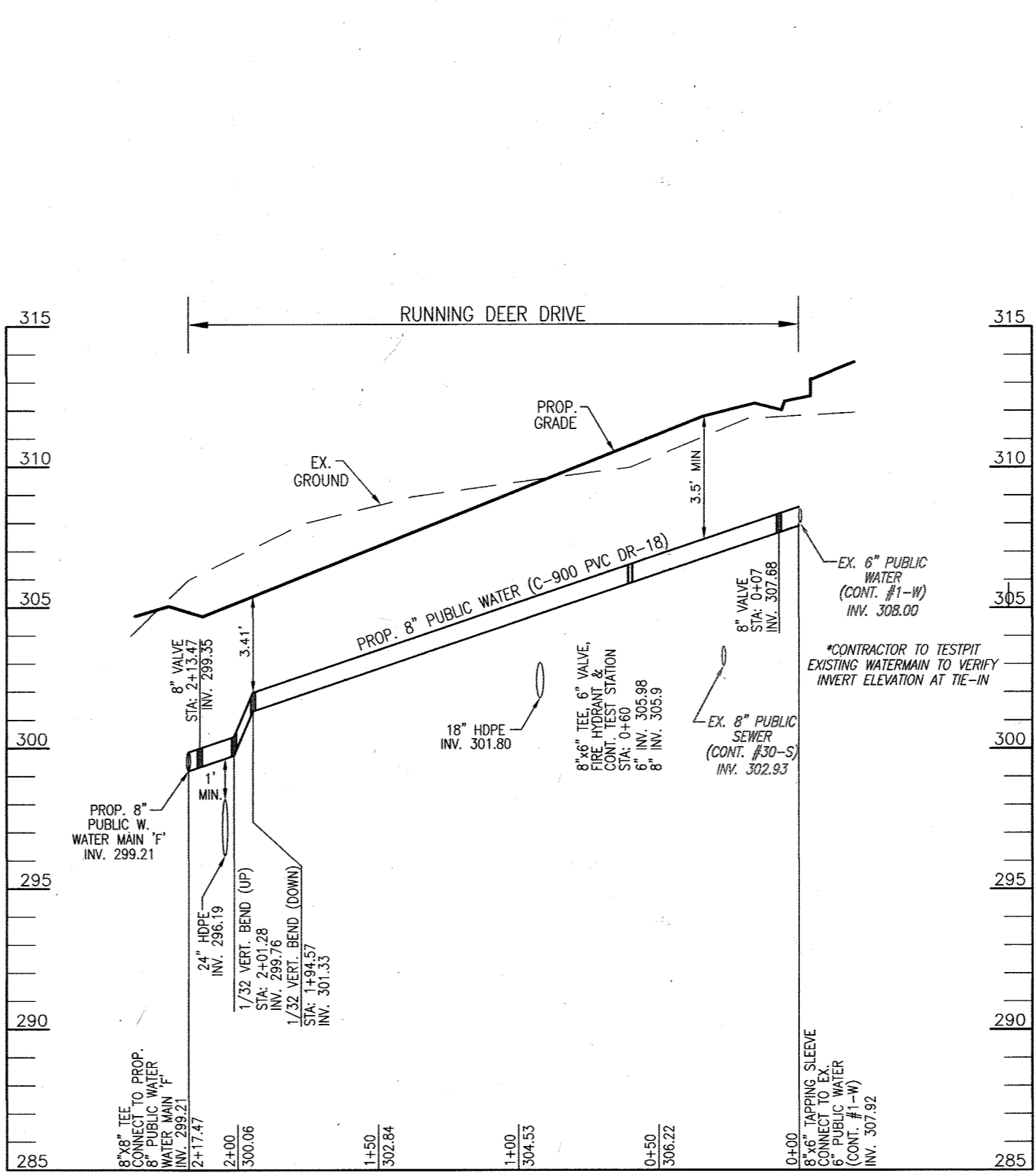
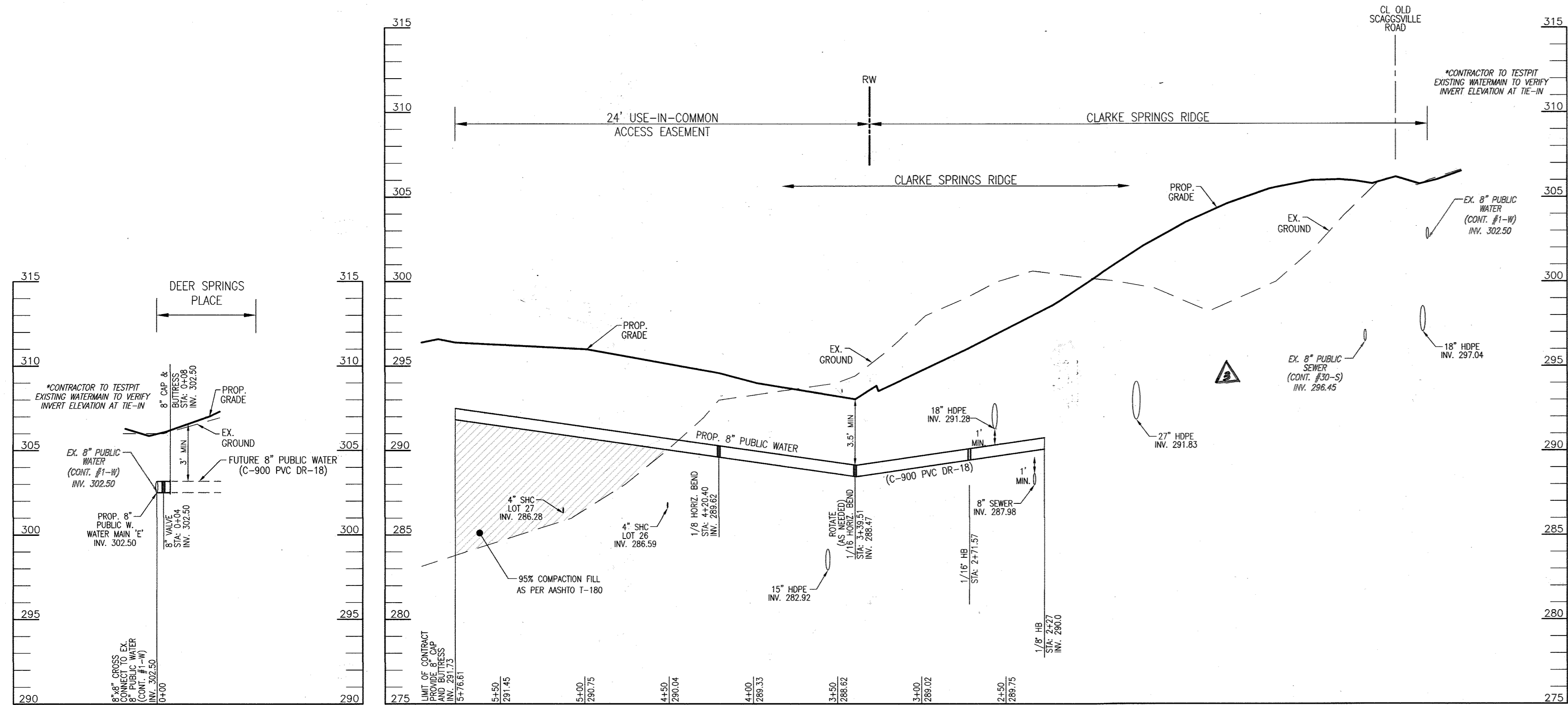
ZONING P-R-SC
PARCELS: 542
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

