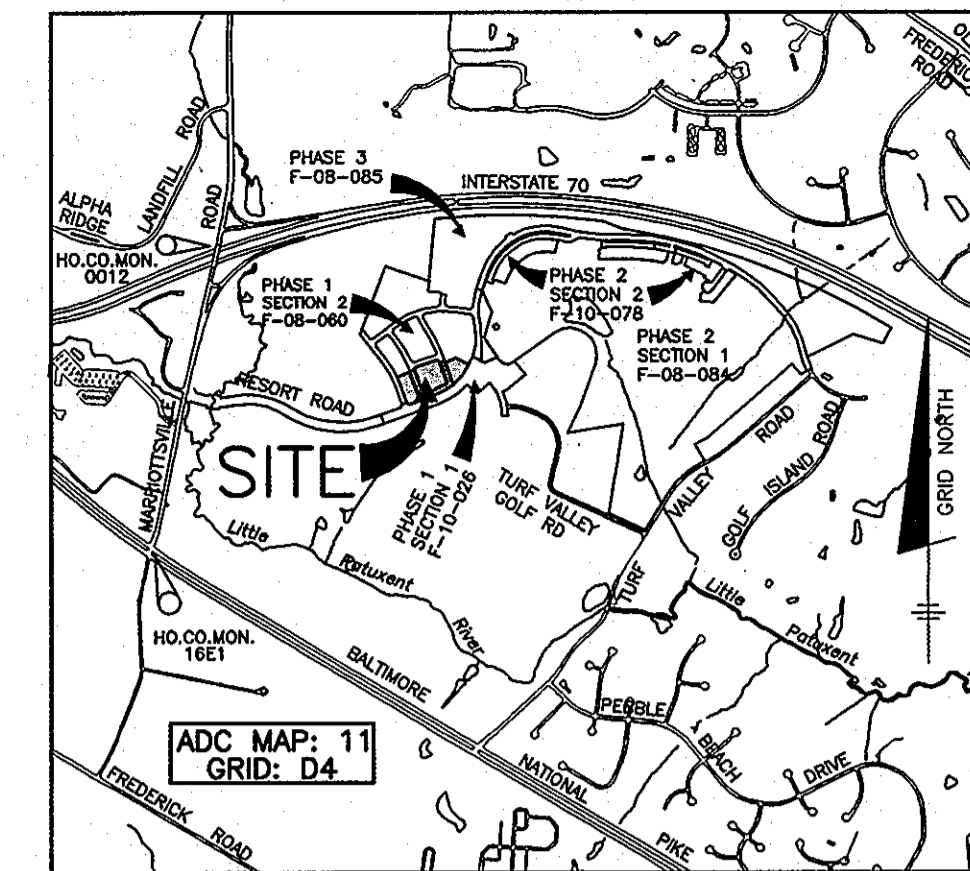


VILLAGES AT TURF VALLEY

PHASE 4

CONTRACT NO. 24-4551-D

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
8" PVC C900 WATER	917 LF			
FIRE HYDRANTS (INCLUDES 8"x6" TEE & 8" VALVE)	3 EA.			
8"x8" TEE	1 EA.			
1" METER	23 EA.			
8" VALVE	2 EA.			
1-1/2" WHC	642 LF			
8" PVC C900 SEWER	477 LF			
MANHOLES	2 EA.			
4" SHC	642 LF			
NAME OF UTILITY CONTRACTOR: SURVEY AND DRAFTING DIVISION AS-BUILT DATE:				



VICINITY MAP
SCALE: 1" = 2000'

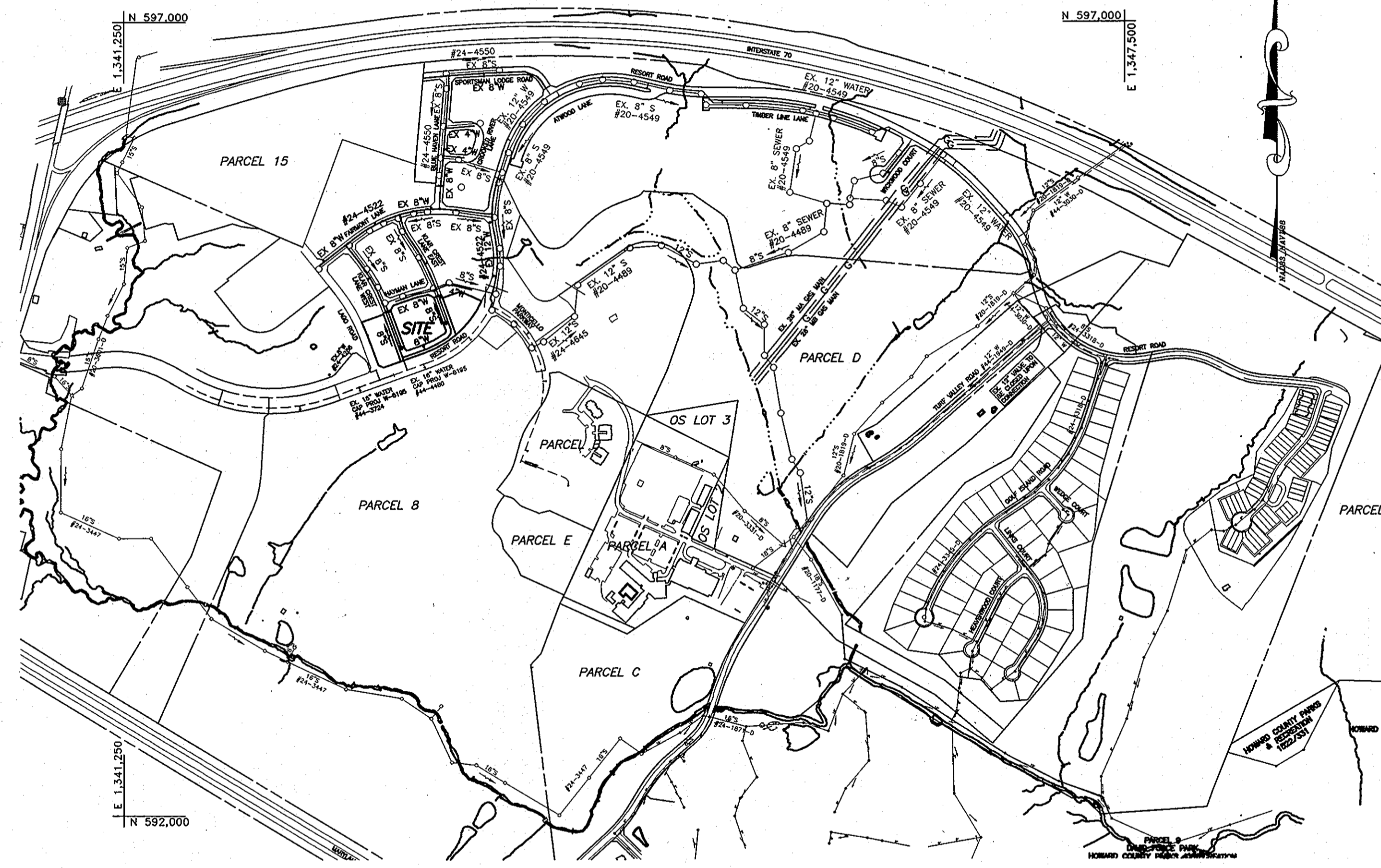
BENCH MARKS	
HORIZONTAL: MARYLAND NAD83	
VERTICAL: NAVD83	
HO. CO. #0012 STAMPED DISC SET ON TOP OF 3' DEEP CONCRETE MONUMENT AT NORTHWEST CORNER OF MARIOTTVILLE ROAD AND ~70' 10.4' FROM X-OUT IN TOP OF GUARDRAIL POST. N 593250.700' E 1340864.370' ELEV. 486.298'	
HO. CO. #161 STAMPED DISC SET ON TOP OF 3' DEEP CONCRETE MONUMENT AT MEDIAN OF ROUTE 40 AT INTERSECTION WITH MARIOTTVILLE ROAD 6.4' FROM E/P OF EAST BOUND LANES. N 593250.960' E 1340192.700' ELEV. 483.981'	

