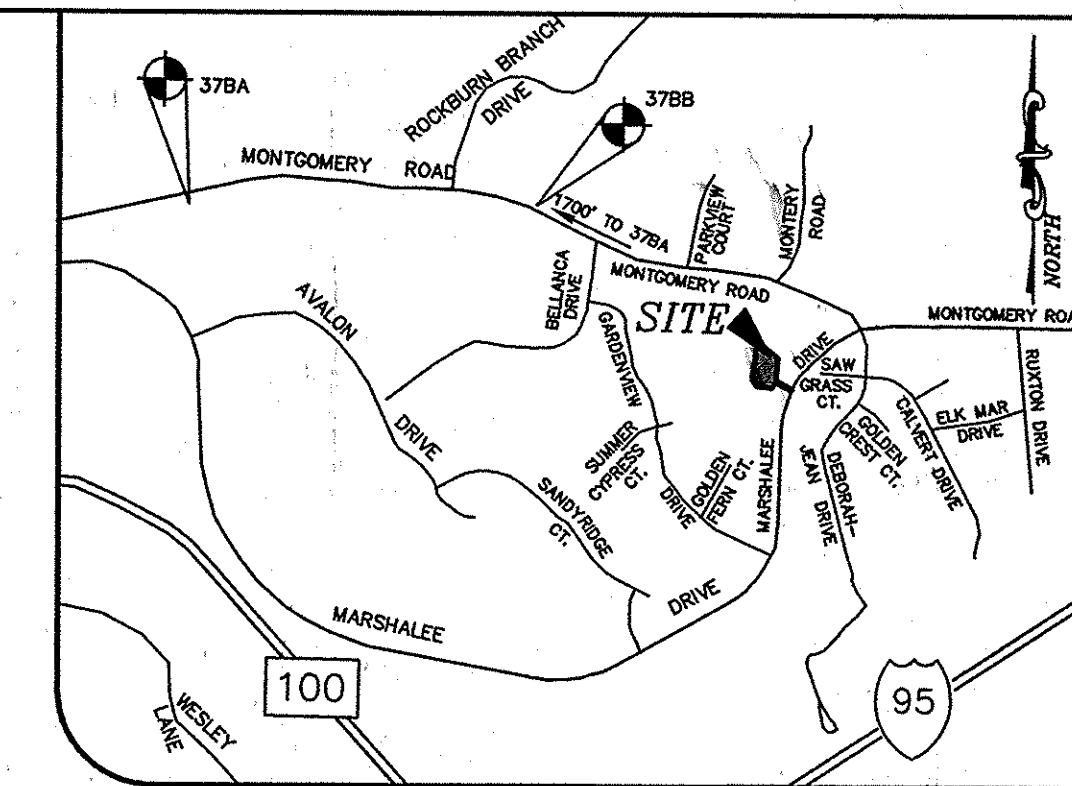


**CONTRACT NO.: 14-4697-D  
MARSHALEE WOODS  
SECTION II AREA V - LOTS 150, 151, 152,  
NON-BUILDABLE BULK PARCEL 'A'  
WATER & SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS**



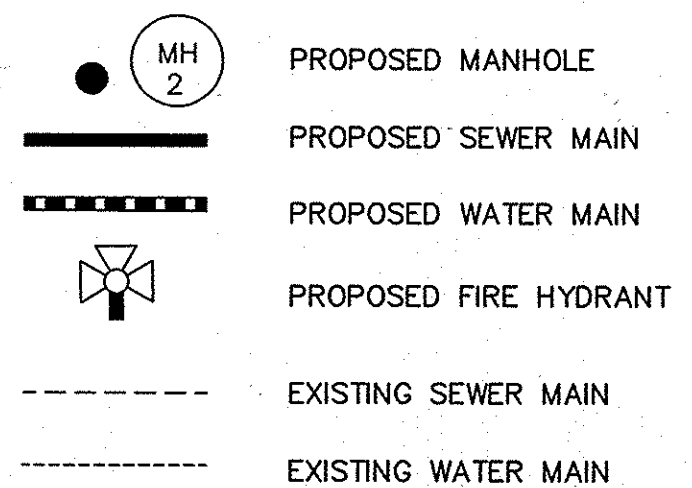
**VICINITY MAP**  
1" = 1000'  
ADC MAP: 4936 GRID J-7