THOMAS MARCELLINO
TM 0050 P 0468
L 3229 F 243
ZONED: RSC
USE: RESIDENTIAL

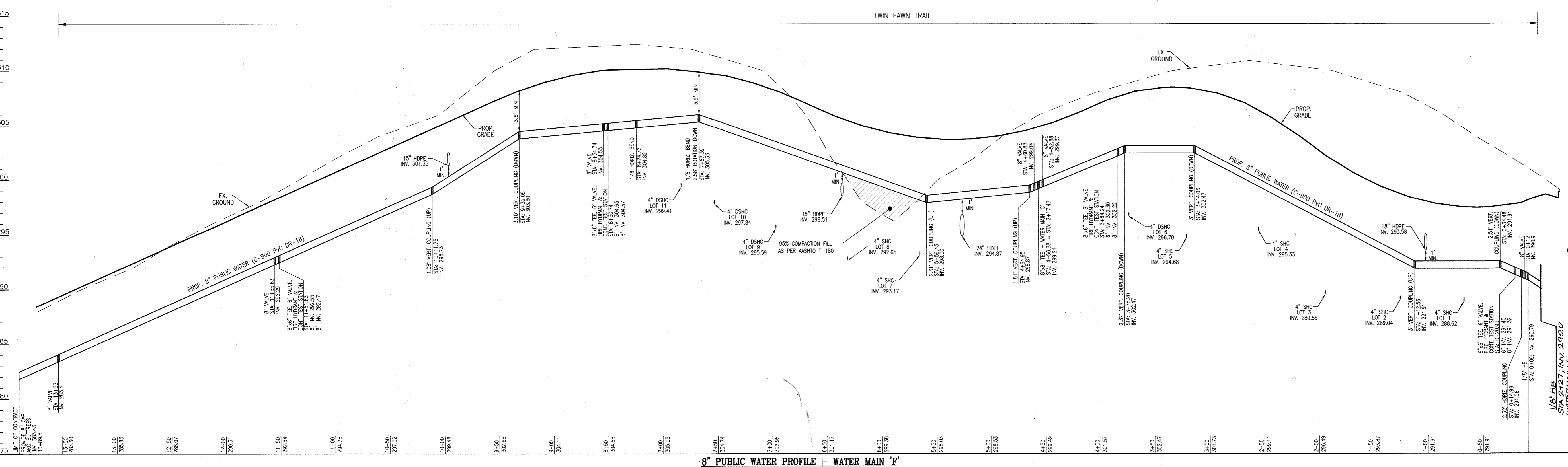
CLIFF J. GRIFFIN
DATE: 5-18-15
M.G.



WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1		52.7' TO FH	58.9' TO 6" VALVE
2		32.9' TO SDMH	34.2' TO INLET
3		45.5' TO SMH 13	44.4' TO SDMH
4		38.0' TO SMH 8	23.8' TO SHC 4
5		48.8' TO SMA 8	15.2' TO WHC 4
6		29.0' TO FH	33.1' TO 6" VALVE
7		33.8' TO SMH 30	12.2' TO PT INLET
8		32.6' TO INLET	30.2' TO PT INLET
9		22.4' TO SHC 9	27.2' TO PT INLET
10		41.1' TO SHC 9	31.5' TO SMH 3A
11		40.0' TO SMH 3A	52.0' TO SMH 3
12		41.1' TO SMH 3	40.1' TO FH
13		74.6' TO FH	37.5' TO PT INLET
14		60.7' TO WHC 13	24.5' TO INLET
15		43.0' TO INLET	37.7' TO SMH 2
16		45.8' TO SMH 2	34.0' TO FH
17		67.5' TO INLET	43.3' TO PT INLET
18		30.1' TO PT INLET	71.4' TO SMH 1
19		17.4' TO INLET	28.3' TO SDMH
20		44.5' TO SDMH	36.7' TO 8" VALVE
21		34.0' TO SHC 21	58.5' TO FH
22		28.5' TO SHC 22	48.4' TO SMH 8
23		20.6' TO SMH 8	54.7' TO SMH 8
24		27.5' TO SMH 13	32.0' TO SDMH
25		27.0' TO SHC 24	17.8' TO SDMH
26		19.2' TO SMH 11	9.9' TO SHC 24
27		40.6' TO SMH 11	13.0' TO SHC 27
28		41.5' TO WHC 27	34.5' TO WHC 27
29		42.5' TO SMH 10	10.4' TO SHC 30
30		30.7' TO SHC 30	14.4' TO WHC 30
31		46.5' TO WHC 30	12.6' TO SMH 11

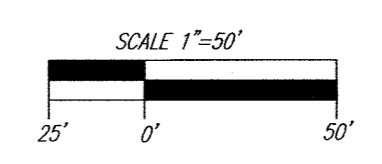
8" PUBLIC WATER PROFILE - WATER MAIN 'D'
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

8" PUBLIC WATER PROFILE - WATER MAIN 'C'
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



PUBLIC WATER MAIN LOCATION CHART		
STA.	FITTING	
WATER MAIN 'D' - DEER SPRINGS PLACE		
0+00	8"x8" TS&V	
0+04	8" VALVE	
0+08	8" CAP AND BUTTRISS	
WATER MAIN 'E' - CLARKE SPRINGS RIDGE		
2+27	1/8" HORIZONTAL BEND	
2+71.57	1/16" HORIZONTAL BEND	
3+39.51	1/16" HORIZONTAL BEND	
4+20.40	1/8" HORIZONTAL BEND	
5+76.61	8" CAP & BUTTRISS	
WATER MAIN 'F' - TWIN FAWN TRAIL		
0+09	1/8" HORIZONTAL BEND	
0+12	8" VALVE	
0+14.99	2.32" HORIZONTAL COUPLING	
0+20.93	8"x6" TEE, 6" VALVE, AND FIRE HYDRANT	
0+34.48	2.51" VERTICAL COUPLING (DOWN)	
1+12.56	3" VERTICAL COUPLING (UP)	
3+14.06	3" VERTICAL COUPLING (DOWN)	
3+78.20	2.37" VERTICAL COUPLING (DOWN)	
3+84.24	8"x6" TEE, 6" VALVE, AND FIRE HYDRANT	
4+52.88	8" VALVE	
4+56.88	8"x8" TEE - WATER MAIN 'G'	
4+60.88	8" VALVE	
4+64.95	1.81" VERTICAL COUPLING (UP)	
5+59.43	2.61" VERTICAL COUPLING (UP)	
7+67.39	1/8" HORIZONTAL BEND	
8+24.72	1/8" HORIZONTAL BEND	
8+50.74	8"x6" TEE, 6" VALVE, AND FIRE HYDRANT	
8+54.74	8" VALVE	
9+32.05	3.10" VERTICAL COUPLING (DOWN)	
10+11.75	1.08" VERTICAL COUPLING (UP)	
11+51.63	8"x6" TEE, 6" VALVE, AND FIRE HYDRANT	
11+55.63	8" VALVE	
13+53	8" VALVE	
13+89.8	8" CAP & BUTTRISS	
WATER MAIN 'G' - RUNNING DEER		
0+00	8"x6" TAPPING SLEEVE	
0+07	8" VALVE	
0+45.56	8"x6" TEE, 6" VALVE, AND FIRE HYDRANT	
1+94.57	1/32" VERTICAL BEND (DOWN)	
2+01.28	1/32" VERTICAL BEND (UP)	
2+13.47	8" VALVE	
2+17.47	8"x8" TEE	