GENERAL NOTES

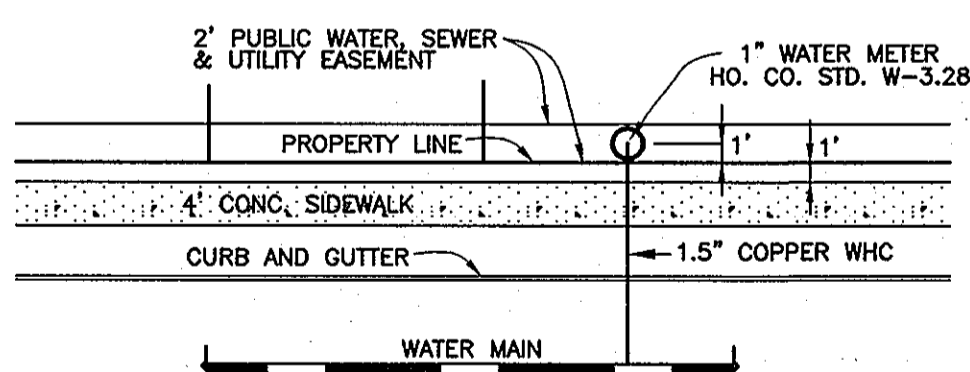
- PART I**
- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
 - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED IN JANUARY, 2006 BY WINGS AERIAL MAPPING CO., INC.
 - HORIZONTAL AND VERTICAL SURVEY CONTROLS:
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM MAD '83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC STATIONS NO. 0012 AND NO. 16E1.
ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE 0012 AND 16E1.
 - 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 THE 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 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 ON THESE PLANS:
A/E/ (CONTRACTOR SERVICES) 1-800-292-1133
BGE (EMERGENCY) 410-537-8713
BGE (EMERGENCY) 410-685-0123
BUREAU OF UTILITIES 410-313-4900
C&D 410-783-1900
MISS UTILITY 1-800-257-7777
M&D 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 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 ROAD FOR PUBLIC WATER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.11(a) OF THE HOWARD COUNTY CODE.

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
177	CHEEKWOOD CIRCLE		
178	CHEEKWOOD CIRCLE		
179	CHEEKWOOD CIRCLE		
180	CHEEKWOOD CIRCLE		
181	CHEEKWOOD CIRCLE		
182	CHEEKWOOD CIRCLE		
183	CHEEKWOOD CIRCLE		
184	CHEEKWOOD CIRCLE		
185	CHEEKWOOD CIRCLE		
186	CHEEKWOOD CIRCLE		
187	CHEEKWOOD CIRCLE		
188	CHEEKWOOD CIRCLE		
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192	CHEEKWOOD CIRCLE		
193	CHEEKWOOD CIRCLE		
194	CHEEKWOOD CIRCLE		
195	CHEEKWOOD CIRCLE		
196	CHEEKWOOD CIRCLE		
197	CHEEKWOOD CIRCLE		
198	CHEEKWOOD CIRCLE		
199	CHEEKWOOD CIRCLE		

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
177	CHEEKWOOD CIRCLE		
178	CHEEKWOOD CIRCLE		
179	CHEEKWOOD CIRCLE		
180	CHEEKWOOD CIRCLE		
181	CHEEKWOOD CIRCLE		
182	CHEEKWOOD CIRCLE		
183	CHEEKWOOD CIRCLE		
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192	CHEEKWOOD CIRCLE		
193	CHEEKWOOD CIRCLE		
194	CHEEKWOOD CIRCLE		
195	CHEEKWOOD CIRCLE		
196	CHEEKWOOD CIRCLE		
197	CHEEKWOOD CIRCLE		
198	CHEEKWOOD CIRCLE		
199	CHEEKWOOD CIRCLE		



LOCATION MAP
SCALE: 1" = 600'



TYPICAL WATER HOUSE CONNECTION
NOT TO SCALE

TYPE OF BUILDING:	SFA
NO. OF LOTS/PARCELS/UNITS:	23
NUMBER OF SHC'S:	23
NUMBER OF WHC'S:	23
AREA OF COMMERCIAL LOT/PARCEL:	N/A
SEWER SHED:	LITTLE PATUENT WRP
PUMPING STATION:	ROUTE 108 PS
WATER ZONE:	630W
TEST GRADIENT:	.780

