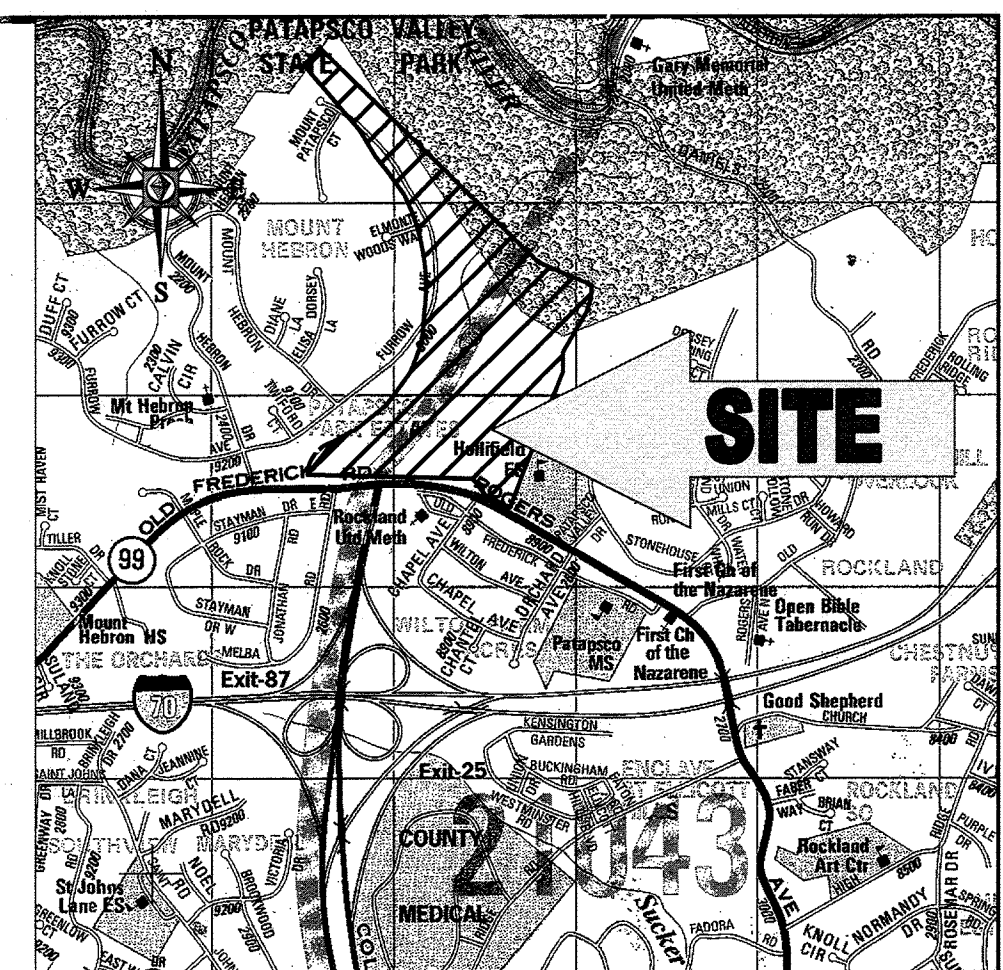


PHASE II PUBLIC WATER & SEWER FINAL CONSTRUCTION PLANS FOR ESTATES AT PATAPSCO PARK



LEGEND

- PROPOSED FIRE HYDRANT
- PROPOSED WATER MAIN
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY TERMINAL MANHOLE
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY MANHOLE
- PROPOSED WATER VALVE
- EXISTING WATER VALVE
- PROPOSED WATER BEND
- PROPOSED SEWER HOUSE CONNECTION
- PROPOSED WATER HOUSE CONNECTION
- DOMESTIC WATER METER
- SEWER CLEANOUT
- UTILITY TEST PIT LOCATION

SHEET INDEX

SHEET TITLE	SHEET NUMBER
TITLE SHEET	1
COMPREHENSIVE PLAN VIEW	2
PUBLIC WATER AND SEWER PLAN	3-4
PUBLIC SANITARY SEWER PROFILES	5
PUBLIC SANITARY SEWER STRUCTURE SCHEDULES	6
PUBLIC WATER PROFILES	7-8
WATER FITTING CHARTS	9

QUANTITIES TABLE

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	AS-BUILT TYPE	MANUFACTURER / SUPPLIER
1/8" BEND	4	2		TYLER / UNION
1/16" BEND	3	3		TYLER / UNION
1/32" BEND	29	29		TYLER / UNION
1 1/2 WVC	71 EA	71 EA		
1 1/2 COPPER WATERLINE	2485 L.F.	2490 L.F.		MUELLER
8" DR 18 C900 PVC WATER	1845 L.F.	1850 L.F.		NATIONAL PIPE/PLASTIC
6" DR 18 C900 PVC WATER	702 L.F.	680 L.F.		NATIONAL PIPE/PLASTIC
4" DR 18 C900 PVC WATER	140 L.F.	130 L.F.		NATIONAL PIPE/PLASTIC
8" VALVE	2 EA	2 EA		MUELLER
6" VALVE	6 EA	6 EA		MUELLER
4" VALVE	1 EA	4 EA		MUELLER
FIRE HYDRANTS	4 EA	4 EA		
8"x8" TEE	1 EA	1 EA		TYLER / UNION
8"x6" TEE	4 EA	4 EA		TYLER / UNION
8"x6" REDUCER	2 EA	2 EA		TYLER / UNION
8"x4" REDUCER	1 EA	1 EA		TYLER / UNION
4" SHC	54 EA	54 EA		HOONE CONCRETE
4" SCH 40 PVC SHC	1890 L.F.	1800 L.F.		NATIONAL PIPE/PLASTIC
8" DIP CL 54 SAN. LINE	110 L.F.	150 L.F.		NOVANE DUCTILE
8" SDR 35 PVC SAN. LINE	2044 L.F.	2000 L.F.		NATIONAL PIPE/PLASTIC
SANITARY MANHOLE	14 EA	14 EA		CAPITAL
BLOW-OFF VALVE	2 EA	2 EA		ECLIPSE
AIR RELEASE VALVE	1 EA	1 EA		VALMATIC
8" TEMP. BLOW-OFF, PLUG & BUTTRESS	1 EA	1 EA		EBAA
NAME OF UTILITY CONTRACTOR				UTILITIES UNLIMITED
CHECK BOX				
AS-BUILT DATE				
SURVEY AND DRAFTING DIVISION				

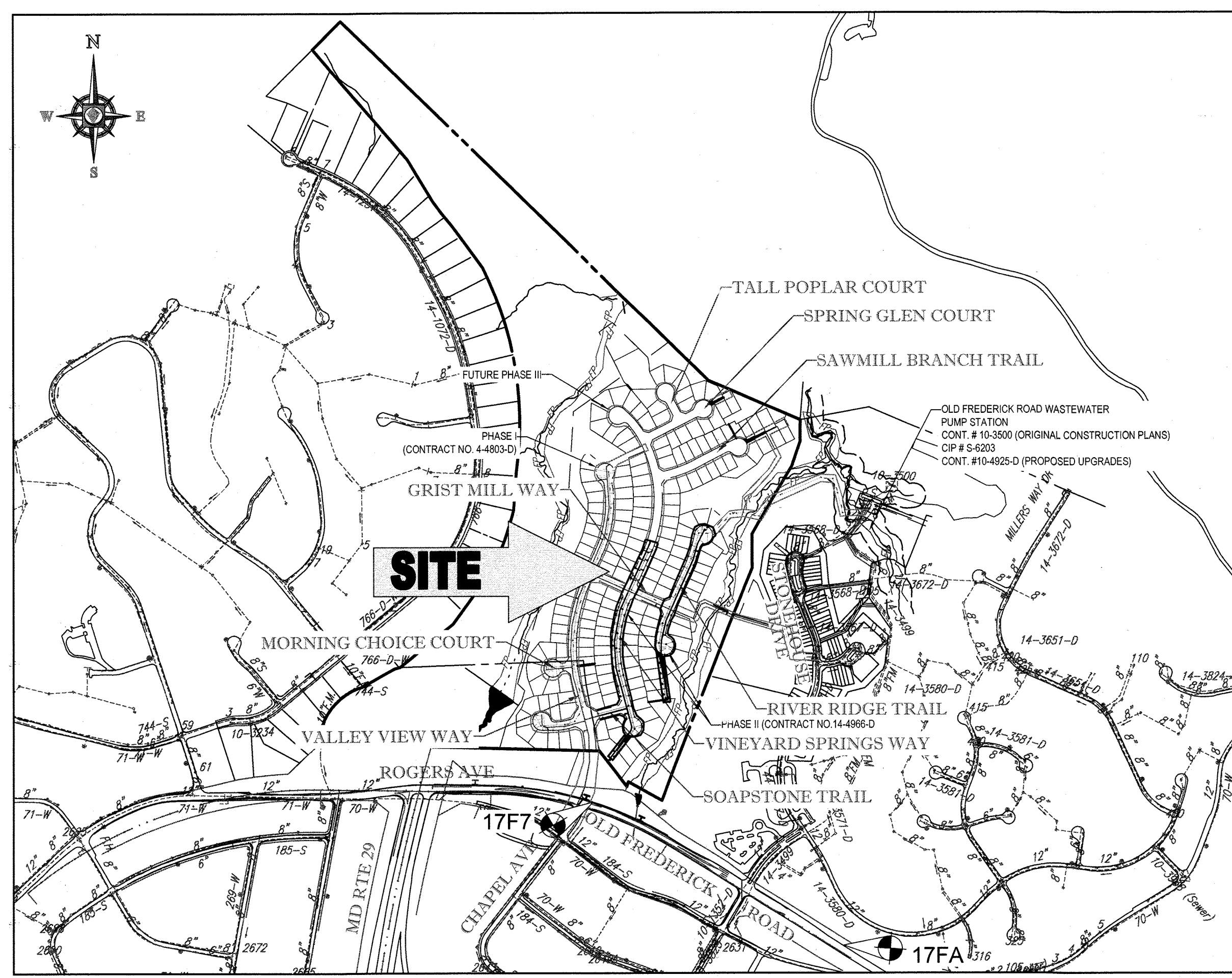
LOCATION OF SITE
ROGERS AVENUE
TAX MAP 17, GRID 5, 6, 11 & 12
HOWARD COUNTY, MARYLAND
ZONING: R-ED AND R-20, 2ND ELECTION DISTRICT
CONTRACT NO. 14-4966-D

