


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.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHICAL SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED AUGUST 18, 2010. OFFSITE TOPOGRAPHY FROM HOWARD COUNTY GIS. THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED AUGUST 18, 2010.
- 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 30CC AND 31AC.
ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:
GEODETIC SURVEY CONTROL 30CC (N 576,747.03/E 1,365,563.14)
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
GEODETIC SURVEY CONTROL 31AC (N 575,223.09/E 1,367,092.12)
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 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 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 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 (CONSTRUCTION SERVICES) 410-637-8713
BGE (EMERGENCY) 410-685-0123
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
- 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 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(g) OF THE HOWARD COUNTY CODE.

- PART II - WATER**
- ALL WATER MAINS SHALL BE C-900 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 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 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 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.
 - 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.
- SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN SDP-14-074

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

John R. Blutz 11/22/17
SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Christy Day 11/3/17
CHIEF, BUREAU OF UTILITIES DATE

Chad Edwards 12.4.17
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

PART I - CONTINUED

12. THIS PLAN IS SUBJECT TO A DESIGN MANUAL WAIVER OF DESIGN MANUAL VOLUME II, SECTIONS 4.3B.5.b, 4.5.F AND 5.3, ON SEPTEMBER 22, 2014, THE DEPUTY DIRECTOR OF THE DEPARTMENT OF PUBLIC WORKS APPROVED THE WAIVER OF SECTION 4.3B.5.b TO ALLOW NO BASEMENT GRAVITY SEWER SERVICE TO LOTS 57 THRU 69. SUBJECT TO CONDITIONS:
(1) THE WAIVER OF SECTION 4.5.F TO ALLOW THE USE OF TWIN SEWER HOUSE CONNECTIONS SUBJECT TO CONDITIONS.
(2) THE WAIVER OF SECTION 5.3 TO ALLOW THE PLACEMENT OF STORM DRAIN INLET #16 WITHIN THE PUBLIC SEWER, WATER, AND UTILITY EASEMENT.

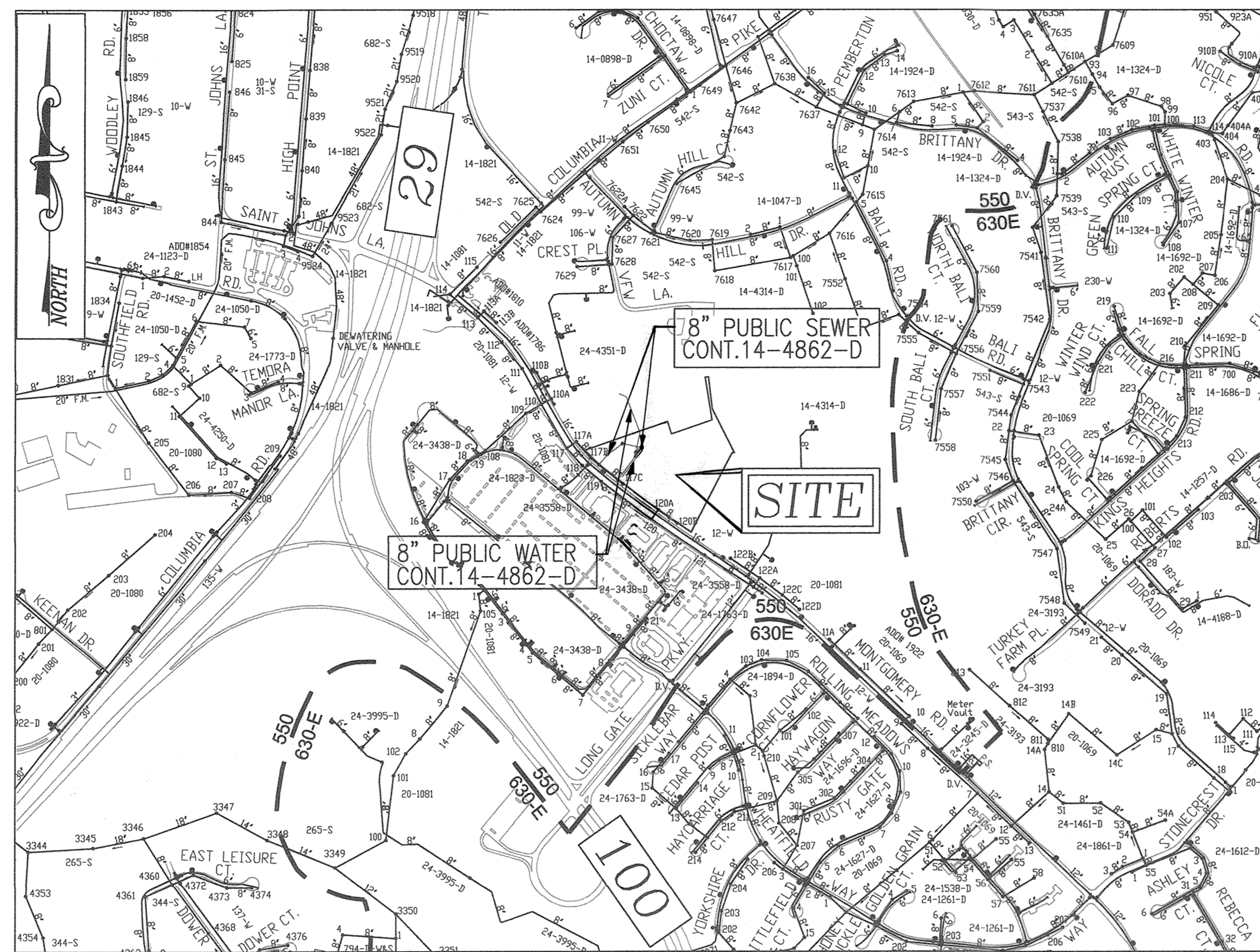
FINAL WATER AND SEWER CONSTRUCTION PLAN

LONG GATE OVERLOOK-PHASE 1

LOTS 1-15

CONTRACT 14-4862-D

HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1"=600'


WATER ZONE: 550
TEST GRADIENT: 827
TEST PRESSURE: 187.91


PART II - HORIZONTAL CONTINUED

- 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 COMPACTOR EQUIPMENT DIRECTLY OVER THE FITTING.
- PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES 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, DR18 MEETING THE REQUIREMENTS OF ANNA C900 AND SHALL BE MULTI FITTINGS (IPEX) 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 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.

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 WATERTIGHT FRAME AND COVER, STANDARD DETAIL C5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE 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 THE CELLAR CANNOT BE SERVED.

