

# Contract No. 14-4822-D

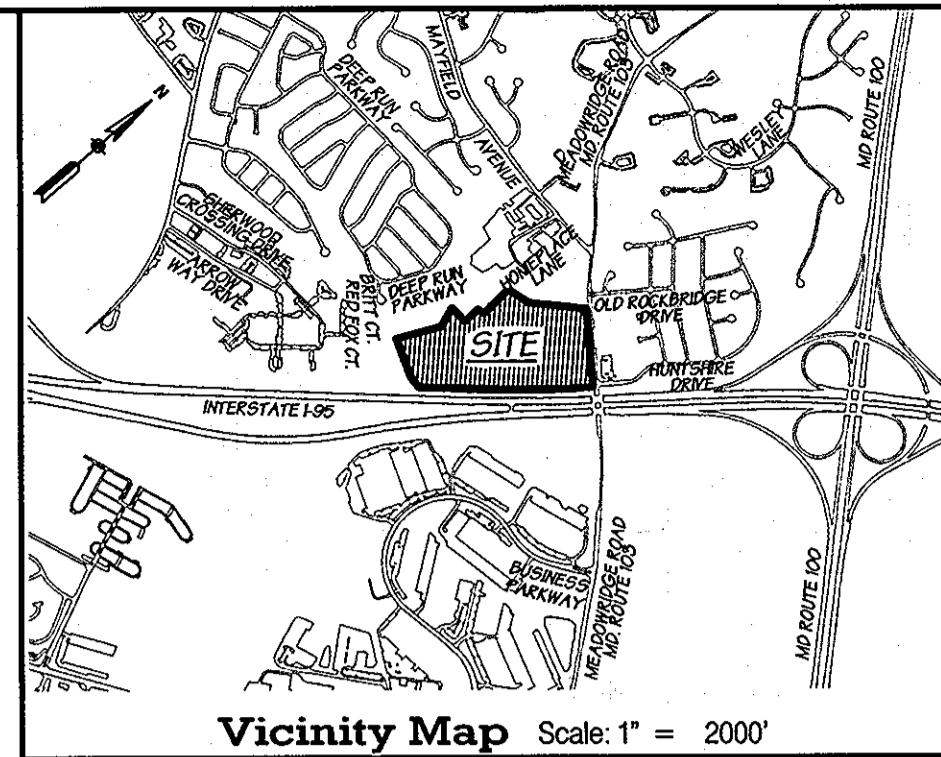
## PROPOSED FACILITIES FOR

# The Meadows Corporate Park

## Phase 2

### PUBLIC WATER & SEWER CONSTRUCTION PLANS

Howard County, Maryland Department of Public Works



Vicinity Map Scale: 1" = 2000'  
ADC MAP 16 K 10

QUANTITIES		AS-BUILT		
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER /SUPPLIER
6" PVC SANITARY SEWER	42 LF			
8" PVC SANITARY SEWER	811 LF			
SANITARY MANHOLE (S-5.12)	5 EACH			
TYPE 'B' DROP CONNECTION (S-1.32)	1 EACH			
6" C900 PVC DR-14 WATER MAIN	68 LF			
8" C900 PVC DR-14 WATER MAIN	956 LF			
6" VALVE & ROADWAY BOX	3 EACH			
8" VALVE & ROADWAY BOX	4 EACH			
8" X 6" TEE	3 EACH			
8" X 8" TEE	2 EACH			
FIRE HYDRANT	3 EACH			
8"- 1/8" HORZ. BEND	3 EACH			
8"- 1/16" HORZ. BEND	4 EACH			
8"- 1/16" VERT. BEND	4 EACH			
8"- 1/32" VERT. BEND	4 EACH			
8" CAP & BUTTRESS	1 EACH			
8" SLEEVE AND SPACER	1 EACH			
8"x 8" TAPPING SLEEVE & VALVE	1 EACH			
16"x 8" TAPPING SLEEVE & VALVE	1 EACH			

