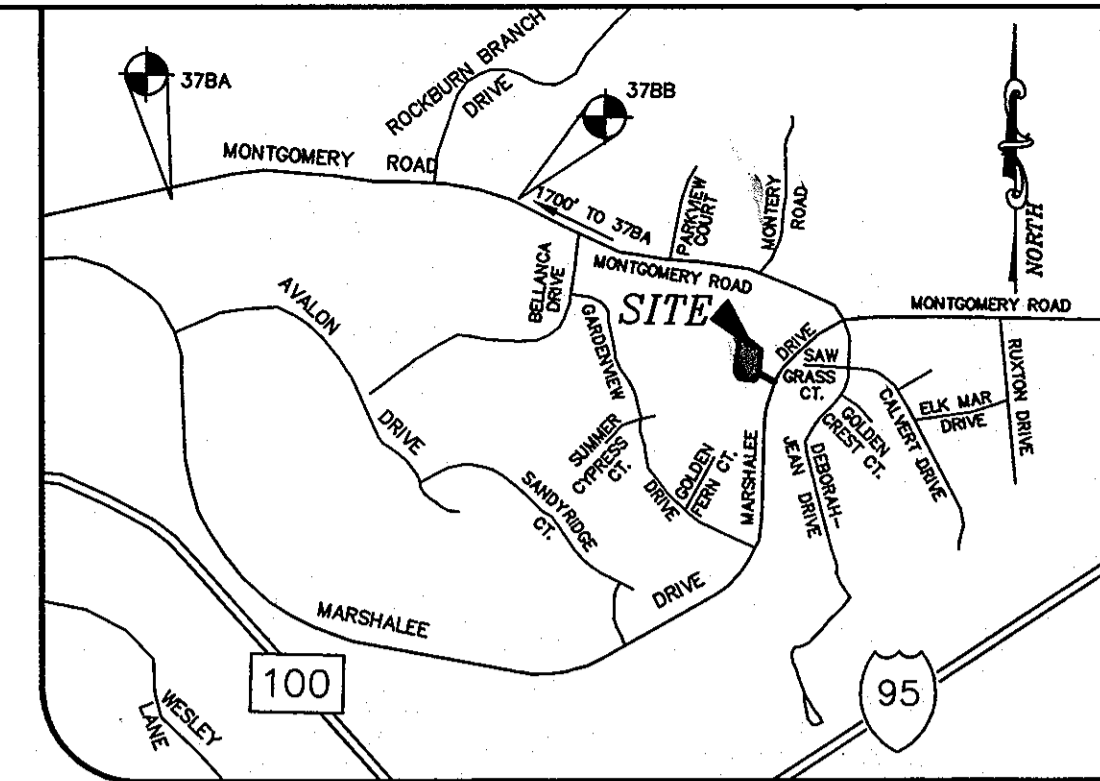


CONTRACT NO.: 14-4697-D
MARSHALEE WOODS
 SECTION II AREA V - LOTS 150, 151, 152,
 NON-BUILDABLE BULK PARCEL 'A'
 WATER & SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS



VICINITY MAP

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

QUANTITY TABLE				
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STANDARD MH	2 EACH	2		ACS
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.	346	CL 54	US PIPE
1.5" WATER HOUSE CONNECTION	30 L.F.	66		CAMBRIDGE LEE
8" CAP & BUTTRESS	1 EACH	1		
6" x 8" REDUCER	1 EACH	1		
6" x 6" FHT & VALVE	1 EACH	1	CS09	KENNEDY VALVE
FH	1 EACH	1	Z50 CAP	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
BOE (CONSTRUCTION SERVICES)	410-850-4620
BOE (EMERGENCY)	410-685-1400
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO.	410-798-1390
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.

- WATER**
- ALL WATER MAINS SHALL 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 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.
 - FIRE SPRINKLER SYSTEMS FOR ALL SINGLE FAMILY DWELLINGS SHALL HAVE A MINIMUM OF A 1-1/2" CONNECTION WITH A 1" OUTSIDE METER SETTING.
- 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 05.52. 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.

