

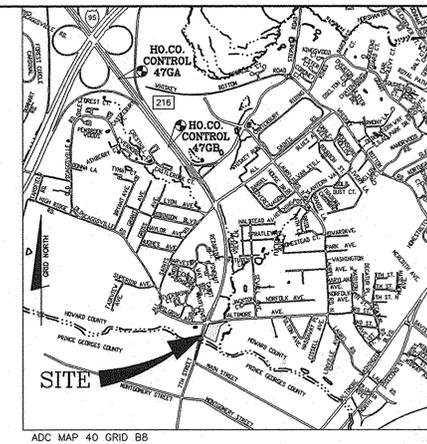
# PUBLIC WATER AND SEWER MAIN EXTENSIONS

## PATUXENT OVERLOOK

### LOTS 1-9 AND OPEN SPACE LOTS 10 & 11

#### 6th ELECTION DISTRICT

#### HOWARD COUNTY, MARYLAND



VICINITY MAP  
SCALE: 1"=200'

| ITEMS                   | QUANTITIES           |            | AS-BUILT |                 |
|-------------------------|----------------------|------------|----------|-----------------|
|                         | ESTIMATED QUANTITIES | QUANTITIES | TYPE     | MANUF./SUPPLIER |
| WATER                   |                      |            |          |                 |
| 8" WATER(PVC C900 DR18) | 279 L.F.             |            |          |                 |
| 1.5" WHC                | 324 L.F.             |            |          |                 |
| WHC                     | 9 EACH               |            |          |                 |
| FIRE HYDRANT            | 1 EACH               |            |          |                 |
| 8"x8" TSV               | 1 EACH               |            |          |                 |
| 8" WATER VALVES         | 1 EACH               |            |          |                 |
| 1" OUTSIDE METER VAULT  | 9 EACH               |            |          |                 |
| 8" CAP & BUTTRISS       | 1 EACH               |            |          |                 |
| SEWER                   |                      |            |          |                 |
| 8" SEWER (DIP CLASS 52) | 84                   |            |          |                 |
| 8" SEWER(PVC C900 DR18) | 297 L.F.             |            |          |                 |
| MH                      | 4 EACH               |            |          |                 |
| 4" SHC                  | 187 L.F.             |            |          |                 |
| SHC                     | 6 EACH               |            |          |                 |
| DHC                     | 3 EACH               |            |          |                 |

NAME OF UTILITY CONTRACTOR:  
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:  
NOTE: THE EXISTING SEWER HOUSE CONNECTION AND WATER HOUSE CONNECTION FOR THE EXISTING BUILDING TO BE RAZED (9801 BALTIMORE AVENUE) IS TO BE ABANDONED AT THE MAIN LINE. THE EXISTING ONSITE WELL IS TO BE SEALED BY A LICENSED WELL DRILLER AND THE WELL ABANDONMENT REPORT RECEIVED BY THE HEALTH DEPARTMENT PRIOR TO BUILDING PERMIT. THE WELL ABANDONMENT IS TO BE DONE UNDER F-14-080.

NOTE: USE HO. CO. STD. DETAILS W-3.32 FOR TWIN AND W-3.28 FOR SINGLE OUTSIDE METER SETTINGS

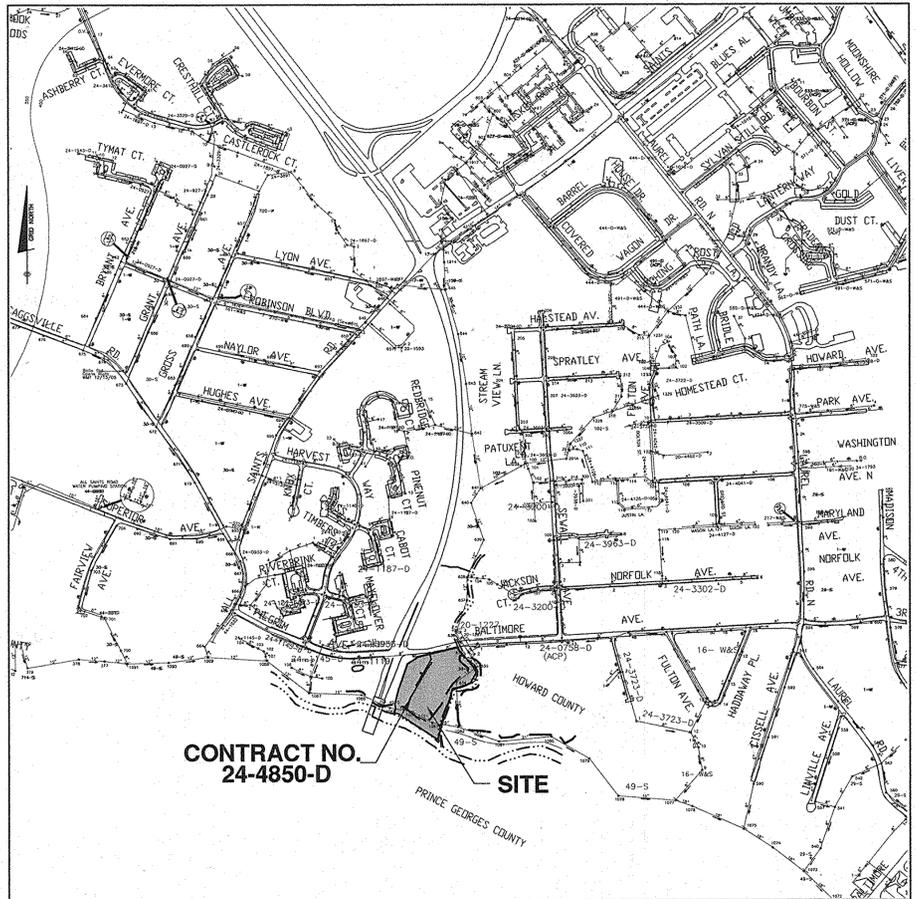
NOTE: ALL JOINTS AND CONNECTIONS LOCATED WITHIN STRUCTURAL FILL AREAS SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION)