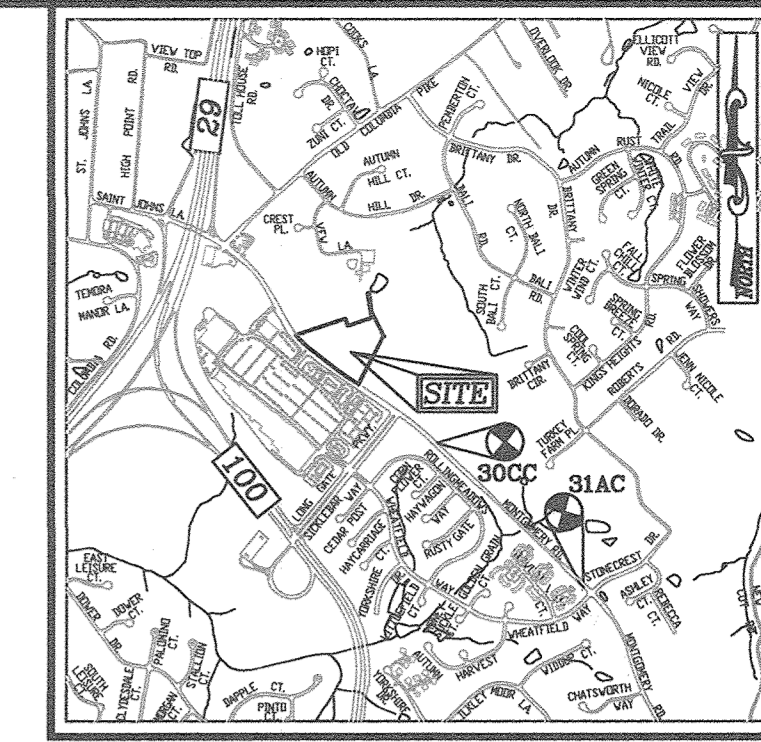
TYPE OF BUILDING:	SINGLE FAMILY TOWNHOMES
NO. OF LOTS/PARCELS:	15 SFA
NO. OF SINGLE WATER HOUSE CONNECTIONS:	3 + 1 * 
NO. OF TWIN WATER HOUSE CONNECTIONS:	6
NO. OF SINGLE SEWER HOUSE CONNECTIONS:	15
NO. OF TWIN SEWER HOUSE CONNECTIONS:	0
DRAINAGE AREA:	PATAPSCO WATERSHED
TREATMENT PLANT:	PATAPSCO WASTEWATER

 THERE IS AN ADDITIONAL 1" WHC FOR IRRIGATION, A 3/4" OUTSIDE METER SETTING AT PROTECT ENTRANCE BETHEL OVERLOOK AT MD 103, WATERMAN RD., WL STA 2+12.7, 10' RT

BENCHMARKS

HOWARD COUNTY BENCHMARK - 30CC (CONC. MONUMENT)
N 576747.03 E 1365563.14 ELEV. 427.32
LOCATION: MONTGOMERY ROAD 1/3 MILE EAST OF LONG GATE PARKWAY

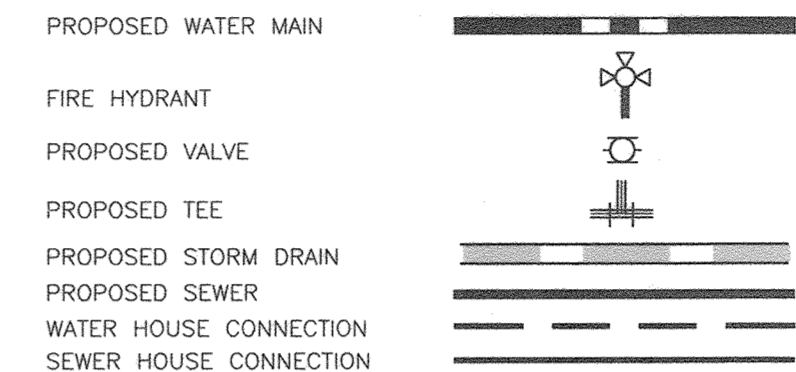
HOWARD COUNTY BENCHMARK - 31AC (CONC. MONUMENT)
N 575223.09 E 1367092.12 ELEV. 432.55
LOCATION: MONTGOMERY ROAD 3/4 MILE EAST OF LONG GATE PARKWAY



LOCATION MAP
SCALE: 1"=2000'
ADC MAP COORDINATE: PG. 4815 K10

SHEET INDEX	
DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 3
WATER & SEWER PLAN	2 OF 3
WATER MAIN PROFILES AND SEWER MAIN PROFILES	3 OF 3

LEGEND



PROPERTIES TO BE REMOVED

HOUSE ADDRESS	EXISTING HOUSE	EXISTING WATER & SEWER SERVICE
4271 MONTGOMERY ROAD	TO BE RAZED	TO BE ABANDONED
4275 MONTGOMERY ROAD	TO BE RAZED	TO BE ABANDONED
4281 MONTGOMERY ROAD	TO BE RAZED	TO BE ABANDONED
4291 MONTGOMERY ROAD	TO BE RAZED	TO BE ABANDONED
4309 MONTGOMERY ROAD	TO BE RAZED	TO BE ABANDONED
4319 MONTGOMERY ROAD	TO BE RAZED	TO BE ABANDONED

QUANTITIES

NAME OF UTILITY CONTRACTOR :		QUANTITIES		AS-BUILT	
SURVEY AND DRAFTING DIVISION AS-BUILT DATE :		ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
WATER					
8" WATER (C-900) (DR-18)	668 LF	668	PVC		NORTH AMERICAN PIPE COMPANY
6" WATER (C-900) (DR-18)	57 LF	57	PVC		NORTH AMERICAN PIPE COMPANY
16" X 8" TAPPING SLEEVE	1 EA	1	DIP		SMITH ISLAIR
8" X 8" TEE	1 EA	1	DIP		TYLER UNION
8" X 6" TEE	2 EA	2	DIP		TYLER UNION
12" X 6" TEE	1 EA	1	DIP		TYLER UNION
8" VALVE	3 EA	3	DIP		MUELLER COMPANY
8" VALVE	3 EA	3	DIP		MUELLER COMPANY
CONTINUITY TEST STATION	3 EA	3	CONCRETE		HORNE CONCRETE
8" - 1/8" HORIZ. BEND	- EA	-	-		TYLER UNION
8" - 1/16" HORIZ. BEND	6 EA	5	DIP		TYLER UNION
8" - 1/32" HORIZ. BEND	2 EA	2	DIP		TYLER UNION
8" - 1/8" VERT. BEND	- EA	-	-		-
8" - 1/16" VERT. BEND	- EA	-	-		-
8" - 1/32" VERT. BEND	2 EA	2	DIP		TYLER UNION
8" - VERT. COUPLING	4 EA	4	PVC		IPEX
1 1/2" WHC	110 LF	111	COPPER		MUELLER COMPANY
1" OUTSIDE METER (SINGLE)	3 EA	3	METER		MUELLER COMPANY
1" OUTSIDE METER (TWIN)	6 EA	6	METER		MUELLER COMPANY
8" COP AND BUTTRISS	2 EA	2	DIP		TYLER UNION
8" - 5" VERT. SWEEP	5 EA	5	PVC		IPEX
SEWER					
MANHOLE	7 EA	7	CONCRETE		CPC
8" SEWER (PVC)	487 LF	488	PVC		NORTH AMERICAN PIPE COMPANY
4" SHC	230 LF	232	PVC		NORTH AMERICAN PIPE COMPANY
CLEANOUT	15 EA	15	CONCRETE		-
3/4" OUTSIDE METER SETTING		1 EA	WATER CONTINUED	METER	MUELLER COMPANY

