

# VILLAGES AT TURF VALLEY

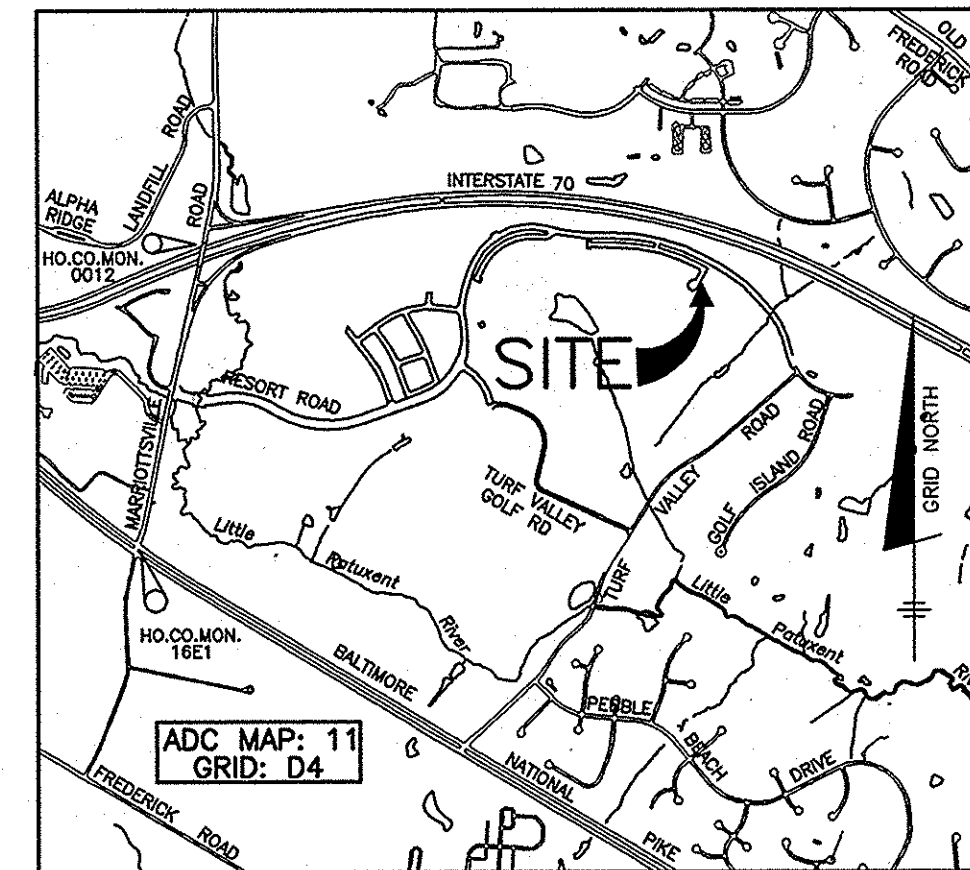
## PHASE 2, SECTION 2

### CONTRACT NO. 24-4663-D

QUANTITIES		AS-BUILT	
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE
8" PVC C900 WATER	167 LF		PVC
6" PVC C900 WATER	79 LF		PVC
FIRE HYDRANTS (INCLUDES 8"x6" TEE & 6" VALVE)	1 EA.		
6" VALVE	1 EA.		DIP
12"x8" REDUCER	1 EA.		DIP
8"x6" REDUCER	1 EA.		DIP
1-1/2" WHIC	126 LF		COPPER
1" METER	5 EA.		
8" PVC SDR-35 SEWER	451 LF		PVC
MANHOLES	3 EA.		CONCRETE
4" SHC	282 LF		CONCRETE

MANUFACTURER/SUPPLIER:  
 JM EAGLE / HD SUPPLY  
 JM EAGLE / HD SUPPLY  
 KENNEDY / HD SUPPLY  
 STAR PTRR / HD SUPPLY  
 STAR PTRR / HD SUPPLY  
 STAR PTRR / HD SUPPLY  
 CAMBRIDGE/EA / HD SUPPLY  
 JM EAGLE / HD SUPPLY  
 ATLANTIC CONCRETE  
 HORMICA / HD SUPPLY

NAME OF UTILITY CONTRACTOR: CTG  
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE:



### 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 NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL 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 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 ON THESE PLANS:  
 AT&T.....1-800-252-1133  
 BGE (CONTRACTOR SERVICES).....410-637-8713  
 BGE (EMERGENCY).....410-685-0123  
 BUREAU OF UTILITIES.....410-313-4800  
 COLONIAL PIPELINE CO.....410-795-1390  
 MISS UTILITY.....1-800-257-7777  
 STATE HIGHWAY ADMINISTRATION.....410-531-5233  
 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 LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(o) OF THE HOWARD COUNTY CODE.