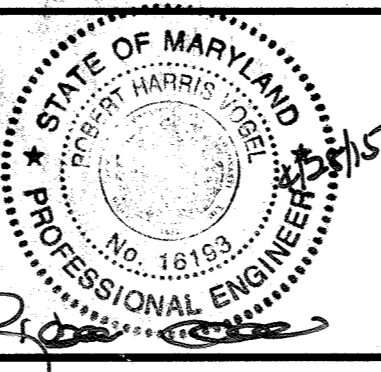
8" PUBLIC WATER PROFILE - WATER MAIN 'F'
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
SAC C. C. ...
CHIEF, BUREAU OF UTILITIES

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

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961



PROFESSIONAL CERTIFICATE	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16163, EXPIRATION DATE: 09-27-2016
DRN: JMR/KG	DES: EDS
CHK: RHV	KG 2 REVISED WATER MAIN E
DATE: DECEMBER 2014	REVISED WATER AND SEWER MAINS PER PHASE 1.
BY NO.	REVISION
10-26-15	10-26-15
2/2015	2/2015
12/2014	12/2014

FINAL WATER AND SEWER PLAN
CONTRACT 24-4778-D
WATER PROFILES
600' SCALE MAP NO. 50
BLOCK NO. 1

OWNER
KATHY MIESSE, PERSONAL REPRESENTATIVE,
ESTATE OF ARTHUR P. KRAESKI
9222 OLD SCAGGSVILLE ROAD
LAUREL, MD 20723-1250
ATTN: MR. DONALD R. REUWER
443-367-0422

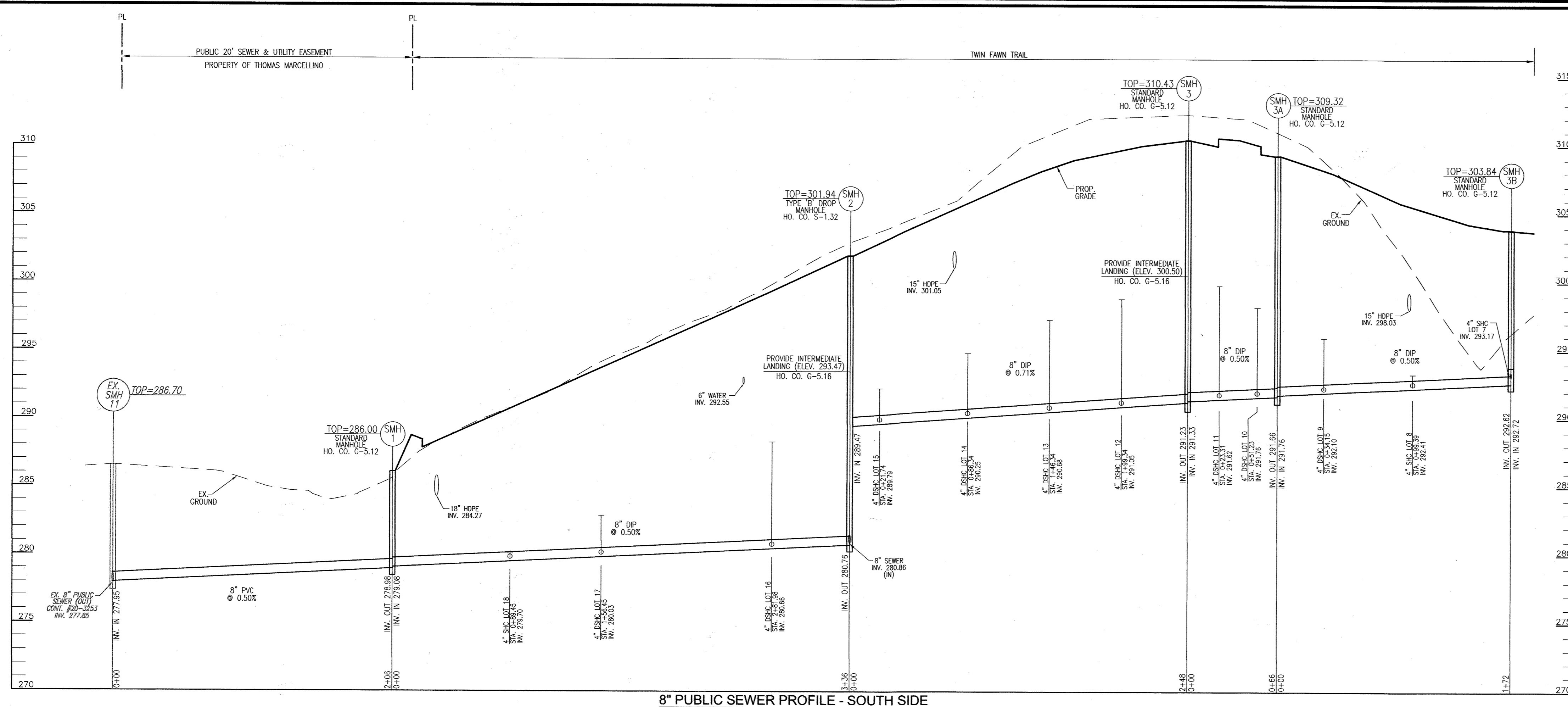
DEVELOPER
LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DRIVE, STE 102
ELICOTT CITY, MARYLAND 21042-7819
ATTN: MR. DONALD R. REUWER
443-367-0422