LEGEND

- MH 2 PROPOSED MANHOLE
- PROPOSED SEWER MAIN
- PROPOSED WATER MAIN
- PROPOSED FIRE HYDRANT
- EXISTING SEWER MAIN
- EXISTING WATER MAIN

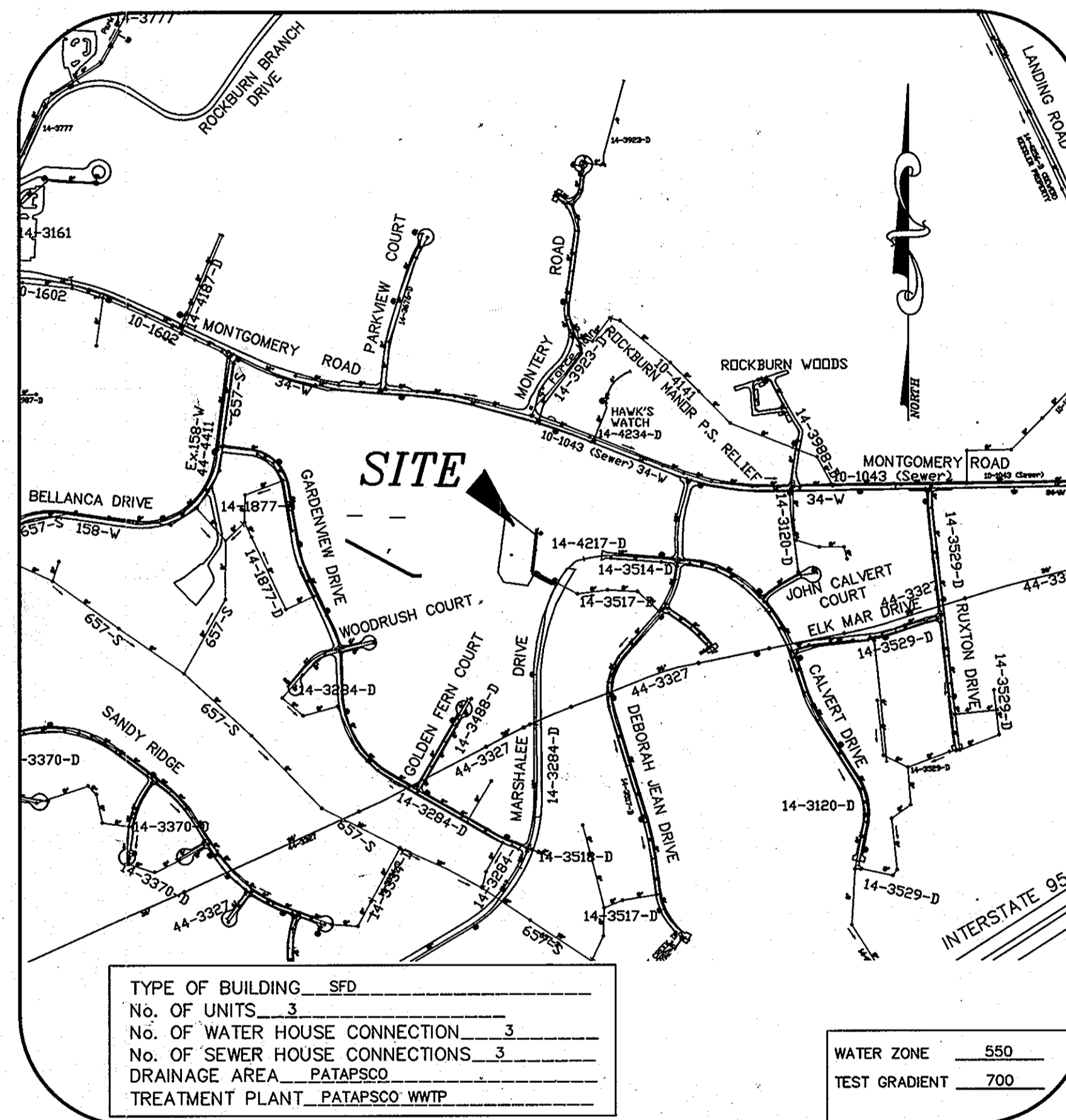
EROSION AND SEDIMENT CONTROL PROVIDED UNDER SDP-10-078

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

BDG TRUST
 7310 ESQUIRE CT., SUITE 14
 ELBRIDGE, 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 F. Lippman
 DEVELOPER'S SIGNATURE DATE

JOHN F. LIPPAMAN - TRUSTEE
 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.