#### BENCH MARKS

HORIZONTAL: MARYLAND MADB3  
 VERTICAL: NAVD83

HO. CO. #0012  
 STAMPED DISC SET ON TOP OF 3" DEEP CONCRETE MONUMENT AT NORTHWEST CORNER OF MARYSVILLE ROAD AND I-70 10.6' FROM X-CUT IN TOP OF GUARDRAIL POST.  
 N: 598502.760 E: 1340964.370  
 ELEV. 486.298'

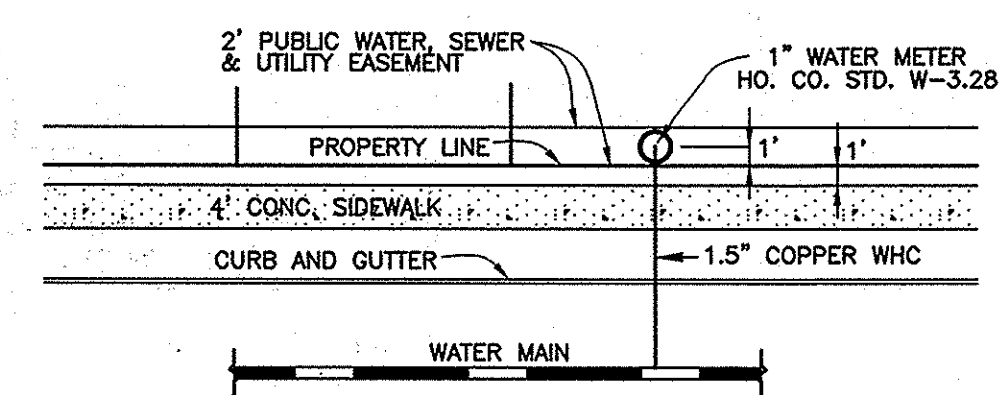
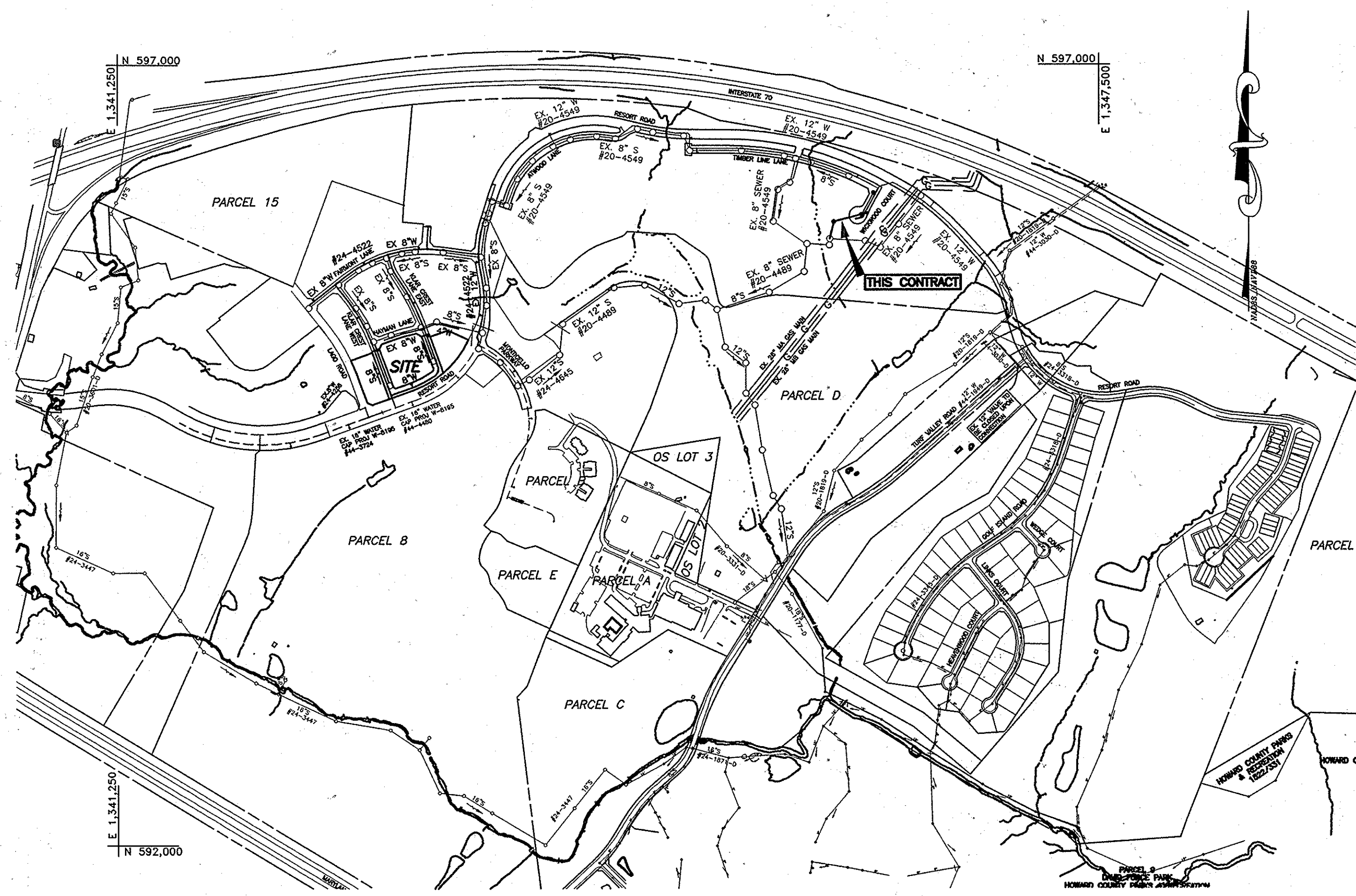
HO. CO. #16E1  
 STAMPED DISC SET ON TOP OF 3" DEEP CONCRETE MONUMENT AT MEDIUM OF ROUTE 40 AT INTERSECTION WITH MARYSVILLE ROAD 8.6' FROM E/P OF EAST BOUND LANES.  
 N: 593250.980 E: 1340192.700  
 ELEV. 483.981'