## CONTRACT NO.: 24-4850-D

### GENERAL NOTES

- PART 1 - GENERAL**
- APPROXIMATE LOCATION 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.
  - EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY BY BENCHMARK ENGINEERING, INC. ON OR ABOUT DECEMBER 2012.
  - THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM, NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 470A AND 470B. ALL VERTICAL CONTROLS ARE BASED ON NAVD 83. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE HO. CO. GEODETIC CONTROL STA. 470A & 470B.
  - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON PLANS.
  - CLEAR ALL UTILITIES BY A MINIMUM OF 12" 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 THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
  - FOR DETAILS NOT SHOWN ON THE DRAWINGS, 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 [X] 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 MADE SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
  - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 

|                                     |                |
|-------------------------------------|----------------|
| AT&T                                | 1-800-292-1133 |
| SCALE (CONSTRUCTION SERVICES)       | 410-837-8713   |
| SCALE (EMERGENCY)                   | 410-885-0123   |
| HO. CO. DEPT. - BUREAU OF UTILITIES | 410-313-4600   |
| COLONIAL PIPELINE CO.               | 410-785-1390   |
| MES UTILITIES                       | 1-800-257-7777 |
| STATE HIGHWAY ADMINISTRATION        | 410-531-5533   |
| VERIZON                             | 1-800-743-0033 |
  - TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE FROM EXISTING 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/ADJACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPM REQUIREMENTS PER SECTION 18.114(c) OF THE HOWARD COUNTY CODE.
- PART 2 - WATER**
- ALL WATER MAINS TO BE PVC C900 DR18 UNLESS OTHERWISE NOTED.
  - TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" 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 THE 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 1005 OF THE STANDARD SPECIFICATIONS.
  - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
  - TRACE WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL D.I.P. AND P.V.C. WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
  - FOR PVC WATER MAINS, ALL RECORDS FOR THE QUANTITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF MATERIAL FOR USE. 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 RECORD RECORD.
  - 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 HANGERS. 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 P.V.C. PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED P.V.C. PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPOUT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL BE VISIBLE. DUE TO THE THICKNESS OF THE GASKETED P.V.C. PIPE JOINTS, THE MAXIMUM AND MINIMUM DEPTH OF INSERTION INTO THE SPOUT BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPOUT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPOUT INTO THE BELL OF THE P.V.C. PIPE.
  - ALL CHANGES IN HORIZONTAL AND VERTICAL DIRECTION OF P.V.C. WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH-DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF P.V.C. PIPE JOINTS IS PERMITTED. WHERE HIGH-DEFLECTION (HD) 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 (HD) COUPLINGS OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE 1/2" STONE ON BOTH SIDES OF THE HIGH-DEFLECTION (HD) COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING. P.V.C. HIGH-DEFLECTION (HD) COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1-1/2 DEGREES ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM OF 200-PSI MEETING THE REQUIREMENTS OF AWWA-C900. SHALL HAVE A MINIMUM LAY LENGTH AND SHALL HAVE CENTER STOPS. P.V.C. HIGH-DEFLECTION (HD) COUPLINGS SHALL BE CERTAIN-TYED P.V.C. HIGH-DEFLECTION (HD) COUPLINGS OR EQUAL. 5-DEGREE SWEEPS SHALL BE BELL BY SPOUT, RATED FOR A MINIMUM 225-PSI, DR-18 MEETING THE REQUIREMENTS OF AWWA-C900, AND SHALL BE WELD-FITTING (W.F.) BLUE BRUTE DR-18 OR EQUAL.
  - WHEN P.V.C. HIGH-DEFLECTION (HD) COUPLINGS OR P.V.C. 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA-C900 P.V.C. PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE P.V.C. SPOOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION (HD) 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 HIGH-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR EQUAL.
  - FIRE SPRINKLER SYSTEMS FOR ALL SINGLE FAMILY DWELLINGS SHALL HAVE A MINIMUM OF A 1-1/2" CONNECTION WITH A 1" OUTSIDE METER SETTING.
- PART 3 - 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 C-5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-0" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
  - HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.