QUANTITY TABLE				
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STANDARD MH	2 EACH	2		ADS
8" SEWER MAIN (PVC)	321 L.F.	321 L.F.	SDR 21	NORTH AMERICAN PIPE
4" SEWER HOUSE CONNECTION	60 L.F.		SDR 26	NORTH AMERICAN PIPE
8" WATER MAIN (DIP)	368 L.F.	345	CL 54	US PIPE
1.5" WATER HOUSE CONNECTION	30 L.F.	66		CAMBRIDGE LEE
8" CAP & BUTTRESS	1 EACH	1		
6" x 6" REDUCER	1 EACH	1		
6" x 6" FHT & VALVE	1 EACH	1	C909	KENNEDY VALVE
FH	1 EACH	1	Z30CAP	KENNEDY VALVE
6" x 8" REDUCER	1 EACH	1		
NAME OF UTILITY CONTRACTOR: G.C.C. GRAPELINE CONSTR. CO.				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE				

**GENERAL NOTES**

- 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 ON JUNE 2009 BY WINGS AERIAL MAPPING. BOUNDARY SHOWN HEREON BASED ON FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED BY MILDENBERG, BOENDER AND ASSOCIATES ON OR ABOUT FEBRUARY 2010.
- 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. 37BA AND NO. 37BB. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE HO.CO. GEODETIC CONTROL STA. 37BA & 37BB.  
STA. No. 37BA N 563785.6421 E 1376343.2088 ELEV. 393.935  
STA. No. 37BB N 563663.4488 E 1378040.5059 ELEV. 373.014
- 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 OWNED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPLIANCE 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(CONSTRUCTION SERVICES).....410-850-4620  
BGE(EMERGENCY).....410-685-1400  
BUREAU OF UTILITIES.....410-313-4900  
COLONIAL PIPELINE CO.....410-795-1390  
MISS UTILITY.....1-800-257-7777  
STATE HIGHWAY ADMINISTRATION.....410-531-5533  
VERIZON.....1-800-743-0033/410-224-9210
- 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 CONSTRUCTOR.
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATED. 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(a) OF THE HOWARD COUNTY CODE.