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

Lot Number	Address	Location Dimension 1	Location Dimension 2
PARCEL A-7			
PARCEL A-8			
PARCEL A-9			

Lot Number	Address	Location Dimension 1	Location Dimension 2
PARCEL A-7			
PARCEL A-8			
PARCEL A-9			

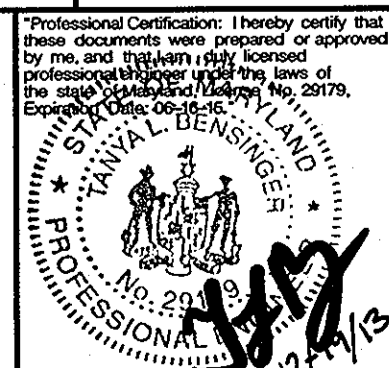
LEGEND	
Existing Property Line	— — — — —
Proposed Internal Property Line	- - - - -
Existing Adjacent Property Line	— — — — —
Prop. Public Water & Utility Easement	— — — — —
Ex. Public Water & Utility Easement	— — — — —
Existing Right-of-Way Line	— — — — —
Proposed Building	— — — — —
Existing Edge of Pavement	— — — — —
Existing Storm Drain	— — — — —
Proposed Storm Drain	— — — — —
Existing Sanitary	— — — — —
Proposed Sanitary	— — — — —
Existing Water	— — — — —
Proposed Water	— — — — —
Existing Curb	— — — — —
Proposed Conc. Curb	— — — — —
Existing Electric	— — — — —
Existing Overhead Utility	— — — — —
Existing Gas	— — — — —

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.  
 APPROVED: \_\_\_\_\_ DATE: 1/21/14  
 HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS AND SITE DEVELOPMENT PLAN SDP 13-070

**Owner/Developer**  
**Merritt Properties, LLC**  
 2066 Lord Baltimore Drive  
 Baltimore, Maryland 21244  
 Phone 410-298-2600  
 Fax 410-298-9644

