


**GENERAL NOTES**

**PART I**

- 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.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL SURVEY BY VRM DATED AUGUST 2004.
- 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 32R2 AND 32R3.  
ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:  
GEODETIC SURVEY CONTROL 3BR2 (N 557,500.663/E 1,391,227.052)  
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT, LOCATED AT NORTH SIDE OF ROUTE 1, EAST SIDE OF INTERSECTION WITH TRAILER PARK PAYING OF WB LANE OF 175' AND 45' WEST AND DIRECTLY SIDE OF THE WEST AND 38.8' WEST SIDE OF FIRE HYDRANT.  
GEODETIC SURVEY CONTROL 3BR3 (N 557,417.823/E 1,391,983.177)  
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT, LOCATED AT BETWEEN RIPRAP AND CHAIN FENCE ALONG SOUTH SIDE OF ROUTE 1, 44' WEST SIDE OF LIGHT POLE AND 148' EAST SIDE OF GATE.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.
- 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 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  AT THE LOCATION OF THE TEST PIT. A NOTES 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 OPERATION AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:  
AT &T.....1-800-252-1133  
BGE (CONTRACTOR SERVICE).....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 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 THE CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY 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(c) OF THE HOWARD COUNTY CODE.

**PART II - WATER**

- ALL WATER MAINS TO BE PVC C-900 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 BUTTRESSED 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.

**PART III - SEWER**

- ALL SEWER MAINS SHALL BE P.V.C UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE PVC SDP 35 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 GS.52. WHERE WATERTIGHT MANHOLE FRAME 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 CELLAR CANNOT BE SERVED.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH FINAL ROAD CONSTRUCTION PLAN F-09-087.

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

*John L. Robertson* 1/24/10  
SOIL CONSERVATION DISTRICT DATE

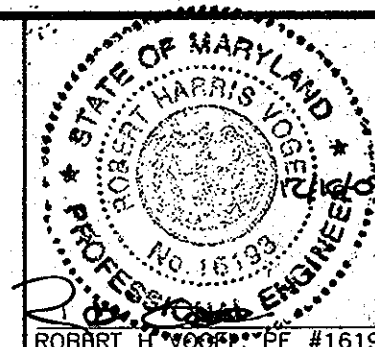
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*John C. Lee* 1/24/10  
CHIEF, BUREAU OF UTILITIES DATE

*John C. Lee* 1/24/10  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**ROBERT H. VOGEL**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET TEL: 410.461.7666  
ELLICOTT CITY, MD 21043 FAX: 410.461.8961



PROFESSIONAL CERTIFICATE  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRES ON DATE 09-27-2010

DRN: KG DES: RJ  
CHK: RHV  
DATE: DECEMBER 2009

BY NO. REVISION DATE

FINAL WATER AND SEWER  
CONT #14-4621-D  
COVER SHEET

FINAL WATER AND SEWER  
EAST POINT PHASE I & II  
LOTS 1-3, 6-14 AND OPEN SPACE LOTS 4 & 5  
NON-BUILDABLE BULK PARCEL 'A' & 'B'

SCALE AS SHOWN  
SHEET 1 OF 3

TAX MAP 38, GRID 15 PARCEL 238, 237  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