SCALE AS SHOWN

SHEET 3 OF 5

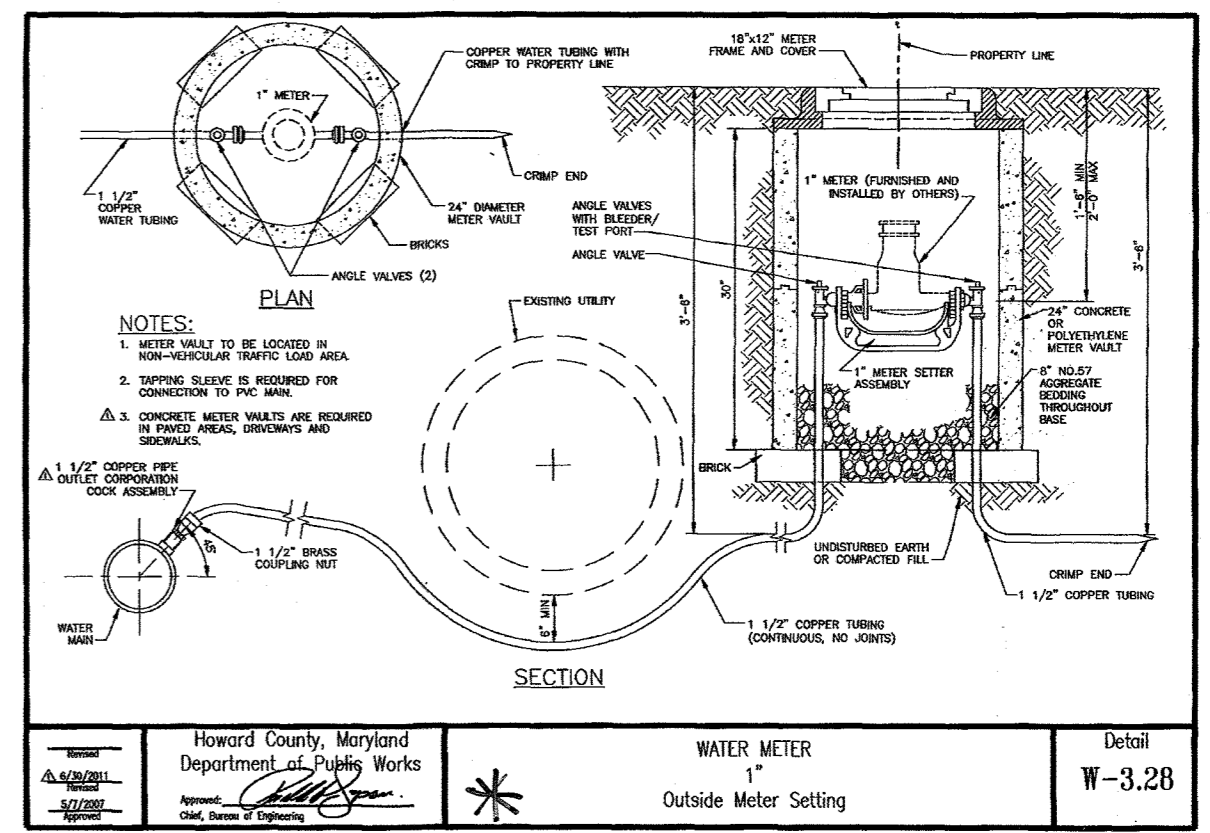
TAX MAP 50 GRID 1
2ND ELECTION DISTRICT

ZONING R-SC
PARCELS: 542
HOWARD COUNTY, MARYLAND