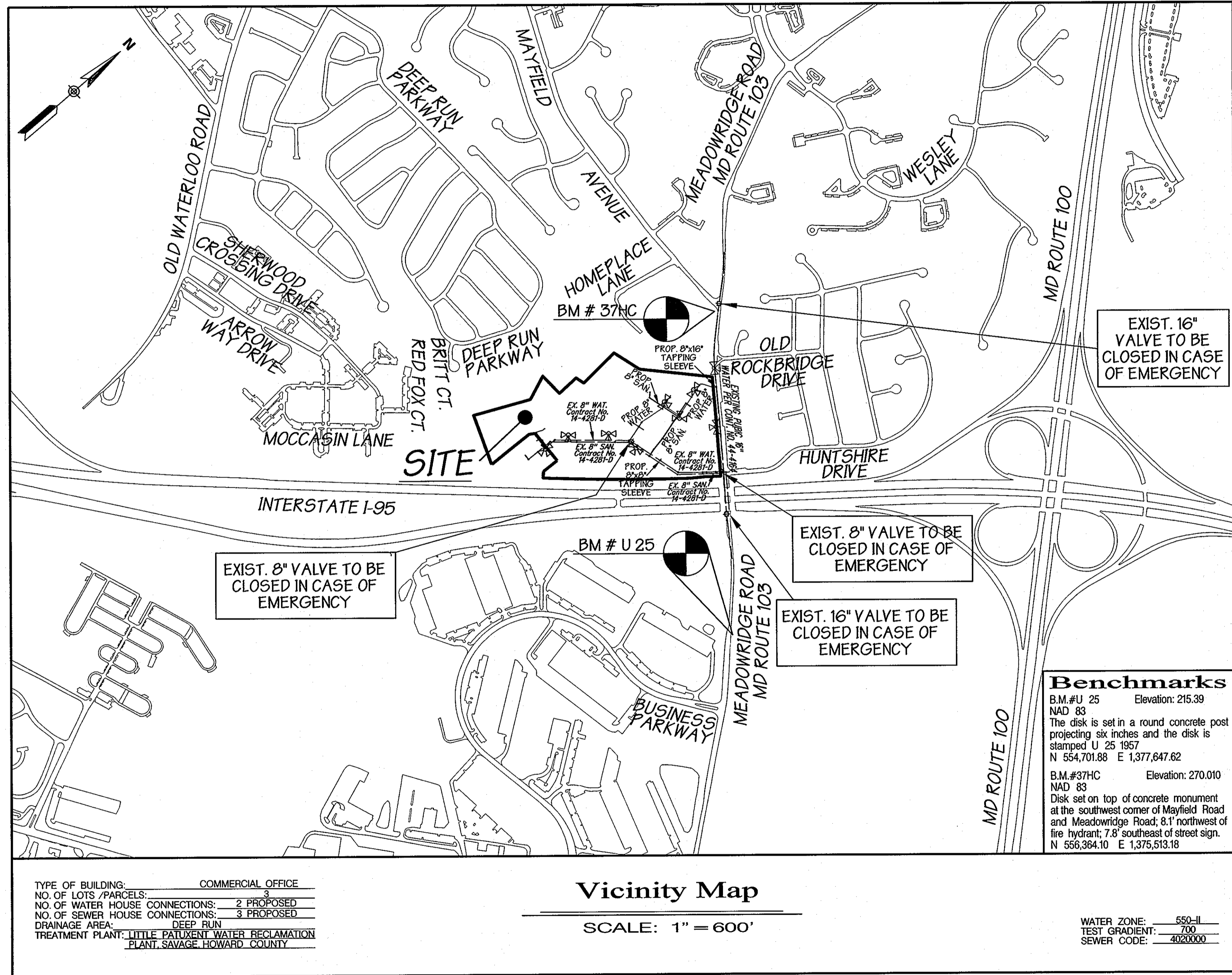
**MATIS WARFIELD**  
 Consulting Engineers  
 10540 York Road, Suite M  
 Hunt Valley, Maryland 21030  
 PHONE 410.683.7004 FAX 410.683.1798  
 www.matiswarfield.com



DESIGNED BY:	DATE:	BY:	NO.	REVISION	DATE
R.L.N.	12/19/13				
DRAWN BY:					
CHECKED BY:					

NO.	SHEET TITLE
1	WATER & SEWER COVER SHEET
2	WATER & SEWER PLAN VIEW
3	SEWER PROFILES
4	WATER PROFILES

**Benchmarks**  
 B.M.#U 25 Elevation: 215.39  
 NAD 83  
 The disk is set in a round concrete post projecting six inches and the disk is stamped U 25 1957  
 N 554,701.88 E 1,377,647.62  
 B.M.#37HC Elevation: 270.010  
 NAD 83  
 Disk set on top of concrete monument at the southwest corner of Mayfield Road and Meadownridge Road, 8.1' northwest of fire hydrant, 7.8' southeast of street sign.  
 N 556,364.10 E 1,376,513.18



#### 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 by DuVal and Associates, P.A. in November 2012.
  - 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 Station 37HC and U25.  
 All vertical controls are based on NAVD'88. Vertical controls provided on the drawings based on Howard County Control Monument 37HC.
  - 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 include 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 (Construction Services) 410-637-8713  
 BGE (Emergency) 410-685-0123  
 Bureau of Utilities 410-313-4900  
 Colonial Pipeline Co. 410-785-1390  
 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 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 18.14(a) of the Howard County Code.
- Part II WATER
- All water mains shall be C900 PVC DR-14 unless otherwise noted.
  - Tops of all water mains shall have a minimum 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 wires 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 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 deflection 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 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 CertainFeed 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.
12. When PVC high deflection couplings or PVC 5-degree sweeps are used to facilitate changes in horizontal or vertical alignments of AWWA C900 PVC pipelines, the contractor shall install devices for the prevention of over-insertion of the PVC pipe spigots or plan 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 DIP or PVC unless otherwise noted.
  - All manholes shall be 4'-0" inside diameter unless otherwise noted.
  - Force mains shall be DIP 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 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.
  - House(s) with the symbol "C.N.S." indicates that the cellar cannot be served.