OWNER/DEVELOPER
BEAZER HOMES

ATTN: J. MARTIN SHAFFER, AREA PRESIDENT
AUTHORIZED SIGNATURE - EAST REGION
6085 MARSHALEE DRIVE, SUITE 350
ELKRIE, MD 21075
413-539-9249

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

STATE OF MARYLAND
PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE No. 16193

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 EXPIRES 09-27-2018

WRA	AS BUILT	11/10/21
VTG	REVISE TO ADD WHC FOR IRRIGATION SYSTEM	5-27-21
VTG	REVISE TO CREATE TWO CONTRACTS FROM ONE PREVIOUSLY	8-20-20
BY	APPROVED CONTRACT, REPLACING THIS CONTRACT FROM TOWNLOTS 15	

DRN: JMR/KG DES: EDS
CHK: RHV
DATE: SEPTEMBER 2017

FINAL WATER AND SEWER CONSTRUCTION PLAN

COVER SHEET

LONG GATE OVERLOOK - PHASE 1
LOTS 1-15
CONTRACT 14-4862-D

SCALE AS SHOWN
SHEET 1 OF 3

ZONED: R-A-15
HOWARD COUNTY, MARYLAND
PARCEL 322, 323, 324, 325, 326 & 327

TAX MAP 24 GRID 24
2ND ELECTION DISTRICT

600' SCALE MAP NO. 24
BLOCK NO. 24

NOTES:

- EXISTING CONTRACT 20-1081 SEWER MAIN AND THE SHC SERVING #4281 AND #4291 (SERVICES TERMINATED 2018) ALONG MONTGOMERY ROAD FROM PROPOSED SMH-1 TO EXISTING CONTRACT 20-1081 SMH 117C ARE TO BE ABANDONED IN PLACE.
SEWER MAIN SHALL BE ABANDONED IN ACCORDANCE WITH DMV II SECTION 5.6.B.
- EXISTING CONTRACT 20-1081 SEWER MAIN FROM EXISTING SMH-120A TO EXISTING SMH 120B AND SHC (TBA) ALONG MONTGOMERY ROAD ARE TO BE ABANDONED IN PLACE. SEWER MAIN SHALL BE ABANDONED IN ACCORDANCE WITH DMV II SECTION 5.6.B.
INVERT INTO EX. SMH 120 (FROM NORTH) SHALL BE PLUGGED, SEWER PIPE BETWEEN EXISTING SMH-120A AND SMH 120 SHALL BE ABANDONED IN PLACE.
SEWER MANHOLES SHALL BE ABANDONED IN ACCORDANCE WITH DMV II SECTION 5.6.C.
- EXISTING CONTRACT 12-W WATER METERS (TBA) ALONG MONTGOMERY ROAD ARE TO BE DISCONNECTED AND PLUGGED AT THE WATER MAIN. (SERVICES TERMINATED 2018)
WATER SERVICE CONNECTIONS SHALL BE ABANDONED IN ACCORDANCE WITH DMV II SECTION 5.6.D.3. CONTRACTOR TO INFORM BUREAU OF UTILITIES OF WATER SERVICE ABANDONMENT.

PROJECT BOUNDARY	
LINE	COURSE
A	S21°11'40"E 9.54'
B	R=33.00' L=25.55'
C	S23°09'45"W 13.20'
D	R=23.00' L=32.60'
E	N75°37'28"W 7.27'
F	R=90.00' L=77.50'
G	S85°02'22"W 60.54'
H	R=92.00' L=12.77'
I	S40°57'57"W 66.06'
J	R=33.00' L=33.72'
K	S42°10'05"W 15.89'
L	N50°09'55"W 57.90'
M	N09°29'45"W 29.63'