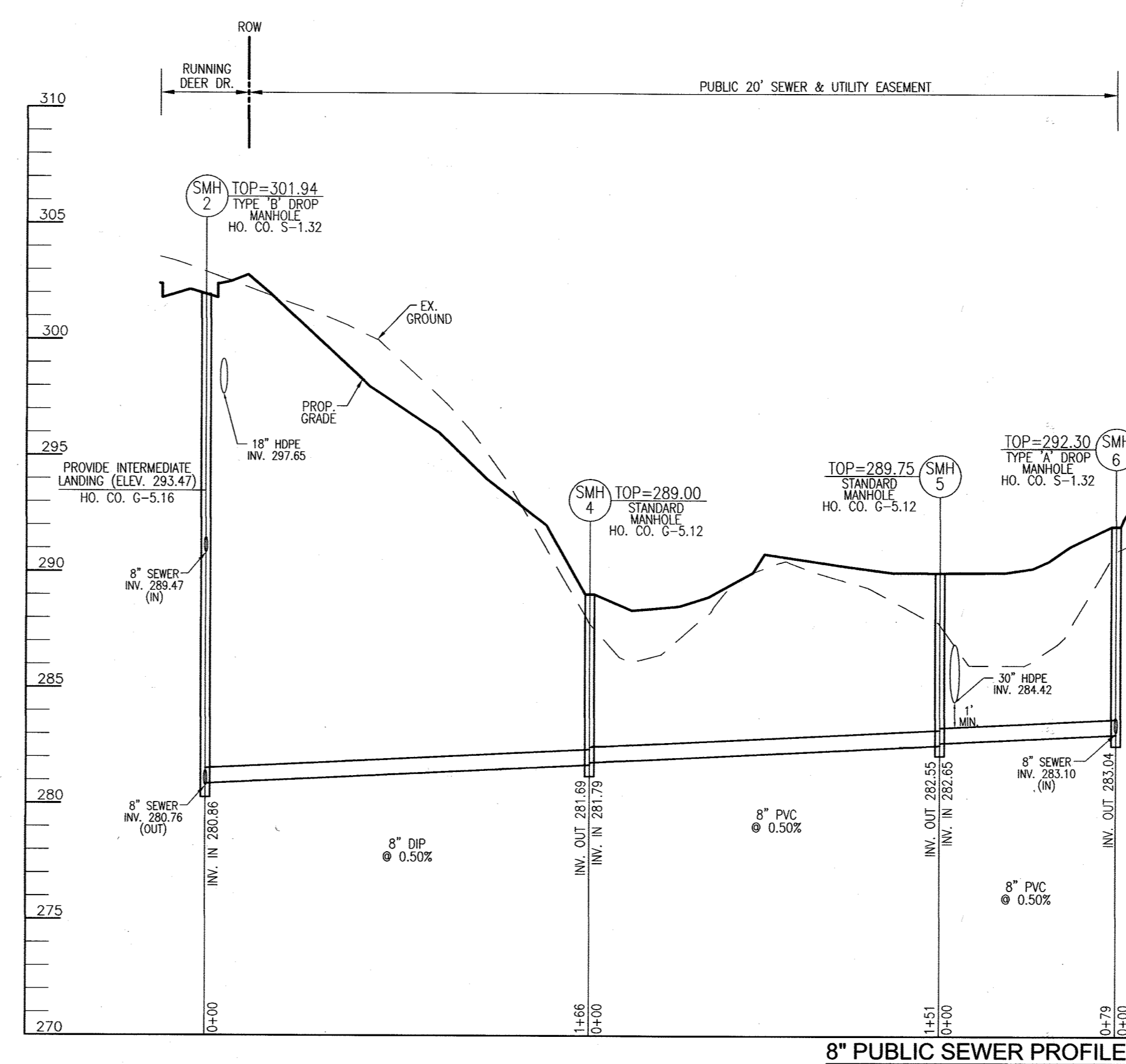
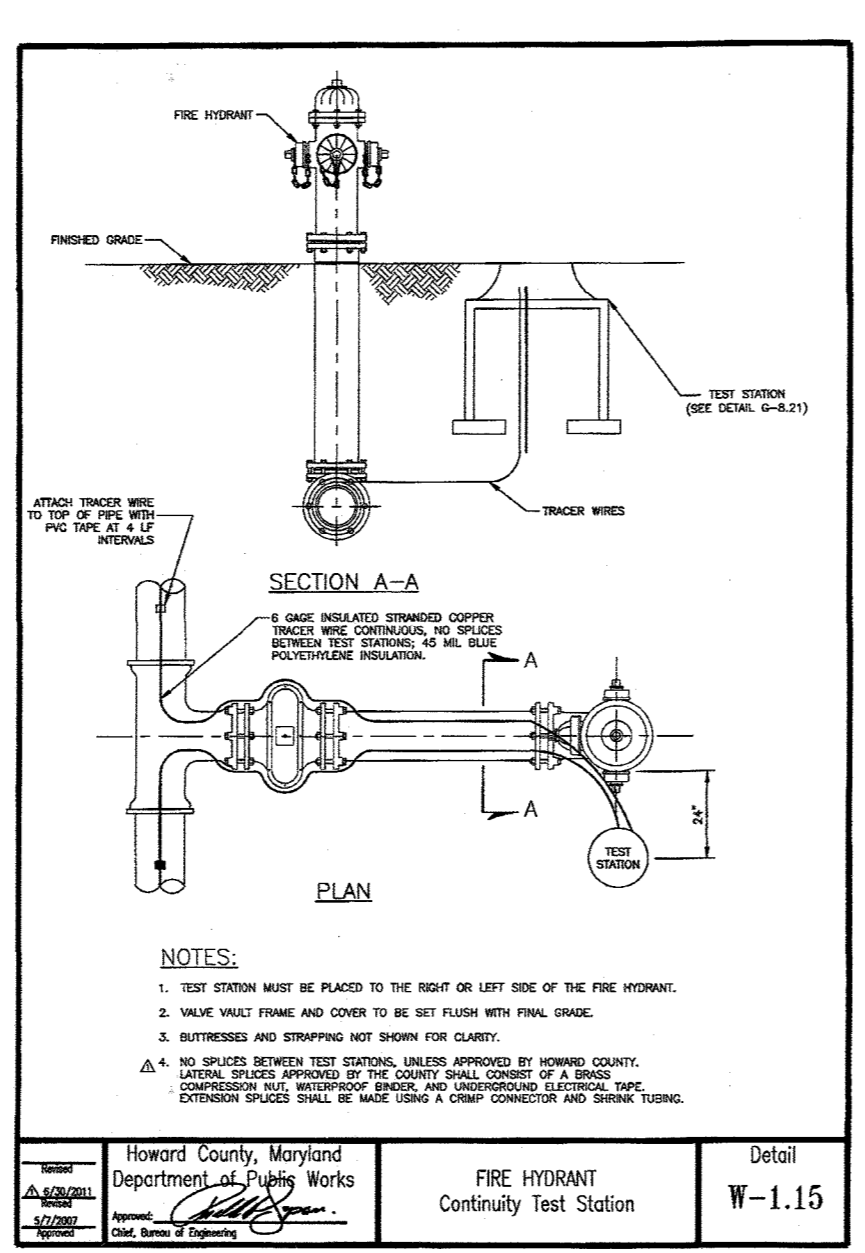
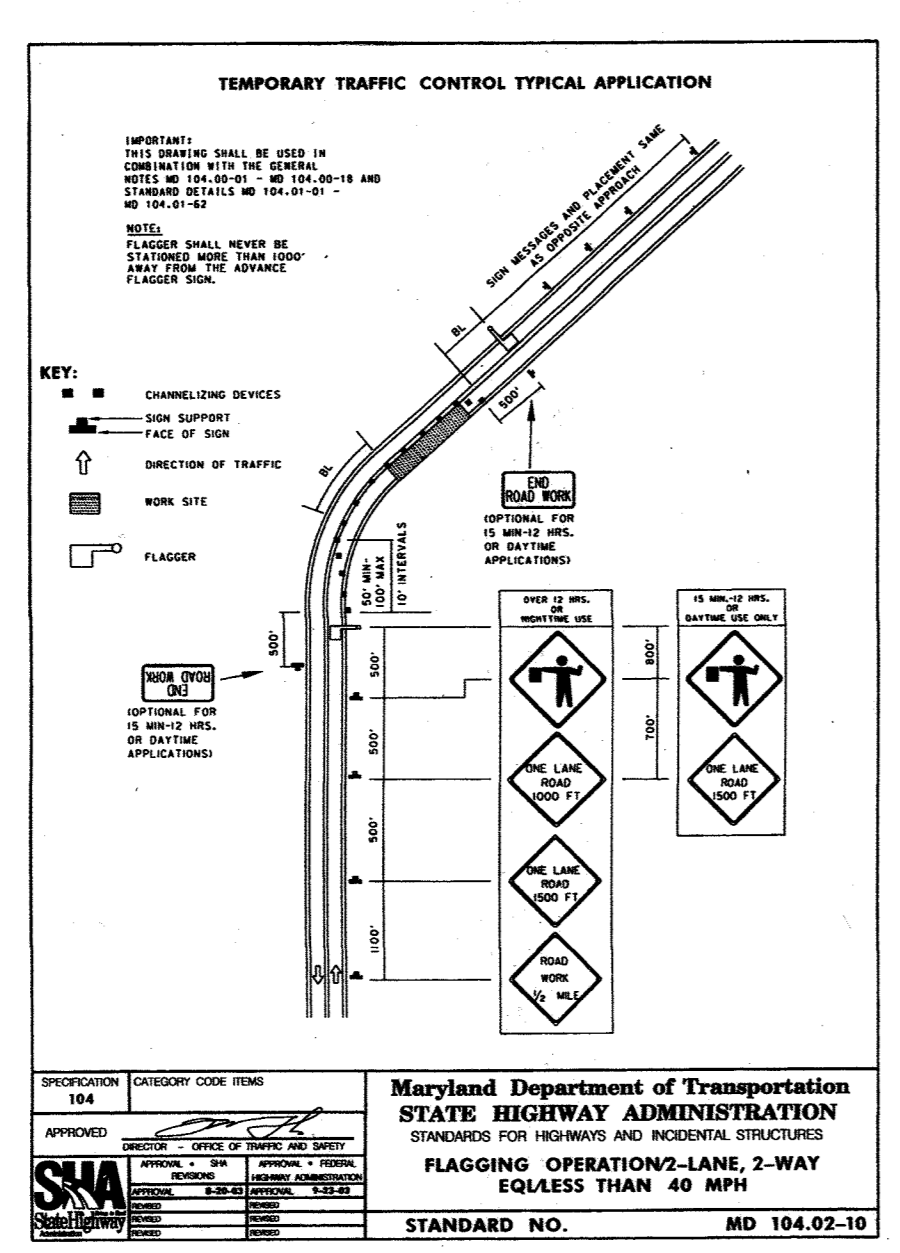
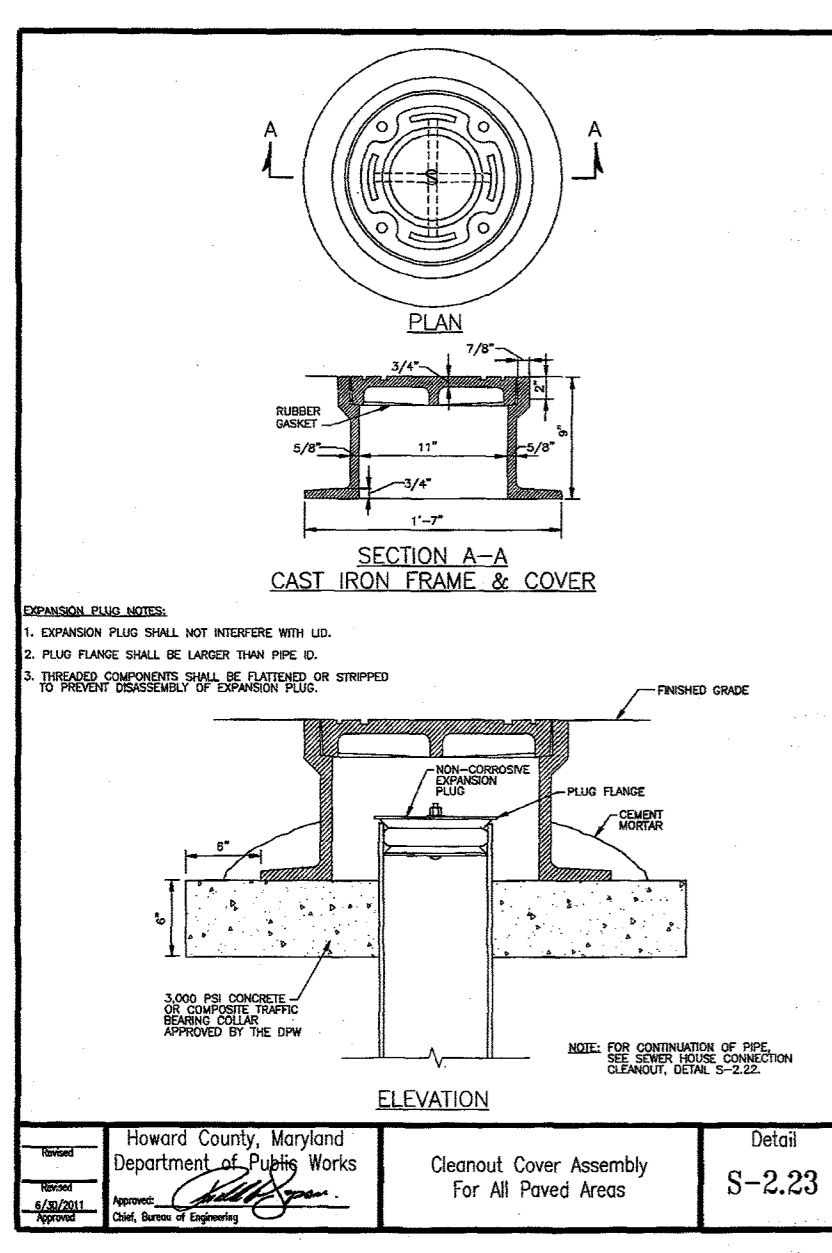