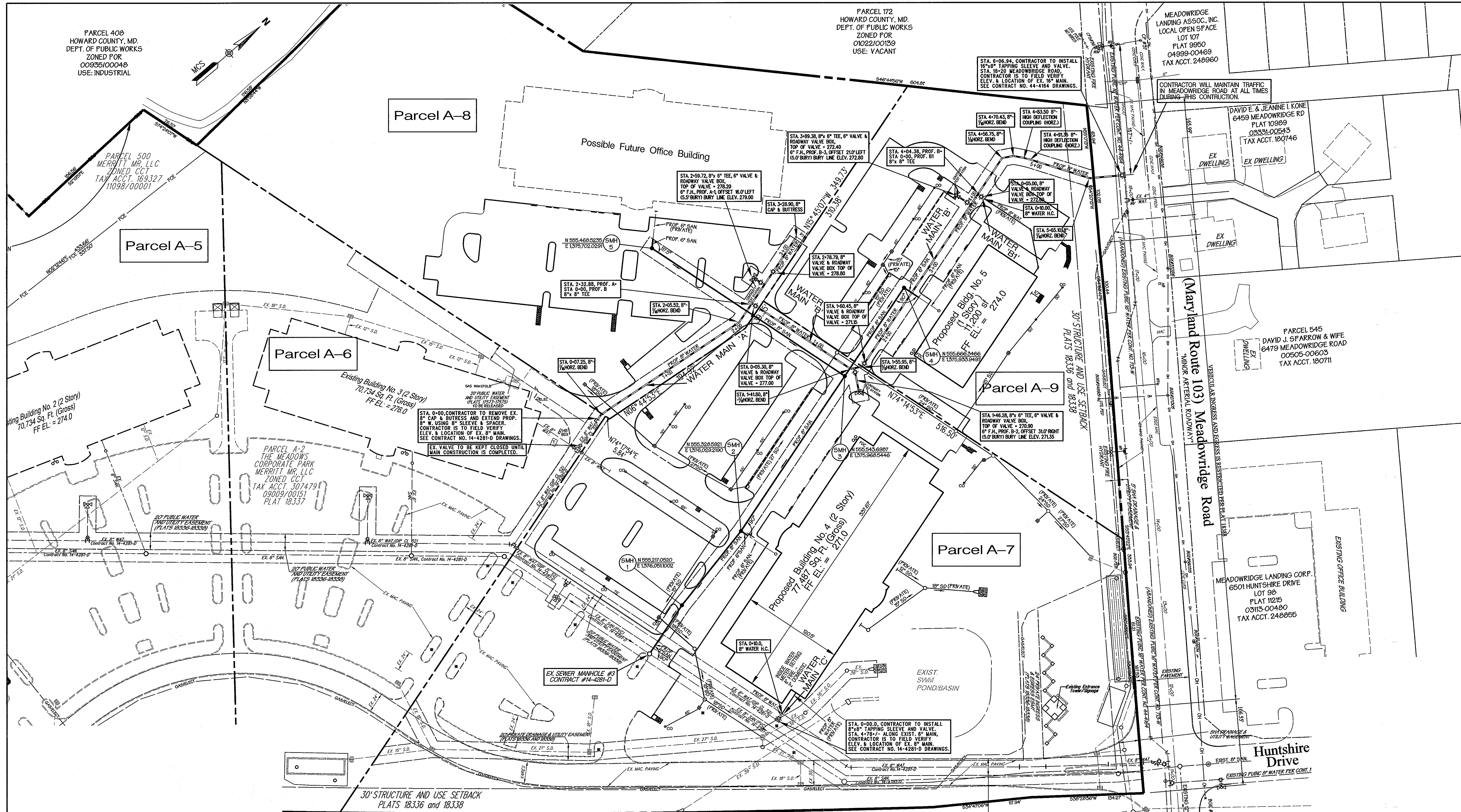
DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 \_\_\_\_\_ DATE: 1/21/14  
 CHIEF - BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
 \_\_\_\_\_ DATE: 1/30/14  
 CHIEF DEVELOPMENT ENGINEERING DIVISION