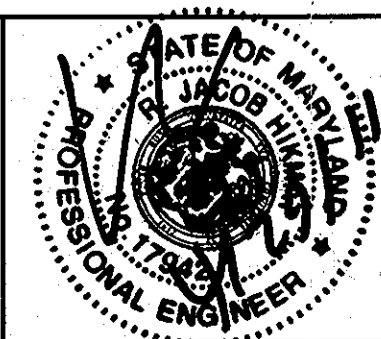
John K. Roberts
 HOWARD SCD DATE 5/24/11

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
John C. Green
 CHIEF, BUREAU OF UTILITIES DATE 5/17/11

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

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 6800 Deepwater Rd., Suite 150, Elbridge, Maryland 21075
 (410) 897-0286 Ball (410) 897-0286 Fax



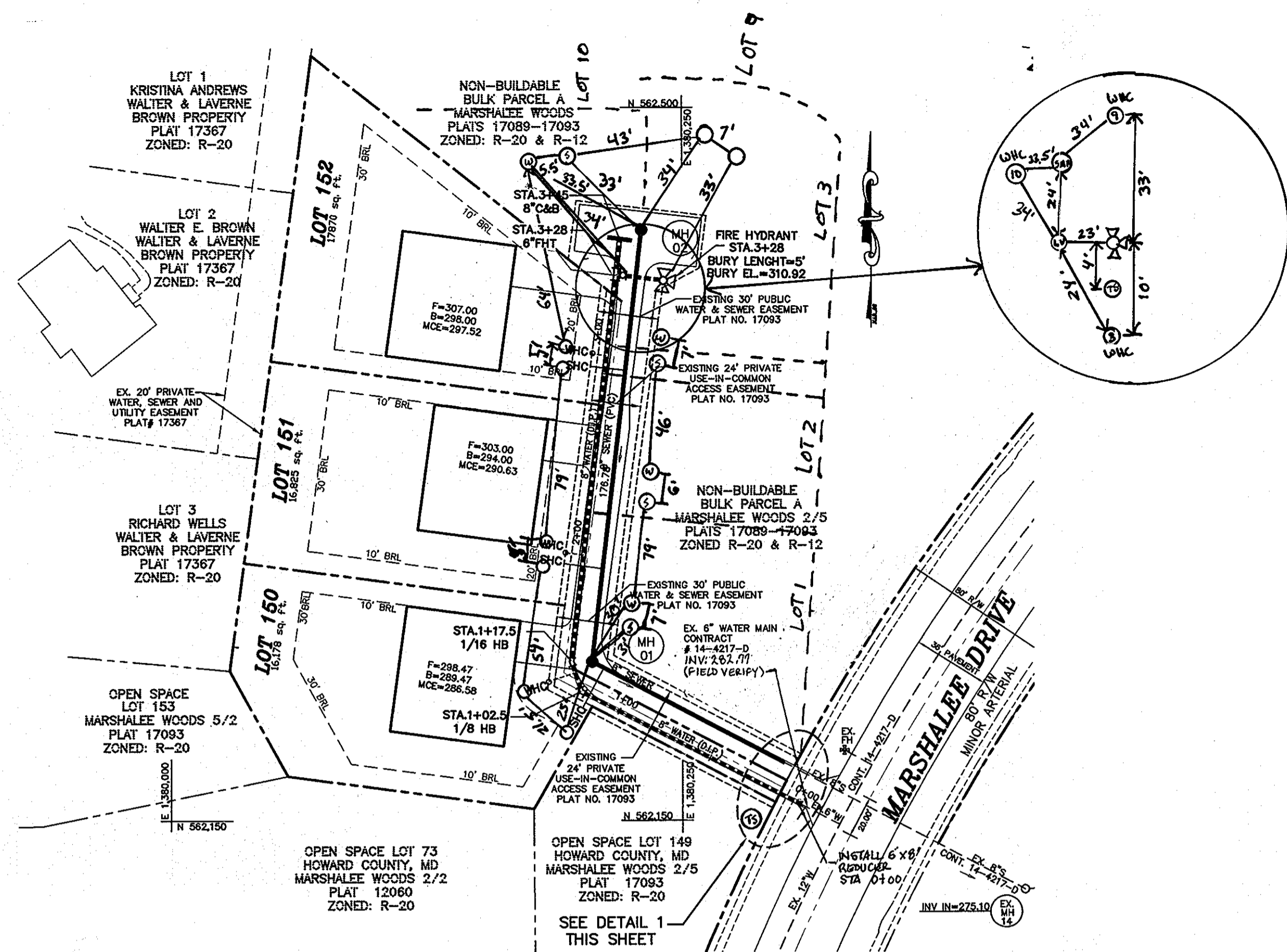
engineering	MMM				
illustration	MMM				
approval	RJH				
project	2009-018	KCE	2	AS-BUILT	7/15/11
date	MARCH 2011	MBA	1	REVISED QUANTITY TABLE	1/1/13
BY	NO.			REVISION	DATE

