

QUANTITY TABLE				
ITEMS	QUANTITIES ESTIMATED	QUANTITIES		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" WATER MAIN	1044 L.F.	1044	DIP	GRIFFIN
8" PVC SEWER MAIN	1055 L.F.	1055	PVC	NORTH AMERICAN PIPE
1 1/2" H.B. (8")	2 EACH	2	DIP	TYLER/UNION
8" CAP & BUTTRESS	1 EACH	1	DIP	TYLER/UNION
12"x8" TAP SLEEVE AND VALVE	1 EACH	1	I	SMITH BLAIR
8"x6" FHT&V	4 EACH	4	DIP	MUELLER
6" FH	4 EACH	4	DIP	MUELLER
MANHOLES	5 EACH	5	CONCRETE	CONTRACTORS PRECAST
NAME OF UTILITY CONTRACTOR: SEH CONTRACTORS				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE				

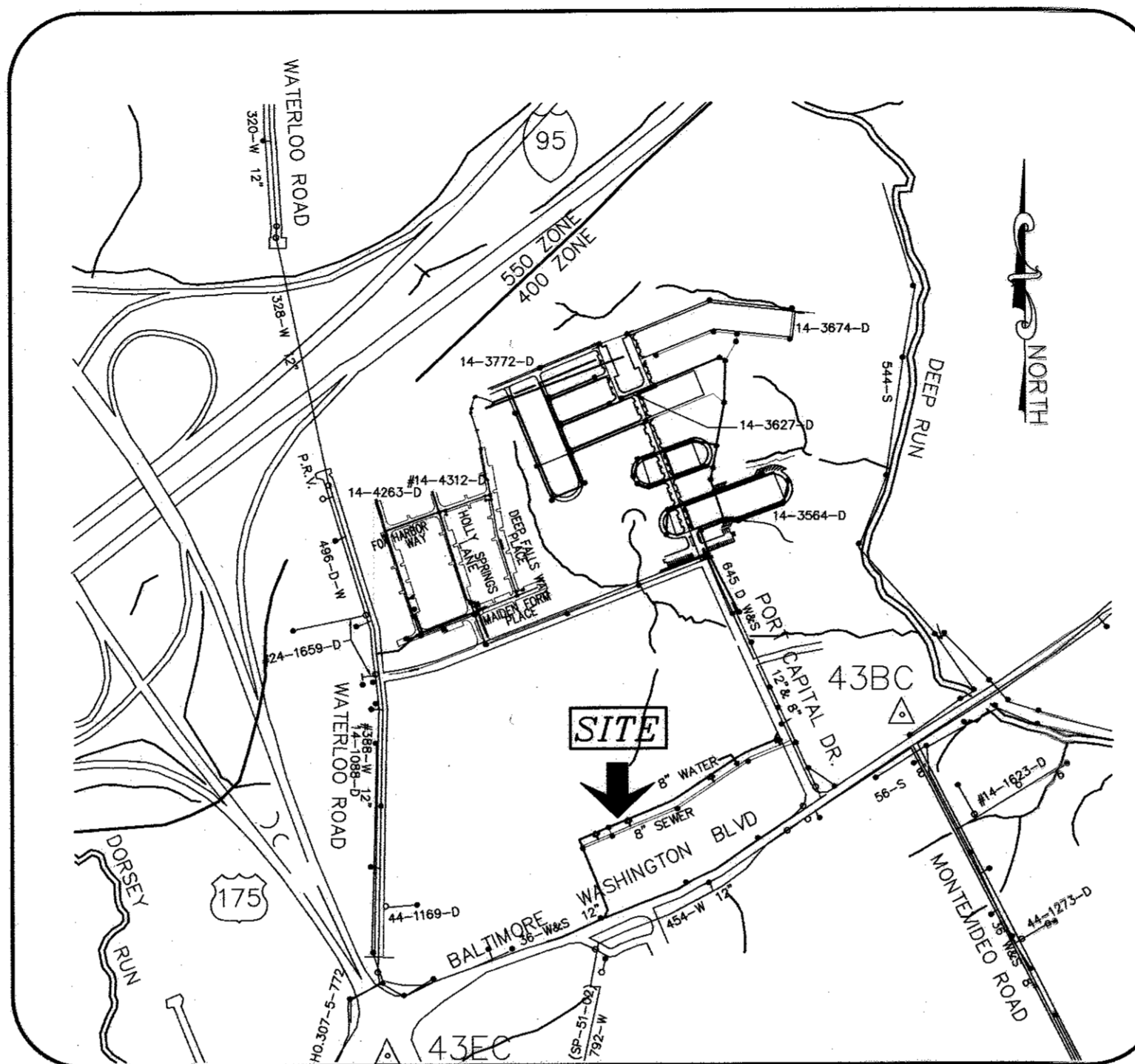
MANHOLE LOCATION CHART		
MANHOLE NUMBER	HEARTH/SIDE WAY STA.	OFFSET
1	12+33.79	7.00 R
2	11+19.21	5.36 R
3	7+60.48	8.70 R
4	4+75.04	7.00 R
5	3+53.56	32.5 L