8" PUBLIC SEWER PROFILE - SOUTH SIDE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

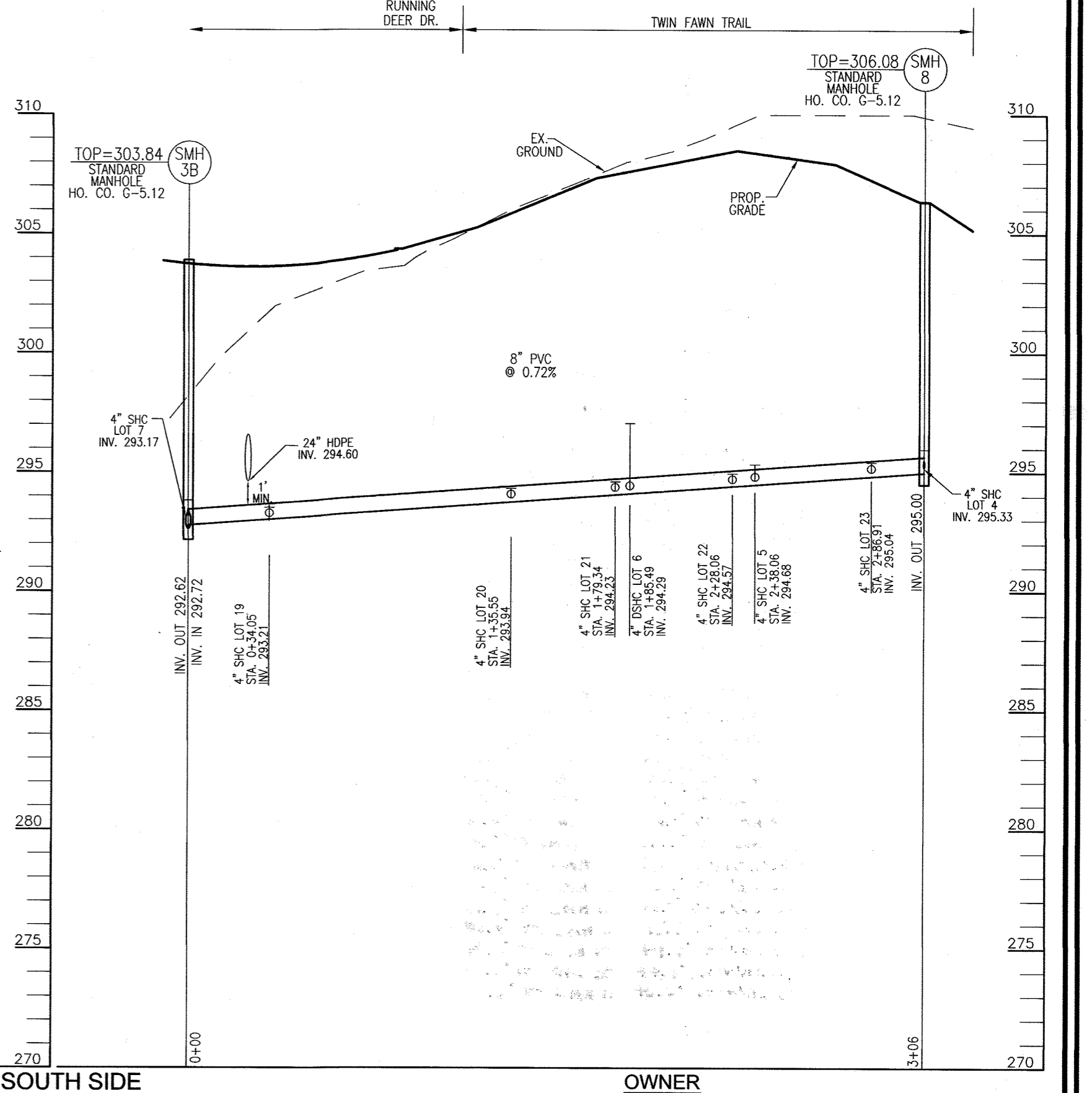
MH No.	TYPE	LOCATION	TOP ELEV.	INV. IN.	INV. OUT.
SMH 1	STD. 4" PRECAST MANHOLE (G-5.12)	N 528025.82 E 1350103.59	286.70	277.95	277.85
SMH 2	STD. 4" PRECAST MANHOLE (G-5.12)	N 527953.55 E 1350296.98	286.00	279.08	278.98
SMH 3	TYPE 'B' DROP MANHOLE (S-1.32)	N 528266.87 E 1350418.96	301.94	288.27	280.76
SMH 4	STD. 4" PRECAST MANHOLE (G-5.12)	N 528498.39 E 1350509.09	310.43	291.33	291.23
SMH 5	STD. 4" PRECAST MANHOLE (G-5.12)	N 528501.63 E 1350575.32	309.32	291.76	291.66
SMH 6	STD. 4" PRECAST MANHOLE (G-5.12)	N 528440.86 E 1350735.86	303.84	292.72	292.62
SMH 7	STD. 4" PRECAST MANHOLE (G-5.12)	N 528206.62 E 1350573.50	289.00	281.79	281.69
SMH 8	STD. 4" PRECAST MANHOLE (G-5.12)	N 528300.56 E 1350691.29	289.75	282.65	282.55
SMH 9	TYPE 'A' DROP MANHOLE (S-1.32)	N 528272.49 E 1350765.46	292.30	283.10	283.04
SMH 10	STD. 4" PRECAST MANHOLE (G-5.12)	CL ROAD STA: 2+62.29 TWIN FAWN TRAIL, 7' LT.	306.08	295.33	295.00
SMH 11	STD. 4" PRECAST MANHOLE (G-5.12)	N 528099.62 E 1350772.85	290.00	284.07	283.97
SMH 12	STD. 4" PRECAST MANHOLE (G-5.12)	N 527976.13 E 1351063.03	296.40	288.75	285.65
SMH 13	STD. 4" PRECAST MANHOLE (G-5.12)	N 528125.09 E 1351126.42	295.50	286.66	286.56
SMH 14	STD. 4" PRECAST MANHOLE (G-5.12)	N 528170.72 E 1351250.43	296.00	287.42	287.32
SMH 15	STD. 4" PRECAST MANHOLE (G-5.12)	CL ROAD STA: 2+13.34 CLARKE SPRINGS RIDGE, 9' LT.	298.03	287.87	287.77
SMH 16	STD. 4" PRECAST MANHOLE (G-5.12)	CL ROAD STA: 2+01.27 TWIN FAWN TRAIL, 7' LT.	302.27	289.55	289.38