LEGEND

[Symbol]	EXIST. WATER MAIN
[Symbol]	EXIST. SEWER MAIN
[Symbol]	EXIST. SEWER MANHOLE
[Symbol]	EXIST. STORM DRAIN
[Symbol]	PROP. WATER MAIN
[Symbol]	PROP. SEWER MAIN
[Symbol]	PROP. STORM DRAIN
[Symbol]	PROP. SEWER MANHOLE
[Symbol]	PROP. TERMINAL MANHOLE
[Symbol]	PROP. SEWER HOUSE CONNECTIONS
[Symbol]	PROP. WATER HOUSE CONNECTION
[Symbol]	PROP. FIRE HYDRANT
[Symbol]	PROP. VALVE
[Symbol]	PROP. PLUG & BUTTRISS

NOTE:
ALL WATER HOUSE CONNECTIONS ARE TO BE 1.5" WITH A 1" METER (OUTSIDE SETTING).

PART II WATER

- ALL WATER MAINS TO BE D.I.P. CLASS 54 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 BUTTRISSED 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 AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL. USE THE TEST RECORDS 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 METALLIC 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 THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTIONLINE 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 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 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 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 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTIFIED 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 FLAN 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 MECA-STOP, AS MANUFACTURED BY ESM 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, CS-52, WHERE WATERIGHT 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 CELLAR CANNOT BE SERVED.

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

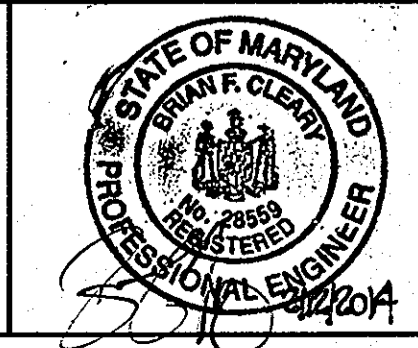
John R. Robertson 3/16/14
HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER F-08-086.

OWNER/DEVELOPER:
MANGIONE ENTERPRISES OF TURF VALLEY, LP
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410-825-8400

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. 20379.
Expiration Date: 7-22-2015.

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 315 A ELICOTT CITY, MARYLAND 21043
(301) 410-465-5105 (F) 410-465-6644
WWW.BD-CIVILENGINEERING.COM



DES:	MCR/DBT				
DRAFT:	MCR/DBT				
CHK:	DAM	BEI	1	UPDATE QUANTITIES CHART, SHEET INDEX & GENERAL NOTES. ADD WHC AND SHC AS-BUILT CHARTS.	2-11-2014
DATE:	02/2014	BY	NO.	REVISIONS	DATE

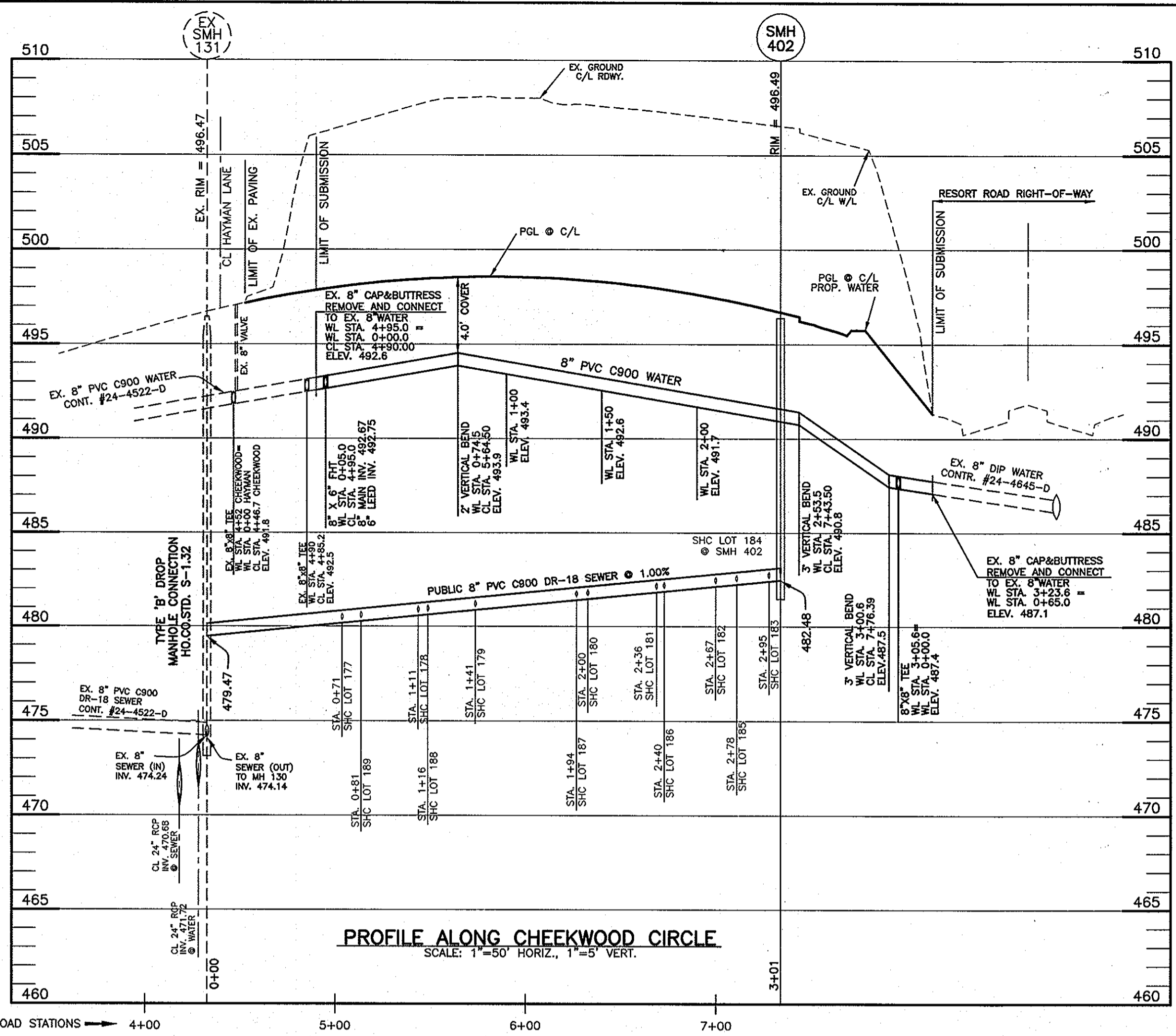
SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN & PROFILE VIEW OF PUBLIC WATER & SEWER MAINS

