QUANTITIES										
ITEMS	QUANTITIES	AS-BUILT								
HEMIS	ESTIMATED	QUANTITIES	TYPE	MANUF./SUPPLIER						
8" PVC C900 DR-18 WATER	715 LF	715 L F	PVC	NATIONAL PIPE/FERGUSO						
FIRE HYDRANTS (INCLUDES 8"x6" TEE & 6"VALVE)	2 EA	2 EA	DIP	MULLER/FERGUSON						
8" VALVE	1 EA	I EA	DIP	MULLER / FERRUSON						
8" DIP CLASS 52 SEWER	170 LF	170LF	DIP	Mewane/Ferguson						
16" DIP CLASS 52 SEWER	130 LF	130 LF	DIP	MCWANE / FERGUSON						
16" DIP CLASS 54 SEWER	160 LF	160 LF	DIP	MCWANE IFERGUSON						
36" STEEL CASING PIPE	122 LF	120 LF	STEEL	OILFIELD PIPELINESAL						
MANHOLES	2 EA	2 EA	CONCRETE	CONTRACTORS PRECAST						
NAME OF UTILITY CONTRACTOR: UTILITIES UNLIMITED										
SURVEY AND DRAFTING DIVISION AS-BUILT DATE: 8-29-16										

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED

IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD

CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

SPECIFICATIONS AND AS PER F-15-056.

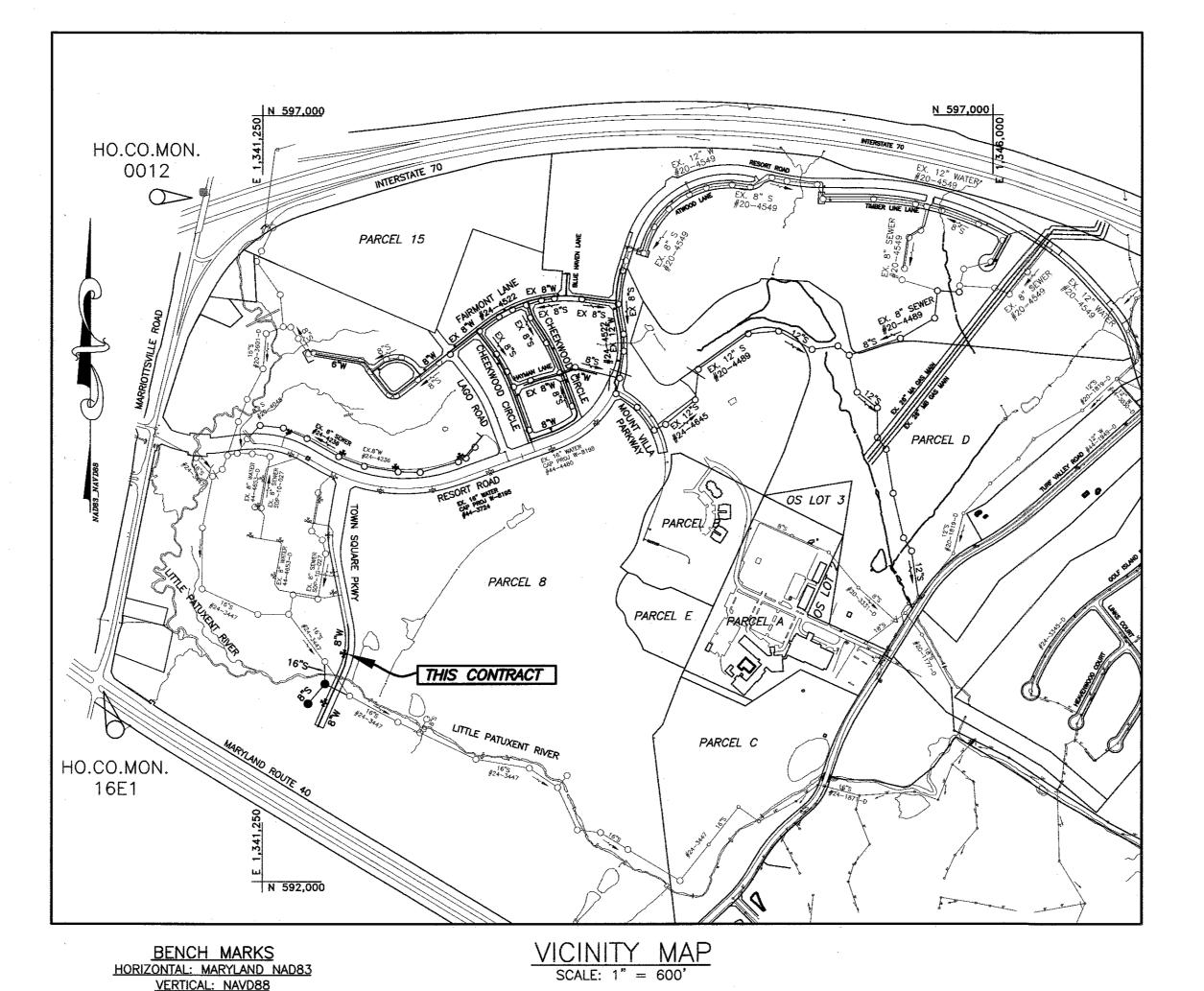
J:\2585 Town Square Parkway\dwg\6009.dwg, 5/19/2015 9:48:44 AM