WATER APPURTENANCE LOCATION CHART		
APPURTENANCE	HEARTH/SIDE WAY STA.	OFFSET
1/32 HB	7+60.48	1.35 L
1/32 HB	11+41.85	7.69 L
FH #1	12+71.31	24.57 L
FHT&V	12+71.31	7.50 L
FH #2	9+48.00	24.10 L
FHT&V	9+48.00	3.00 L
FH #3	5+50.00	24.10 L
FHT&V	5+50.00	3.00 L
FH #4	4+02.27	25.10 L
FHT&V	4+02.27	3.00 L
APPURTENANCE	NORTHING	EASTING
8" C&B	549068.32	1374056.18
8" x12" TS&V	549530.92	1374986.87

**EROSION AND SEDIMENT CONTROL FOR THIS CONTRACT IS PROVIDED UNDER F-08-013**

PLAN REFERENCE NUMBERS:  
 S-06-010, F-08-013, F-09-007,  
 SDP-08-046, SDP-08-078, SDP-92-79,  
 WP-92-165, WP-93-44, WP-93-94,  
 WP-94-47, WP-06-114, WP-07-052,  
 WP-08-020, WP-07-129, GP-08-24

QUANTITY TABLE				
ITEMS	QUANTITIES ESTIMATED	QUANTITIES		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
1 1/2" WHC	220 LF			
4" SHC	39.5 LF			
6" TWIN SHC	270 LF			



TYPE OF BUILDING	NONE
No. OF UNITS	13
No. OF WATER HOUSE CONNECTION	0
No. OF SEWER HOUSE CONNECTIONS	1
DRAINAGE AREA	PATAPSCO
TREATMENT PLANT	PATAPSCO WWTP

VICINITY MAP  
 SCALE: 1" = 600'  
 ADC MAP 16: H13, J13  
 MAP 20: H1, J1

**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 MAY 2005 BY WINGS AERIAL MAPPING SUPPLEMENTED BY TOPOGRAPHIC SURVEY PERFORMED BY MILDENBERG BOENDER & ASSOCIATES IN JUNE 2007.
- 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. 43EC AND NO. 43BC. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE NO. CO. GEODETIC CONTROL STA. 43EC & 43BC.  
 STA. NO. 43EC N 547,821.272 E 1,372,882.450 ELEV. 220.415  
 STA. NO. 43BC N 549,592.091 E 1,375,466.620 ELEV. 214.870
- 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 MONEYS OWED TO 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 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.....1-800-157-7777  
 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 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 18.114(a) OF THE HOWARD COUNTY CODE.
- PLEASE USE CAUTION WHEN EXCAVATING IN THE VICINITY OF OVERHEAD ELECTRIC LINES.