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 JANUARY, 2009 BY AERO-METRIC.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. HORIZONTAL AND VERTICAL CONTROL DATUM ARE BASED ON HOWARD COUNTY MONUMENT NOS. 17FA AND 17F7 WHICH WERE USED FOR THIS PROJECT.
- HOWARD COUNTY MONUMENT NO. 17FA ELEV. = 478.72
HOWARD COUNTY MONUMENT NO. 17F7 ELEV. = 469.40
- 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 OWED BY 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) 410-637-8713
 BGE (EMERGENCY) 410-685-9123
 BUREAU OF UTILITIES 410-313-4900
 COLONIAL PIPELINE COMPANY 410-795-1390
 MISS UTILITY 1-800-257-7777
 STATE HIGHWAY ADMINISTRATION 410-531-5533
 VERIZON 1-800-743-0033
- 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.
- HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, IN A LETTER DATED JANUARY 21, 2015, APPROVED A WAIVER REQUEST OF THE REQUIREMENTS OF SECTION 4.3.3.B AND 4.5.E FOR LOTS 61 (NEW 283) THROUGH 66 (NEW 288), LOTS 71 (NEW 273) THROUGH 74 (NEW 278), 87 (NEW 299), AND 101 (NEW 303) (NO BASEMENT GRAVITY SEWER) AS A RESULT OF TOPOGRAPHY CAUSING DEPTHS OF SEWER IN EXCESS OF 20 FEET, BASEMENT SEWER SERVICE CANNOT BE PROVIDED TO THESE PROPOSED LOTS. FOR THESE LOTS, GRAVITY SEWER SERVICE TO BE PROVIDED TO FIRST FLOOR ONLY. BASEMENT SERVICE TO BE PROVIDED BY PRIVATE ON-SITE PUMP. THE APPROVAL AND INSPECTION OF ON-SITE PUMPING UNITS INCLUDES THE DEPARTMENT OF INSPECTION, LICENSES AND PERMITS (DILP).
- HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, IN A LETTER DATED JANUARY 21, 2015, APPROVED A WAIVER REQUEST OF THE REQUIREMENTS OF SECTION 3.3.B.5 (DEPTH OF COVER OVER WATER MAINS). THE WAIVER REQUEST TO ALLOW AN INCREASED DEPTH OF COVER OVER THE WATER MAIN CROSSING IN THE FOREST CONSERVATION EASEMENT, BETWEEN STATION 13+23 AND STATION 14+00 OF WATERLINE 1E, TO TEN (10) FEET IS APPROVED WITH THE FOLLOWING LIMITATIONS:
 • DR-14, C-900 PVC PIPE, WITH RESTRAINED JOINTS, SHALL BE USED BETWEEN STATION 13+06 AND STATION 14+20.
 • THE MAXIMUM COVER WITHIN THE LIMITS DESCRIBED ABOVE SHALL NOT EXCEED TEN (10) FEET.

WATER NOTES

- ALL WATER MAINS TO BE P.V.C. C900 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO 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 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 RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE 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.
- TRACER WIRES AND CONTINUITY TEST STATION SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATIONS TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH PIPE MATERIALS CERTIFICATIONS OR SHOP DRAWING PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE 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 RECORDS RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS SACRIFICIAL ANODES SHALL BE 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 DUCTILE IRON FITTINGS INCLUDING RESTRAINS AND HARNESSES. 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 PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF PVC PIPE.
- ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFLECTION 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 COUPLING OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5 DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTOR EQUIPMENT DIRECTLY OVER THE FITTING.
- PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 1/2 DEGREE ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWWA C900. SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTIED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
- FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI. DR18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR18 OR EQUAL.
- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION 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 MEGA-STOP, AS MANUFACTURED BY EBAA INC., OR APPROVED EQUAL.
- EACH DWELLING WILL BE SERVED BY A 1-1/2" DIAMETER WHC, WITH A 1" METER WHICH WILL BE LOCATED AT THE PROPERTY LINE. THE PREFERRED LOCATION OF THE OUTSIDE WATER METER SETTING IS IN A GRASS AREA WITH THE ROAD RIGHT-OF-WAY AND OUTSIDE OF TRAFFIC BEARING AREAS.



VICINITY MAP
SCALE: 1"=600'

REFERENCE DRAWINGS

TYPE OF BUILDING: RESIDENTIAL
 DRAINAGE AREA: PATAPSCO
 NUMBER OF LOTS/PARCELS/UNITS: LOTS (PHASE II)
 AREA OF RESIDENTIAL LOT/PARCEL: 113.23 AC
 NUMBER OF W.H.C.: 71 (PHASE II)
 NUMBER OF S.H.C.: 54 (PHASE II)
 WATER ZONE: 630 W
 TEST GRADIENT: 780 PSI

PROFESSIONAL CERTIFICATION
 I, BRANDON R. ROWE, 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. 40808. EXPIRATION DATE: 7/31/2017

BENCHMARK

GEODETIC SURVEY CONTROL - 17FA
 ELEV. 478.721'
 N. 594,945.425
 E. 1,364,628.770

GEODETIC SURVEY CONTROL - 17F7
 ELEV. 469.399'
 N. 595,829.688
 E. 1,363,088.330

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 309 OF THE SPECIFICATIONS AND AS SHOWN ON F-14-124

SEWER NOTES

- ALL SEWER MAINS SHALL BE SDR 35 OR SCH. 40 PVC 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 COVERS, STANDARD DETAIL G6.52. WHERE WATERTIGHT FRAME AND COVER IS 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.

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

John R. Blitzer 5/16/16
 HOWARD SCD DATE

OWNER
 ESTATES AT PATAPSCO PARK, LLC
 24012 FREDERICK ROAD
 CLARKSBURG, MD 20861
 CONTACT: MR. DAN SNYDER
 PHONE: (301) 674-8509

DEVELOPER
 ESTATES AT PATAPSCO PARK, LLC
 24012 FREDERICK ROAD
 CLARKSBURG, MD 20861
 CONTACT: MR. DAN SNYDER
 PHONE: (301) 674-8509

BOHLER ENGINEERING
 901 DULANEY VALLEY ROAD, SUITE 801
 TOWSON, MARYLAND 21204
 Phone: (410) 821-7900
 Fax: (410) 821-7987
 www.BohlerEngineering.com

STATE OF MARYLAND
 BRANDON R. ROWE
 PROFESSIONAL ENGINEER
 LICENSE NO. 40808
 EXPIRATION DATE: 7/31/2017

DES. J.A.	DRN. R.L.B.	CHK. B.R.R.	DATE: 4/13/16
REV.	DATE	DESCRIPTION	BY
1	1-16-17	AS-BUILTS	KCT

**PHASE II
TITLE SHEET**

PARCEL NO.	N/A
600' SCALE MAP NO.	17
BLOCK NO.	5

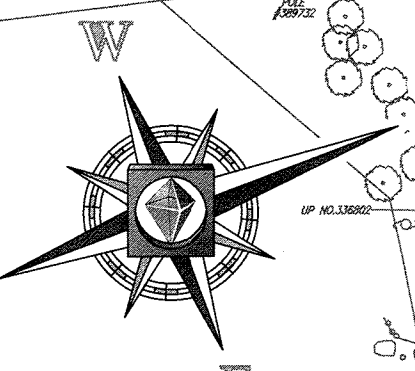
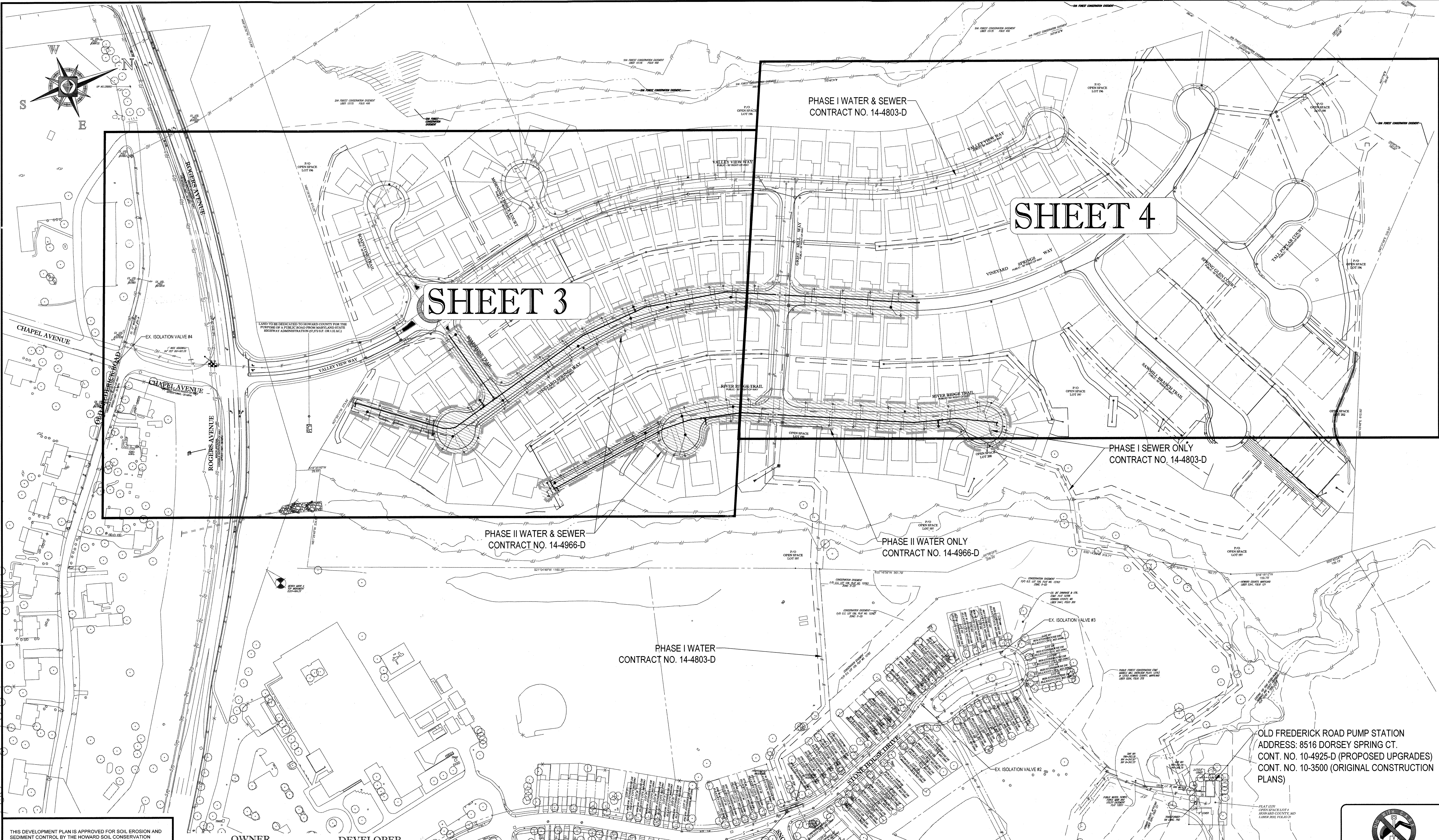
ESTATES AT PATAPSCO PARK
 ROGERS AVENUE
 BUILDABLE LOTS 318 - 320, 338 - 372, 386 - 397 (W&S)
 BUILDABLE LOTS 321 - 337 (WATER ONLY)
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO.: 14-4966-D

SCALE AS SHOWN
 SHEET 1 OF 9

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
Steve Coen 5/16/16
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
Chad Eubank 5-16-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE IN VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND DELAWARE CALL: (1) WV 1-800-245-4848 (PA 1-800-245-1778) (DC 1-800-257-7777) (VA 1-800-552-7001) (MD 1-800-257-7777) (DE 1-800-282-8559)



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

[Signature] 5/16/16
 PROJECT SCHEMATIC

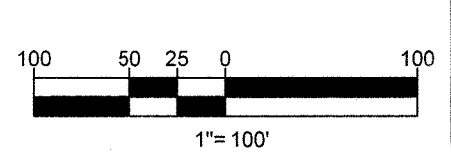
OWNER
 ESTATES AT PATAPSCO PARK, LLC
 24012 FREDERICK ROAD
 CLARKSBURG, MD 20851
 CONTACT: MR. DAN SNYDER
 PHONE: (301) 674-8509

DEVELOPER
 ESTATES AT PATAPSCO PARK, LLC
 24012 FREDERICK ROAD
 CLARKSBURG, MD 20851
 CONTACT: MR. DAN SNYDER
 PHONE: (301) 674-8509

PROFESSIONAL CERTIFICATION
 I, BRANDON R. ROWE, 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. 48808, EXPIRATION DATE: 7/30/17

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND AS SHOWN ON F-14-124.