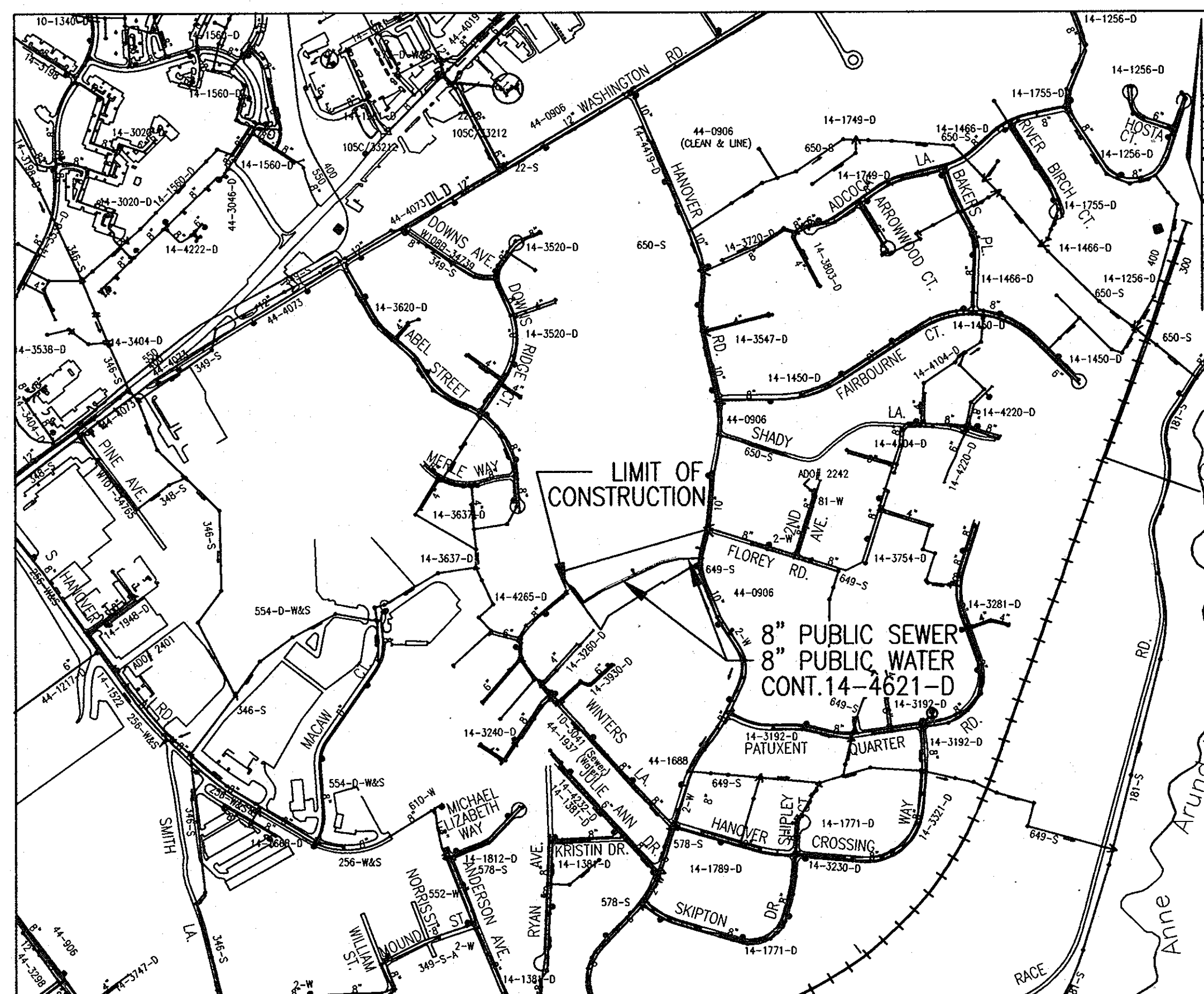
# FINAL WATER & SEWER PLAN

## EAST POINT PHASE I & II

### LOTS 1-3, 6-14 AND OPEN SPACE LOTS 4 & 5

### NON-BUILDABLE BULK PARCEL A & B

## CONT.NO. 14-4621-D



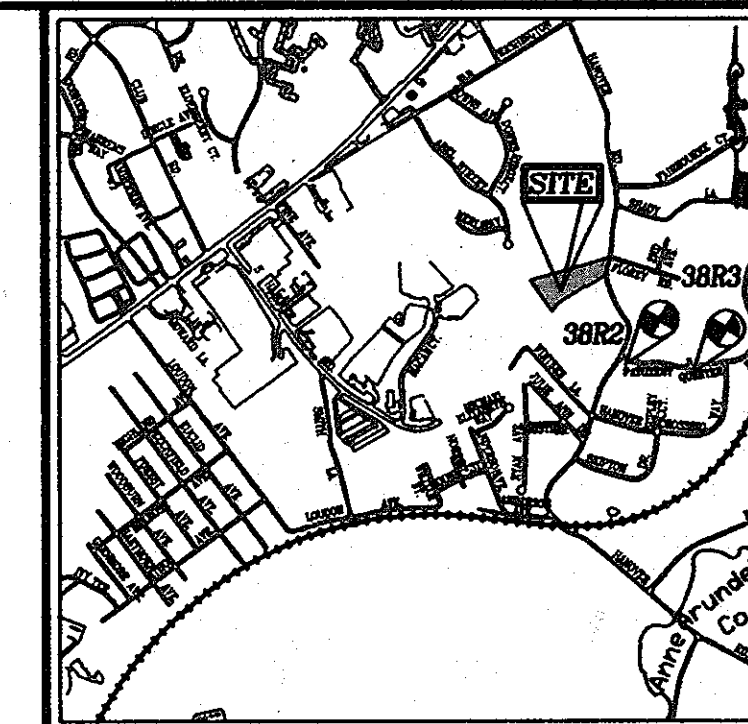
WATER ZONE: 400  
TEST GRADIENT: 550

VICINITY MAP  
SCALE: 1"=600'

TYPE OF BUILDING :	SINGLE FAMILY DETACHED
NO. OF LOTS/PARCELS :	14
NO. OF SINGLE WATER HOUSE CONNECTIONS :	12
NO. OF SEWER HOUSE CONNECTIONS :	12
SEWER SHED :	PATAPSCO
TREATMENT PLANT :	PATAPSCO WASTE WATER TREATMENT PLANT

**BENCHMARKS**







HOWARD COUNTY BENCHMARK 3BR2 (CONCRETE MONUMENT)  
N 557,500.663 E 1,391,227.052 ELEV. 193.726  
HOWARD COUNTY BENCHMARK 3BR3 (CONCRETE MONUMENT)  
N 557,417.823 E 1,391,983.177 ELEV. 175.228



**LOCATION MAP**

SCALE 1"=2000'  
ADC COORDINATE: 17 H9

**LEGEND**

EXISTING WATER MAIN	— W —
PROPOSED WATER MAIN	— W —
FIRE HYDRANT	
PROPOSED VALVE	
PROPOSED TEE	
EXISTING STORM DRAIN	— SD —
PROPOSED STORM DRAIN	— SD —