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

LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
247	WICKWOOD COURT		
248	WICKWOOD COURT		
249	WICKWOOD COURT		
250	WICKWOOD COURT		
251	WICKWOOD COURT		
252	WICKWOOD COURT		
253	WICKWOOD COURT		
254	WICKWOOD COURT		

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

LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
248	WICKWOOD COURT		
249	WICKWOOD COURT		
250	WICKWOOD COURT		
251	WICKWOOD COURT		
252	WICKWOOD COURT		



TYPE OF BUILDING.....	SFA
NO. OF LOTS/PARCELS/UNITS.....	8
NUMBER OF SHC'S.....	8
NUMBER OF WHC'S.....	5
AREA OF COMMERCIAL LOT/PARCEL.....	N/A
SEWER SHED.....	LITTLE PATRICK WRP
PUMPING STATION.....	ROUTE 108 PS
WATER ZONE.....	630W
TEST GRADIENT.....	.780

#### LEGEND

	EXIST. WATER MAIN
	EXIST. SEWER MAIN
	EXIST. STORM DRAIN
	PROP. WATER MAIN
	PROP. SEWER MAIN
	PROP. STORM DRAIN (BY OTHERS)
	PROP. SEWER MANHOLE
	PROP. TERMINAL MANHOLE
	PROP. SEWER HOUSE CONNECTIONS
	PROP. WATER HOUSE CONNECTION
	PROP. FIRE HYDRANT
	PROP. VALVE
	PROP. PLUG & BUTTRESS

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 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 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 HARNESSES. 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 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 TEST 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 AWWA 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.
- 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 PLAN 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 EBBA IRON, INC. OR APPROVED EQUAL.
- THE MINIMUM WHC FOR FIRE SPRINKLER CODE IS 1.5" WITH A 1" METER WITH OUTSIDE 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 WATER TIGHT FRAME AND COVER. STANDARD DETAIL GS.52, WHERE WATER TIGHT 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.