**LEGEND**



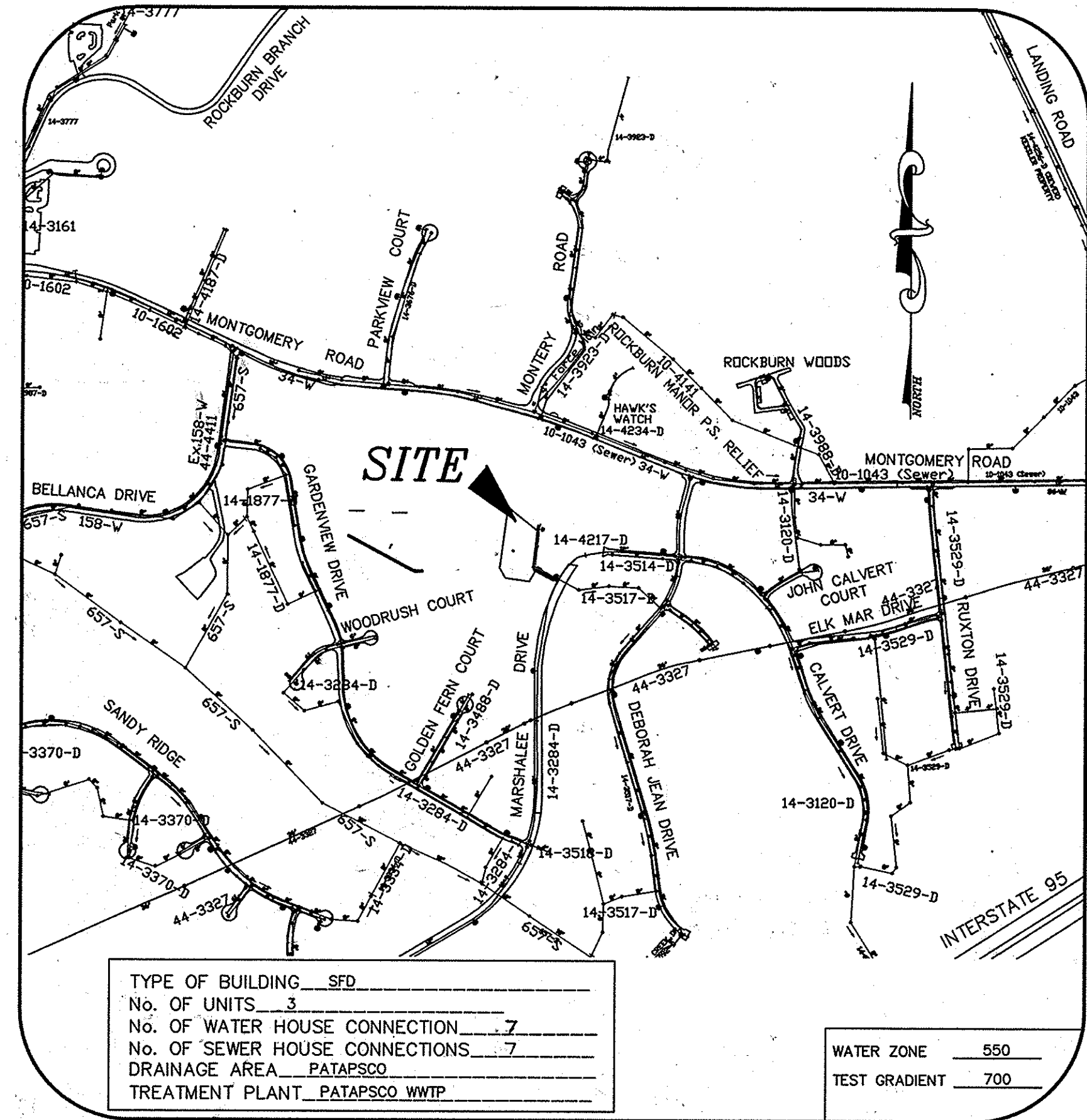
**EROSION AND SEDIMENT CONTROL PROVIDED UNDER SDP-10-078**

NOTE: SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 308 IN DESIGN MANUAL VOLUME IV.

**INDEX OF DRAWINGS**

NO.	DESCRIPTION
1	TITLE SHEET
2	WATER & SEWER PLAN AND PROFILES

PLAN REFERENCE NUMBERS:  
SDP-10-078



**VICINITY MAP**

SCALE: 1" = 600'  
ADC MAP: 4936 GRID J-7

**OWNER/DEVELOPER**

BDC TRUST  
7310 ESQUIRE CT, SUITE 14  
ELK RIDGE, MD 21075  
(410) - 379-8681

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John P. L. ...*  
DEVELOPER'S SIGNATURE DATE

**J. L. ...**  
DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*R. Jacob Hikmat*  
ENGINEER'S SIGNATURE DATE 4/29/11

**R. JACOB HIKMAT**  
ENGINEER'S NAME

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

*John K. ...*  
HOWARD SCD DATE 5/24/11

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. 17942, EXP. DATE 9/03/12

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Steve ...*  
CHIEF, BUREAU OF UTILITIES DATE 5/17/11

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*...*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 5/21/11

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
6800 Deepford Rd., Suite 150, Elkridge, Maryland 21075  
(410) 997-0298 Fax (410) 997-0298 Fax

STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
*R. Jacob Hikmat*

engineering	MMM				
illustration	MMM				
approval	RJH	RJV	3	CORRECT NUMBER OF CONNECTIONS	5/20/11
project	2009-018	KCT	2	AS-BUILT	7/15/11
date	MARCH 2011	MBA	1	REVISED QUANTITY TABLE	1/1/13
BY	NO.			REVISION	DATE

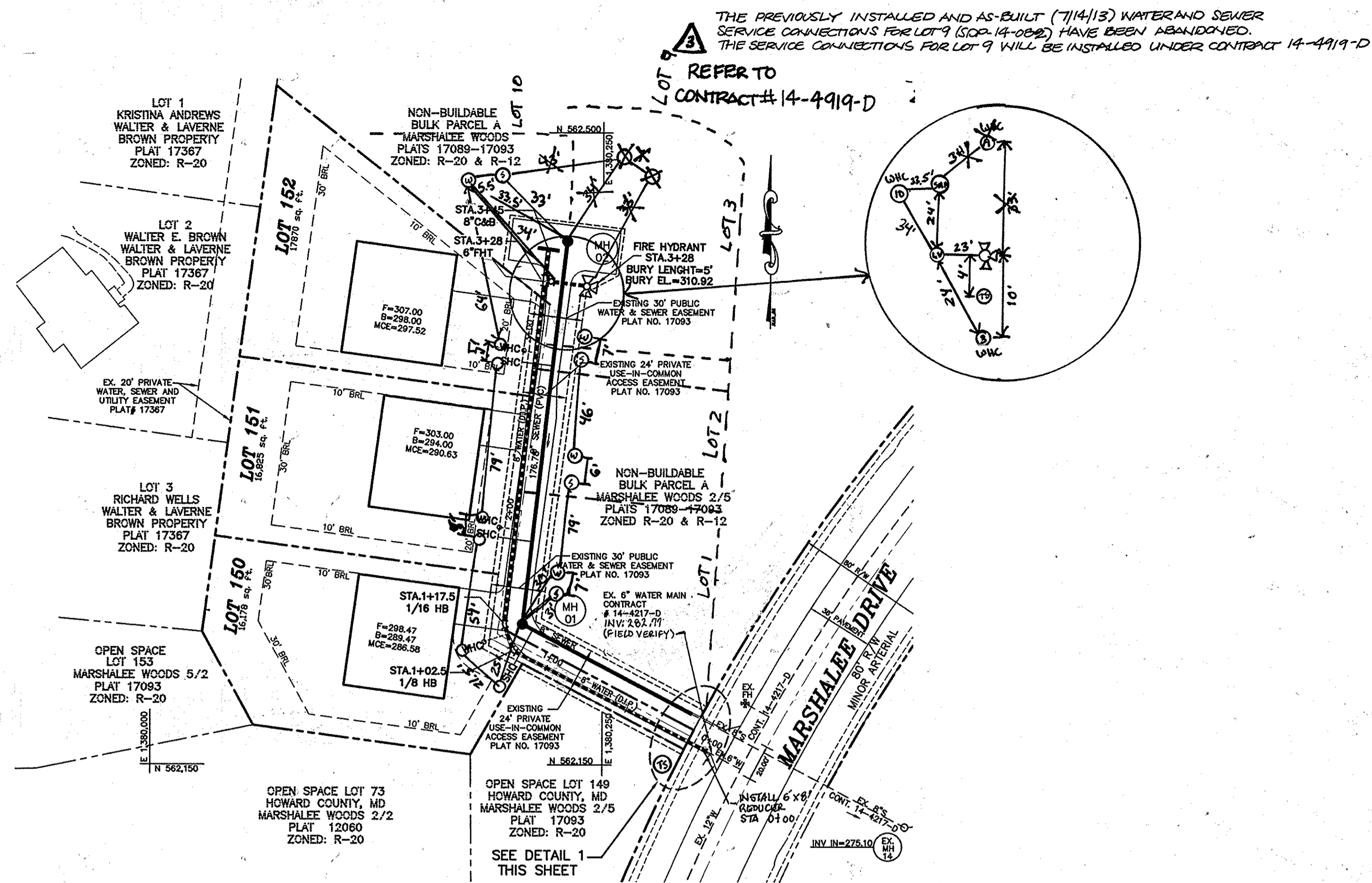
**TITLE SHEET**

600' SCALE MAP NO. 37 BLOCK NO. 5

**MARSHALEE WOODS**

CONTRACT NO. 14-4697-D  
TAX MAP 37 PARCEL 682  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale AS SHOWN  
1 OF 2



**WATER AND SEWER PLAN**

SCALE: 1"=50'

**SHC CHART**

LOT	SLOPE	EL @ EASE	MCE
150	2%	282.08	288.58
151	2%	285.67	290.17
152	2%	293.02	297.52

**WATER / SEWER MAIN TABULATION CHART**

APPURTENANCE	ROAD	NORTHING	EASTING
MH 1	USE-IN COMMON DRIVE	562,227.95	1,380,205.74
MH 2	USE-IN COMMON DRIVE	562,440.05	1,380,230.13
1/16 HB	USE-IN COMMON DRIVE	562,228.14	1,380,195.67
1/8 HB	USE-IN COMMON DRIVE	562,213.33	1,380,200.37
6"x8" REDUCER	USE-IN COMMON DRIVE	562,187.65	1,380,307.85
F.H.	USE-IN COMMON DRIVE	562,415.11	1,380,240.78
8" CAP & BUTTRESS	USE-IN COMMON DRIVE	562,435.59	1,380,219.59

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

LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
150	6481 MARSHALEE DRIVE	21.5' TO SHC	24' TO SMH 1
151	6485 MARSHALEE DRIVE	5' TO SHC	6' TO LOT 150 WHC
152	6489 MARSHALEE DRIVE	7' TO SHC	31' TO SMH 2

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

LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
150	6481 MARSHALEE DRIVE	21.5' TO WHC	25' TO SMH 1
151	6485 MARSHALEE DRIVE	5' TO WHC	57' TO LOT 150 WHC
152	6489 MARSHALEE DRIVE	7' TO WHC	79' TO LOT 151 WHC