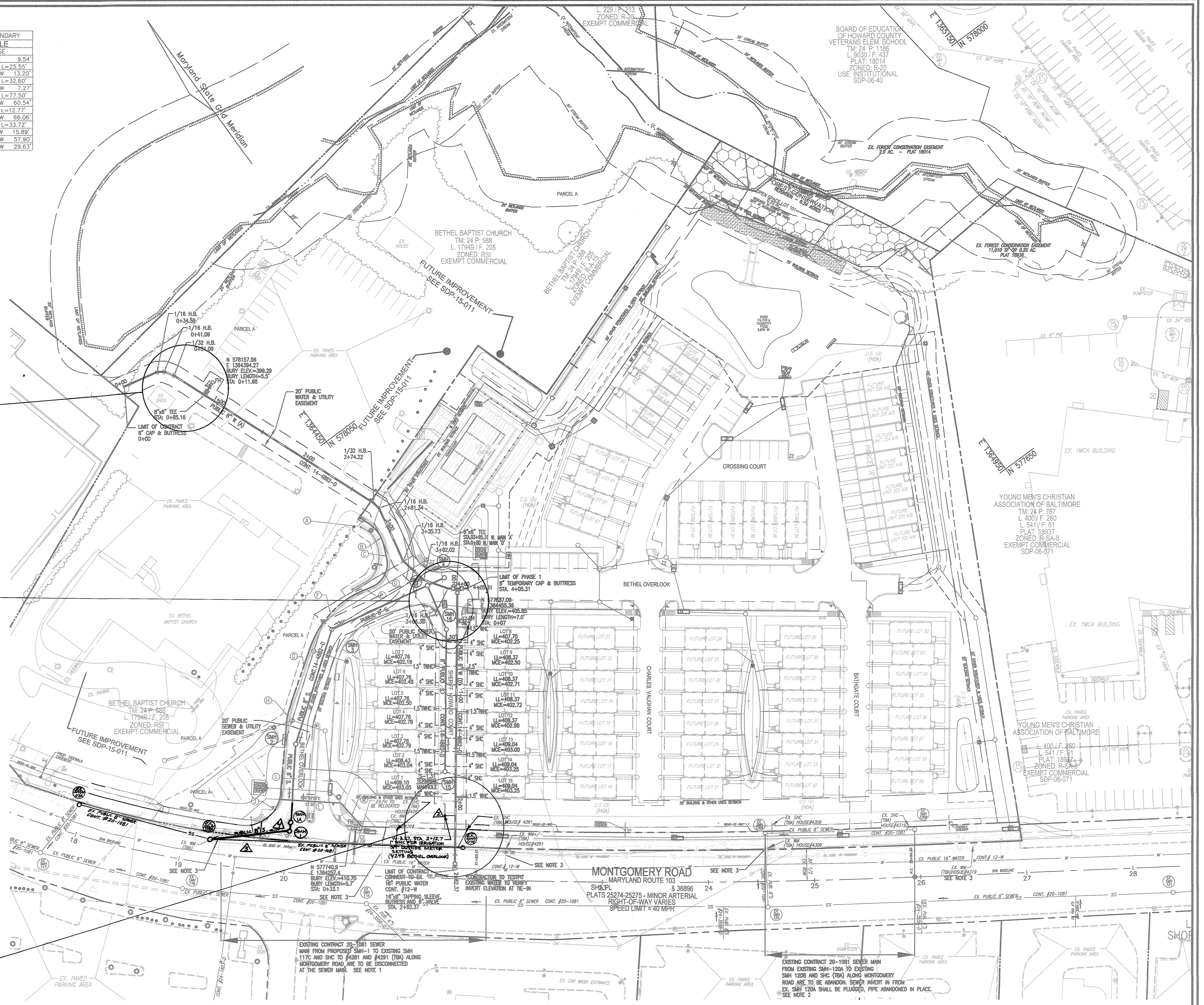
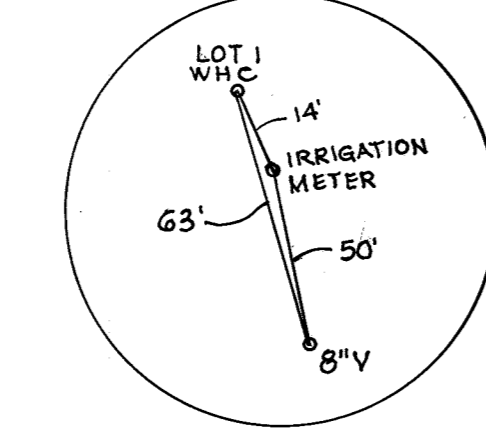
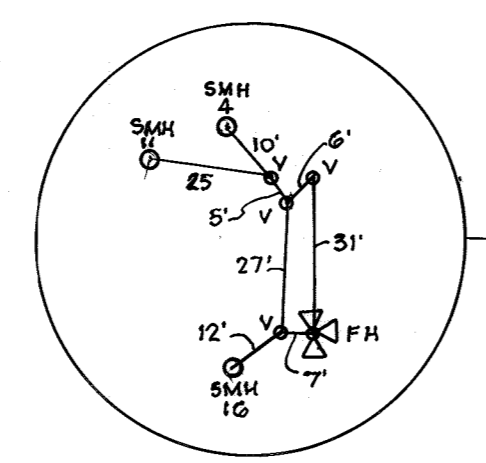
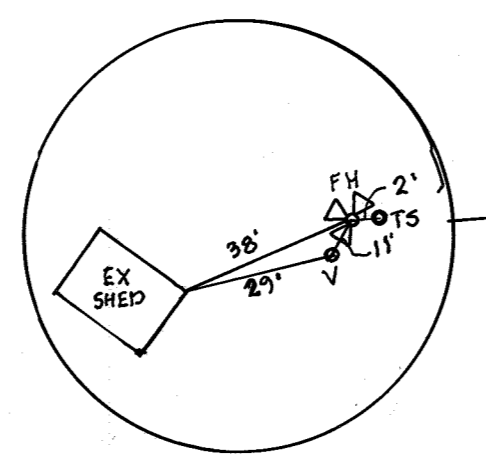
WATER			
LOT #	LOCATION 1	LOCATION 2	
1	WHC-1 TO SMH-15	WHC-1 TO SHC-1	17'
2	WHC-2-3 TO SMH-15	WHC-2-3 TO SHC-3	16'
3			
4	WHC-4-5 TO SHC-5	WHC-4-5 TO SHC-4	14'
5			
6	WHC-6-7 TO SHC-7	WHC-6-7 TO SHC-6	15'
7			
8	WHC-8 TO FHT	WHC-8 TO SHC-8	8'
9	WHC-9-10 TO SHC-9	WHC-9-10 TO SHC-10	69'
10			
11	WHC-11-12 TO SHC-12	WHC-11-12 TO SHC-11	14'
12			
13	WHC-13-14 TO SHC-14	WHC-13-14 TO SHC-13	14'
14			
15	WHC-15 TO SHC-15	WHC-15 TO SMH-15	31'

SEWER			
LOT #	LOCATION 1	LOCATION 2	
1	SHC-1 TO WHC-1	SHC-1 TO SMH-15	12'
2	SHC-2 TO WHC-2-3	SHC-2 TO SMH-15	14'
3	SHC-3 TO WHC-2-3	SHC-3 TO SMH-15	36'
4	SHC-4 TO WHC-4-5	SHC-4 TO SHC-3	11'
5	SHC-5 TO WHC-4-5	SHC-5 TO SHC-6	16'
6	SHC-6 TO SHC-5	SHC-6 TO WHC-4-5	24'
7	SHC-7 TO WHC-6-7	SHC-7 TO SHC-6	35'
8	SHC-8 TO FHT	SHC-8 TO WHC-9-10	25'
9	SHC-9 TO FHT	SHC-9 TO WHC-9-10	15'
10	SHC-10 TO WHC-9-10	SHC-10 TO SHC-11	10'
11	SHC-11 TO SHC-10	SHC-11 TO WHC-11-12	18'
12	SHC-12 TO WHC-11-12	SHC-12 TO SHC-13	10'
13	SHC-13 TO WHC-13-14	SHC-13 TO SHC-14	24'
14	SHC-14 TO WHC-13-14	SHC-14 TO SMH-15	22'
15	SHC-15 TO WHC-15	SHC-15 TO SMH-15	22'

- NOTES:**
- ALL TOWNHOUSE WATER CONNECTIONS SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAILS W-3.28 AND W-3.32 FOR SINGLE AND TWIN OUTSIDE METER SETTINGS.

CAUTION SHOULD BE TAKEN AROUND OVERHEAD UTILITIES AT THE FRONTAGE OF THE PROPERTY ALONG MONTGOMERY ROAD DURING EXCAVATION FOR THE CONSTRUCTION OF THIS WATER CONTRACT.

CONTRACTOR TO VERIFY LOCATION OF AND ABANDON EXISTING UTILITY CONNECTIONS FOR 4281, 4291, 4309, AND 4319 MONTGOMERY ROAD PER HOWARD COUNTY REQUIREMENTS.



NOTE

- EXISTING MANHOLES 117A & 117B (CONTRACT20-1081) SHALL BE RECONSTRUCTED TO PROVIDE NECESSARY CLEARANCE FOR ROAD WIDENING AS SHOWN HEREON AND THE SHA US29/M0103 - 402275157 PLANS

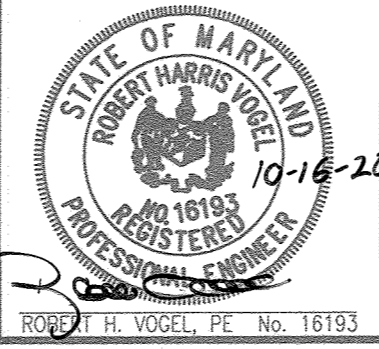
LAYOUT PLAN
SCALE: 1"=50'

OWNER / DEVELOPER
BEAZER HOMES
ATTN: J. MARTIN SHAFER, AREA PRESIDENT
6085 MARSHALLE DRIVE, SUITE 350
ELICOTT CITY, MD 21119
443-539-9249

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
10/30/2020

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
11.9.20

VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21143
P: 410.461.7666 F: 410.461.8961 www.timmons.com