#### SHEET INDEX

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

THIS SHEET REPLACES THE SHEET ORIGINALLY SIGNED ON 5-20-2010.

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

*John R. Roberts* 9/15/14  
 HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER F-10-078.

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. 122810, Expiration Date: 6-30-2015

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*John C. ...* 9/15/14  
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY, MARYLAND

*John C. ...* 9/23/14  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK  
 ENGINEERS & LAND SURVEYORS & PLANNERS  
 ENGINEERING, INC.  
 8480 BALTIMORE NATIONAL PIKE SUITE 315 A ELICOTT CITY, MARYLAND 21043  
 (P) 410-410-6105 (F) 410-465-6644  
 WWW.BD-CIVILENGINEERING.COM

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 JOHN C. ...  
 9/23/14

DES: MCR/DBT			
DRAFT: MCR/DBT			
CHK: DAM	BEI	UPDATE QUANTITIES CHART, SHEET INDEX & GENERAL NOTES. ADD WHC AND SHC AS-BUILT CHARTS.	8-21-2014
DATE: 09/20/13	BY: NO.	REVISIONS	DATE

TITLE SHEET

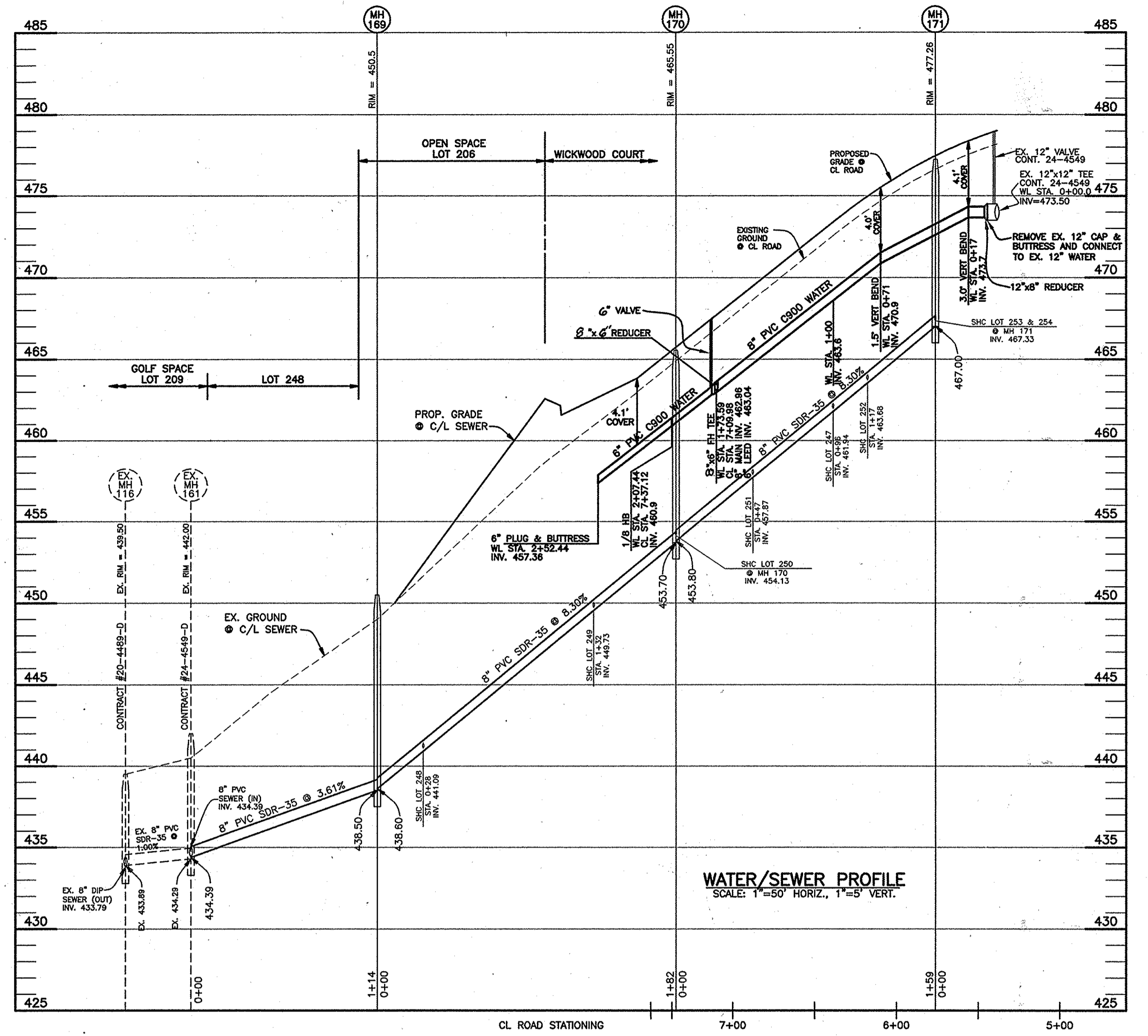
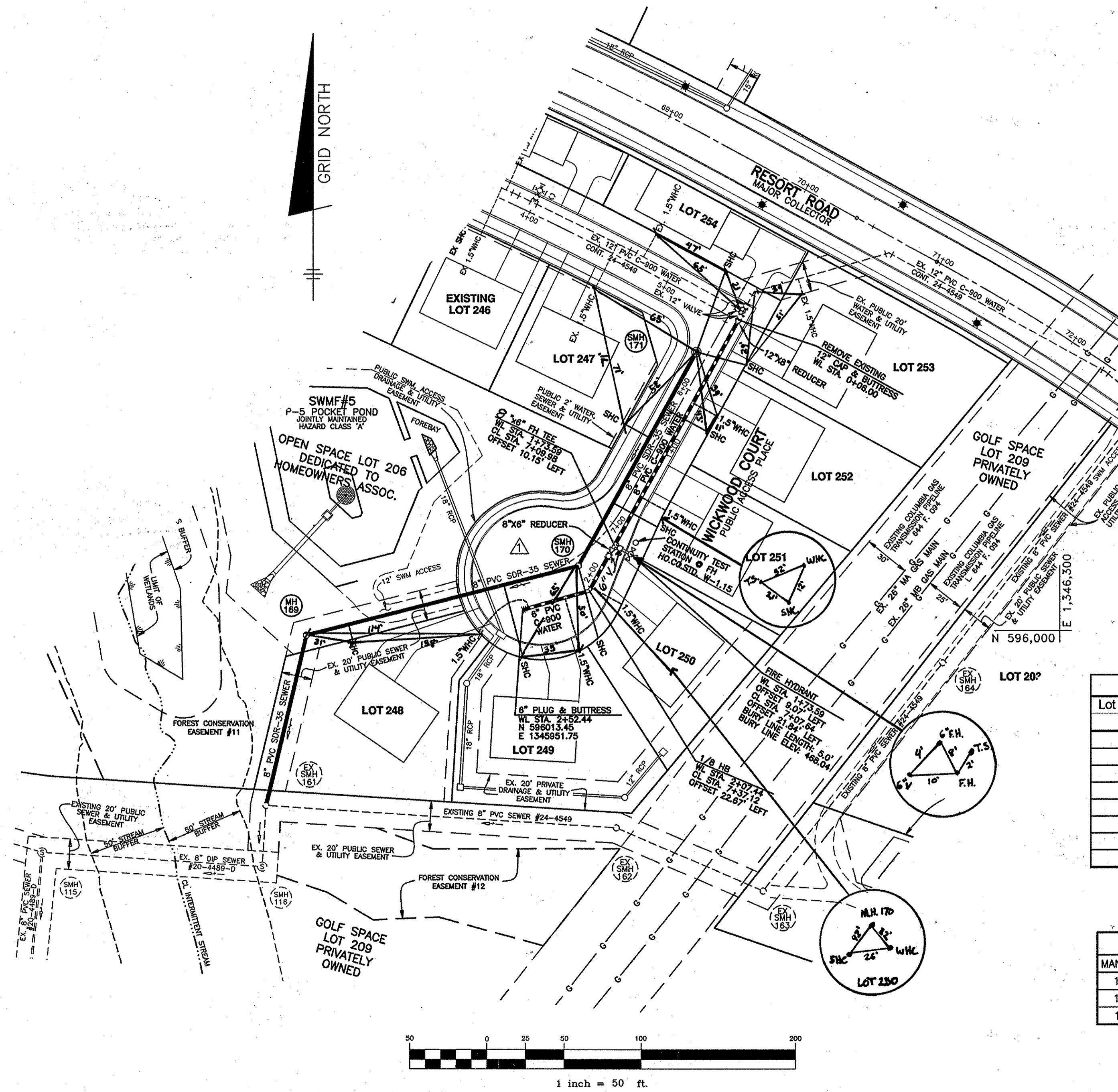
600 SCALE MAP #16 BLOCK: 11&17 200 SCALE MAP #146