EXISTING SEWER	— SS —
PROPOSED SEWER	— SS —
SEWER MANHOLE	
WATER HOUSE CONNECTION	— W —
SEWER HOUSE CONNECTION	— S —
PROPOSED SIGN	
PROPOSED LIGHT	

**QUANTITIES**

NAME OF UTILITY CONTRACTOR :				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE :				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
<b>WATER</b>				
10" x 6" TAPPING SLEEVE	1 EA	1 EA		FORD METER BOX
10" x 8" TAPPING SLEEVE	1 EA	1 EA		FORD METER BOX
8" WATER (PVC C-900)	854 LF	880 LF	DR.18 C900	JM EAGLE / BRS
8" x 6" TEE	2 EA	2 EA		SIGMA / BRS
8" VALVE	2 EA	2 EA		SIGMA / BRS
6" VALVE	2 EA	2 EA		KENNEDY / HD SUPPLY
6" FIRE HYDRANT	2 EA	2 EA	C500/A12/CL-3	KENNEDY / HD SUPPLY
1" WHC	350 LF			READING / BRS
1/8 BEND	4 EA	4 EA		SIGMA / BRS
1/16 BEND	1 EA	1 EA		SIGMA / BRS
1/32 BEND	3 EA	3 EA		SIGMA / BRS
<b>SEWER</b>				
8" SEWER	751 LF	754 LF	14" PVC / SDR 35	JM EAGLE / BRS
MANHOLE	5 EACH	5 EA	SANITARY	ATLANTIC CONCRETE
4" SHC	334 LF	448 LF	14" PVC / SDR 35	JM EAGLE / BRS