Water & Sewer Cover Sheet

600 SCALE MAP NO. 37 BLOCK NO. 8

PUBLIC WATER & SEWER  
**Proposed Water & Sewer Facilities for**  
**The Meadows Corporate Park**  
**Phase 2**  
**3 Parcels - A-7, A-8 and A-9**  
 CONTRACT NO. 14-4822-D  
 1st Election District  
 SCALE AS SHOWN  
 SHEET 1 OF 4



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.  
 APPROVED  
 John R. Roberts 1/21/14  
 HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS AND SITE DEVELOPMENT PLAN SDP 13-070

**Owner/Developer**  
 Merritt Properties, LLC  
 2066 Lord Baltimore Drive  
 Baltimore, Maryland 21244  
 Phone 410-298-2600  
 Fax 410-298-9644

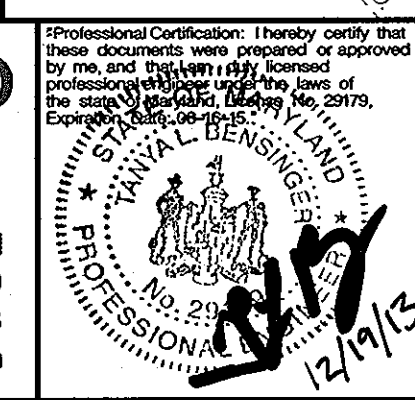
**Interstate (I-95)**  
 (Principal Arterial Highway)  
 Vehicular Ingress & Egress Restricted

**Plan**  
 Scale: 1" = 50'  
 SEE SDP 13-070

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Chief - Bureau of Utilities - DATE

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
 Chief - Development Engineering Division - DATE

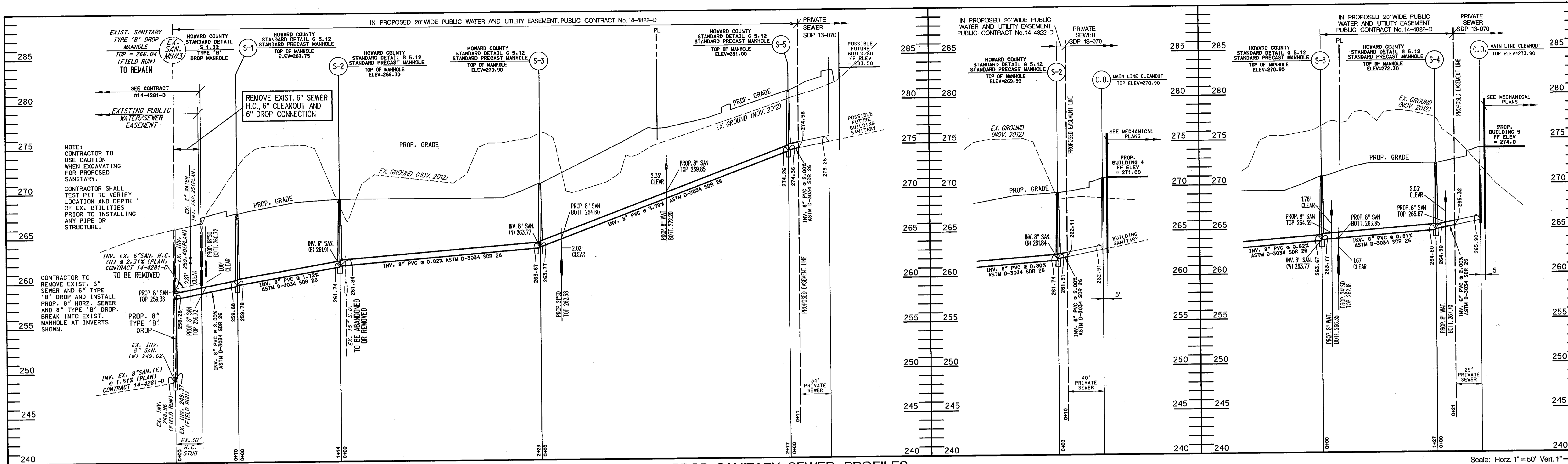
**MATIS WARFIELD**  
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 PHONE 410.683.7004 FAX 410.683.1798  
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DESIGNED BY:	R.L.N.
DRAWN BY:	R.L.N.
CHECKED BY:	T.L.B.
DATE:	12/19/13
BY NO.	
REVISION	
DATE	
600 SCALE MAP NO.	37
BLOCK NO.	8