VILLAGES AT TURF VALLEY  
 PHASE 2, SECTION 2  
 LOT 210 thru 257; OPEN SPACE LOTS 258 thru 260

TAX MAP: 16 - BLOCK: 17 - PARCELS: 401, P/O 8, P/O 394 - ZONED: PGCC - ELECTION DISTRICT: 3

CONTRACT NO. 24-4663-D

SCALE: AS SHOWN  
 SHEET NO. 1 OF 2



SHC CHART			
Lot Number	Invert @ main	Invert @ R/W or esmt	MCE
247	461.94	462.34	466.68
248	441.09	441.29	445.61
249	449.73	450.71	454.73
250	454.13	455.11	459.41
251	457.87	458.51	462.81
252	463.68	464.32	468.82
253	467.33	467.99	472.49
254	467.33	468.45	472.55

Lot Frontage Chart	
Lot Number	Distance (feet)
247	62.00
248	26.04
249	67.82
250	67.48
251	70.08
252	70.00
253	51.52
254	131.19

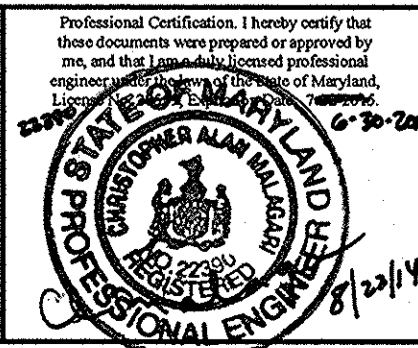
SEWER MANHOLE - STRUCTURE SCHEDULE		
MANHOLE	LOCATION	RIM ELEVATION
169	N 595996.6824 E 1345811.6452	450.50
170	CL STA. 7+34.70 WICKWOOD COURT; OFFSET 5.22' LEFT	465.55
171	CL STA. 5+76.24 WICKWOOD COURT; OFFSET 7.00' RIGHT	477.26

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

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

**BENCHMARK**  
ENGINEERS • LAND SURVEYORS • PLANNERS  
**ENGINEERING, INC.**  
2480 BALTIMORE NATIONAL PIKE & SUITE 315 • ELICOTT CITY, MARYLAND 21043  
(P) 410-465-9165 (F) 410-465-6544  
WWW.BD-CIVILENGINEERING.COM



DESIGN:	MCR DBT		
DRAFT:	MCR DBT		
CHK:	DAM		
DATE:	09/2013		
BY:	NO.	REVISIONS	DATE
		revise Wickwood Court, lot layout, and water/sewer layout	8-21-2014

**PLAN VIEW**  
**PUBLIC WATER & SEWER MAINS**

**VILLAGES AT TURF VALLEY**  
PHASE 2, SECTION 2  
LOT 210 thru 257; OPEN SPACE LOTS 258 thru 260  
TAX MAP: 16 - BLOCK: 17 - PARCEL: 401, P/O 8, P/O 394 - ZONED: PGCC - ELECTION DISTRICT: 3  
**CONTRACT NO. 24-4663-D**

SCALE:  
AS SHOWN  
SHEET NO.  
2 OF 2

THIS SHEET REPLACES THE SHEET  
ORIGINALLY SIGNED ON 5-20-2010.