NOTE: THIS MYLAR REPLACES THE ORIGINAL SHEET 1
DATED 02/2010

TITLE SHEET

VILLAGES AT TURF VALLEY
PHASE 4
LOT 177 thru 199; OPEN SPACE LOTS 200 thru 202
CONTRACT NO. 24-4551-D

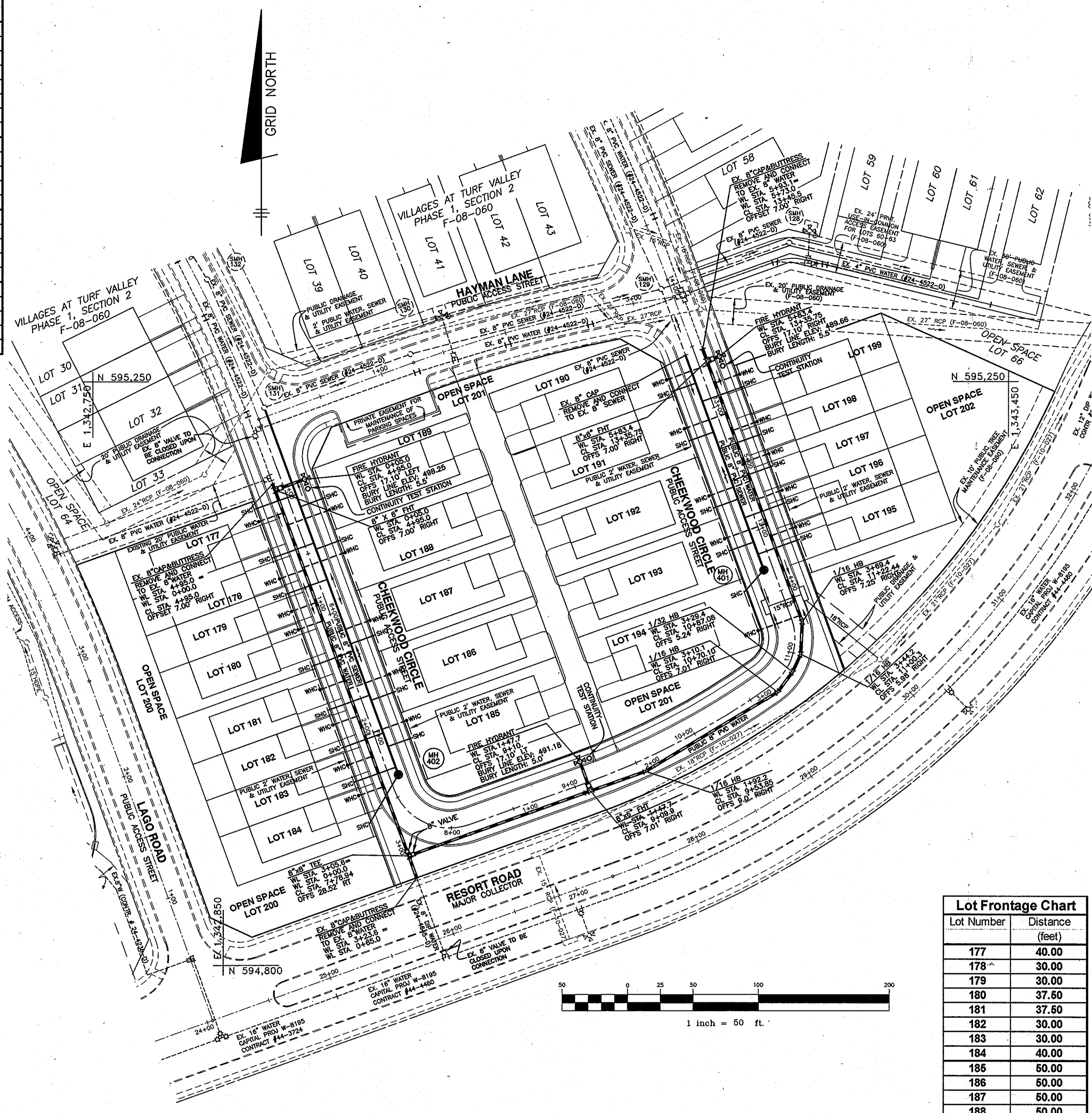
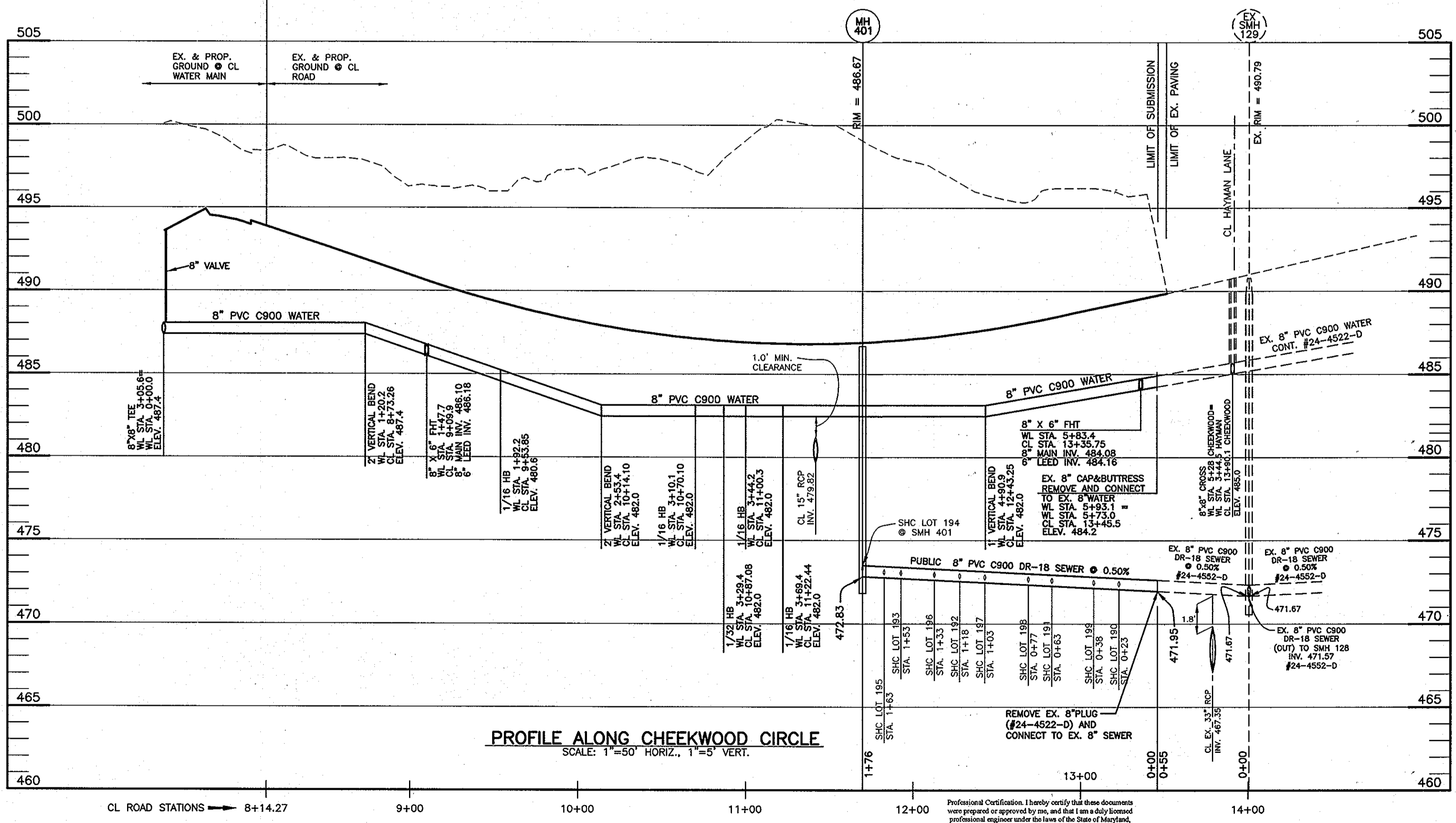
SCALE:
AS SHOWN
SHEET NO.
1 OF 2