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



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"x6" REDUCER	USE-IN COMMON DRIVE	562,157.63	1,380,307.83
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	62' TO LOT 150 WMC
152	6489 MARSHALEE DRIVE	7' TO SHC	31' TO SMH 2

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE

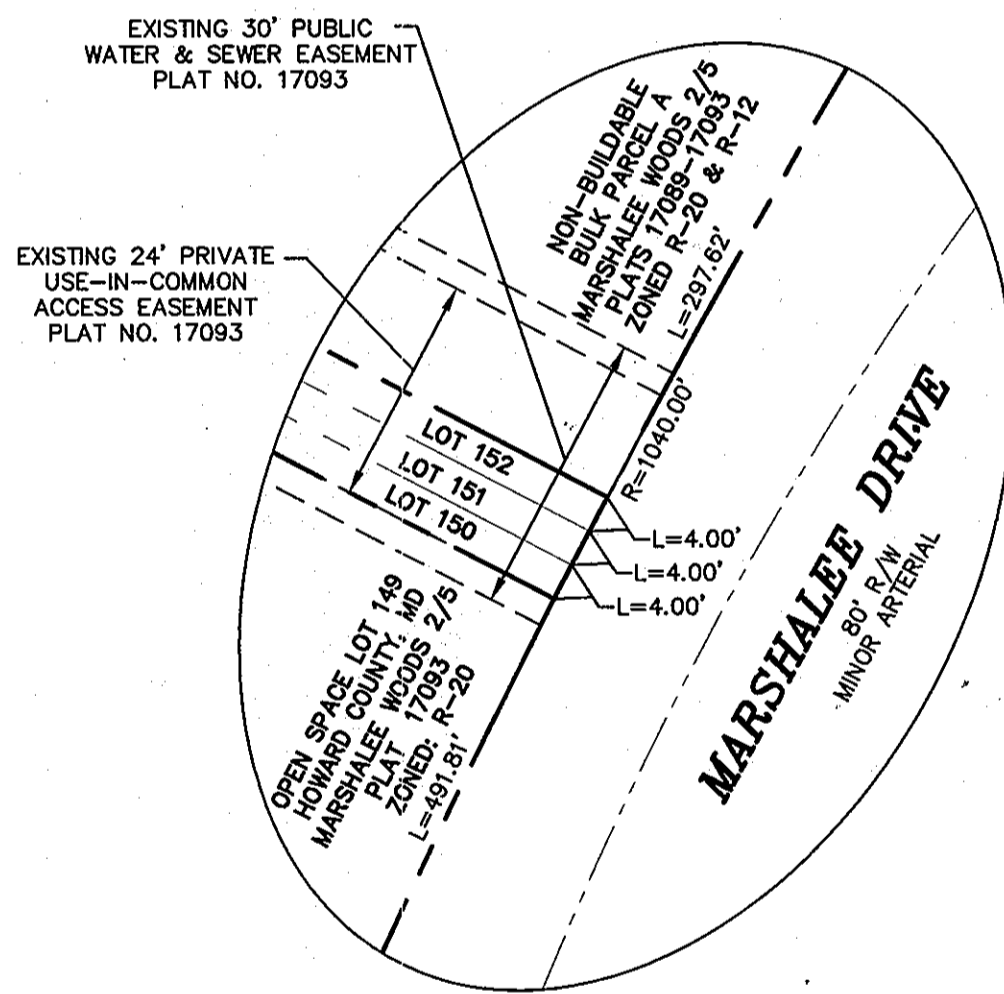
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
150	6481 MARSHALEE DRIVE	21.5' TO WMC	25' TO SMH 1
151	6485 MARSHALEE DRIVE	5' TO WMC	57' TO LOT 150 WMC
152	6489 MARSHALEE DRIVE	7' TO WMC	79' TO LOT 151 WMC

FUTURE LOTS SHC

1	7' TO WMC	31' TO SMH 1
2	6' TO WMC	26' TO SHC LOT 1
3	7' TO WMC	46' TO WMC LOT 2
9	7' TO WMC	39' TO SMH 2
10	5.5' TO WMC	33' TO SMH 2