**AS BUILTS**  
DATE: 8/18/11

DEVELOPER  
TRINITY QUALITY HOMES  
3675 PARK AVE., STE. 301  
ELLICOTT CITY, MARYLAND 21043  
(410) 480-0023





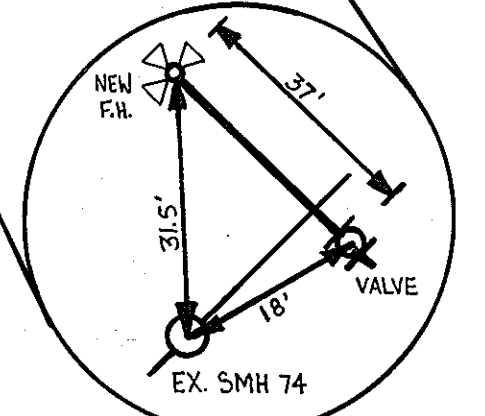
PLAN  
SCALE: 1"=50'

ASBUILT UTILITY LOCATION CHART				
LOT	LOCATION	DISTANCE	REMARKS	
1	CL SMH 5 TO WHC	38.67'	NORTHEAST FROM 6224 HANOVER RD STA 0+23	
1	EX. SMH 74 TO WHC	71.5'		
1	CL SMH 5 TO SHC	18.67'		
1	WHC LOT 1 TO SHC	28.33'		
2	CL SMH 5 TO WHC	47.58'		
2	CL SMH 4 TO WHC	85.33'		
2	CL SMH 5 TO SHC	57.08'		
2	CL SMH 4 TO SHC	74.58'		
3	CL SMH 4 TO WHC	45.75'		
3	CL L-2 TO WHC	53.17'		
3	CL SMH 4 TO SHC	53.58'		
3	CL L-2 TO SHC	84.5'		
6	CL MH 3 TO WHC	49.5'		
6	CL L-2 TO WHC	16.75'		
6	CL MH 3 TO SHC	72.82'		
6	CL L-2 TO SHC	21.58'		
7	PH TO WHC	44.08'		
7	CL MH 2 TO WHC	50.35'		
7	PH TO SHC	53.67'		
7	CL MH 2 TO SHC	50.32'		
8	CL MH 2 TO WHC	42.67'		
8	CL L-1 TO WHC	74.42'		
8	CL MH 2 TO SHC	58.67'		
9	CL L-1 TO SHC	62.67'		
9	SMH 3 TO WHC	42.35'		
9	SMH 3 TO SHC	29.67'		
9	I-1 TO SHC	84.75'		
9	SMH 3 TO WHC	84.5'		
10	CL L-1 TO WHC	76.58'		
10	CL SMH 3 TO WHC	59.75'		
10	I-1 TO SHC	67.67'		
10	SMH 3 TO SHC	51.33'		
11	CL SMH 3 TO WHC	84.82'		
11	CL MH 2 TO WHC	51'		
11	CL SMH 3 TO SHC	95'		
11	CL MH 2 TO SHC	95'		
12	CL MH 2 TO WHC	47'		
12	I-5 TO WHC	116.67'		
12	NH 1 TO SHC	54.33'		
12	CL L-5 TO SHC	105'		
13	I-5 TO WHC	11.67'		
13	PH V. STA 3+98 TO WHC	31.75'		
13	I-5 TO SHC	17.75'		
13	PH V. STA 3+98 TO SHC	55.83'		
14	CL SMH 4 TO WHC	34'		
14	CL SMH 4 TO SHC	25.67'		
14	I-5 TO SHC	123.58'		
14	PH TO 8" W VALVE	32.17'	STA. 3+98	
14	PH 8" VALVE TO I-2	42.67'	STA. 3+98	
14	CUL-DE-SAC 8" WM TO I-1	28.58'	STA. 6+20	

\*NOTE:  
EXISTING WHO'S AND SHC'S FOR 6224 AND 6228 HANOVER ROAD ARE TO BE DISCONNECTED AT THE MAIN AND PLUGGED.