SHC CHART			
Lot Number	Invert @ main	Invert @ R/W or esmt	MCE
177	480.26	480.94	485.24
178	480.66	481.34	485.64
179	480.96	481.64	485.94
180	481.55	482.23	486.53
181	481.91	482.59	486.89
182	482.22	482.90	487.20
183	482.50	483.18	487.48
184	482.81	483.49	487.79
185	482.33	482.73	487.33
186	481.95	482.35	486.95
187	481.49	481.89	486.49
188	480.71	481.11	485.71
189	480.36	480.76	485.36
190	472.15	472.55	477.35
191	472.35	472.75	477.55
192	472.62	473.02	477.82
193	472.80	473.20	478.00
194	473.16	473.62	478.42
195	472.85	473.53	477.79
196	472.70	473.38	477.64
197	472.55	473.23	477.49
198	472.42	473.10	477.36
199	472.07	472.75	477.01

Water Appurtenance Table		
Appurtenance	road cl station	offset
Fire Hydrant Tee	4+95.0	7.00' right
8"x6" tee	7+78.94	28.52' right
Fire Hydrant Tee	9+09.9	7.01' right
1/16" HB	9+53.85	9.0' right
1/16" HB	10+70.10	7.01' right
1/32" HB	10+87.08	5.24' right
1/16" HB	11+00.30	5.98' right
1/16" HB	11+22.44	7.25' right
Fire Hydrant Tee	13+35.75	7.00' right
2" Vert Bend	5+64.50	7.00' right
3" Vert Bend	7+43.50	7.00' right
2" Vert Bend	7+76.39	24.68' right
2" Vert Bend	8+73.26	7.00' right
2" Vert Bend	10+14.10	5.07' right
1" Vert Bend	12+43.25	7.00' right