OWNER/DEVELOPER
BDC 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

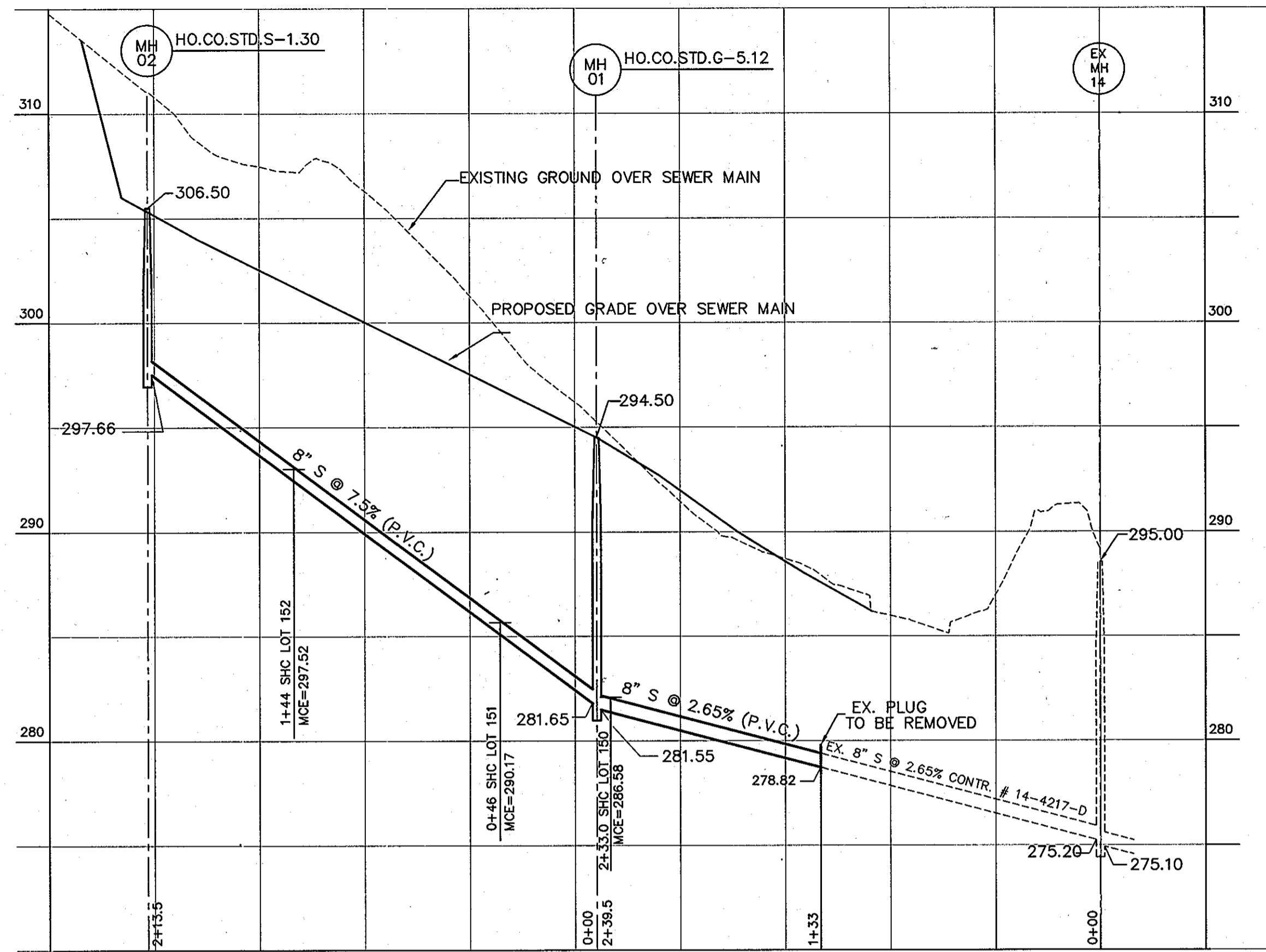


DETAIL 1

SCALE: 1"=20'