CONTRACT NO. 24-4850-D

|                                      |                    |
|--------------------------------------|--------------------|
| NUMBER OF UNITS: 9                   | NUMBER OF SHC'S: 9 |
| DRAINAGE AREA: PATUXENT              | NUMBER OF WHC'S: 9 |
| TREATMENT PLANT: LITTLE PATUXENT WTP |                    |
| WATER ZONE: 400W                     |                    |
| TEST GRADIENT: .550                  |                    |

LOCATION MAP  
SCALE: 1" = 600'

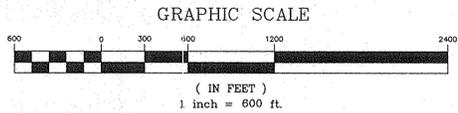
NOTE: CONTRACTORS TO EXERCISE EXTREME CAUTION WHEN WORKING IN AREA OF EXIST. OVERHEAD LINES ALONG BALTIMORE AVENUE.

NOTE: HOUSE CONNECTIONS TO BE SIZED ACCORDINGLY:  
SINGLE WHC = 1-1/2"  
TWIN WHC = 1-1/2"  
SINGLE SHC = 4"  
TWIN SHC = 6"x4"

NOTE: ALL JOINTS AND CONNECTIONS LOCATED WITHIN STRUCTURAL FILL AREAS SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION)

### LEGEND

|   |  |
|---|--|
| EXIST. WATER MAIN                                     |  |
| EXIST. SEWER MAIN                                     |  |
| EXIST. SEWER MANHOLE                                  |  |
| EXIST. STORM DRAIN                                    |  |
| PROP. WATER MAIN                                      |  |
| PROP. SEWER MAIN                                      |  |
| PROP. STORM DRAIN                                     |  |
| (BY OTHERS)   |  |
| PROP. SEWER MANHOLE                                   |  |
| PROP. TERMINAL MANHOLE                                |  |
| PROP. SEWER HOUSE CONNECTION                          |  |
| PROP. DROP SEWER HOUSE CONN. (SEE PLAN VIEW FOR TYPE) |  |
| PROP. WATER HOUSE CONNECTION                          |  |
| PROP. FIRE HYDRANT                                    |  |
| PROP. VALVE   |  |
| PROP. PLUG & BUTTRISS                                 |  |

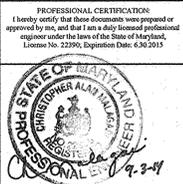


THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.

*John R. Blunt* 9/18/14  
HOWARD SOIL CONSERVATION DISTRICT  
SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER APPROVED DEVELOPMENT PLANS F-14-080.

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

OWNER/DEVELOPER  
DEVELOPMENT PARTNERS, LLC  
11807 NOLLINGFORD COURT  
CLARKSVILLE, MD 21029  
301-490-0388



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Steve C. Cram* 9/24/14  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

*Phil Anderson* 9/24/14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**BENCHMARK**  
ENGINEERS & LAND SURVEYORS & PLANNERS  
**ENGINEERING, INC.**  
8480 BALTIMORE NATIONAL PIKE SUITE 315 A ELICOTT CITY, MARYLAND 21043  
(P) 410-465-8102 (F) 410-465-6844  
WWW.BE-ONLINEENGINEERING.COM

|       |            |    |     |           |      |
|-------|------------|----|-----|-----------|------|
| DES:  | JCO        |    |     |           |      |
| DRN:  | JCO        |    |     |           |      |
| CHK:  | CAM        |    |     |           |      |
| DATE: | SEPT. 2014 | BY | NO. | REVISIONS | DATE |

PUBLIC WATER AND SEWER  
TITLE SHEET

600 SCALE MAP: 27 BLOCK: 1

8901 BALTIMORE AVENUE  
**PATUXENT OVERLOOK**  
LOTS 1-9 AND OPEN SPACE LOTS 10 & 11  
TAX MAP 50, GRID 02, PARCELS 257  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

CONTRACT No. 24-4850-D

SCALE: AS SHOWN  
SHEET NO. 1 OF 2