TEST PIT NOTE
 CONTRACTOR TO TEST PIT FOR EXACT LOCATION OF EXISTING UTILITY AND SUBMIT ANY DISCREPANCIES TO BOHLER ENGINEERING IN WRITING.



THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE OF VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND DELAWARE CALL: 811 (WWW.811-VA.COM) (PA 1-800-242-3776) (DC 1-800-257-7777) (VA 1-800-852-7001) (MD 1-800-257-7777) (DE 1-800-283-8559)

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

[Signature] 5/16/16
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

[Signature] 5.16.16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BOHLER ENGINEERING
 901 DULANEY VALLEY ROAD, SUITE 801
 TOWSON, MARYLAND 21284
 Phone: (410) 521-7500
 Fax: (410) 821-7597
 www.BohlerEngineering.com

BRANDON R. ROWE
 PROFESSIONAL ENGINEER
 LICENSE NO. 48808

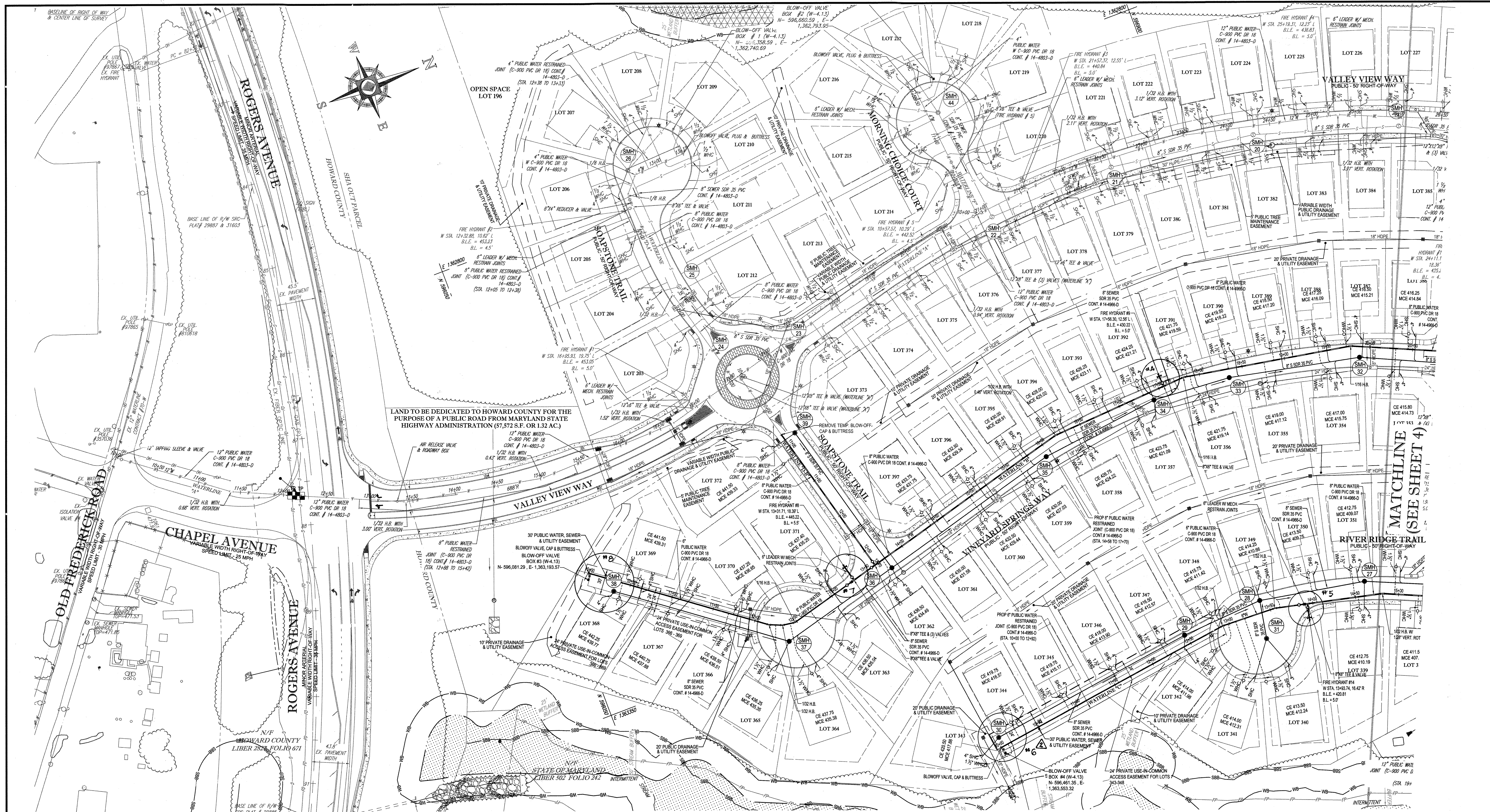
DES: J.A.					
DRN: R.L.B.					
CHK: B.R.R.					
DATE: 4/13/16	REV.	DATE	DESCRIPTION	BY	

PHASE II COMPREHENSIVE PLAN VIEW

PARCEL NO. N/A
 600' SCALE MAP NO. 17 BLOCK NO. 5

ESTATES AT PATAPSCO PARK
 ROGERS AVENUE
 BUILDABLE LOTS 318 - 320, 338 - 372, 386 - 397 (W&S)
 BUILDABLE LOTS 321 - 337 (WATER ONLY)
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO.: 14-4966-D

SCALE 1" = 100'
 SHEET 2 OF 9



SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 508 OF THE SPECIFICATIONS AND AS SHOWN ON F-14-12-4.

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

John K. Kilton
Stella

OWNER
 ESTATES AT PATAPSCO PARK, LLC
 24012 FREDERICK ROAD
 CLARKSBURG, MD 20891
 CONTACT: MR. DAN SNYDER
 PHONE: (301) 674-8509

DEVELOPER
 ESTATES AT PATAPSCO PARK, LLC
 24012 FREDERICK ROAD
 CLARKSBURG, MD 20891
 CONTACT: MR. DAN SNYDER
 PHONE: (301) 674-8509

PROFESSIONAL CERTIFICATION
 I, BRANDON R. ROWE, 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. 40898. EXPIRATION DATE: 7/31/2017

TEST PIT NOTE

CONTRACTOR TO TEST PIT FOR EXACT LOCATION OF EXISTING UTILITY AND SUBMIT ANY DISCREPANCIES TO BOHLER ENGINEERING IN WRITING.

THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE IN VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND DELAWARE CALL: 811 (TOLL FREE 1-800-246-4848) (PA 1-800-242-1778) (DC 1-800-257-7777) (VA 1-800-552-7001) (MD 1-800-257-7777) (DE 1-800-382-8555)

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

Steve Chan
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

Chad
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

BOHLER ENGINEERING
 901 DULANEY VALLEY ROAD, SUITE 801
 TOWSON, MARYLAND 21204
 Phone: (410) 521-7900
 Fax: (410) 521-7907
 www.BohlerEngineering.com

B. R. ROWE
 PROFESSIONAL ENGINEER
 LICENSE NO. 40898

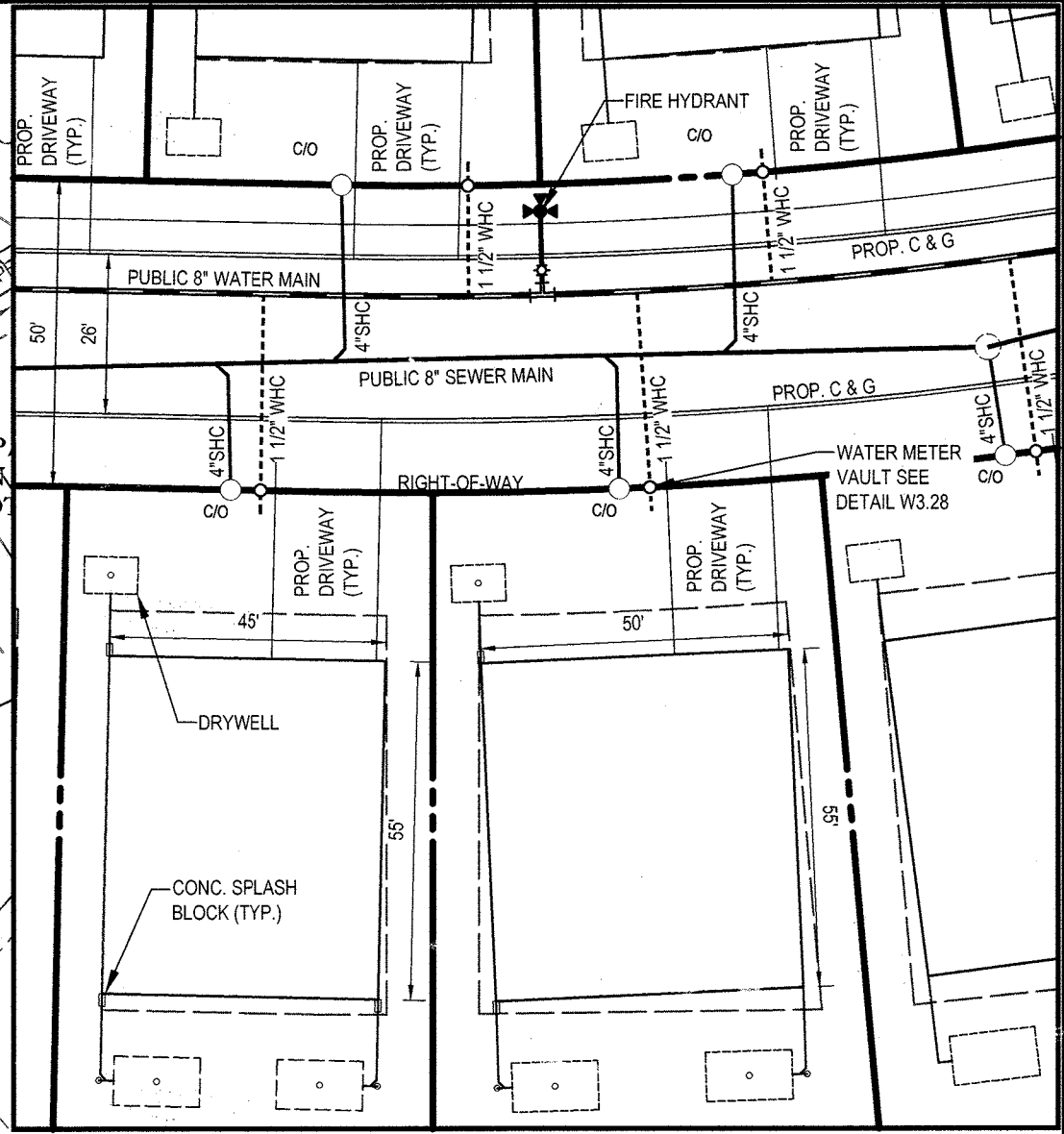
DES. J.A.	
DRN. R.L.B.	
CHK. B.R.R.	2. 12/7/21. AS BUILTS
DATE: 4/13/16	WRA

PHASE II PUBLIC WATER AND SEWER PLAN

PARCEL NO. N/A
 600' SCALE MAP NO. 17 BLOCK NO. 5

ESTATES AT PATAPSCO PARK
 ROGERS AVENUE
 BUILDABLE LOTS 318 - 320, 338 - 372, 386 - 397 (W&S)
 BUILDABLE LOTS 321 - 337 (WATER ONLY)
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO.: 14-4966-D

SCALE: 1" = 50'
 SHEET: 3 OF 9



TYPICAL WATER & SEWER HOUSE CONNECTION METER SETTINGS
SCALE: 1" = 30'

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

[Signature] 5/16/16
DATE

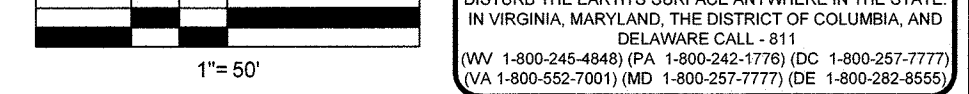
SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 306 OF THE SPECIFICATIONS AND AS SHOWN ON F-14-124.