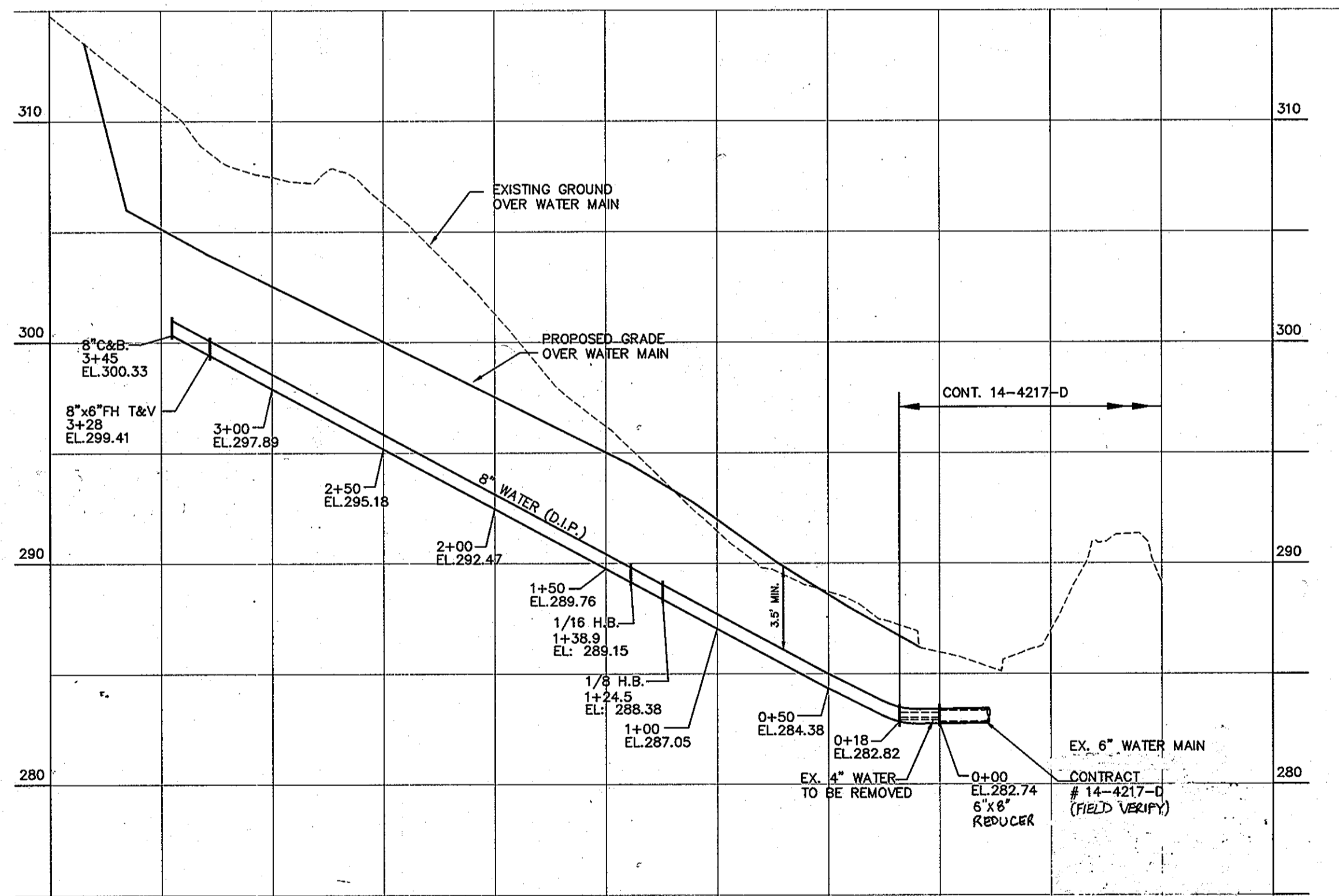
FUTURE LOTS WMC

1	7' TO SHC	43' TO SMH 1
2	6' TO SHC	26' TO WMC LOT 1
3	7' TO SHC	16' TO F.H.
9	7' TO SHC	53' TO F.H.
10	5.5' TO SHC	34' TO 6" F.H. VALVE



8" SEWER PROFILE

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



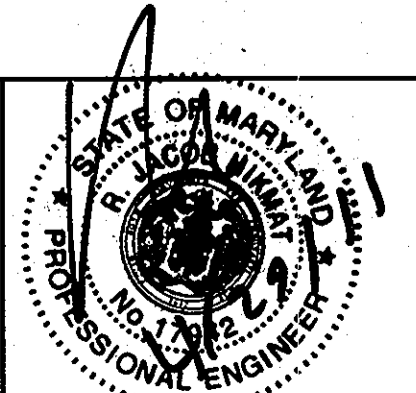
8" WATER PROFILE

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 Deerpath Rd., Suite 150, Elkridge, Maryland 21075
(410) 997-0286 Fax



engineering	illustration	approval	project	date
MMM	MMM	RJH	2009-018	APRIL 2011
KCE	Z	AS-BUILT	1/14/12	
NBA	1	REVISE PLAN AND PROFILE	1/7/13	

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