Note: See Profile for inverts

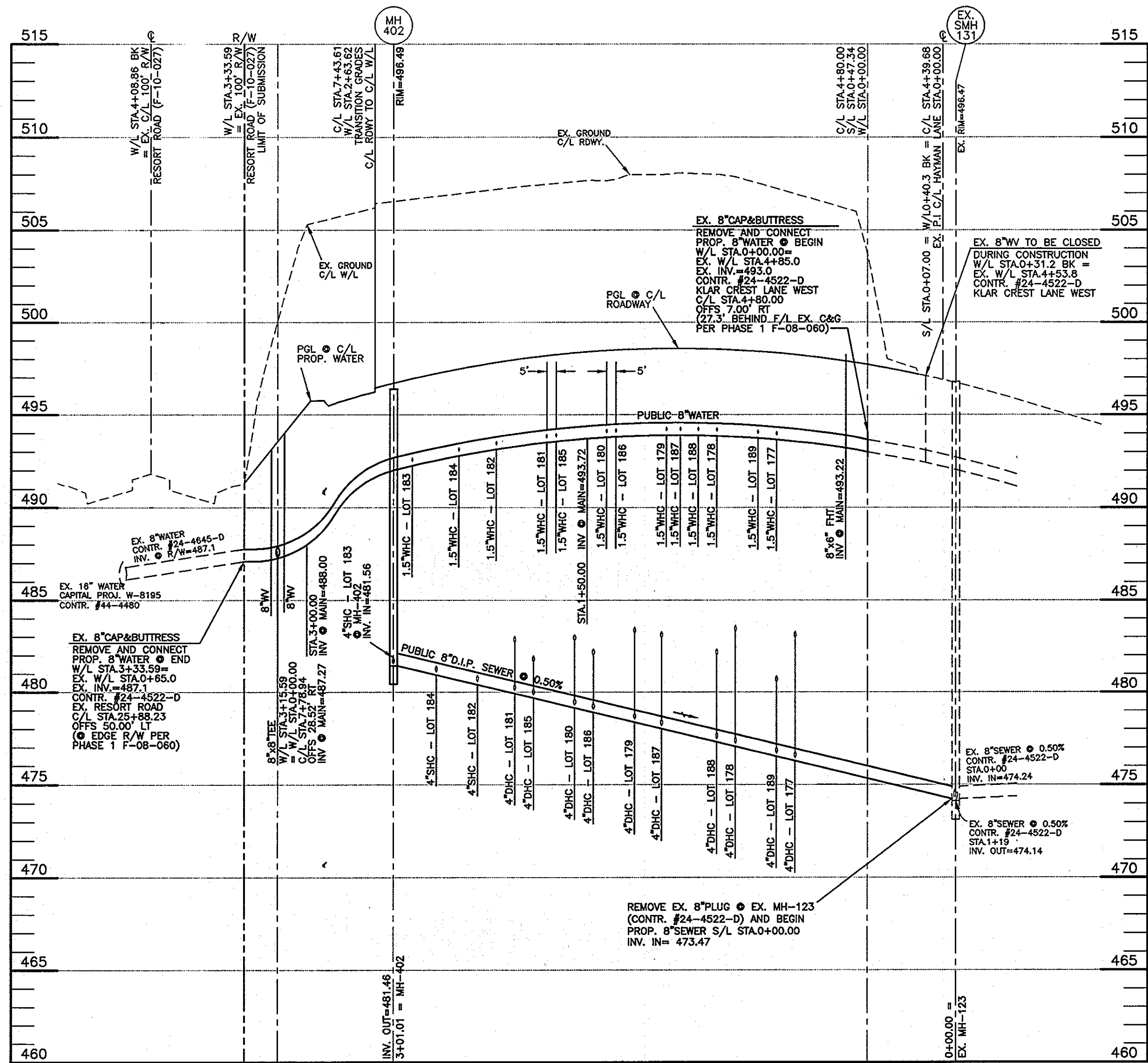


SEWER MANHOLE - STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	INVERT IN	INVERT OUT	TOP ELEV.	HO. CO. STD.
401	STD. 4.0'	CL STA. 11+69.58 OFFSET 7.00' LEFT CHEEKWOOD CIRCLE	-	472.83	486.67	G-5.12
402	STD. 4.0'	CL STA. 7+33.67 OFFSET 7.00' LEFT CHEEKWOOD CIRCLE	-	481.46	496.49	G-5.12

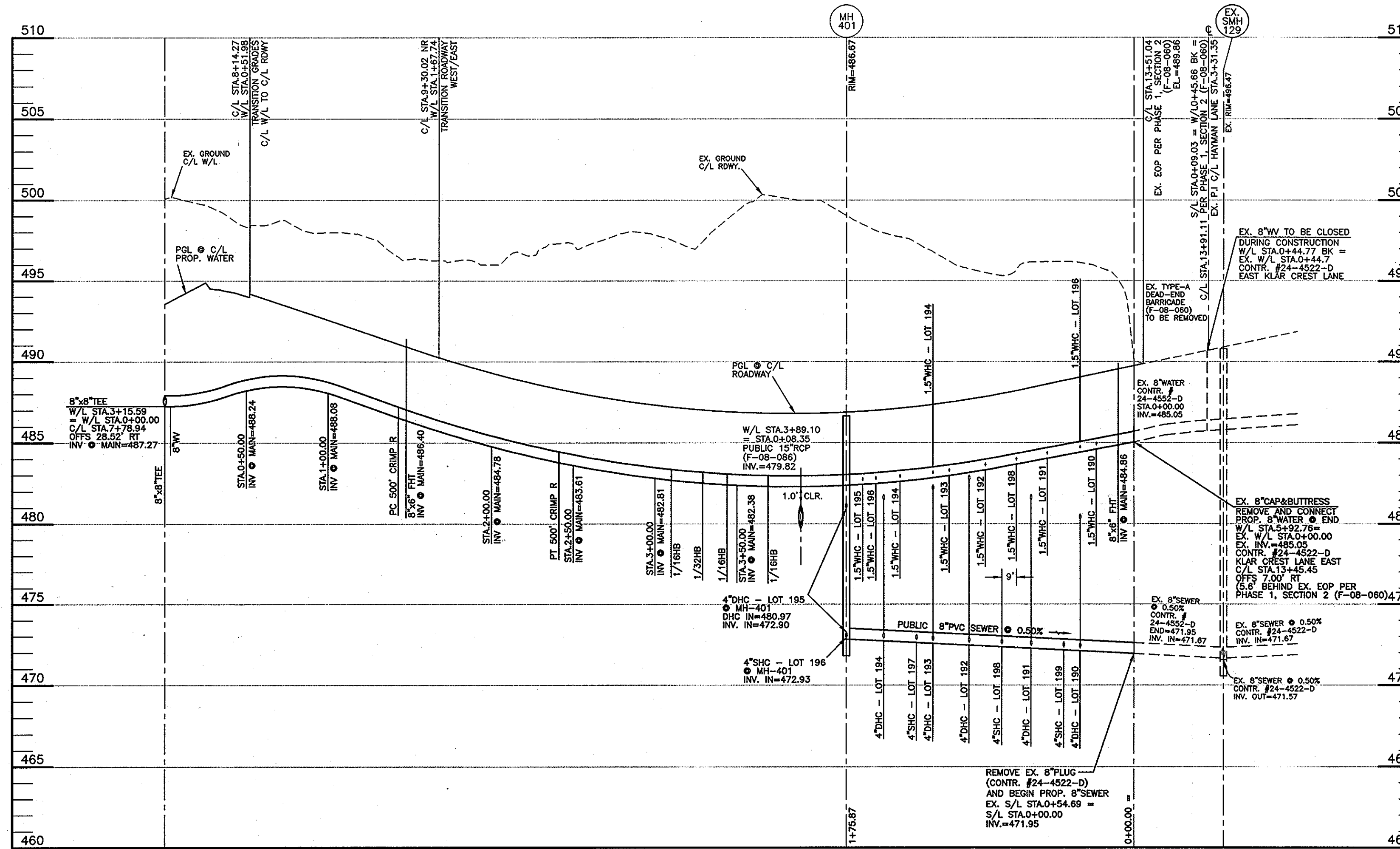
NOTES:
1. STRUCTURE LOCATION FOR MANHOLES IS AT THE CENTER OF THE STRUCTURE.