**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.

**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.

**SHEET INDEX**

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PUBLIC WATER & SEWER PLAN	2
PUBLIC WATER & SEWER PROFILES	3

**CONTRACT NO.: 14-4554-D  
 HOWARD SQUARE  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PUBLIC WORKS**

**AS-BUILT**

By *lca* Date 1/31/17

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 EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 12/3/08 DATE  
 DEVELOPER'S SIGNATURE

*[Signature]* 12/03/08 DATE  
 ENGINEER'S SIGNATURE  
 R. JACOB HIKMAT  
 ENGINEER'S NAME

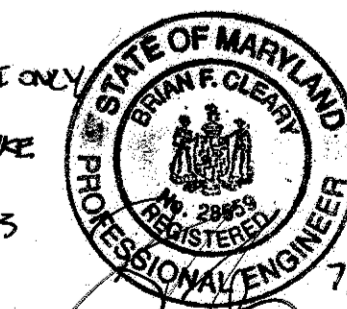
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.

*[Signature]* 12/18/08 DATE  
 JOHN R. ROBERTSON  
 HOWARD SCD

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 9/3/2010

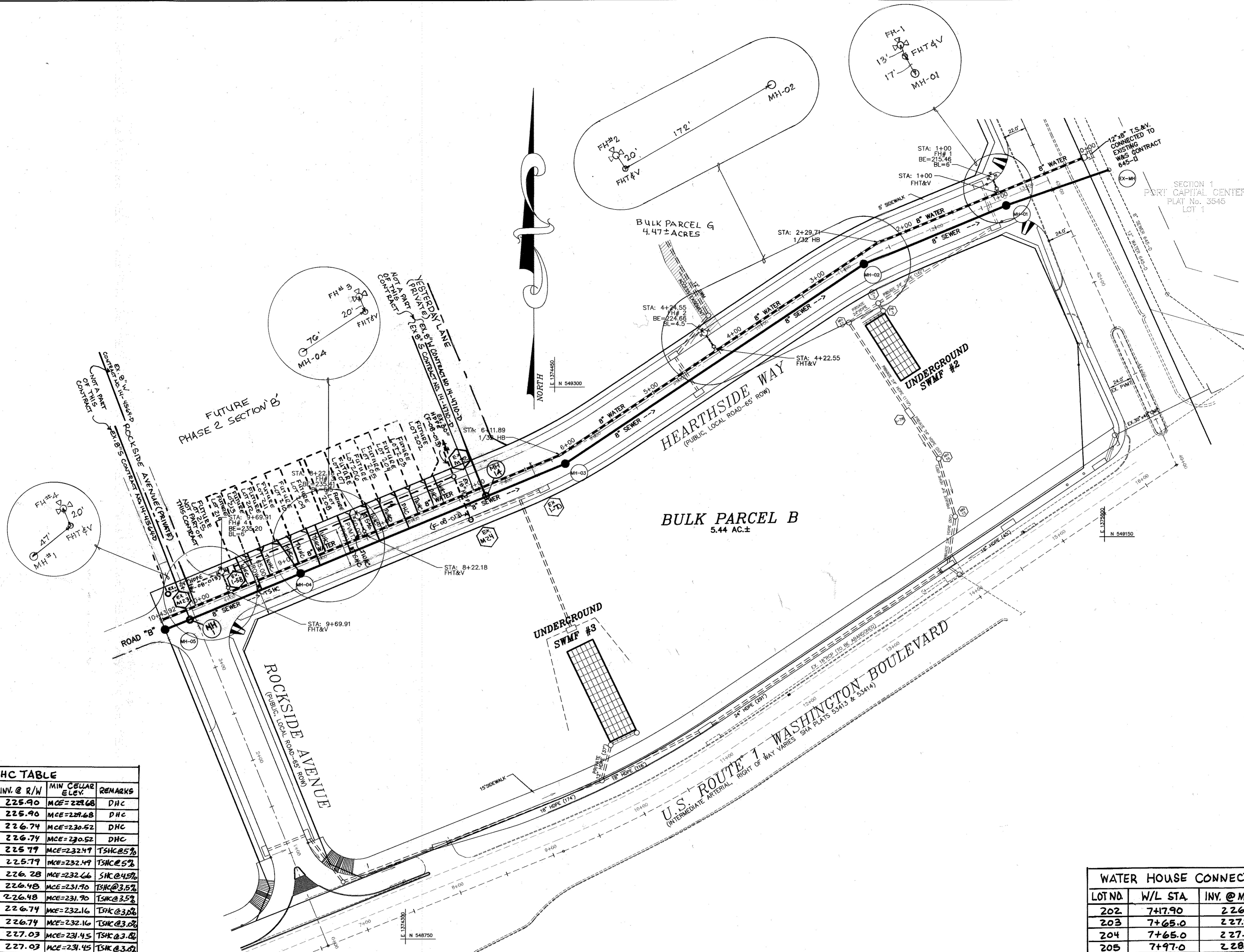
**DEVELOPER**  
 ALADDIN ROCK, LLC  
 6800 DEERPATH ROAD, SUITE 100  
 ELKBRIDGE, MARYLAND 21075  
 410-579-2442