OWNER
ESTATES AT PATAPSCO PARK, LLC
24012 FREDERICK ROAD
CLARKSBURG, MD 20861
CONTACT: MR. DAN SMYDER
PHONE: (301) 674-8509

DEVELOPER
ESTATES AT PATAPSCO PARK, LLC
24012 FREDERICK ROAD
CLARKSBURG, MD 20861
CONTACT: MR. DAN SMYDER
PHONE: (301) 674-8509

PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 40088, EXPIRATION DATE: 7/30/17

TEST PIT NOTE
CONTRACTOR TO TEST PIT FOR EXACT LOCATION OF EXISTING UTILITY AND SUBMIT ANY DISCREPANCIES TO BOHLER ENGINEERING IN WRITING.



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
[Signature] 5/16/16
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
[Signature] 5/16/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BOHLER ENGINEERING
901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987
www.BohlerEngineering.com

BRANDON R. ROWE
PROFESSIONAL ENGINEER
STATE OF MARYLAND
LICENSE NO. 40088

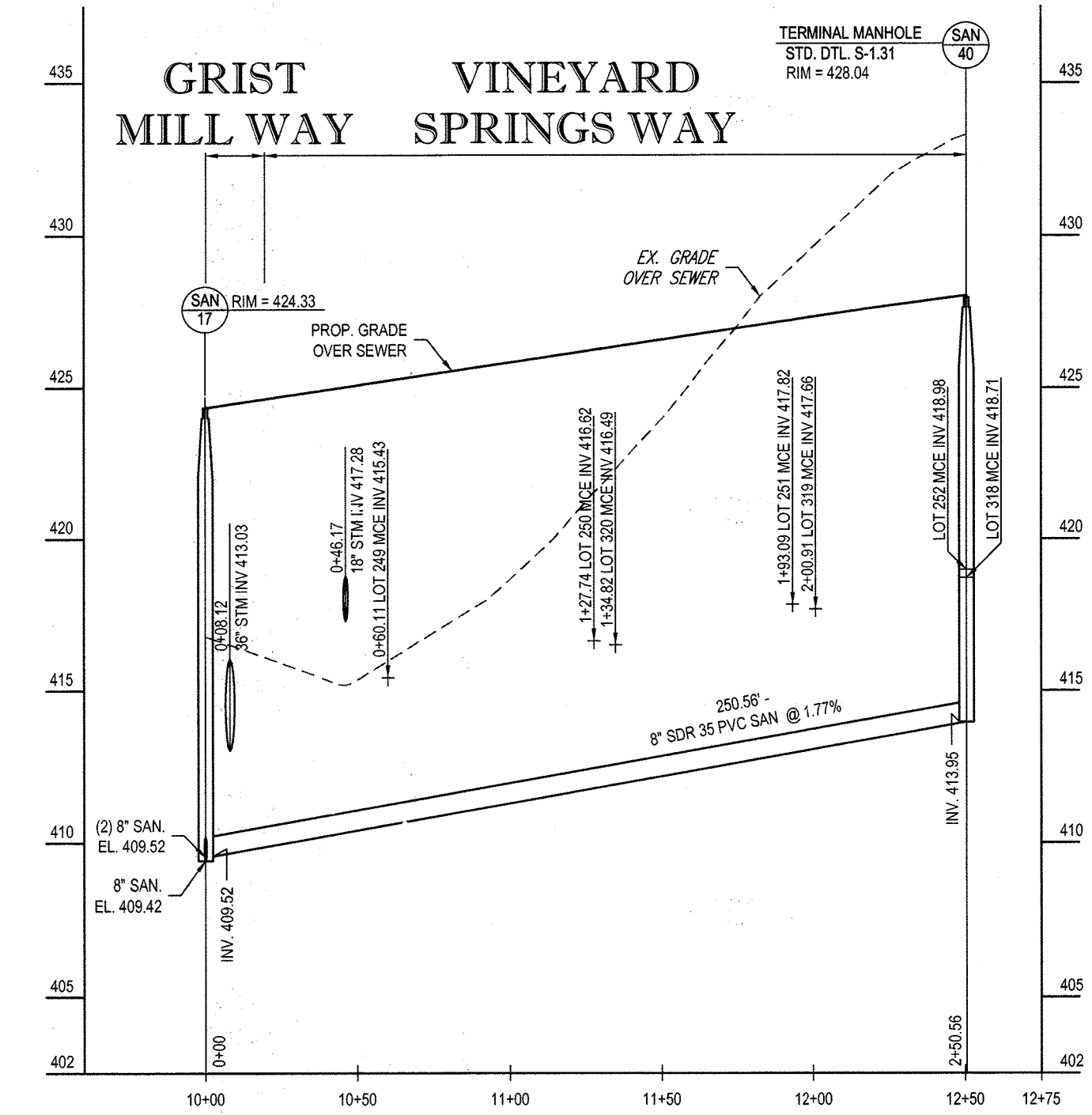
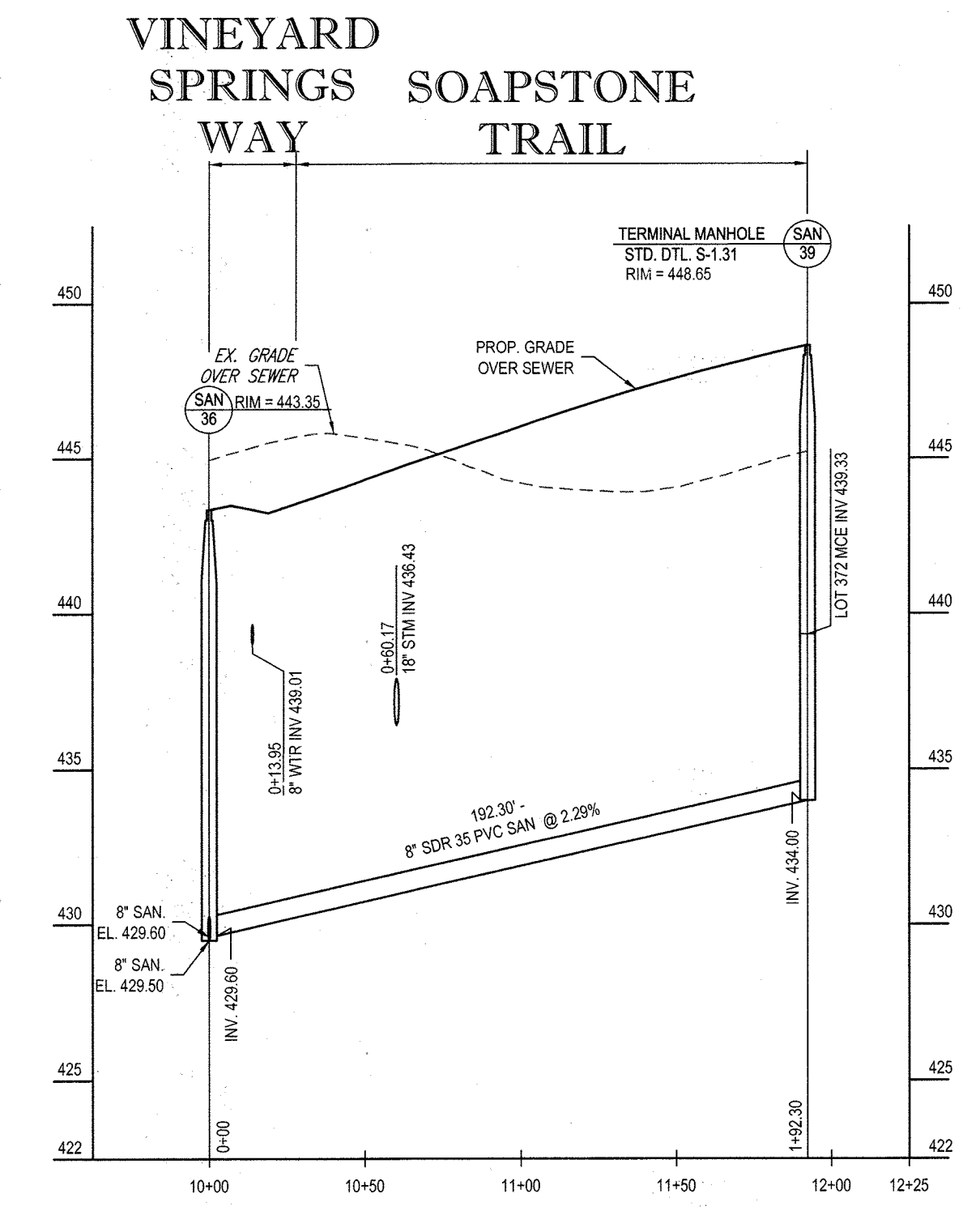
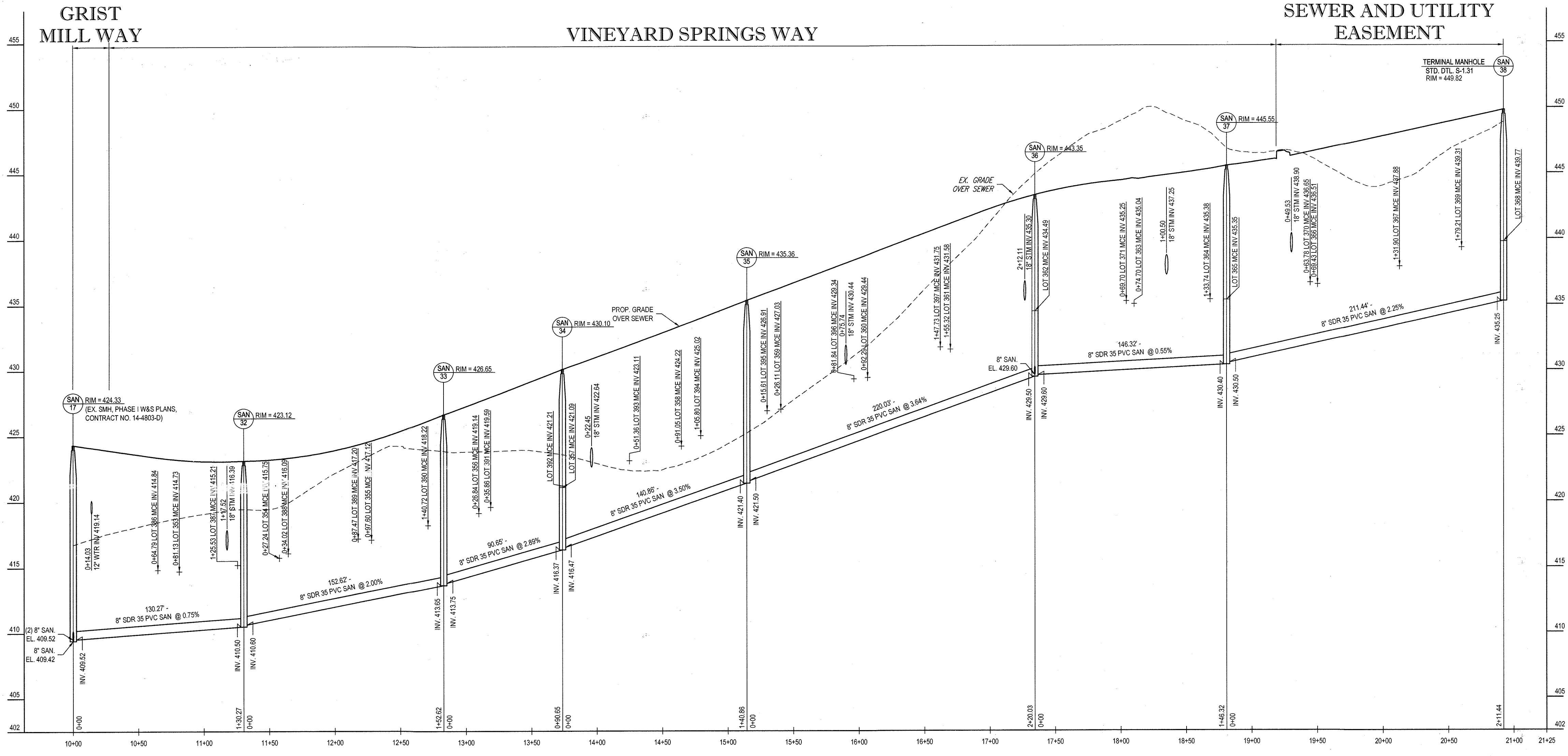
DES. J.A.				
DRN. R.L.B.				
CHK. B.R.R.	2	12/7/21	AS BUILTS	WRA
DATE 4/13/16	1	1/16/17	AS-BUILTS	WRA
REV.		DATE	DESCRIPTION	BY