Lot Frontage Chart	
Lot Number	Distance (feet)
177	40.00
178	30.00
179	30.00
180	37.50
181	37.50
182	30.00
183	30.00
184	40.00
185	50.00
186	50.00
187	50.00
188	50.00
189	50.00
190	57.19
191	50.00
192	50.00
193	50.00
194	41.83
195	40.00
196	30.00
197	30.00
198	30.00
199	40.00

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND 	BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 418 A ELLICOTT CITY, MARYLAND 21043 (P) 410-485-8105 (F) 410-465-6644 WWW.BDI-CIVILENGINEERING.COM		DESIGN: MCR/DBT DRAFT: MCR/DBT CHK: DAM DATE: 02/2014 BY: NO.	REVISIONS 1 revise lot layout, revise WHC and SHC locations, revise Klar Great Lane to Cheekwood Circle, Update existing water and sewer based on redline to #24-4522-D, add profiles to this sheet and remove sheet 3 from set.	DATE: 2-11-2014 600 SCALE MAP NO. 16 BLOCK: 11 200 SCALE MAP NO. 146	VILLAGES AT TURF VALLEY PHASE 4 LOT 177 thru 199; OPEN SPACE LOTS 200 thru 202 TAX MAP: 16 - BLOCK: 17 - PARCEL: 401, P/O 8, P/O 394 - ZONED: PGCC - ELECTION DISTRICT: 3 CONTRACT NO. 24-4551-D	SCALE: AS SHOWN SHEET NO. 2 OF 2
---	--	--	--	---	---	---	--	---



PROFILE ALONG KLAR CREST LANE WEST
SCALE: 1"=50' HORIZ., 1"=5' VERT.



PROFILE ALONG EAST KLAR CREST LANE
SCALE: 1"=50' HORIZ., 1"=5' VERT.

WATER HOUSE CONNECTION LOCATION AND ELEVATION DATA

LOT NO.	RDWY. C/L STA.	W.M. C/L STA.	INV. @ MAIN	INV. @ WHC	INV. @ R/W	INV. @ PUE	REMARKS
LOT 177	5+28.67 7.00' R	0+48.67	493.66	493.94			
LOT 178	5+60.67 7.00' R	0+80.67	493.86	494.14	494.14		
LOT 179	5+87.59 7.00' R	1+07.50	493.90	494.18	494.18		
LOT 180	6+19.67 7.00' R	1+39.67	493.79	494.07	494.07		5' HORIZONTAL FROM LOT 183 WHC
LOT 181	6+55.67 7.00' R	1+71.67	493.52	493.80	493.80		5' HORIZONTAL FROM LOT 182 WHC
LOT 182	6+78.67 7.00' R	1+98.67	493.15	493.43	493.43		
LOT 183	7+23.67 7.00' R	2+43.67	492.27	492.55	492.55		
LOT 184	6+98.67 7.00' R	2+18.67	492.80	492.93	492.93		
LOT 185	6+46.67 7.00' R	1+66.67	493.57	493.85	493.85		5' HORIZONTAL FROM LOT 178 WHC
LOT 186	6+14.67 7.00' R	1+34.67	493.82	494.10	494.10		5' HORIZONTAL FROM LOT 177 WHC
LOT 187	5+80.17 7.00' R	1+00.17	493.90	494.18	494.18		
LOT 188	5+70.67 7.00' R	0+90.67	493.89	494.17	494.17		
LOT 189	5+38.67 7.00' R	0+58.67	493.74	494.02	494.02		
LOT 190	13+22.46 7.00' R	5+69.76	484.61	484.89	484.89		
LOT 191	12+92.46 7.00' R	5+39.76	484.04	484.32	484.32		
LOT 192	12+54.46 7.00' R	5+01.89	483.33	483.61	483.61		
LOT 193	12+32.46 7.00' R	4+79.76	482.98	483.26	483.26		
LOT 194	12+02.46 7.00' R	4+49.76	482.62	482.90	482.90		
LOT 195	11+79.58 7.00' R	4+26.89	482.44	482.72	482.72		
LOT 196	11+87.59 7.00' R	4+34.89	482.49	482.77	482.77		
LOT 197	12+22.46 7.00' R	4+69.76	482.85	483.13	483.13		
LOT 198	12+73.59 7.00' R	5+20.89	483.68	483.96	483.96		9' HORIZONTAL FROM LOT 195 SHC
LOT 199	13+12.46 7.00' R	5+59.76	484.42	484.70	484.70		

WATER LINE APPURTENANCE DATA

APPURTENANCE	RDWY. C/L STA.	W.M. C/L STA.	INV. @ MAIN	REMARKS
8" CAP&BUTTRSS	4+80.00 7.00' R	0+00.00	(EX.)493.0	(CONTR. No.24-4522-D) PHASE 1
8"x6" FH TEE	4+91.55 7.00' R	0+11.55	493.22	
FH	4+91.55 17.10' L	0+11.55 27.10' L	(6"TEE) 493.30	BLE=498.30 BL=5.0' HT
8" WV	7+77.38 26.10' R	3+12.09	487.38	
8"x8" TEE	7+78.94 28.52' R	3+15.59	487.27	= STA.0+00.00 W/L EAST KLAR CREST LANE
8" WV	7+80.40 31.02' R	3+19.09	487.19	
8" CAP&BUTTRSS	25+88.23 50.00' L	3+35.59	(EX.)487.1	(CONTR. No.24-4522-D) PHASE 1
8"x8" TEE	7+78.94 28.52' R	0+00.00	487.27	= STA.3+40.86 W/L WEST KLAR CREST LANE
8" WV	7+80.50 26.10' R	0+03.50	487.27	
PC 500' CRIMP R	9+05.42 7.00' R	1+42.99	486.56	
8"x6" FH TEE	9+09.89 7.00' R	1+47.86	486.40	
FH	9+09.89 17.10' L	1+47.86 24.10' L	(6"TEE) 486.48	BLE=491.48 BL=5.0' HT
PT 500' CRIMP R	10+02.21 5.35' R	2+41.16	483.79	
1/16 HB	10+70.10 7.01' R	3+09.79	482.70	
1/32 HB	10+87.08 5.24' R	3+29.04	482.52	
1/16 HB	11+00.34 5.98' R	3+43.92	482.41	
1/16 HB	11+22.44 7.25' R	3+69.04	482.31	
8"x6" FH TEE	13+35.75 7.00' R	5+83.06	484.86	
FH	13+35.75 17.10' R	5+83.06 10.10' R	(6"TEE) 484.94	BLE=489.94 BL=5.0' HT
8" CAP&BUTTRSS	13+45.46 7.00' R	5+92.76	(EX.)485.05	(CONTR. No.24-4522-D) PHASE 1