FOR REVISIONS BY DEI ONLY  
 BENJAMIN ENG. INC.  
 8850 BALTIMORE NAT'L FDE  
 SUITE 418  
 BELLON CITY MD 21045  
 (410) 465-6105



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. 28559 Expiration Date: 7-22-13

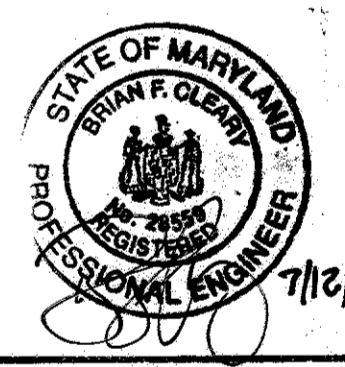
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>[Signature]</i> 12/1/08 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>[Signature]</i> 12-24-8 CHIEF, DEVELOPMENT ENGINEERING DIVISION	MILDENBERG & BOENDER & ASSOC., INC. Engineers Planners Surveyors 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Ball. (410) 997-0298 Fax	engineering 3VD illustration 3SB approval MAM project 04-081 date DEC 2008	BY NO. 1 REVISION	REVISION NO. OF UNITS, WHC, SHC & ADD QUANTITY CHART 7-11-12	DATE 600' SCALE MAP NO. 4.3 BLOCK NO. 12	COVER SHEET	HOWARD SQUARE BULK PARCELS A & B CONTRACT NO.: 14-4554-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND	scale 1"=50' 1 OF 3
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SECTION 1  
PORT CAPITAL CENTER  
PLAT No. 3545  
LOT 1

AS-BUILT

By 1/20 Date 1/31/17



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. 28569, Expiration Date: 7-22-13

LOT NO.	INV. @ MAIN	INV. @ R/W	MIN. CELLAR ELEV.	REMARKS
202	222.43	225.90	MCE=227.68	DHC
203	222.43	225.90	MCE=227.68	DHC
204	223.07	226.74	MCE=230.52	DHC
206	223.07	226.74	MCE=230.52	DHC
206	223.71	225.77	MCE=232.47	TSHC@5%
207	223.71	225.77	MCE=232.47	TSHC@5%
208	224.31	226.28	MCE=232.66	SHC@4.5%
209	225.00	226.48	MCE=231.70	TSHC@3.5%
210	225.00	226.48	MCE=231.70	TSHC@3.5%
211	225.44	226.74	MCE=232.16	TSHC@3.0%
212	225.44	226.74	MCE=232.16	TSHC@3.0%
213	225.75	227.03	MCE=231.45	TSHC@3.0%
214	225.75	227.03	MCE=231.45	TSHC@3.0%