PROPERTIES WITH WELL AND SEPTIC		
ADDRESS	EXISTING SEPTIC	EXISTING WELL
6224 HANOVER ROAD	TO BE ABANDONED	TO BE ABANDONED

LOT #	FRONT FOOTAGE
1	113'
2	103'
3	101'
4	OPEN SPACE
5	OPEN SPACE
6	94'
7	83'
8	92'
9	53'
10	16'
11	79'
12	92'
13	102'
14	109'



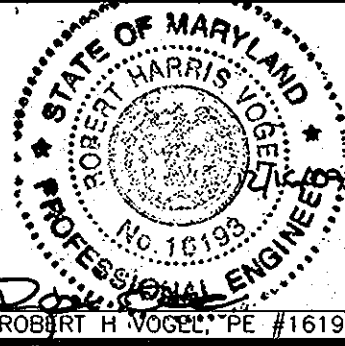
**AS BUILTS**  
DATE 8/18/11

**DEVELOPER**  
TRINITY QUALITY HOMES  
3675 PARK AVE., STE. 301  
ELLCOTT CITY, MARYLAND 21043  
(410) 480-0023

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*[Signature]*  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*[Signature]* 11/9/10  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET TEL: 410.461.7666  
ELLCOTT CITY, MD 21043 FAX: 410.461.8961



PROFESSIONAL CERTIFICATE  
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DRN: KG DES: RJ  
CHK: RHV  
DATE: DECEMBER 2009