PHASE II PUBLIC WATER AND SEWER PLAN

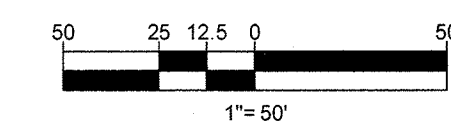
PARCEL NO.	N/A
60' SCALE MAP NO.	17
BLOCK NO.	5

ESTATES AT PATAPSCO PARK
ROGERS AVENUE
BUILDABLE LOTS 318 - 320, 338 - 372, 386 - 397 (W&S)
BUILDABLE LOTS 321 - 337 (WATER ONLY)
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO.: 14-4966-D

SCALE: 1" = 50'
SHEET: 4 OF 9



PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 40808. EXPIRATION DATE: 7/31/2017



THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE OF VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND DELAWARE CALL: 811
DELAWARE CALL: 811
MD: 1-800-245-4848 (PA: 1-800-342-1776) (DC: 1-800-251-7777)
VA: 1-800-552-7001 (MD: 1-800-251-7777) (DC: 1-800-252-8555)

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES
DATE

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

BOHLER ENGINEERING
901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204
Phone: (410) 821-7900 Fax: (410) 821-7987
www.BohlerEngineering.com

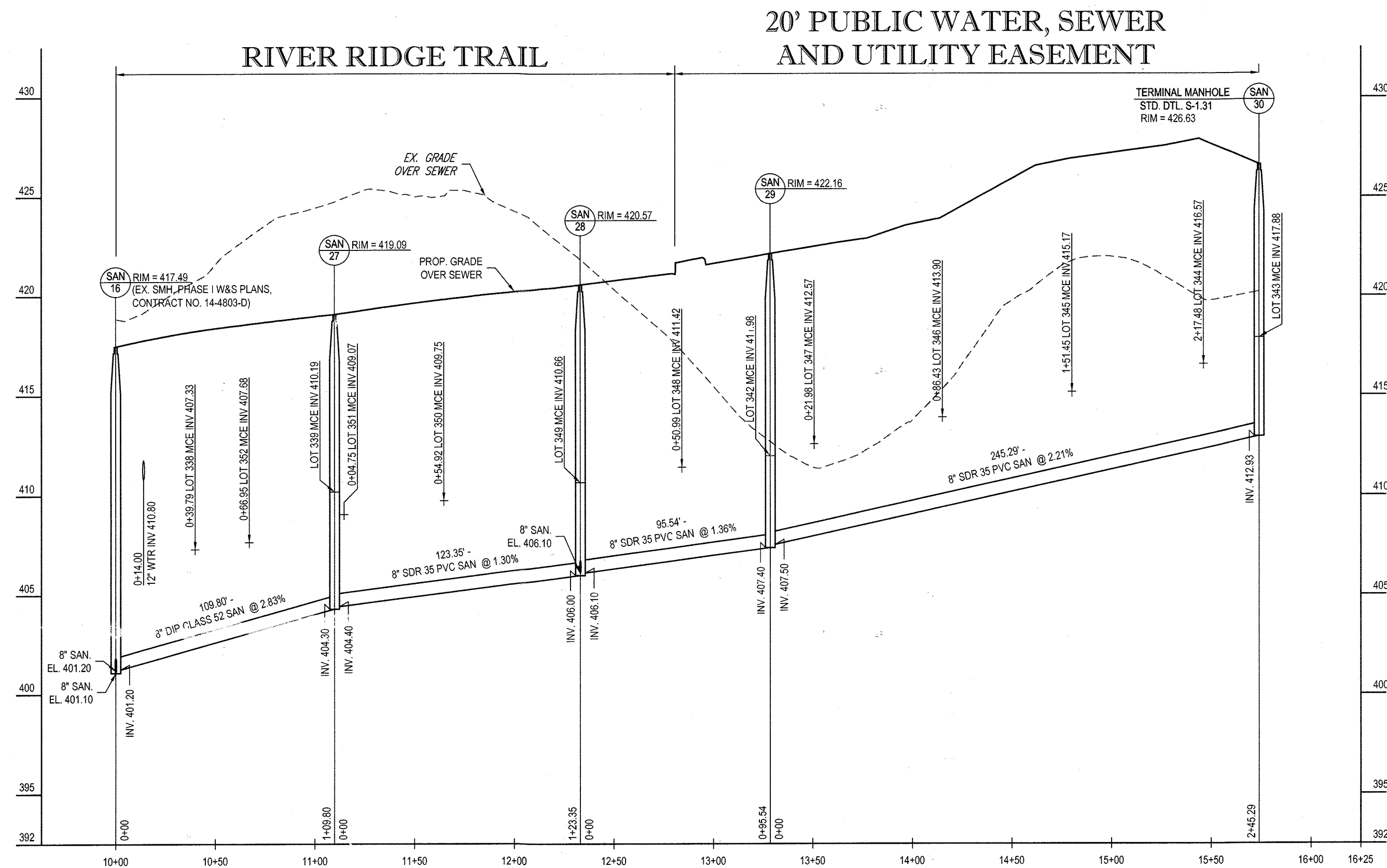
PROFESSIONAL ENGINEER
BRANDON R. ROWE
4/13/16

DES. J.A.					
DRN. R.L.B.					
CHK. B.R.R.					
DATE: 4/13/16	REV.	DATE	DESCRIPTION	BY	

PHASE II PUBLIC SANITARY SEWER PROFILES
PARCEL NO. N/A
600' SCALE MAP NO. 17 BLOCK NO. 5

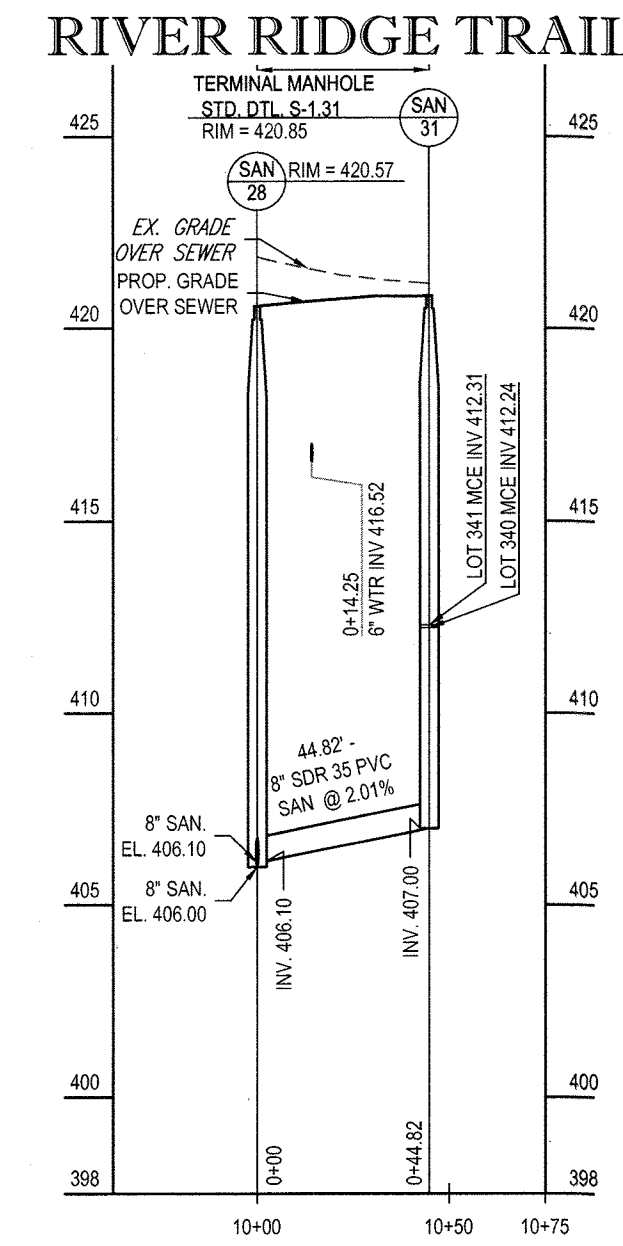
ESTATES AT PATAPSCO PARK
ROGERS AVENUE
BUILDABLE LOTS 318 - 320, 338 - 372, 386 - 397 (W&S)
BUILDABLE LOTS 321 - 337 (WATER ONLY)
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO.: 14-4966-D