* See Current Detail W-3.28 DATED 5/1/14



8" PUBLIC SEWER PROFILE - SOUTH SIDE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

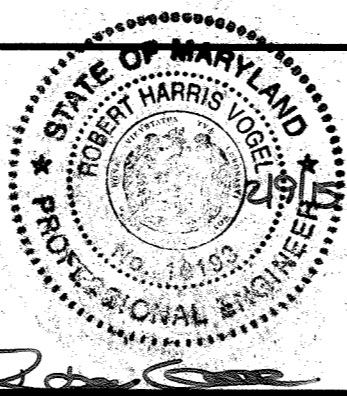


8" PUBLIC SEWER PROFILE - SOUTH SIDE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DATE: 2/2/15

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 DATE: 3-18-15

ROBERT H. VOGEL ENGINEERS, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET, ELLICOTT CITY, MD 21043
 TEL: 410.461.7666 FAX: 410.461.8961



DRN:	JMR/KG	DES:	EDS
CHK:	RHV	BY:	NO.
DATE:	DECEMBER 2014	REVISION:	10-26-15

FINAL WATER AND SEWER PLAN
 CONTRACT 24-4778-D
SEWER PROFILES

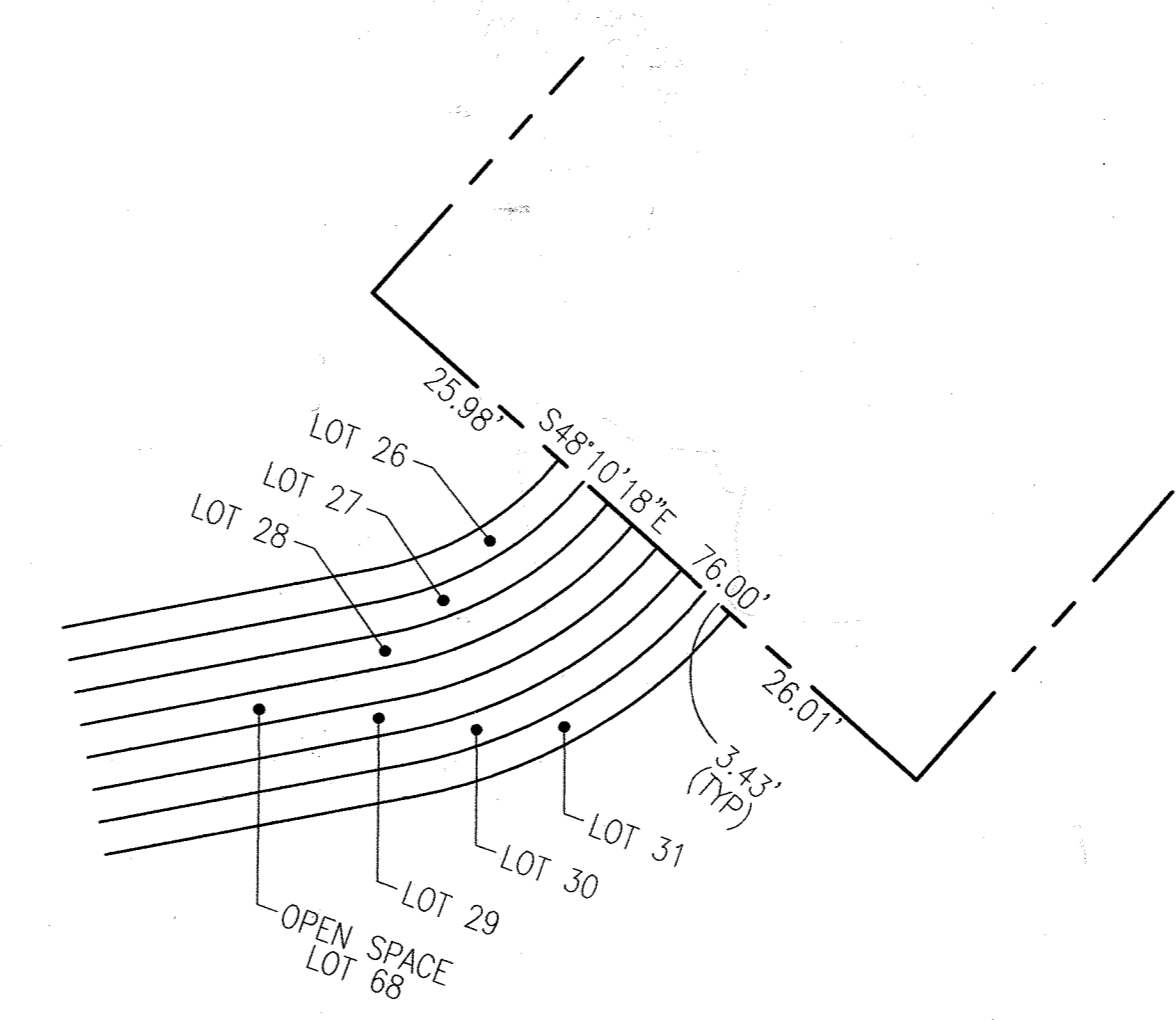
HIGH RIDGE MEADOWS SECTION 1-PHASE 1
 (SFD RESIDENTIAL)
 LOTS 1-31 AND OPEN SPACE LOTS 55, 57-59 AND 63-68
 OLD SCAGGSVILLE ROAD PARCELS 542
 HOWARD COUNTY, MD