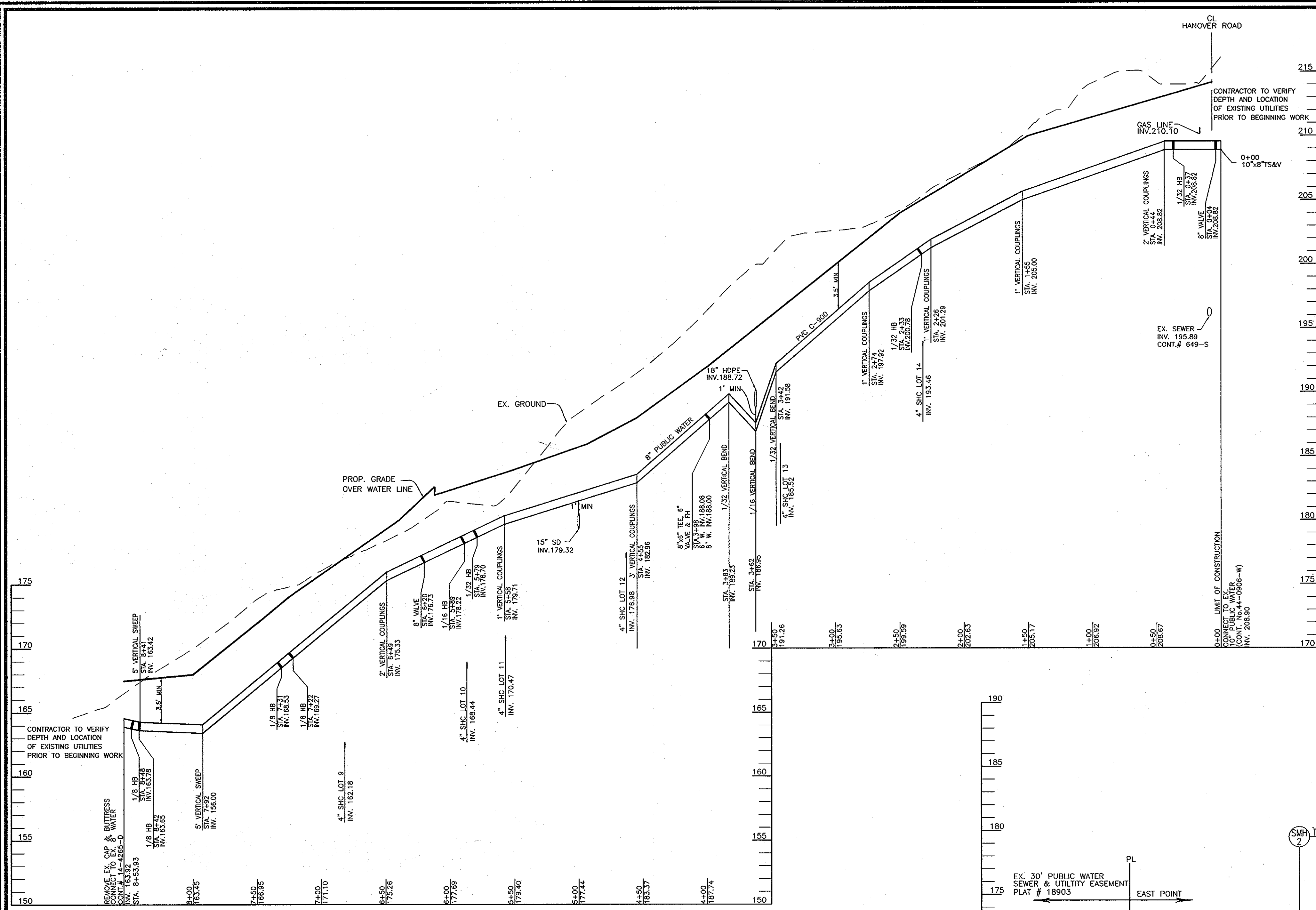
BY	NO.	REVISION	DATE

**FINAL WATER AND SEWER CONT.#14-4621-D LAYOUT PLAN**

**FINAL WATER AND SEWER EAST POINT PHASE I & II**  
LOTS 1-3, 6-14 AND OPEN SPACE LOTS 4 & 5  
NON-BUILDABLE BULK PARCEL 'A' & 'B'