**Water & Sewer Plan View**

**Proposed Water & Sewer Facilities for  
 The Meadows Corporate Park  
 Phase 2  
 3 Parcels - A-7, A-8 and A-9**  
 CONTRACT NO. 14-4822-D  
 1st Election District  
 SCALE 1" = 50'  
 SHEET 2 OF 4



PROP. SANITARY SEWER PROFILES

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APPROVED

*John R. Robert* 1/21/14  
HOWARD SOIL CONSERVATION DISTRICT DATE

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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Land Development \_\_\_\_\_ Date \_\_\_\_\_

Director \_\_\_\_\_ Date \_\_\_\_\_

Owner/Developer  
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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

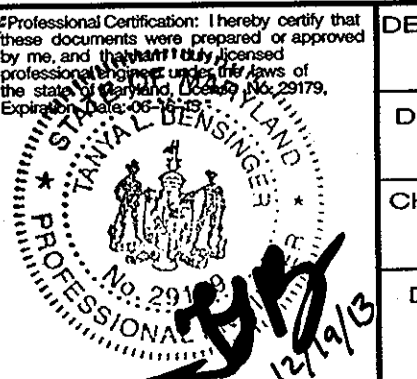
*Steve Corman* 1/21/14  
CHIEF - BUREAU OF UTILITIES - DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*Chad Edwards* 1/30/14  
CHIEF - DEVELOPMENT ENGINEERING DIVISION - DATE