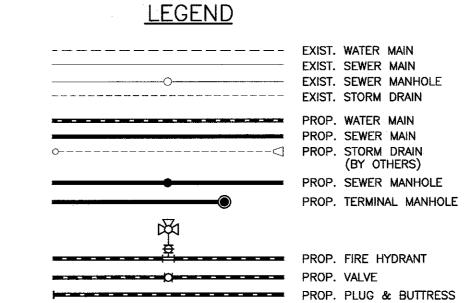
DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

es/ferguson

TOWN SQUARE PARKWAY CONTRACT NO. 24-4891-D





SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

1. Obtain grading permit. (day 1)

2. Hold on-site pre-construction meeting. (day 2)

3. Clear and Grub as necessary to install stabilized construction entrance and perimeter controls as shown under F-15-056. (super silt fences, diversion dikes, etc.) (day 3-6)

4. Upon approval from the Howard County sediment control inspector, begin installation of the new sewer line. Begin by installing SMH 15A and the sewer main from SMH 15A to EX SMH 15. Do NOT remove the existing main at this time. Existing sewer is to remain in place and functional. (day 7-9)

5. Once Step 4 is complete begin to install the sewer from SMH 15A up towards the stream channel and from EX SMH 16 towards the stream channel. Stop the sewer one section short of the top of the stream channel. (day 10-11).

6. Install the temporary stream diversion (Option #1 or Option #2) as shown on sheet 13 of F-15-056. Once installed, begin to install final section(s) of sewer to make the connection. Backfill, and install 12" rip-rap per Detail S-3.12. The temporary stream diversion and construction of final section of sewer shall be accomplished within a 24 hour period. (day 12).

7. Once new sewer line is in place, abandonment of the existing sewer can take place. This shall be accomplished by utilizing a masonry plug (in lieu of a mechanical plug) a minimum of 12" into the abandoned pipe. All space around the pipeline behind the plug shall be filled/surrounded by non-shrink grout or 2,500 psi concrete. (day 13-14).

8. Stabilize any remaining disturbed areas in accordance with the permanent seedbed notes. Note that all perimeter sediment controls shall remain in place until all site construction is complete. See S.O.C. on F-15-056.(day 15)

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

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.

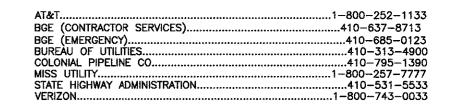
3. HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 0012 AND NO.

5. 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 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.

6. 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.

8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE



TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND

O. 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

11. 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(a) OF THE HOWARD COUNTY CODE.

PART II WATER

1. ALL WATER MAINS TO BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.

WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE

3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.

4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS. 5. 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.

6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM. 7. TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.

8. 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.

9. 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

10. 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 INSERTIONLINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE HE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO

11. 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 #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CÂRE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.

PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 } 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 CERTAINTEED 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 (IPEX) BLUE BRUTE DR18 OR EQUAL. 12. 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 DEVICESFOR 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

- 1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- 2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- 3. FORCE MAINS SHALL BE D.I.P. ONLY.
- 4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY. 5. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.

6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

BENCHMARK ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS

TYPE OF BUILDING: _

NUMBER OF SHC'S:.

NUMBER OF WHC'S:..

DRAINAGE AREA:___

TREATMENT PLANT:

WATER ZONE ___

TEST GRADIENT.

ENGINEERING, INC. . 1480 BALTIMORE NATIONAL PIKE▲SUITE 315▲ELLICOTT CITY, MARYLAND 21043 (P) 410-465-6105 (F) 410-465-6644 6.30-15 WWW.BEI-CIVILENGINEERING.COM CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DEPARTMENT OF PLANNING AND ZONING

HOWARD COUNTY, MARYLAND



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. 22390, Expiration Date: 6-30-2015.

HO. CO. #0012

ELEV. 486.298'

HO. CO. #16E1

ELEV. 463.981'

OWNER/DEVELOPER:

MANGIONE ENTERPRISES OF TURF VALLEY, LP

1205 YORK ROAD, PENTHOUSE

LUTHERVILLE, MARYLAND 21093

410-825-8400

STAMPED DISC SET ON TOP OF 3' DEEP

FROM E/P OF EAST BOUND LANES.

N 593250.960 E 1340192.700

CONCRETE MONUMENT AT NORTHWEST CORNER

OF MARRIOTSVILLE ROAD AND I-70 10.6' FROM X-CUT IN TOP OF GUARDRAIL POST.

STAMPED DISC SET ON TOP OF 3' DEEP CONCRETE MONUMENT AT MEDIAN OF ROUTE 40

AT INTERSECTION WITH MARRIOTSVILLE ROAD 8.6'

	DES:	DBT				
	DRAFT:	DBT				
5.20-15	CHK:	САМ				
		4/2015	BY	NO.	REVISIONS	DATE

LITTLE PATUXENT WRP

_ROUTE 108 PS

__630W

TITLE SHEET

600 SCALE MAP #16

BLOCK: 11&17

TOWN SQUARE PARKWAY PARCELS 1-2, I-3, I-4 & K-1 AND OPEN SPACE LOTS 6 thru 8 A RESUBDIVISION OF OPEN SPACE LOT 2 AND PARCELS I & K PREVIOUSLY RECORDED AS PLAT 18696-18698 AND OPEN SPACE LOTS 4 & 5 PREVIOUSLY

RECORDED AS PLAT 22078-22079

SHEET NO.

TAX MAP: 16 - BLOCK: 17 - PARCEL: P/O 8 - ZONED: PGCC - ELECTION DISTRICT: 3 CONTRACT NO. 24-4891-D

1 OF 2

SCALE:

AS SHOWN