SCALE AS SHOWN
SHEET 5 OF 9



PROPOSED SANITARY PROFILE (SAN-16 TO SAN-30)

SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL



PROPOSED SANITARY PROFILE (SAN-28 TO SAN-31)

SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

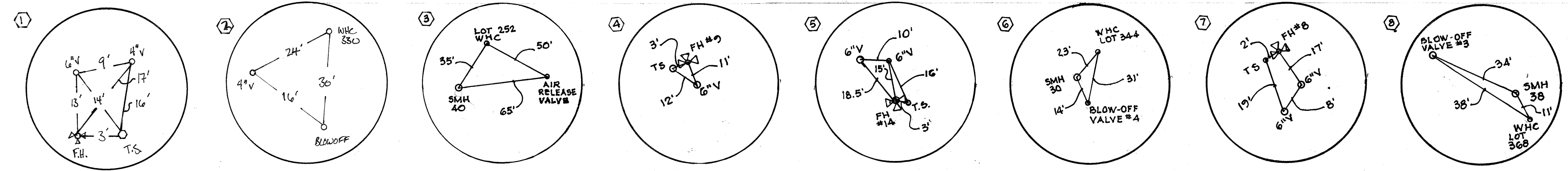
LOT	FF ELEV.	CELLAR ELEV.	INV. @ MAN	SHC LENGTH TO ROW (FT)	SHC SLOPE WITHIN ROW	INVERT @ ROW	SHC SLOPE WITHIN LOT	MAX SHC LENGTH (FT)	2.50 FT BELOW CELLAR	MIN. CELLAR (MCE)	CONNECTION TYPE	LOT	Δ BETWEEN ELEV. (MCE)	SHC SLOPE WITHIN ROW	INVERT @ ROW	CELLAR GRAVITY SERVICE	FLOOR TO FLOOR (FT)
318	431.25	421.25	414.05	23.20	3.5%	414.86	3.5%	84.70	2.50	420.33	STD SHC	318	0.82			YES	10.00
319	430.75	420.75	413.08	19.00	4.0%	413.84	4.0%	85.00	2.50	419.74	STD SHC	319	1.01			YES	10.00
320	430.00	420.00	411.91	18.80	4.5%	412.78	4.5%	85.00	2.50	419.68	STD SHC	320	0.82			YES	10.00
338	421.50	411.50	402.32	32.40	4.5%	403.78	4.5%	93.30	2.50	410.48	STD SHC	338	1.02			YES	10.00
339	422.75	412.75	404.40	33.30	3.0%	405.40	3.0%	131.00	2.50	411.83	STD SHC	339	0.82			YES	10.00
340	423.50	413.50	407.10	44.50	2.0%	407.98	2.0%	87.50	2.50	412.24	STD SHC	340	1.28			YES	10.00
341	424.00	414.00	407.10	52.90	2.5%	400.42	2.5%	82.80	2.50	412.89	STD SHC	341	1.01			YES	10.00
342	424.00	414.00	407.50	18.40	3.0%	408.05	3.0%	80.50	2.50	412.87	STD SHC	342	1.03			YES	10.00
343	430.50	420.50	413.03	30.90	3.5%	414.11	3.5%	86.40	2.50	419.64	STD SHC	343	0.86			YES	10.00
344	429.75	419.75	412.31	9.20	4.5%	412.72	4.5%	78.90	2.50	418.78	STD SHC	344	0.99			YES	10.00
345	429.75	419.75	410.85	9.20	5.0%	411.31	5.0%	81.60	2.50	417.89	STD SHC	345	1.86			YES	10.00
346	429.00	419.00	409.41	9.20	5.0%	409.87	5.0%	90.30	2.50	416.89	STD SHC	346	1.12			YES	10.00
347	428.50	418.50	407.99	9.20	5.0%	408.45	5.0%	95.00	2.50	415.70	STD SHC	347	0.80			YES	10.00
348	428.75	418.75	408.79	11.70	5.0%	407.38	5.0%	95.00	2.50	414.63	STD SHC	348	1.13			YES	10.00
349	424.25	414.25	406.10	17.80	4.5%	408.81	4.5%	85.00	2.50	413.23	STD SHC	349	1.02			YES	10.00
350	423.50	413.50	405.11	22.20	4.5%	406.11	4.5%	85.00	2.50	412.43	STD SHC	350	1.07			YES	10.00
351	422.75	412.75	404.50	18.70	5.0%	405.44	5.0%	85.00	2.50	412.19	STD SHC	351	0.58			YES	10.00
352	422.50	412.50	403.09	19.40	5.0%	404.06	5.0%	85.00	2.50	410.81	STD SHC	352	1.69			YES	10.00
353	428.80	418.80	410.13	20.20	2.0%	410.53	2.0%	85.00	2.50	414.73	STD SHC	353	1.07			YES	10.00
354	427.00	417.00	411.14	20.60	2.5%	411.66	2.5%	85.00	2.50	416.28	STD SHC	354	0.72			YES	10.00
355	428.00	418.00	412.55	18.40	3.0%	413.10	3.0%	85.00	2.50	418.15	STD SHC	355	0.85			YES	10.00
356	431.75	421.75	414.53	20.60	3.5%	415.25	3.5%	85.00	2.50	420.73	STD SHC	356	1.02			YES	10.00
357	433.75	423.75	416.47	20.80	3.5%	417.20	3.5%	85.00	2.50	422.87	STD SHC	357	1.08			YES	10.00
358	436.75	426.75	419.88	17.80	3.5%	420.28	3.5%	85.00	2.50	425.78	STD SHC	358	0.99			YES	10.00
359	440.00	430.00	422.45	18.90	4.0%	423.21	4.0%	85.00	2.50	429.11	STD SHC	359	0.89			YES	10.00
360	442.50	432.50	424.86	18.80	4.0%	425.61	4.0%	85.00	2.50	431.51	STD SHC	360	0.99			YES	10.00
361	445.00	435.00	427.15	18.80	4.5%	428.00	4.5%	77.80	2.50	434.00	STD SHC	361	1.00			YES	10.00
362	446.50	436.50	429.60	18.30	3.0%	430.15	3.0%	101.00	2.50	435.88	STD SHC	362	0.82			YES	10.00
363	446.50	436.50	430.01	20.50	2.5%	430.52	2.5%	108.00	2.50	435.67	STD SHC	363	0.83			YES	10.00
364	447.75	437.75	430.33	48.40	3.0%	431.78	3.0%	79.00	2.50	436.65	STD SHC	364	1.10			YES	10.00
365	446.25	436.25	430.50	38.44	2.0%	431.27	2.0%	79.30	2.50	435.35	STD SHC	365	0.90			YES	10.00
366	448.50	438.50	432.08	8.80	3.0%	432.32	3.0%	88.50	2.50	437.48	STD SHC	366	1.02			YES	10.00
367	450.75	440.75	433.48	8.80	4.0%	433.81	4.0%	87.20	2.50	439.80	STD SHC	367	0.95			YES	10.00
368	452.25	442.25	435.35	8.30	3.5%	435.64	3.5%	87.80	2.50	441.21	STD SHC	368	1.04			YES	10.00
369	451.50	441.50	434.53	22.80	3.0%	435.21	3.0%	91.00	2.50	440.44	STD SHC	369	1.06			YES	10.00
370	447.25	437.25	431.83	22.80	2.0%	432.39	2.0%	88.30	2.50	436.65	STD SHC	370	0.60			YES	10.00
371	447.40	437.40	429.98	33.10	3.0%	430.97	3.0%	105.40	2.50	436.64	STD SHC	371	0.76			YES	10.00
372	451.50	441.50	434.10	32.00	3.0%	435.08	3.0%	104.70	2.50	440.70	STD SHC	372	0.80			YES	10.00
386	428.25	418.25	410.01	32.00	2.5%	410.81	2.5%	84.40	2.50	415.42	STD SHC	386	0.83			YES	10.00
387	428.50	418.50	410.46	28.60	2.5%	411.18	2.5%	84.00	2.50	415.78	STD SHC	387	0.73			YES	10.00
388	427.25	417.25	411.28	31.70	2.0%	411.91	2.0%	84.00	2.50	416.69	STD SHC	388	1.16			YES	10.00
389	428.50	418.50	412.35	33.40	2.0%	413.02	2.0%	84.00	2.50	417.20	STD SHC	389	1.30			YES	10.00
390	429.50	419.50	413.41	31.30	2.0%	414.04	2.0%	84.00	2.50	418.22	STD SHC	390	1.28			YES	10.00
391	431.75	421.75	414.78	31.10	3.0%	415.72	3.0%	84.00	2.50	420.74	STD SHC	391	1.01			YES	10.00
392	434.25	424.25	416.47	28.00	4.0%	417.59	4.0%	84.00	2.50	423.45	STD SHC	392	0.80			YES	10.00
393	436.25	426.25	418.27	33.10	4.0%	419.59	4.0%	84.00	2.50	425.45	STD SHC	393	0.80			YES	10.00
394	438.00	428.00	420.17	33.40	4.0%	421.51	4.0%	84.00	2.50	427.37	STD SHC	394	0.63			YES	10.00
395	440.00	430.00	422.07	32.50	4.0%	423.37	4.0%	84.50	2.50	429.25	STD SHC	395	0.75			YES	10.00
396	442.50	432.50	424.48	32.80	4.0%	425.79	4.0%	85.00	2.50	431.69	STD SHC	396	0.81			YES	10.00
397	443.75	433.75	426.87	32.80	3.0%	427.85	3.0%	86.00	2.50	432.83	STD SHC	397	0.82			YES	10.00

WATER SERVICE AS-BUILT LOCATION TABLE

LOT	ADDRESS	LOCATION DIMENSION #1	LOCATION DIMENSION #2
322	RIVER RIDGE TRAIL	INLET 1	SMH 7
323	RIVER RIDGE TRAIL	INLET 1	WHC LOT 323
324	RIVER RIDGE TRAIL	WHC LOT 325	WHC LOT 326
325	RIVER RIDGE TRAIL	SHC LOT 325	SMH 15
326	RIVER RIDGE TRAIL	INLET 27	SMH 15
327	RIVER RIDGE TRAIL	INLET 27	SMH 15
328	RIVER RIDGE TRAIL	4" VALVE STA 20+90	SMH 14
329	RIVER RIDGE TRAIL	4" VALVE STA 20+90	SMH 14
330	RIVER RIDGE TRAIL	BLINDOFF STA 21+07	4" VALVE STA 20+90
331	RIVER RIDGE TRAIL	BLINDOFF STA 21+07	4" VALVE STA 20+90
332	RIVER RIDGE TRAIL	F.H. STA 11+48	INLET 21
333	RIVER RIDGE TRAIL	F.H. STA 11+48	SMH 16
334	RIVER RIDGE TRAIL	F.H. STA 11+48	SMH 15
335	RIVER RIDGE TRAIL	SHC LOT 325	SMH 15
336	RIVER RIDGE TRAIL	SHC LOT 325	SMH 15
337	RIVER RIDGE TRAIL	INLET 1	WHC LOT 325