WATER HOUSE CONNECTION LOCATION AND ELEVATION DATA					
LOT NO.	W/L STA.	INV. @ MAIN	INV. @ CONN.	INV. @ R/W	REMARKS
202	7+17.90	226.85	227.12	227.12	HEARTH SIDE WAY
203	7+65.0	227.90	228.17	228.17	HEARTH SIDE WAY
204	7+65.0	227.90	228.17	228.17	HEARTH SIDE WAY
205	7+97.0	228.50	228.77	228.77	HEARTH SIDE WAY
206	7+97.0	228.50	228.77	228.77	HEARTH SIDE WAY
207	8+29.0	228.90	229.17	229.17	HEARTH SIDE WAY
208	8+29.0	228.90	229.17	229.17	HEARTH SIDE WAY
209	8+64.9	229.10	229.37	229.37	HEARTH SIDE WAY
210	8+92.9	229.12	229.39	229.39	HEARTH SIDE WAY
211	8+92.9	229.12	229.39	229.39	HEARTH SIDE WAY
212	9+24.9	229.12	229.39	229.39	HEARTH SIDE WAY
213	9+24.9	229.12	229.39	229.39	HEARTH SIDE WAY
214	9+50.8	229.12	229.39	229.39	HEARTH SIDE WAY

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 9/3/2010

**DEVELOPER**  
ALADDIN ROCK, LLC  
6800 DEERPATH ROAD, SUITE 100  
ELKRIDGE, MARYLAND 21075  
410-579-2442

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 987-0298 Ball. (410) 987-0298 Fax.

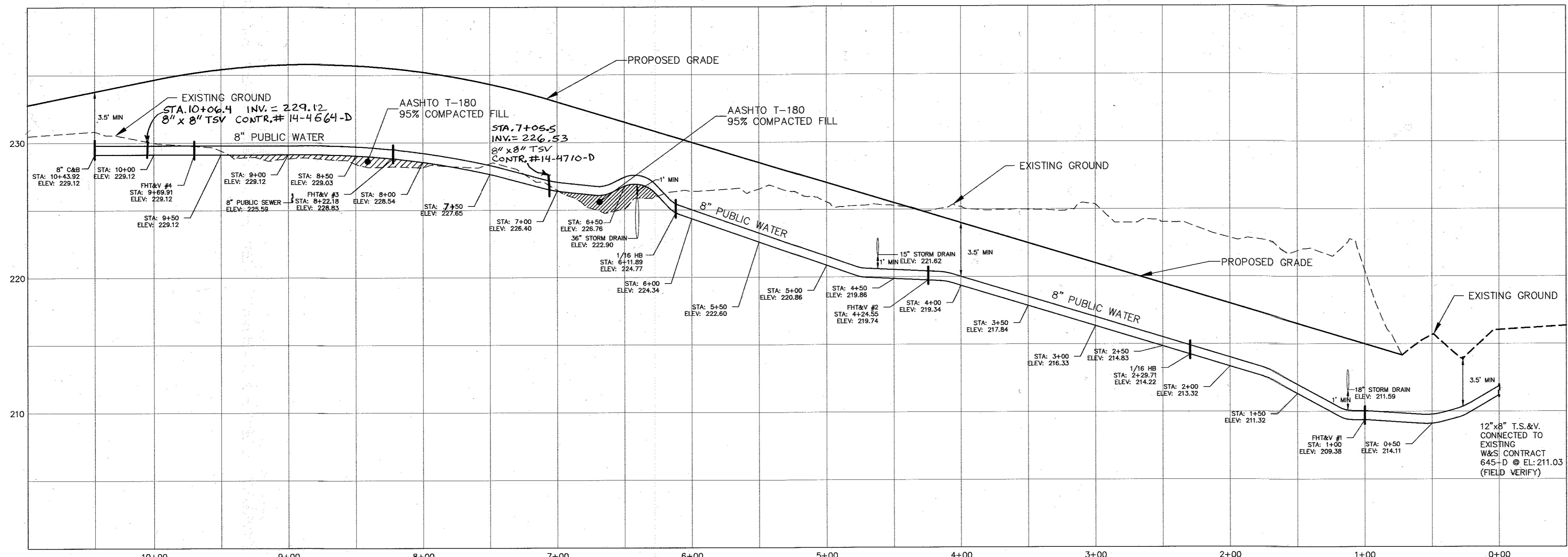


engineering	JJO				
illustration	JJO				
approval	MMM				
project	04-081	BET	1	ADD W/L & SHC CHARTS, LETS USE LOT NO. & SIDING DRAW	7-11-12
date	DEC 2008	BY	NO.	REVISION	DATE