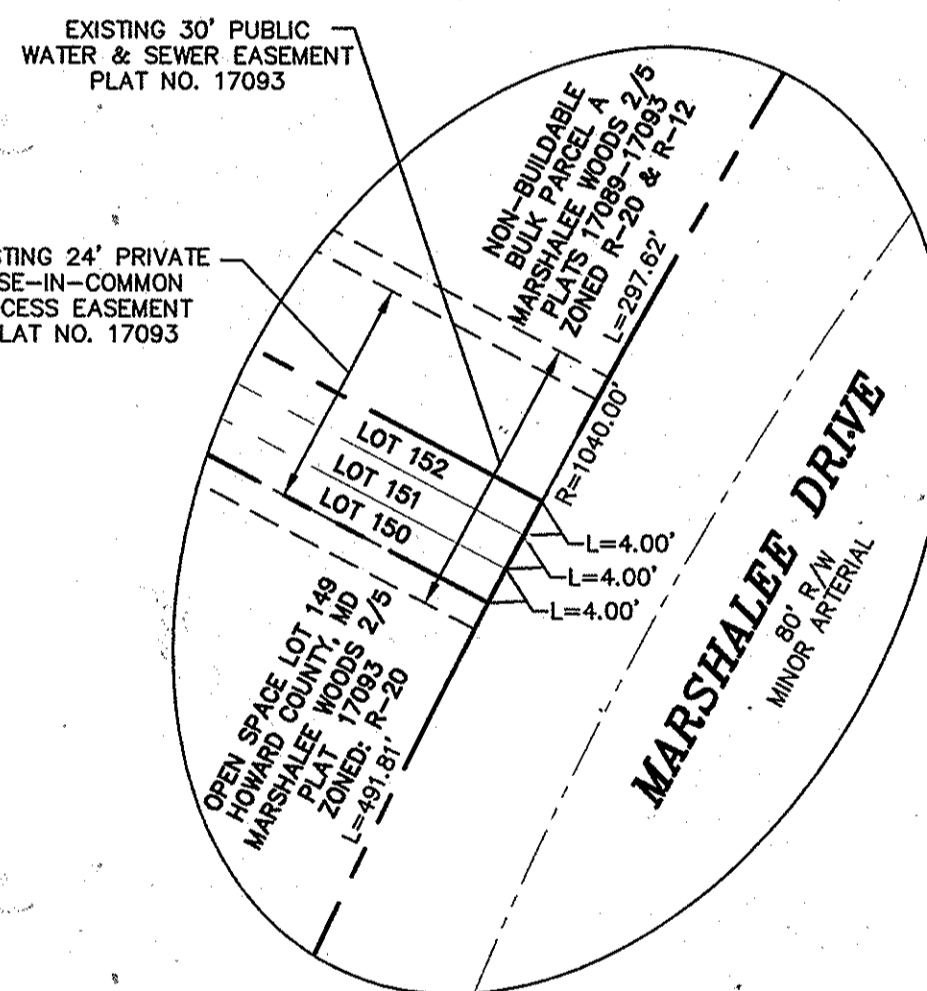
**FUTURE LOTS SHC**

LOT NUMBER	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1	7' TO WHC	31' TO SMH 1
2	6' TO WHC	86' TO SHC LOT 1
3	7' TO WHC	46' TO WHC LOT 2
10	5.5' TO WHC	33' TO SMH 2

**OWNER/DEVELOPER**

BDO TRUST  
7310 ESQUIRE CT., SUITE 14  
ELKRIDGE, MD 21075  
(410) - 379-8681

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. 17942, EXP. DATE 9/03/12.