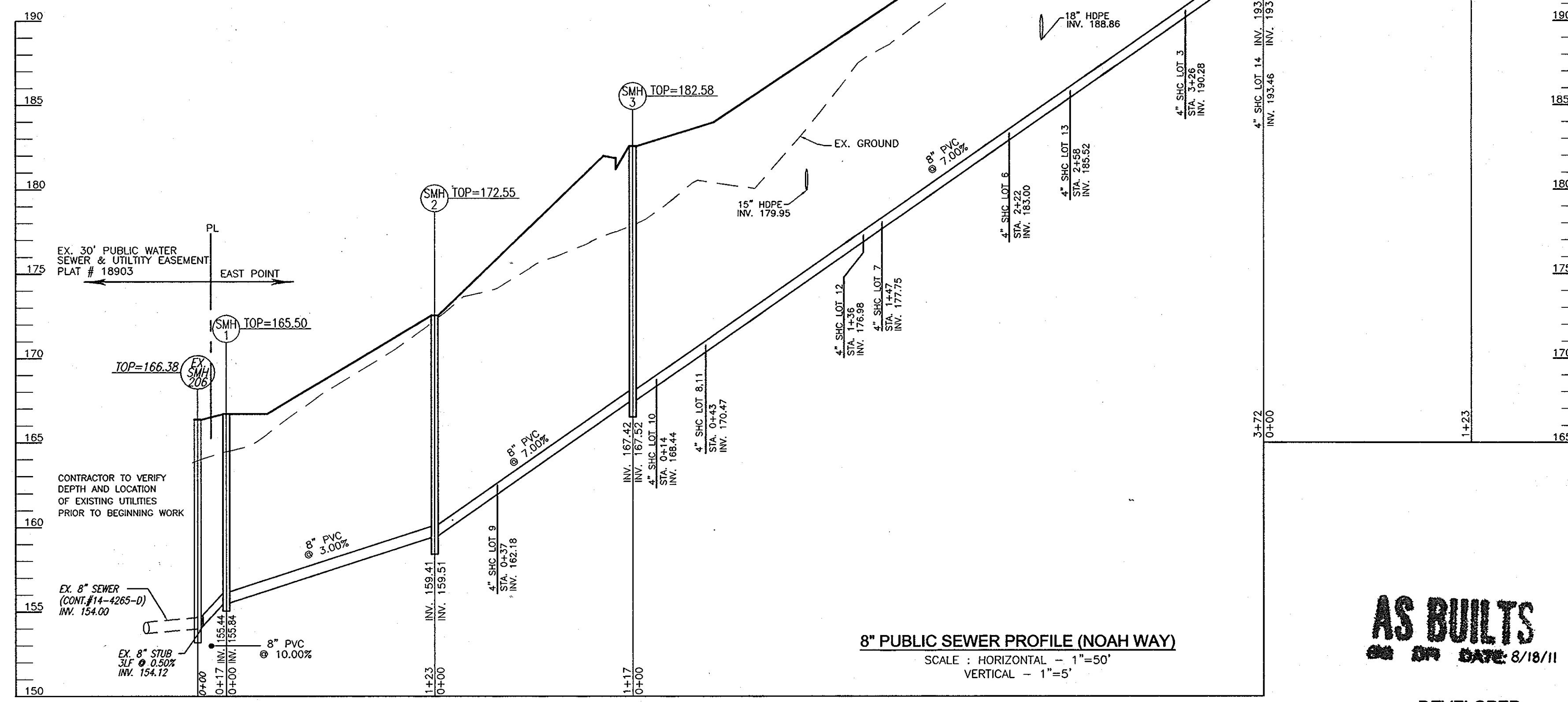
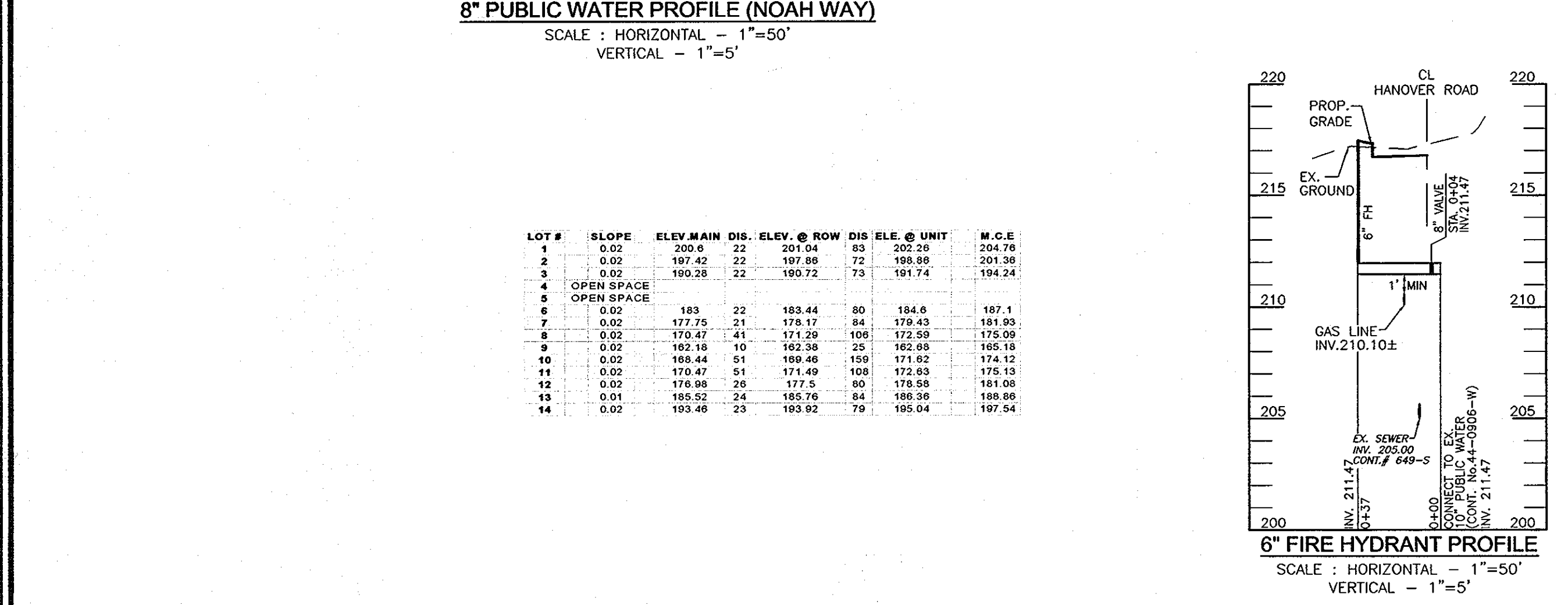
SCALE AS SHOWN  
SHEET 2 OF 3