**PUBLIC WATER AND SEWER PLAN**  
60' SCALE MAP NO. 43 BLOCK NO. 12

**HOWARD SQUARE BULK PARCELS A & B**  
CONTRACT NO.: 14-4554-D  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale AS SHOWN  
2 OF 3

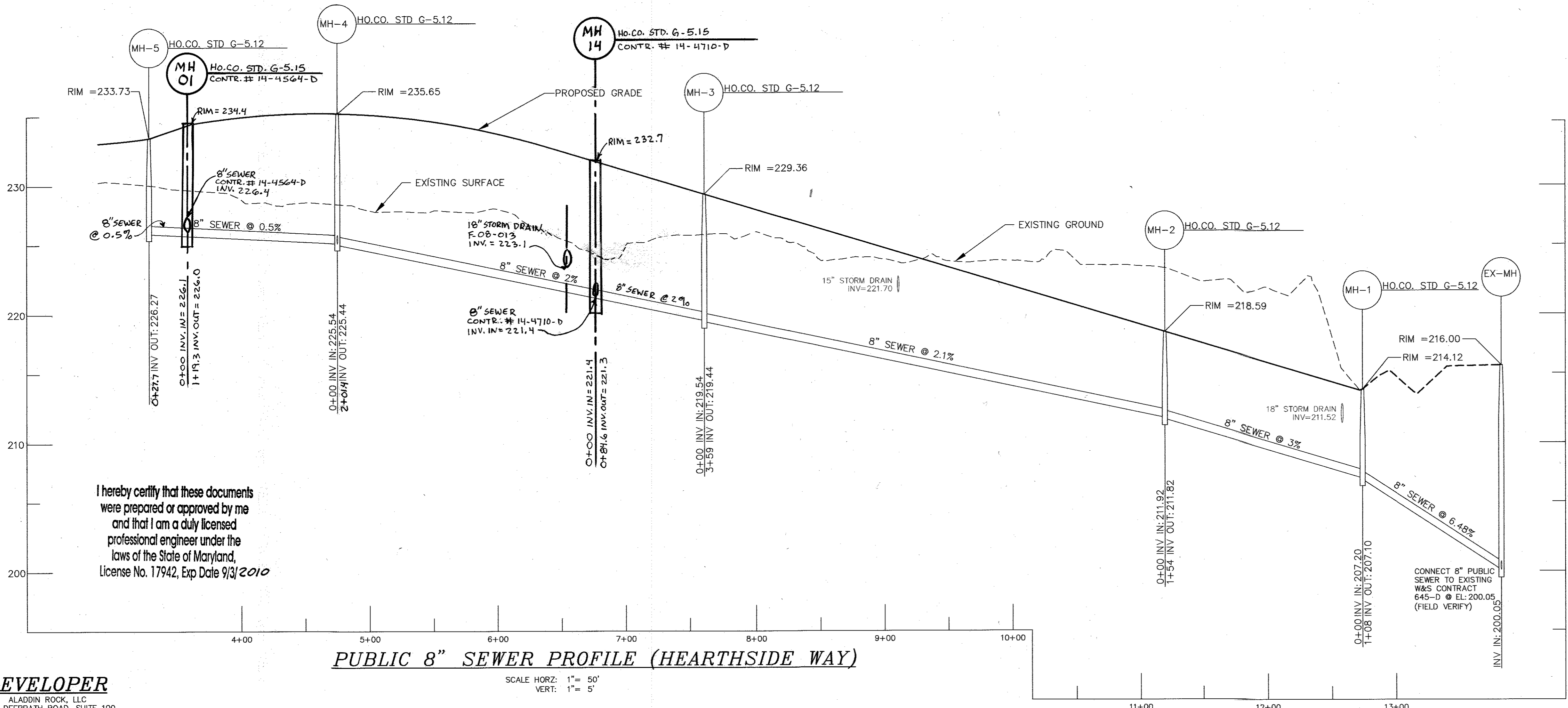


**PUBLIC 8" WATER PROFILE (HEARTHSIDE WAY)**

SCALE HORZ: 1" = 50'  
VERT: 1" = 5'