SEWER SERVICE AS-BUILT LOCATION TABLE

LOT	ADDRESS	LOCATION DIMENSION #1	LOCATION DIMENSION #2
322	RIVER RIDGE TRAIL	INLET 1	SMH 7
323	RIVER RIDGE TRAIL	INLET 1	SMH 7
324	RIVER RIDGE TRAIL	WHC LOT 324	WHC LOT 326
325	RIVER RIDGE TRAIL	WHC LOT 325	SMH 15
326	RIVER RIDGE TRAIL	INLET 27	SMH 15
327	RIVER RIDGE TRAIL	4" VALVE STA 20+90	SMH 14
328	RIVER RIDGE TRAIL	4" VALVE STA 20+90	SMH 14
329	RIVER RIDGE TRAIL	4" VALVE STA 20+90	SMH 14
330	RIVER RIDGE TRAIL	BLINDOFF STA 21+07	4" VALVE STA 20+90
331	RIVER RIDGE TRAIL	INLET 20	SMH 13
332	RIVER RIDGE TRAIL	4" VALVE STA 20+90	SMH 13
333	RIVER RIDGE TRAIL	F.H. STA 11+48	SMH 15
334	RIVER RIDGE TRAIL	F.H. STA 11+48	SMH 15
335	RIVER RIDGE TRAIL	F.H. STA 11+48	SMH 15
336	RIVER RIDGE TRAIL	WHC LOT 325	SMH 15
337	RIVER RIDGE TRAIL	INLET 1	SMH 15



PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 48898 EXPIRATION DATE 7/28/21

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
S. C. C...
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
...
CHIEF, DEVELOPMENT ENGINEERING DIVISION

BOHLER ENGINEERING
901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204
Phone: (410) 821-7900 Fax: (410) 821-7987
www.BohlerEngineering.com

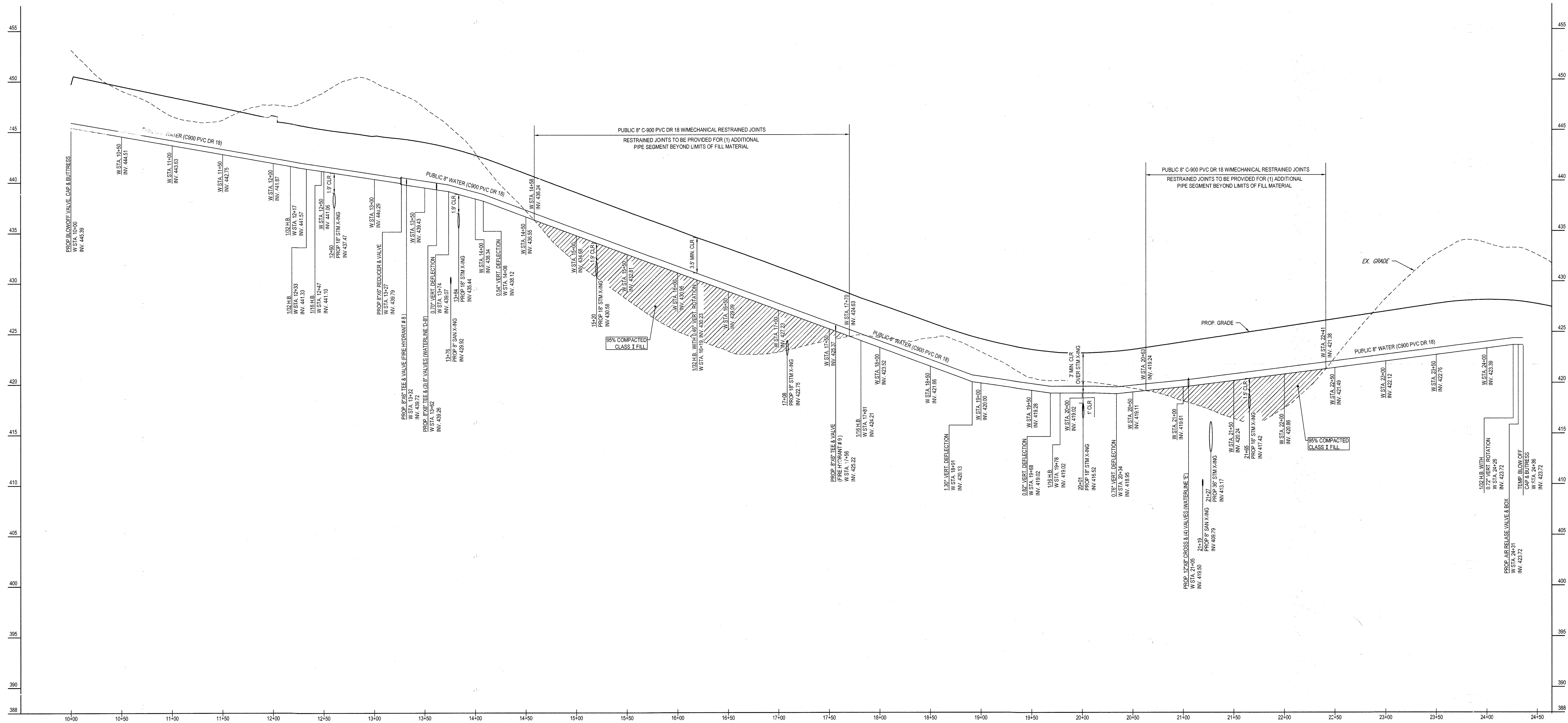
BRANDON R. ROWE
PROFESSIONAL ENGINEER
LICENSE NO. 48898 EXPIRATION DATE 7/28/21

DES. J.A.	
DRN. R.L.B.	
CHK. B.R.R.	2 12/7/21 AS BUILTS
DATE 4/13/16	1 1-16-17 AS-BUILTS
REV.	DATE DESCRIPTION

PHASE II
PUBLIC SANITARY SEWER
STRUCTURE SCHEDULES
PARCEL NO. N/A
600' SCALE MAP NO. 17 BLOCK NO. 5

ESTATES AT PATAPSCO PARK
ROGERS AVENUE
BUILDABLE LOTS 318 - 320, 338 - 372, 386 - 397 (W&S)
BUILDABLE LOTS 321 - 337 (WATER ONLY)
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO.: 14-4966-D

SCALE AS SHOWN
SHEET 6 OF 9



PROPOSED WATERLINE 'B' PROFILE - (10+00 - 24+26)
 SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL

PROFESSIONAL CERTIFICATION
 I, BRANDON R. ROWE, 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. 40806, EXPIRATION DATE: 7/31/2017

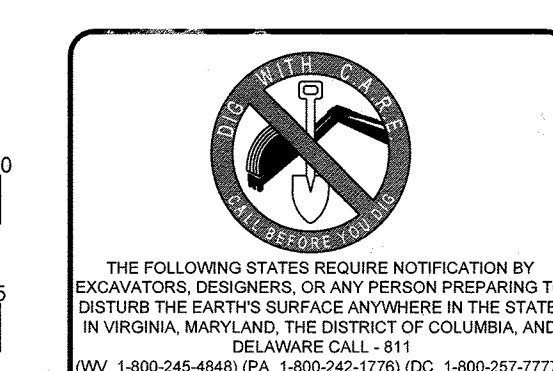
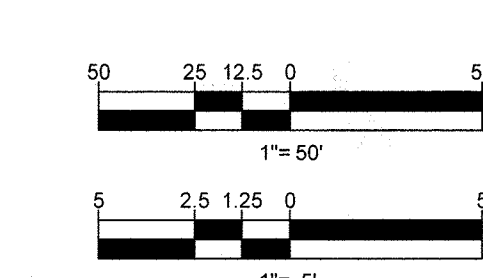
BOHLER ENGINEERING
 901 DULANEY VALLEY ROAD, SUITE 801
 TOWSON, MARYLAND 21204
 Phone: (410) 821-7900
 Fax: (410) 821-7987
 www.BohlerEngineering.com

B. R. ROWE
 PROFESSIONAL ENGINEER
 LICENSE NO. 40806
 EXPIRATION DATE: 7/31/2017

DES. J.A.				
DRN. R.L.B.				
CHK. B.R.R.				
DATE: 4/13/16	REV.	DATE	DESCRIPTION	BY

PHASE II PUBLIC WATER PROFILES

PARCEL NO.	N/A
600' SCALE MAP NO.	17
BLOCK NO.	5

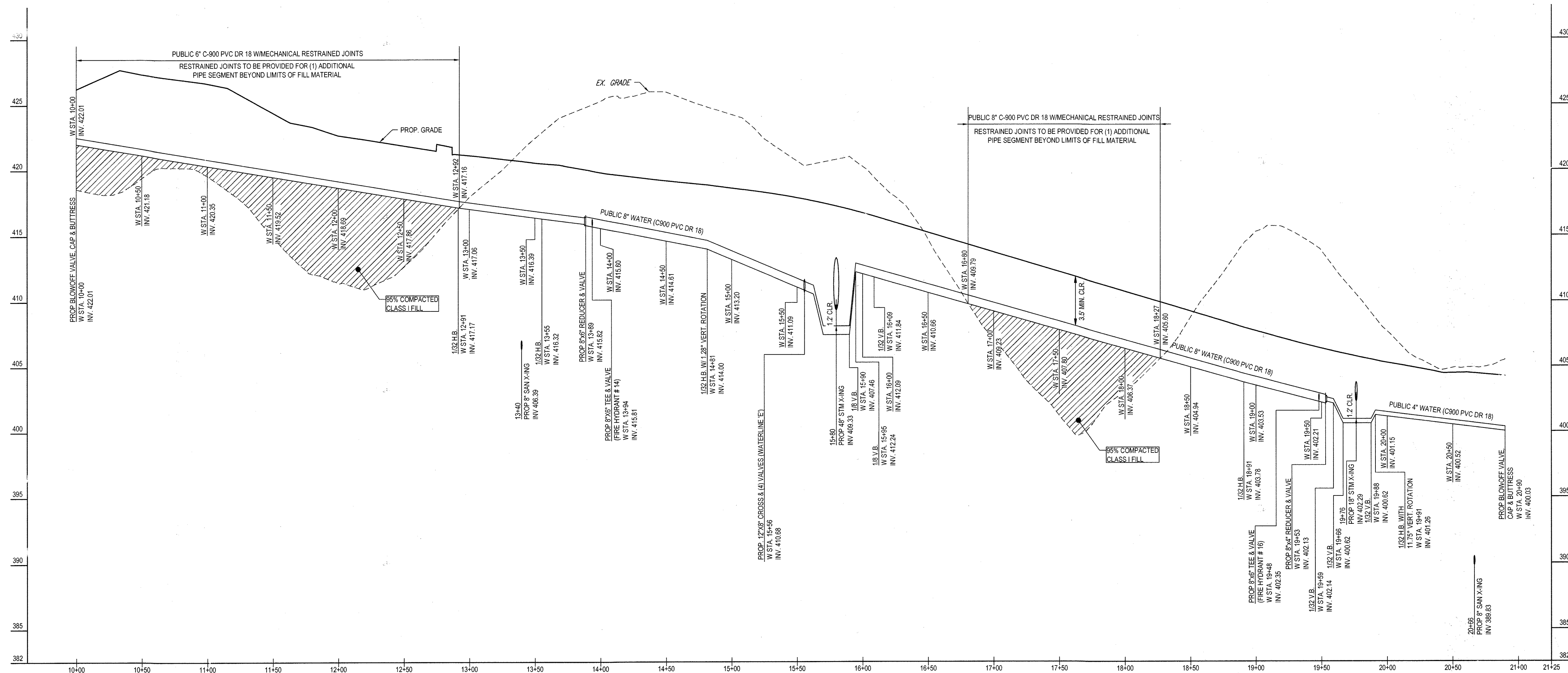


DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities: *Steve C. Green*
 DATE: 5-16-16