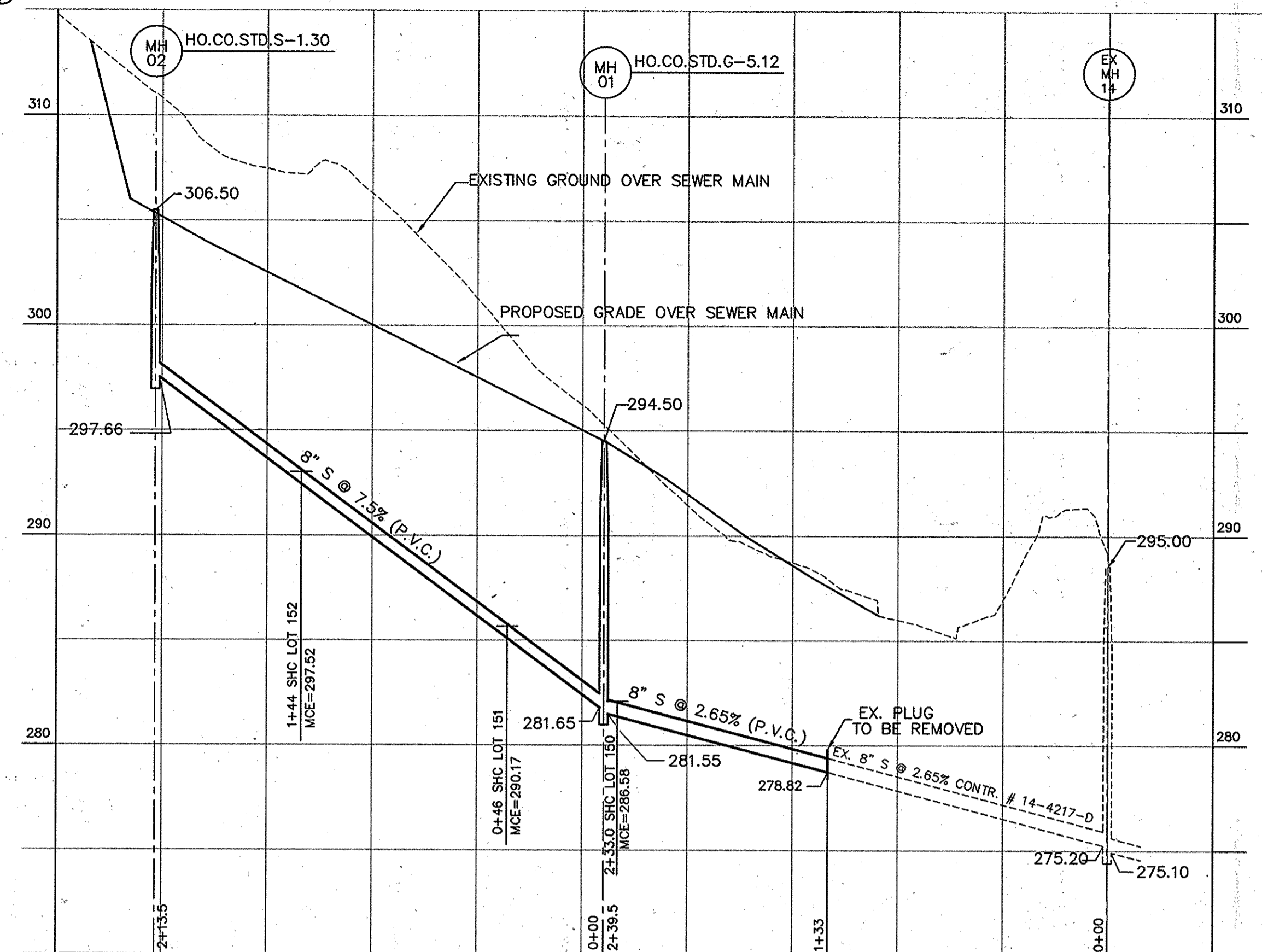


**DETAIL 1**

SCALE: 1"=20'