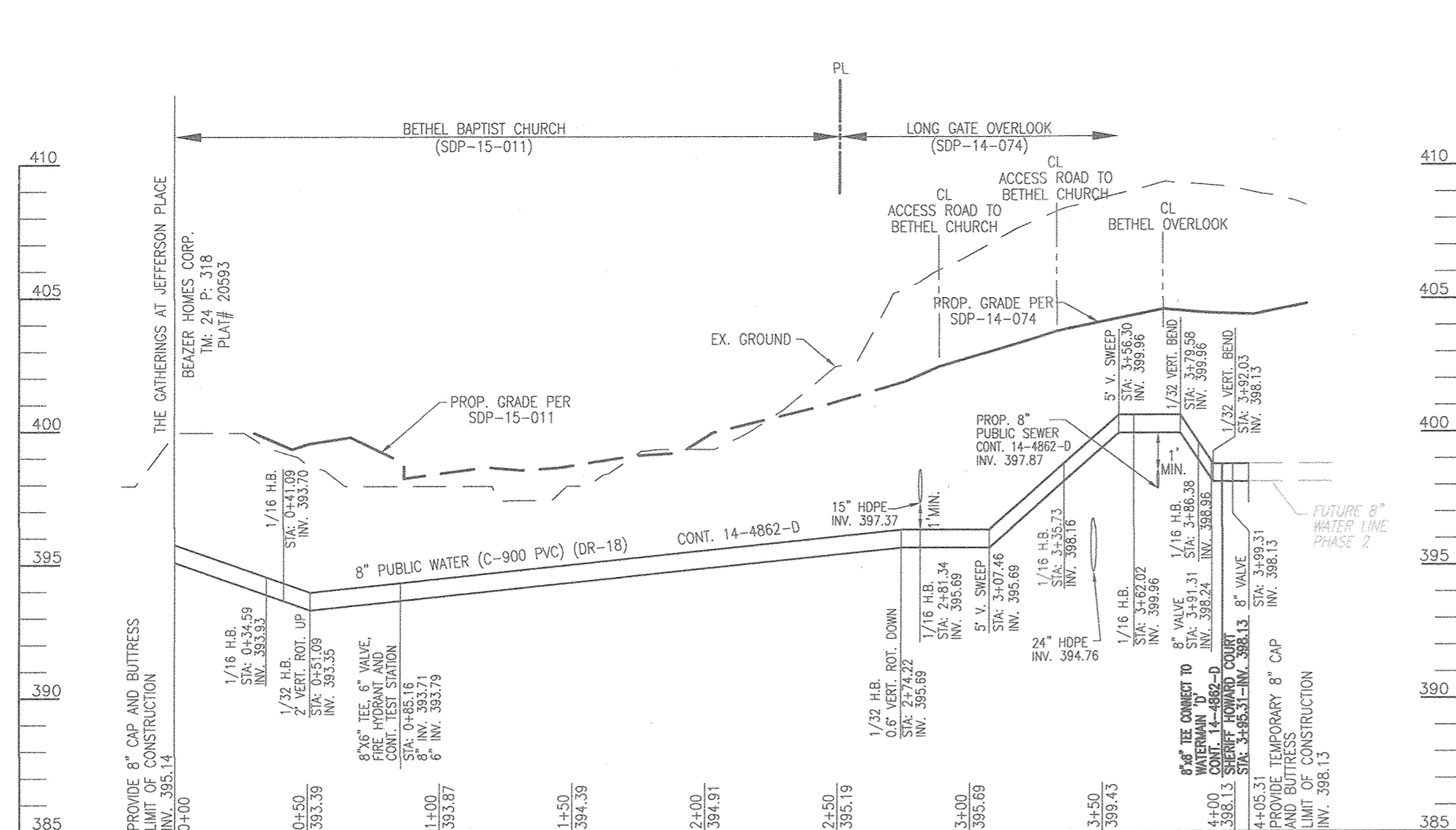
NO.	BY	NO.	REVISION	DATE
1	WRA	AS BUILT		11/11/21
2	VTG	REVISE TO RELOCATE SMH-1 TO AVOID EXISTING FIBER OPTIC LINE	8-27-21	
3	VTG	REVISE TO ADJUST SMH-1 TO EXISTING MAIN LOCATION AND TO ADD SMH-1A	6-3-21	
4	VTG	REVISE TO ADD WHC FOR IRRIGATION SYSTEM	5-27-21	

FINAL WATER AND SEWER CONSTRUCTION PLAN
LAYOUT PLAN

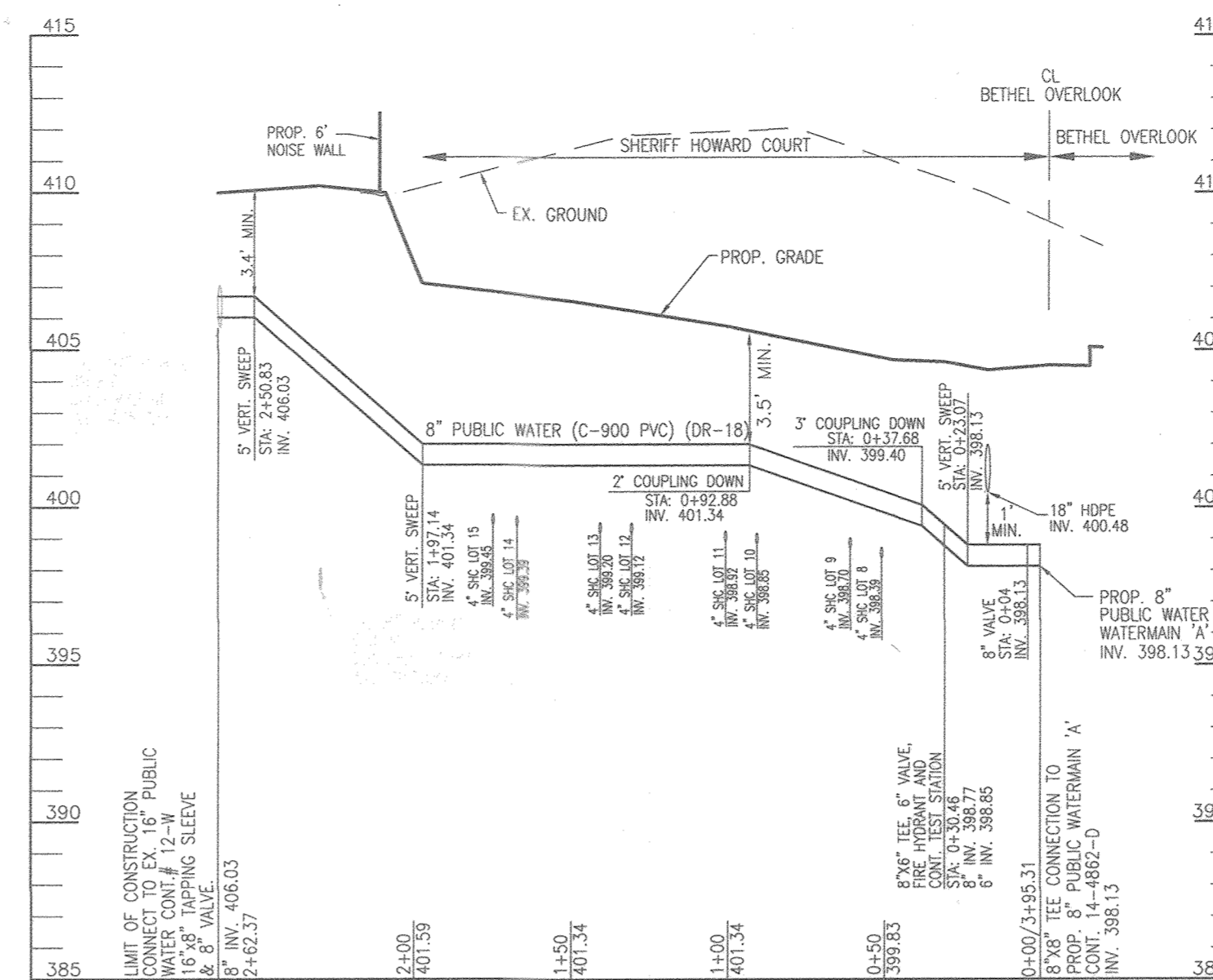
LONG GATE OVERLOOK-PHASE 1
LOTS 1-15
CONTRACT 14-4862-D
ZONED: R-A-15
HOWARD COUNTY, MARYLAND
PARCEL 322, 323, 324, 325, 326 & 327