WATER SERVICE AS-BUILT LOCATION TABLE			
LOT NO.	ADDRESS	LOCATION DIMENSION #1	LOCATION DIMENSION #2
202	7589	10' TO LOT 202 SHC	15' TO LOT 203 SHC
203	7587	18' TO LOT 203 SHC	18' TO LOT 202 SHC
204	7585		
205	7583	19' TO LOT 205 SHC	18.5' TO LOT 204 SHC
206	7581		
207	7579	13' TO LOT 207 SHC	19' TO LOT 206 SHC
208	7577		
209	7575	9' TO LOT 209 SHC	15.5' TO LOT 210 SHC
210	7571	12' TO LOT 210 SHC	15' TO LOT 211 SHC
211	7569		
212	7567	11' TO LOT 212 SHC	16' TO LOT 211 SHC
213	7565		
214	7563	7' TO LOT 214 SHC	20' TO FH STA

SEWER SERVICE AS-BUILT LOCATION TABLE			
LOT NO.	ADDRESS	LOCATION DIMENSION #1	LOCATION DIMENSION #2
202	7589	10' TO LOT 202 WHC	16' TO LOT 203 WHC
203	7587	6' TO LOT 203 SHC	12' TO LOT 203/204 WHC
204	7585	5.5' TO LOT 204 SHC	20' TO LOT 205/206 WHC
205	7583	5.5' TO LOT 204 SHC	19' TO LOT 205/206 WHC
206	7581	11' TO LOT 205/206 WHC	21' TO LOT 204 WHC
207	7579	6' TO LOT 206 SHC	12.5' TO LOT 207/208 WHC
208	7577	12' TO LOT 207/208 WHC	21' TO LOT 209 WHC
209	7575	6.5' TO LOT 210 SHC	9' TO LOT 209 WHC
210	7571	6.5' TO LOT 204 SHC	12' TO LOT 210/211 WHC
211	7569	4.5' TO LOT 212 SHC	14.5' TO LOT 210/211 WHC
212	7567	4.5' TO LOT 211 SHC	11' TO LOT 212/213 WHC
213	7565	12' TO LOT 213/215 WHC	6' TO LOT 214 SHC
214	7563	6' TO LOT 215 SHC	6.5' TO LOT 214 WHC



**PUBLIC 8" SEWER PROFILE (HEARTHSIDE WAY)**

SCALE HORZ: 1" = 50'  
VERT: 1" = 5'

STATE OF MARYLAND  
BROWN F. CLEARY  
REGISTERED PROFESSIONAL ENGINEER  
7/12/2012  
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. 28559, Expiration Date: 7-22-13

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

AS-BUILT

By *[Signature]* Date 1/31/17

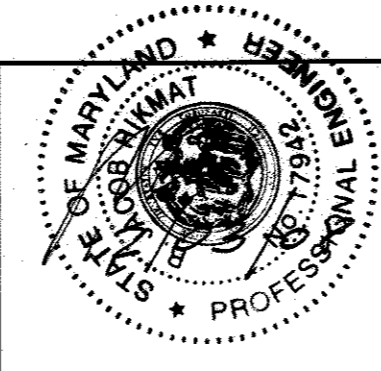
NOTE: ALL WATER HOUSE CONNECTIONS ARE TO BE 1.5" WITH A 1" METER (OUTSIDE SETTINGS) PER HO. CO. STD. W-3.28/W-3.32.

**DEVELOPER**  
ALADDIN ROCK, LLC  
6800 DEERPATH ROAD, SUITE 100  
ELKRIDGE, MARYLAND 21075  
410-579-2442

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HOWARD COUNTY, MARYLAND

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illustration	JJO				
approval	MMM				
project	04-081	BET	1	ADD WHC & SHC, MH 01, 14, AS-BUILT CHARTS	7-11-12
date	DEC 2008	BY	NO.	REVISION	DATE

**PUBLIC WATER AND SEWER PROFILES**

**HOWARD SQUARE BULK PARCELS A & B**

CONTRACT NO.: 14-4554-D  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale  
AS SHOWN  
3 OF 3