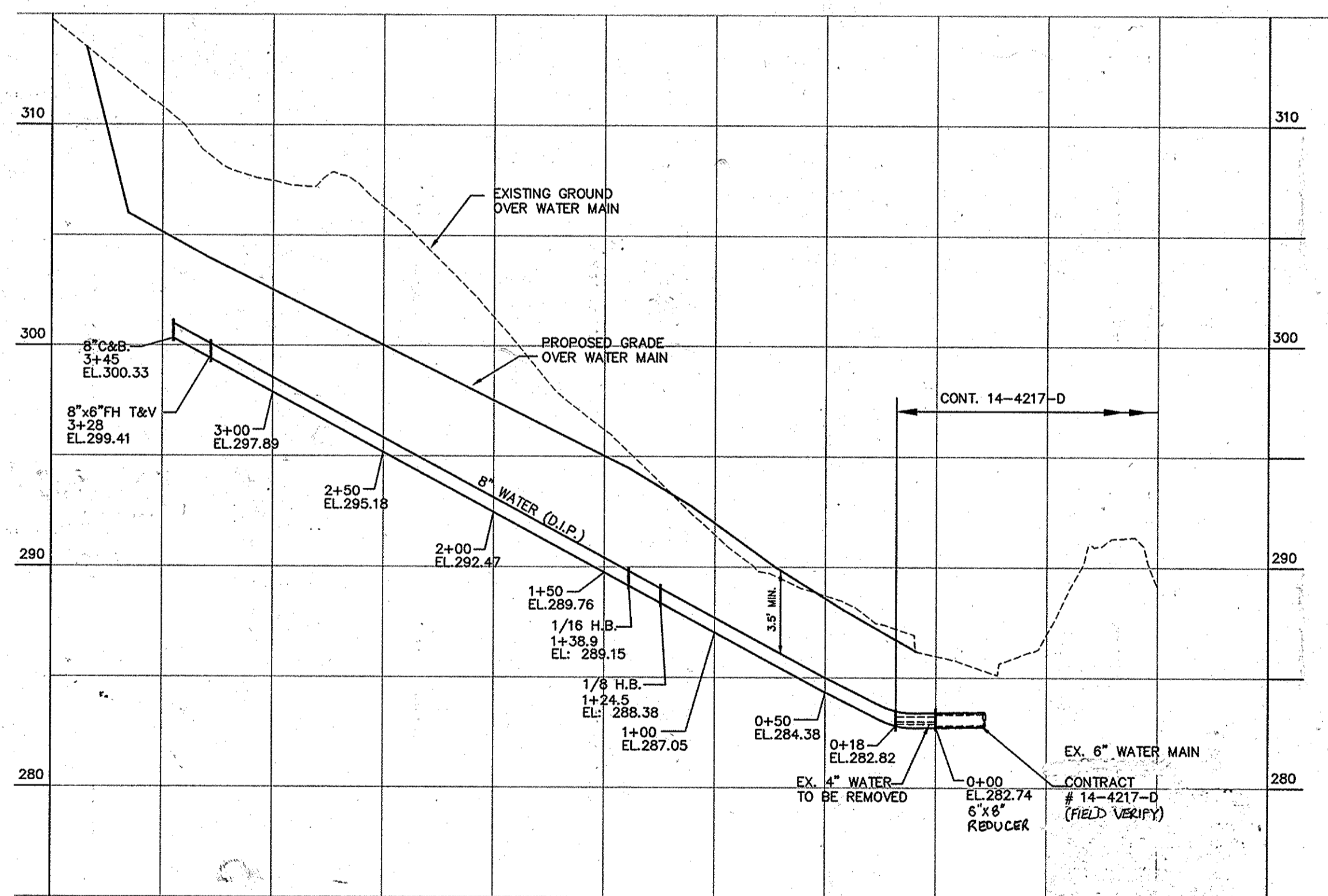
**FUTURE LOTS WHC**

LOT NUMBER	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1	7' TO SHC	43' TO SMH 1
2	6' TO SHC	86' TO WHC LOT 1
3	7' TO SHC	16' TO F.H.
10	5.5' TO SHC	34' TO 6" C.H. VALVE



**8" SEWER PROFILE**

SCALE: HOR. 1"=50'  
VER. 1"=5'



**8" WATER PROFILE**

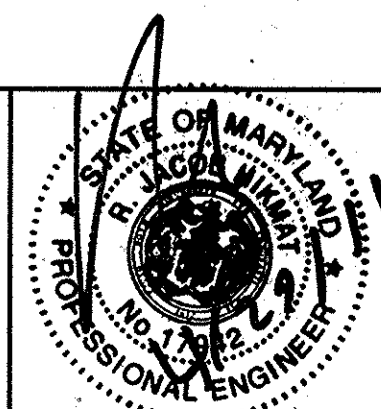
SCALE: HOR. 1"=50'  
VER. 1"=5'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors

6800 Deepwater Rd., Suite 150, Elkridge, Maryland 21075  
(410) 897-0296 Fax (410) 897-0296 Fax



engineering	MMM				
illustration	MMM				
approval	RJH	QW 3	CORRECT NUMBER OF CONNECTIONS	8/20/11	
project	KCC 2		AS-BUILT	7/14/13	
date	2009-018	MBA 1	REVISE PLAN AND PROFILE	1/1/13	
date	APRIL 2011	BY NO.	REVISION	DATE	

**WATER & SEWER PLAN AND PROFILES**

600' SCALE MAP NO. 37 BLOCK NO. 5

**MARSHALEE WOODS**

CONTRACT NO. 14-4697-D  
TAX MAP 37 PARCEL 682  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale  
AS SHOWN

2 of 2