SCALE AS SHOWN
SHEET 2 OF 3

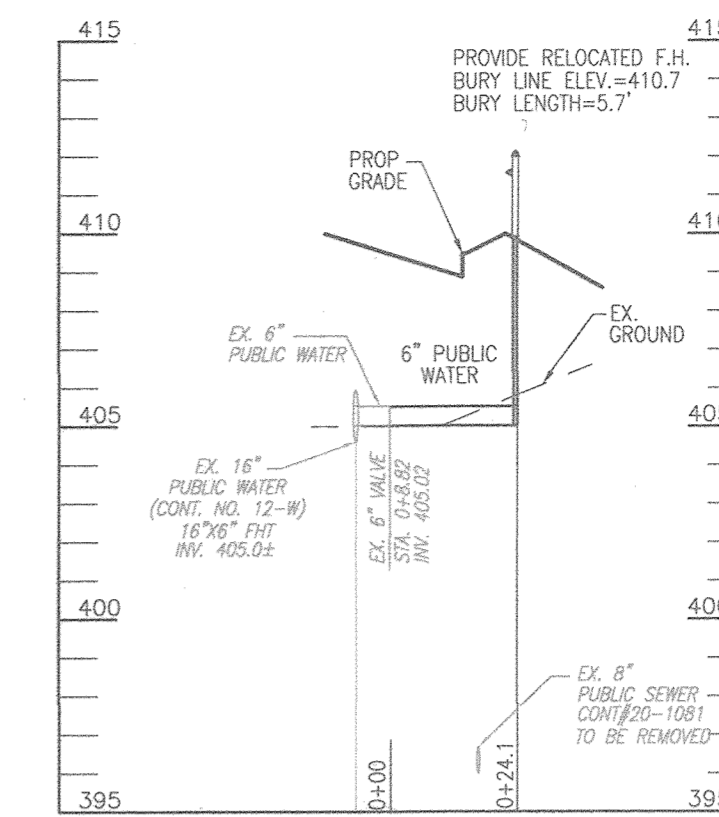
WATER MAIN LOCATION CHART	
WATERMAIN 'A'	
WL STA.	APPURTENANCE
WL STA. 0+00.00	8" CAP AND BUTTRESS
WL STA. 0+34.59	1/16 HORIZ. BEND
WL STA. 0+41.09	1/16 HORIZ. BEND
WL STA. 0+51.09	1/32 HORIZ. BEND - ROTATED 2.00' UP
WL STA. 0+85.16	8"x8" TEE (6" VALVE, FH AND TEST STATION)
WL STA. 2+74.22	1/32 HORIZ. BEND, ROTATE 0.6' DOWN
WL STA. 2+81.34	1/16 HORIZ. BEND
WL STA. 3+07.46	5' VERT. SWEEP
WL STA. 3+35.73	1/16 HORIZ. BEND
WL STA. 3+56.30	5' VERT. SWEEP
WL STA. 3+62.02	1/16 HORIZ. BEND
WL STA. 3+79.58	1/32 VERT. BEND
WL STA. 3+86.38	1/16 HORIZ. BEND
WL STA. 3+91.31	8" VALVE
WL STA. 3+92.03	1/32 VERT. BEND
WL STA. 3+95.31	8"x8" TEE, CONNECT TO WATERMAIN 'D'
WL STA. 3+99.31	8" VALVE
WL STA. 4+05.31	TEMPORARY 8" CAP AND BUTTRESS
WATERMAIN 'D' - SHERIFF HOWARD COURT	
WL STA.	APPURTENANCE
WL STA. 0+00.00	8"x8" TEE, CONNECT TO WATERMAIN 'A'
WL STA. 0+04.00	8" VALVE
WL STA. 0+23.07	5' VERT. SWEEP
WL STA. 0+30.46	8"x6" TEE (6" VALVE, FH AND TEST STATION)
WL STA. 0+37.68	3" COUPLING DOWN
WL STA. 0+92.88	2" COUPLING DOWN
WL STA. 1+97.14	5' VERT. SWEEP
WL STA. 2+50.83	5' VERT. SWEEP
WL STA. 2+62.37	16"x8" TAPPING SLEEVE & VALVE