SCALE AS SHOWN
 SHEET 4 OF 5

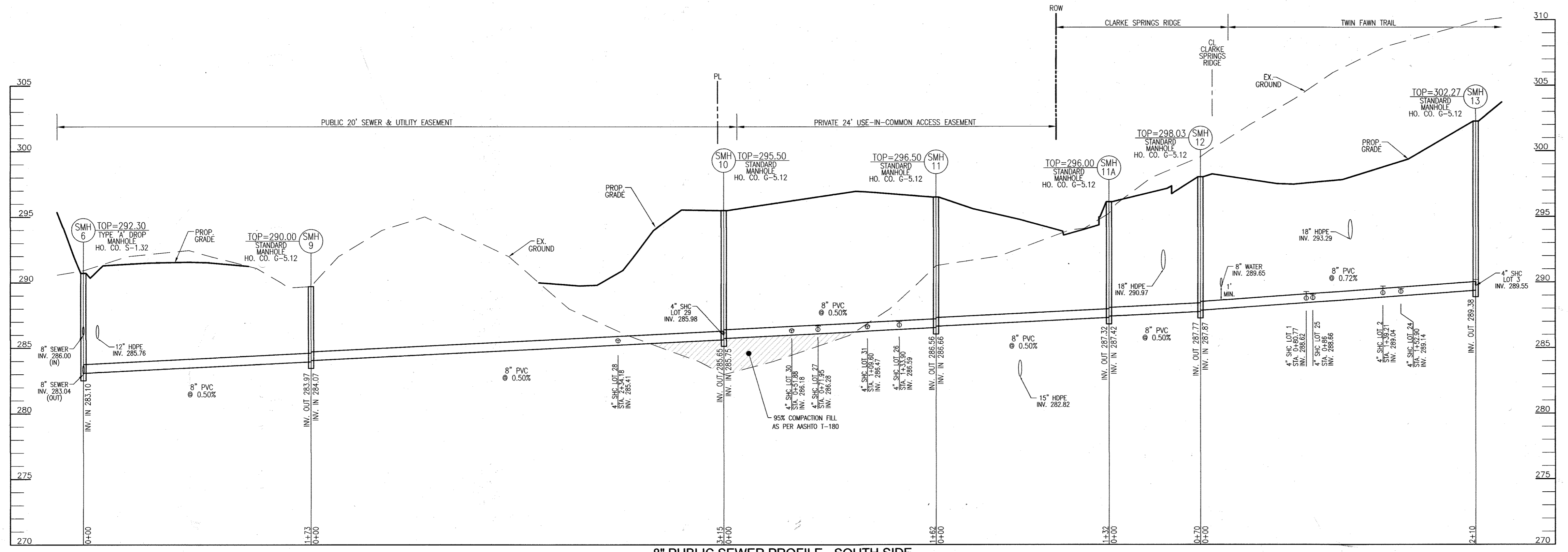
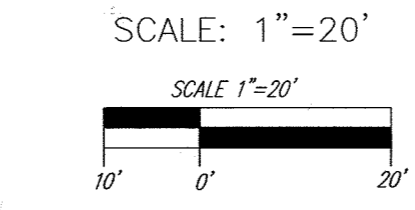
MINIMUM CELLAR ELEVATION CHART

DROP THRU SLAB 2.5

LOT #	EL @ MAIN	TYPE	DIST. TO ESMT / R/W	ELEV @ ESMT / R/W	DIST TO HOUSE	EL @ HOUSE	MCE	SHC SLOPE
1	288.62	SHC	33	289.28	75	290.03	292.53	1.00%
2	289.04	SHC	33	289.70	70	290.40	292.90	1.00%
3	289.55	SHC	33	290.19	65	291.49	293.99	2.00%
4	295.33	SHC	32	295.97	65	297.27	299.77	2.00%
5	294.63	SHC	32	295.34	65	296.64	299.14	2.00%
6	294.29	DSHC	33	294.95	70	298.46	300.96	2.00%
7	292.60	SHC	32	293.24	80	294.84	297.34	2.00%
8	292.41	SHC	33	293.07	80	294.67	297.17	2.00%
9	292.10	DSHC	33	292.95	80	297.45	299.95	2.00%
10	291.79	DSHC	40	298.19	75	299.69	302.19	2.00%
11	291.62	DSHC	40	299.77	70	301.17	303.67	2.00%
12	291.05	SHC	19	298.79	85	300.49	302.99	2.00%
13	290.68	DSHC	19	297.25	70	298.65	301.15	2.00%
14	290.25	DSHC	19	294.79	70	296.19	298.69	2.00%
15	289.79	DSHC	19	292.21	70	293.61	296.11	2.00%
16	280.66	DSHC	19	288.29	70	289.69	292.19	2.00%
17	280.03	DSHC	19	282.87	70	284.27	286.77	2.00%
18	279.70	SHC	19	280.08	70	281.48	283.98	2.00%
19	293.14	SHC	18	293.50	75	295.00	297.50	2.00%
20	293.90	SHC	18	294.26	75	295.76	298.26	2.00%
21	294.23	SHC	19	294.61	75	296.11	298.61	2.00%
22	294.61	SHC	19	295.00	80	296.60	299.10	2.00%
23	295.04	SHC	19	295.42	85	297.12	299.62	2.00%
24	289.14	SHC	19	289.52	85	291.22	293.72	2.00%
25	288.66	SHC	21	289.08	70	289.78	292.28	1.00%
26	286.59	SHC	21	287.01	80	287.81	290.31	1.00%
27	286.28	SHC	21	286.70	80	287.50	290.00	1.00%
28	285.41	SHC	11	285.63	65	286.28	288.78	1.00%
29	285.98	SHC	10	286.18	75	286.93	289.43	1.00%
30	286.18	SHC	11	286.40	75	287.15	289.65	1.00%
31	286.47	SHC	11	286.69	75	287.44	289.94	1.00%

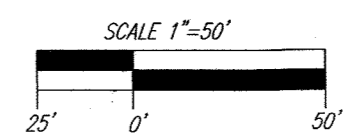


FRONT FOOT DETAIL FOR LOTS 26-31, & OPEN SPACE LOT 68



8\"/>

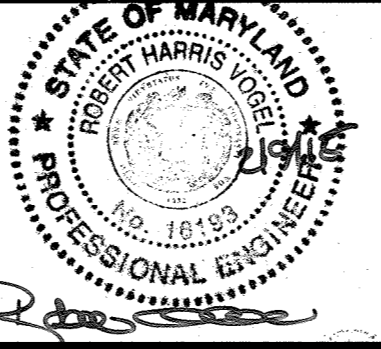
LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1		45.6' TO FH	48.5' TO 6\"/>



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES
DATE: 3-18-15

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 3-18-15

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PROFESSIONAL CERTIFICATE	DATE: 12/2014
DRN: JMR/KG DES: EDS	BY: NO.
CHK: RHW	REVISION
DATE: DECEMBER 2014	DATE

FINAL WATER AND SEWER PLAN
CONTRACT 24-4778-D
SEWER PROFILES

HIGH RIDGE MEADOWS SECTION 1-PHASE 1
LOTS 1-31 AND OPEN SPACE LOTS 55, 57-59 AND 63-68
(SFD RESIDENTIAL)
OLD SCAGGSVILLE ROAD PARCELS 542 HOWARD COUNTY, MD
TAX MAP 50 GRID 1 2ND ELECTION DISTRICT

SCALE AS SHOWN
SHEET 5 OF 5