600' SCALE MAP NO. 38 BLOCK NO. 15  
TAX MAP 38, GRID 15 1ST ELECTION DISTRICT  
PARCEL 238, 237 HOWARD COUNTY, MARYLAND



WATER MAIN LOCATION CHART	
WL STA.	APPURTENANCE
WL STA. 0+04	8" VALVE
WL STA. 0+37	1/32 HORIZONTAL BEND
WL STA. 2+33	1/32 HORIZONTAL BEND
WL STA. 3+98	8"x6" TEE & 8" VALVE, 6" FH
WL STA. 5+49	1/32 HORIZONTAL BEND
WL STA. 5+89	1/16 HORIZONTAL BEND
WL STA. 6+20	8" VALVE
WL STA. 7+22	1/8 HORIZONTAL BEND
WL STA. 7+31	1/8 HORIZONTAL BEND
WL STA. 8+42	1/8 HORIZONTAL BEND
WL STA. 8+48	1/8 HORIZONTAL BEND
WL STA. 5+76.85	8" CAP & BUTRESS

SEWER MANHOLE SCHEDULE						
NO.	TYPE	LOCATION		TOP ELEV.	INV. IN	INV. OUT
		NORTHING	EASTING			
SMH 1	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 558277.22	E 1390311.27	165.50	155.84	155.44
SMH 2	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 548177.26	E 1390382.82	172.55	159.51	159.41
SMH 3	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 548240.01	E 1390482.02	182.58	167.52	167.42
SMH 4	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL ROAD STA. 2+27, 5.45' RT		205.58	193.38	193.28
SMH 5	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL ROAD STA. 1+53, 748' RT		211.17	-	200.52



LOT #	SLOPE	ELEV. MAIN DIS.	ELEV. @ ROW	DIS. @ ELEV.	UNIT	M.C.E.
1	0.02	200.6	22	191.04	63	202.28
2	0.02	197.42	22	197.80	72	198.89
3	0.02	190.28	22	190.72	73	191.74
4	OPEN SPACE					194.24
5	OPEN SPACE					197.1
6	0.02	183	22	183.44	80	184.6
7	0.02	177.75	21	176.17	84	178.43
8	0.02	170.47	41	171.29	106	172.58
9	0.02	162.18	10	162.38	25	162.88
10	0.02	168.44	51	168.48	158	174.42
11	0.02	170.47	51	171.49	108	172.63
12	0.02	176.98	25	177.5	65	178.58
13	0.01	185.52	24	185.76	64	188.38
14	0.02	193.45	23	193.92	79	195.04

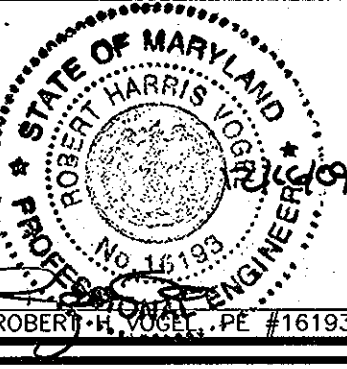
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DATE: 11/9/10

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

DATE: 11/9/10

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EXPIRATION DATE: 09-27-2010

DRN: KG DES: RJ  
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DATE: DECEMBER 2009

**FINAL WATER AND SEWER  
CONT.#14-4621-D  
WATER AND SEWER PROFILES**

600' SCALE MAP NO. 38 BLOCK NO. 15

**FINAL WATER AND SEWER  
EAST POINT PHASE I & II  
LOTS 1-3, 6-14 AND OPEN SPACE LOTS 4 & 5  
NON-BUILDABLE BULK PARCEL 'A' & 'B'**

TAX MAP 38, GRID 15  
1ST ELECTION DISTRICT

PARCEL 238, 237  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 3 OF 3

**AS BUILTS**  
DATE: 8/18/11

DEVELOPER  
TRINITY QUALITY HOMES  
3675 PARK AVE., STE. 301  
ELLICOTT CITY, MARYLAND 21043  
(410) 480-0023