**MATIS WARFIELD**  
Consulting Engineers

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BY	NO.	REVISION	DATE

Sewer Profiles

600 SCALE MAP NO. 37 BLOCK NO. 8

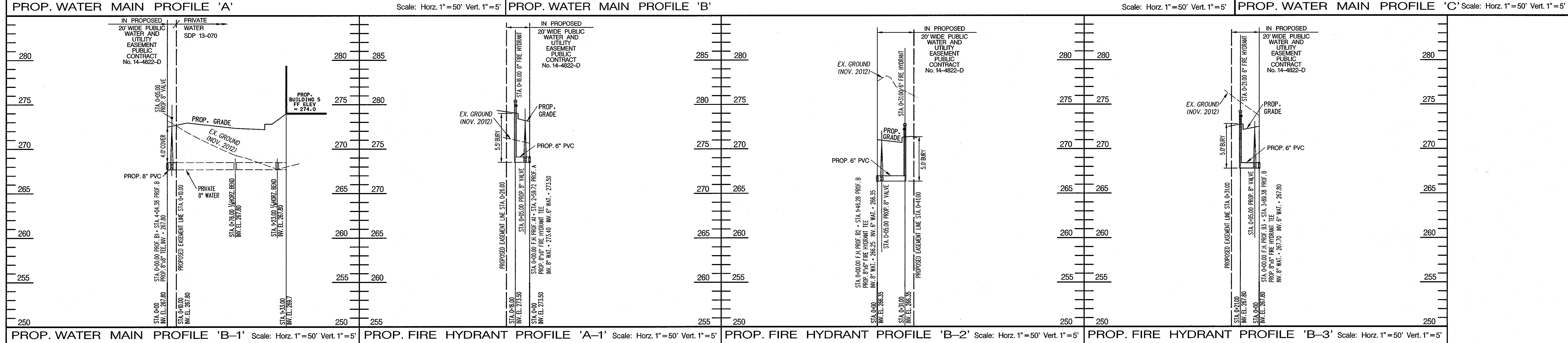
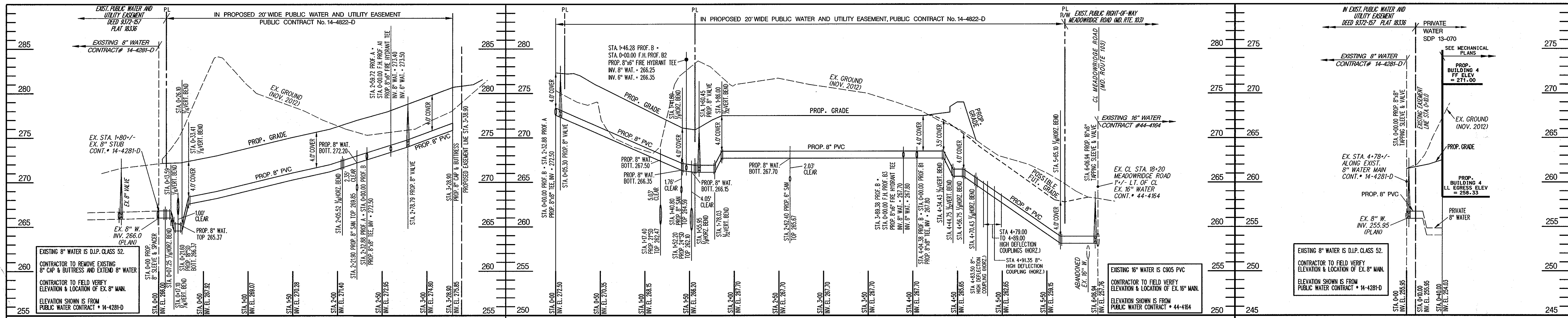
PUBLIC WATER & SEWER

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3 Parcels - A-7, A-8 and A-9**

CONTRACT NO. 14-4822-D 1st Election District

SEE SDP 13-070

SCALE AS SHOWN  
SHEET 3 OF 4



CENTER A SECTION OF WATER MAIN PIPE UNDER STORM DRAIN AND SEWER CROSSINGS. WATER MAIN JOINTS SHALL NOT BE LOCATED DIRECTLY UNDER SEWER OR STORM DRAIN CROSSINGS.

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

APPROVED: *[Signature]* 1/21/14  
 HOWARD COUNTY CONSERVATION DISTRICT DATE

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Chief, Development Engineering Division Date  
 Chief, Division of Land Development Date  
 Director Date

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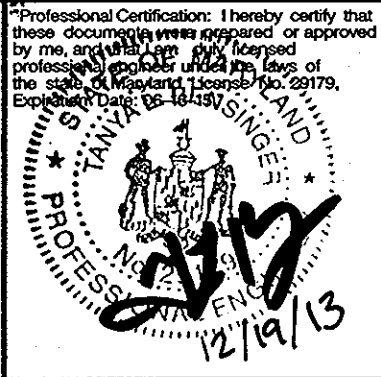
DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*[Signature]* 1/21/14  
 CHIEF - BUREAU OF UTILITIES - DATE

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

*[Signature]* 1/30/14  
 CHIEF - DEVELOPMENT ENGINEERING DIVISION - DATE

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DATE:	12/19/13	
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DATE	600 SCALE MAP NO. 37	BLOCK NO. 8
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PUBLIC WATER & SEWER

**Proposed Water & Sewer Facilities for The Meadows Corporate Park Phase 2**  
 3 Parcels - A-7, A-8 and A-9

SCALE AS SHOWN

SHEET 4 OF 4

CONTRACT NO. 14-4822-D 1st Election District

SEE SDP 13-070