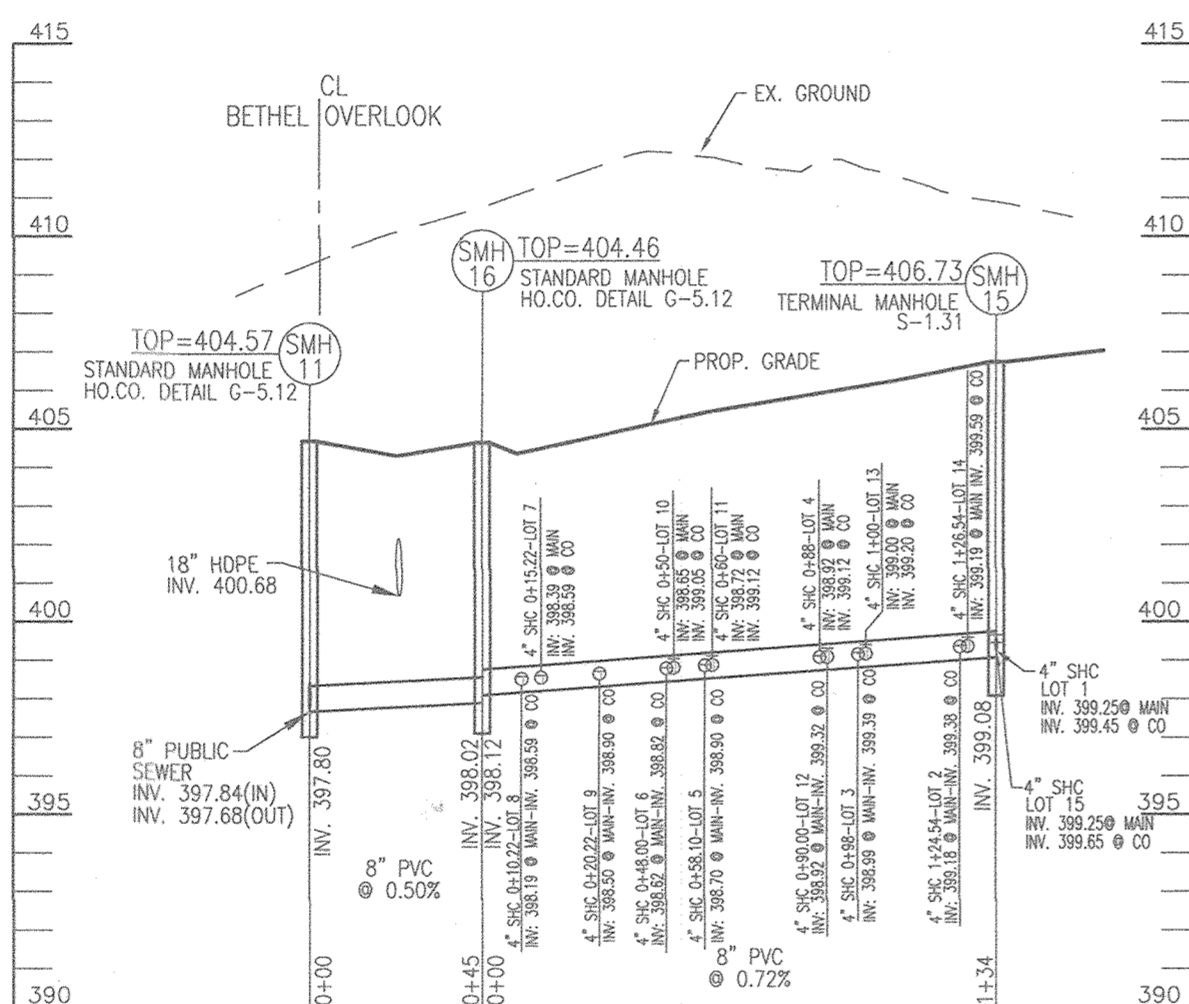
8" PUBLIC WATER PROFILE (WATERMAIN 'A')
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'
 BETHEL BAPTIST CHURCH
 FOR FUTURE LOOP



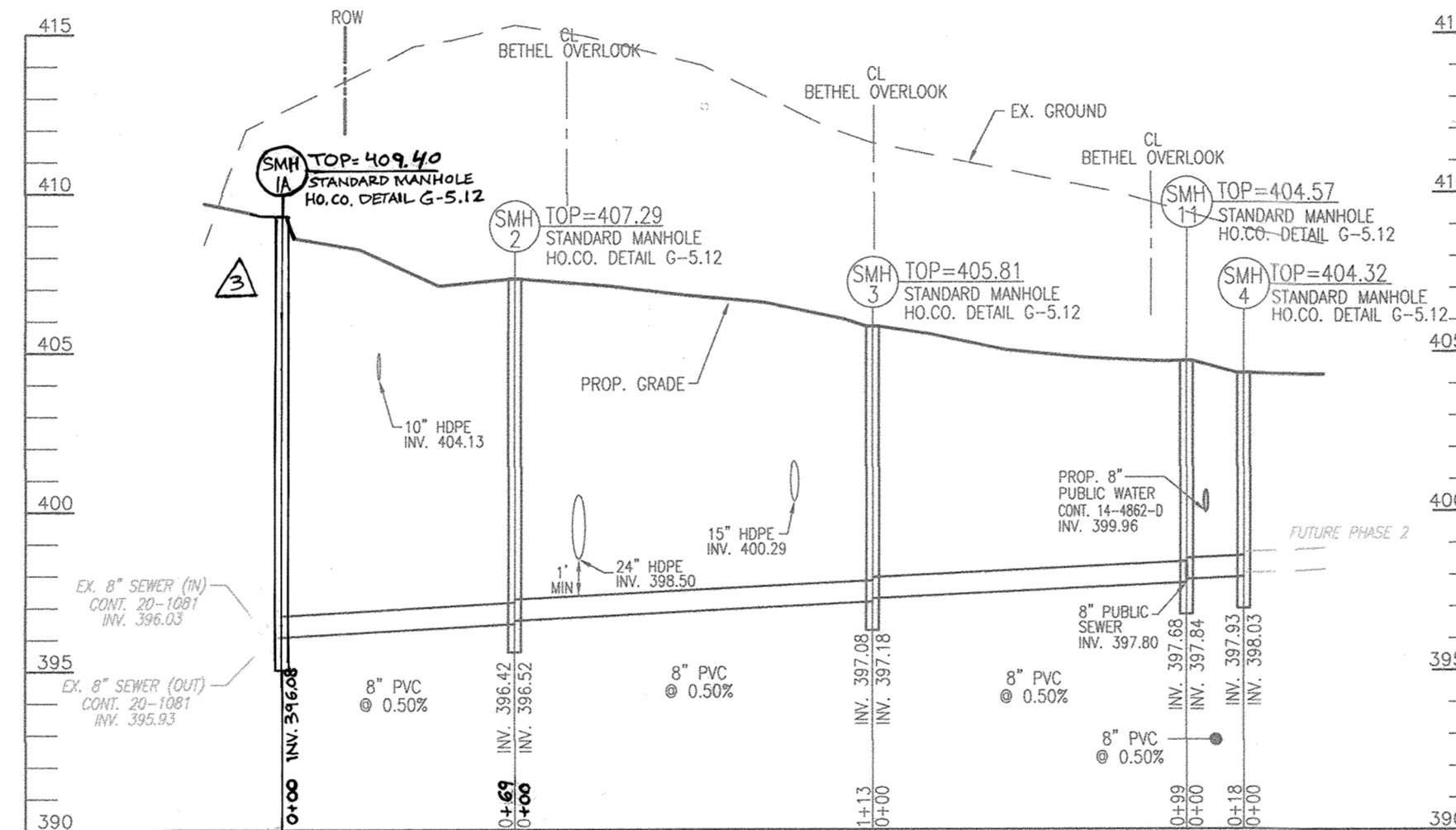
8" PUBLIC WATER PROFILE (WATERMAIN 'D')
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'
 SHERIFF HOWARD COURT