SEWER MANHOLE - STRUCTURE SCHEDULE

NO.	TYPE	COORDINATE LOCATION	RDWY. C/L STA.	INVERT IN	SHC INV.	INVERT OUT	TOP ELEV.	HO. CO. STD.	REMARKS
SM-401	STD. 4.0' PRE-CAST	N 595,105.1141 E 1,343,262.6961	11+69.58 7.00' L	-	(2) 472.93	472.83	486.67	G-5.12	EAST KLAR CREST LANE
SM-402	STD. 4.0' PRE-CAST	N 594,947.3011 E 1,342,983.8043	7+33.67 7.00' L	-	481.56	481.46	496.49	G-5.12	WEST KLAR CREST LANE

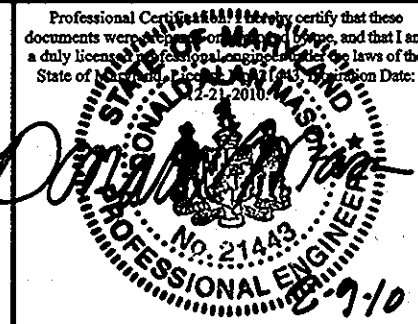
NOTES:
1. STRUCTURE LOCATION FOR MANHOLES IS AT THE CENTER OF THE STRUCTURE.

SEWER HOUSE CONNECTION LOCATION AND ELEVATION DATA

LOT NO.	RDWY. C/L STA.	INV. @ MAIN	INV. @ DHC	INV. @ SHC	INV. @ R/W	INV. @ PUE	MCE	REMARKS	HO. CO. STD.
LOT 177	5+18.67 6.95' L	476.30	482.96	-	483.60	-	488.3	DHC @ 2.0%	S-2.12
LOT 178	5+50.67 6.95' L	477.07	483.29	-	483.93	-	488.6	DHC @ 2.0%	S-2.12
LOT 179	6+04.67 6.97' L	478.36	483.20	-	483.84	-	488.5	DHC @ 2.0%	S-2.12
LOT 180	6+36.67 6.98' L	479.13	482.80	-	483.44	-	488.1	DHC @ 2.0%	S-2.12
LOT 181	6+68.67 6.98' L	479.90	482.70	-	483.34	-	488.0	DHC @ 2.0%	S-2.12
LOT 182	6+88.67 6.99' L	480.38	-	480.55	481.19	-	485.9	SHC @ 2.0%	S-2.11
LOT 183	7+33.67 7.00' L	(MH-402)	-	481.56	482.20	-	485.9	SHC @ 2.0%	S-2.11
LOT 184	7+10.67 6.99' L	480.91	-	481.08	-	481.48	486.4	SHC @ 2.0%	S-2.11
LOT 185	6+58.67 6.98' L	479.66	481.65	-	-	482.05	487.0	DHC @ 2.0%	S-2.12
LOT 186	6+26.67 6.97' L	478.90	482.01	-	-	482.65	487.0	DHC @ 2.0%	S-2.12
LOT 187	5+90.17 6.96' L	478.02	482.95	-	-	483.35	488.3	DHC @ 2.0%	S-2.12
LOT 188	5+60.67 6.96' L	477.31	481.65	-	-	482.05	487.0	DHC @ 2.0%	S-2.12
LOT 189	5+28.67 6.95' L	476.55	480.55	-	-	480.95	485.9	DHC @ 2.0%	S-2.12
LOT 190	13+12.46 7.00' L	472.10	480.27	-	-	480.67	485.8	DHC @ 2.0%	S-2.12
LOT 191	12+92.46 7.00' L	472.26	481.47	-	-	481.87	487.0	DHC @ 2.0%	S-2.12
LOT 192	12+62.46 7.00' L	472.45	482.67	-	-	483.07	488.2	DHC @ 2.0%	S-2.12
LOT 193	12+22.46 7.00' L	472.55	482.07	-	-	482.47	487.6	DHC @ 2.0%	S-2.12
LOT 194	11+92.46 7.00' L	472.70	481.47	-	-	481.87	487.0	DHC @ 2.0%	S-2.12
LOT 195	11+72.46 7.00' L	(MH-401)	480.97	472.93	-	481.37	486.5	DHC @ 2.0%	S-1.32
LOT 196	11+72.46 7.00' L	(MH-401)	-	472.93	-	473.80	478.5	SHC @ 2.0%	S-2.11
LOT 197	12+12.46 7.00' L	472.62	-	472.79	-	473.47	478.3	SHC @ 2.0%	S-2.11
LOT 198	12+52.46 7.00' L	472.35	-	472.52	-	473.20	478.1	SHC @ 2.0%	S-2.11
LOT 199	12+82.46 7.00' L	472.17	-	472.34	-	473.02	478.1	SHC @ 2.0%	S-2.11

OWNER/DEVELOPER:
MANGIONE ENTERPRISES OF TURF VALLEY, LP
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410-825-8400

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644



DES:	MCR/DBT
DRAFT:	MCR/DBT
CHK:	DAM
DATE:	02/2010
BY:	NO.
REVISIONS:	
DATE:	

PROFILES OF PUBLIC WATER & SEWER MAINS

VILLAGES AT TURF VALLEY
PHASE 4
LOTS 177 thru 199 AND OPEN SPACE LOTS 200 thru 202
A RE-SUBDIVISION OF NON-BUILDABLE BULK PARCEL BB PREVIOUSLY RECORDED
UNDER PHASE 1, SECTION 2
TAX MAP: 16 - BLOCK: 11 & 17 - PARCEL: p/o 8 - ZONED: PGCC - ELECTION DISTRICT: 3
CONTRACT NO. 24-4551-D

SCALE:	AS SHOWN
SHEET NO.	3 OF 3