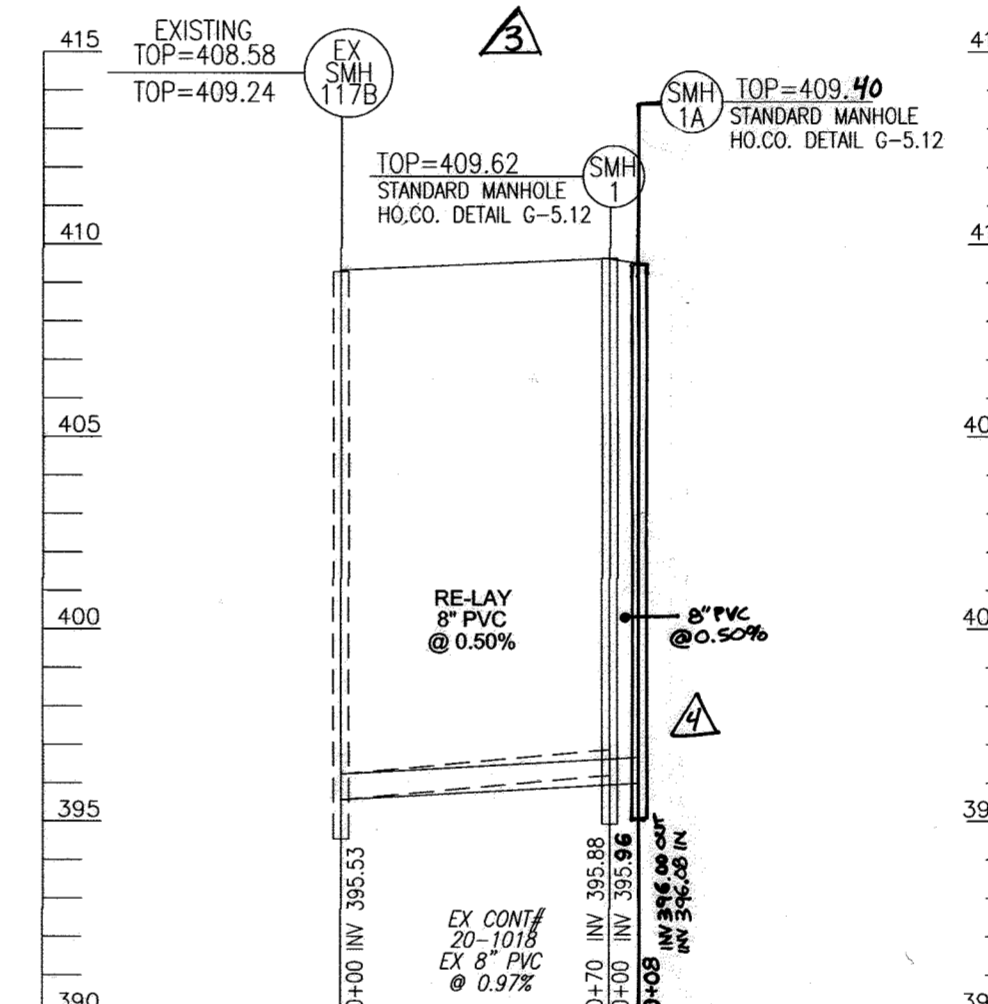
**MONTGOMERY ROAD (MD 103)
 RELOCATED PUBLIC
 FIRE HYDRANT PROFILE**
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'



SEWER PROFILE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

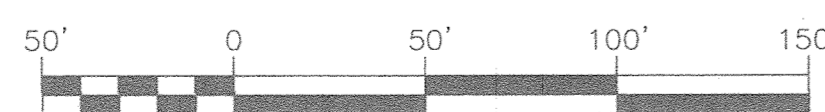


SEWER PROFILE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'



SEWER MANHOLE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	COMMENT
SMH 1	PRECAST MH HO. CO. STD. DET. G-5.14	N 577777.18 E 1364225.73	409.62	395.96	395.88	STANDARD MANHOLE
SMH 2	PRECAST MH HO. CO. STD. DET. G-5.12	N 577838.16 E 1364258.83	407.29	396.57	396.47	STANDARD MANHOLE
SMH 3	PRECAST MH HO. CO. STD. DET. G-5.12	N 577904.80 E 1364349.83	405.81	397.25	397.15	STANDARD MANHOLE
SMH 4	PRECAST MH HO. CO. STD. DET. G-5.12	N 577880.99 E 1364463.95	404.32	398.03	397.93	STANDARD MANHOLE
SMH 11	PRECAST MH HO. CO. STD. DET. G-5.12	N 577884.59 E 1364446.73	404.57	397.80	397.68	STANDARD MANHOLE
SMH 15	PRECAST MH HO. CO. STD. DET. G-5.12	N 577733.80 E 1364356.89	406.73	399.25	399.08	TERMINAL MANHOLE S-1.31
SMH 16	PRECAST MH HO. CO. STD. DET. G-5.12	N 577840.79 E 1364436.73	404.46	398.12	398.02	STANDARD MANHOLE
SMH 1A	PRECAST MH HO. CO. STD. DET. G-5.12	N 577782.21 E 136422.24	409.40	396.00	396.00	STANDARD MANHOLE

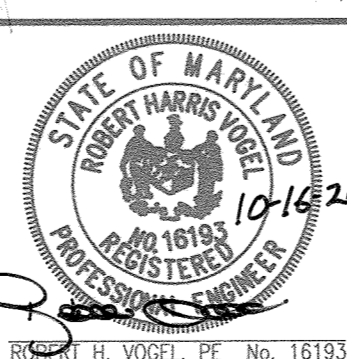
MINIMUM CELLAR ELEVATION CHART							
* DROP THRU SLAB 2.5							
LOT #	EL @ MAIN	SHC/DSHC	DIST TO RW.	EL @ R/W	DIST ON LOT	EL @ HOUSE	MCE* SHC SLOPE
1	399.25	SHC	10	399.45	55	400.55	403.05 2.00%
2	399.18	SHC	10	399.38	58	400.54	403.04 2.00%
3	398.99	SHC	10	399.19	55	400.29	402.79 2.00%
4	398.92	SHC	10	399.12	58	400.28	402.78 2.00%
5	398.70	SHC	10	398.90	55	400.00	402.50 2.00%
6	398.62	SHC	10	398.82	58	399.98	402.48 2.00%
7	398.39	SHC	10	398.59	55	399.69	402.19 2.00%
8	398.19	SHC	20	398.59	58	399.75	402.25 2.00%
9	398.50	SHC	20	398.90	55	400.00	402.50 2.00%
10	398.65	SHC	20	399.05	58	400.21	402.71 2.00%
11	398.72	SHC	20	399.12	55	400.22	402.72 2.00%
12	398.92	SHC	20	399.32	58	400.48	402.98 2.00%
13	399.00	SHC	20	399.40	55	400.50	403.00 2.00%
14	399.19	SHC	20	399.59	58	400.75	403.25 2.00%
15	399.25	SHC	20	399.65	55	400.75	403.25 2.00%



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 [Signature]
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature]
 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



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: 09-27-2022.
 DRN: JMR/KG DES: EDS
 CHK: RHW
 DATE: SEPTEMBER 2020

FINAL WATER AND SEWER CONSTRUCTION PLAN
WATER AND SEWER MAIN PROFILES
 8-27-21
 G-3-21

LONG GATE OVERLOOK-PHASE 1
 LOTS 1-15
CONTRACT 14-4862-D
 SCALE AS SHOWN
 SHEET 3 OF 3
 ZONED: R-A-15
 HOWARD COUNTY, MARYLAND
 TAX MAP 24 GRID 24
 2ND ELECTION DISTRICT
 PARCEL 322, 323, 324, 325, 326 & 327

OWNER / DEVELOPER
 BEAZER HOMES
 ATTN: J. MARTIN SHATTER, AREA PRESIDENT
 AUTHORIZED SIGNATURE - EAST REGION
 6065 MARSHALLE DRIVE, SUITE 350
 ELK RIDGE, MD 21075
 443-539-9249