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division: *[Signature]*
 DATE: 5-16-16

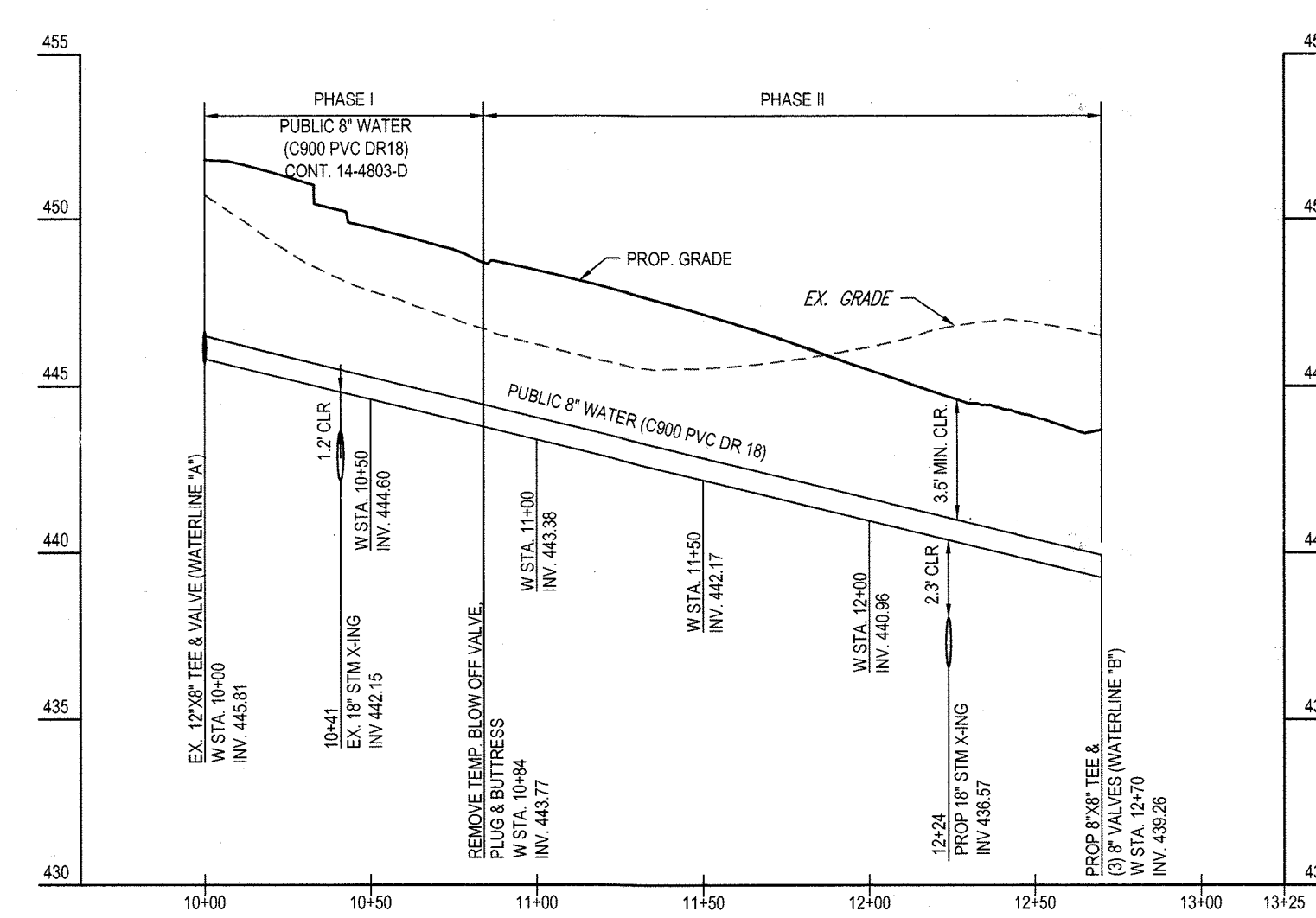
ESTATES AT PATAPSCO PARK
 ROGERS AVENUE
 BUILDABLE LOTS 318 - 320, 338 - 372, 386 - 397 (W&S)
 BUILDABLE LOTS 321 - 337 (WATER ONLY)
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO.: 14-4966-D

SCALE AS SHOWN
 SHEET 7 OF 9



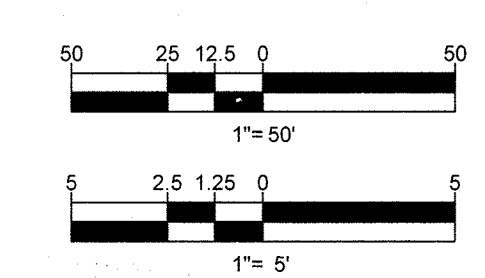
PROPOSED WATERLINE 'C' PROFILE - STA 10+00 TO 20+89.96

SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL



PROPOSED WATERLINE 'D-B' PROFILE

SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL



PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 40908, EXPIRATION DATE: 7/3/2017.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
Stacy C. ...
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
...
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BOHLER ENGINEERING
901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987
www.BohlerEngineering.com



DES. J.A.				
DRN. R.L.B.				
CHK. B.R.R.				
DATE: 4/13/16				
REV.	DATE	DESCRIPTION	BY	

PHASE II
PUBLIC WATER PROFILES
PARCEL NO. N/A
600' SCALE MAP NO. 17 BLOCK NO. 5

ESTATES AT PATAPSCO PARK
ROGERS AVENUE
BUILDABLE LOTS 318 - 320, 338 - 372, 386 - 397 (W&S)
BUILDABLE LOTS 321 - 337 (WATER ONLY)
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO.: 14-4966-D
SCALE AS SHOWN SHEET 8 OF 9

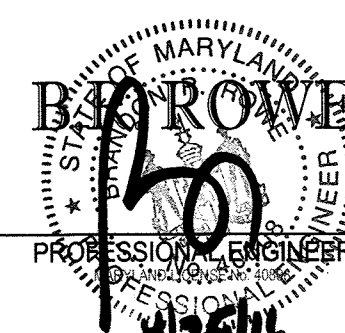
WATER FITTING CHART		
WATER MAIN CL. STATION	FITTING	NORTHING EASTING
10+00.00 WATERLINE - 'B'	BLOWOFF VALVE, CAP & BUTTRESS	N 596384.51 E 1363196.90
12+17.01 WATERLINE - 'B'	1/32 H.B.	N 596257.87 E 1363317.32
12+22.77 WATERLINE - 'B'	1/32 H.B.	N 596272.41 E 1363322.41
12+47.49 WATERLINE - 'B'	1/16 H.B.	N 596296.97 E 1363326.97
13+31.71 WATERLINE - 'B'	8"X8" TEE & VALVE (FIRE HYDRANT #8)	N 596598.27 E 1363334.00
13+61.63 WATERLINE - 'B'	8"X8" TEE & (3) VALVES (WATERLINE D-B)	N 596597.30 E 1363296.33
13+73.56 WATERLINE - 'B'	0.70" VERT. DEFLECTION	N 596408.83 E 1363293.27
13+93.56 WATERLINE - 'B'	1/32 V.B.	N 596428.16 E 1363288.14
16+18.13 WATERLINE - 'B'	1/32 H.B. WITH 0.45" VERT. ROTATION	N 596646.19 E 1363230.33
17+56.30 WATERLINE - 'B'	PROP 8"X8" TEE & VALVE (FIRE HYDRANT #9)	N 596783.09 E 1363221.72
17+81.26 WATERLINE - 'B'	1/16 H.B.	N 596808.01 E 1363220.15
18+91.34 WATERLINE - 'B'	1.30" VERT. DEFLECTION	N 596916.28 E 1363240.02
19+68.45 WATERLINE - 'B'	0.82" VERT. DEFLECTION	N 596992.12 E 1363253.94
19+78.12 WATERLINE - 'B'	1/16 H.B.	N 597001.63 E 1363255.68
21+05.27 WATERLINE - 'B'	12"X8" TEE & (4) VALVES (WATERLINE 'E')	N 597117.73 E 1363307.53
24+26.24 WATERLINE - 'B'	1/32 H.B. WITH 0.72" VERT. ROTATION	N 597410.80 E 1363438.43
24+31.22 WATERLINE - 'B'	AIR RELEASE VALVE & BOX	N 597415.52 E 1363440.02
24+36.20 WATERLINE - 'B'	TEMP. BLOW-OFF CAP & BUTTRESS (WATERLINE 'B')	N 597420.24 E 1363441.60

WATER FITTING CHART		
WATER MAIN CL. STATION	FITTING	NORTHING EASTING
10+00.00 WATERLINE - 'C'	BLOWOFF VALVE, CAP & BUTTRESS	N 596458.77 E 1363545.61
12+91.49 WATERLINE - 'C'	1/32 H.B.	N 596747.53 E 1363505.75
13+55.29 WATERLINE - 'C'	1/32 H.B.	N 596811.29 E 1363508.05
13+88.74 WATERLINE - 'C'	PROP 8"X8" REDUCER & VALVE	N 596843.87 E 1363515.61
13+93.74 WATERLINE - 'C'	8"X8" TEE & VALVE (FIRE HYDRANT #14)	N 596848.74 E 1363516.74
14+81.36 WATERLINE - 'C'	1/32 H.B. W/ 1.28" VERT. ROTATION	N 596934.08 E 1363536.55
15+55.64 WATERLINE - 'C'	12"X8" CROSS & (4) VALVES (WATERLINE 'E')	N 597001.91 E 1363566.85
15+92.51 WATERLINE - 'C'	1/8 V.B.	N 597008.18 E 1363569.65
15+99.91 WATERLINE - 'C'	1/8 V.B.	N 597014.94 E 1363572.67
15+99.92 WATERLINE - 'C'	1/8 V.B.	N 597033.21 E 1363580.83
15+94.70 WATERLINE - 'C'	1/8 V.B.	N 597037.58 E 1363582.78
19+90.78 WATERLINE - 'C'	1/32 H.B.	N 597307.92 E 1363703.52
19+48.05 WATERLINE - 'C'	8"X8" TEE & VALVE (FIRE HYDRANT #16)	N 597363.15 E 1363718.65
19+53.05 WATERLINE - 'C'	PROP 8"X4" REDUCER & VALVE	N 597367.87 E 1363719.97
19+59.07 WATERLINE - 'C'	1/32 V.B.	N 597373.78 E 1363721.96
19+56.44 WATERLINE - 'C'	1/32 V.B.	N 597380.89 E 1363723.51
19+87.77 WATERLINE - 'C'	1/32 V.B.	N 597401.46 E 1363729.14
19+91.01 WATERLINE - 'C'	1/32 H.B. WITH 11.75" VERT. ROTATION	N 597404.59 E 1363730.00
20+89.96 WATERLINE - 'C'	BLOWOFF VALVE, CAP & BUTTRESS	N 597493.09 E 1363774.25

WATER FITTING CHART		
WATER MAIN CL. STATION	FITTING	NORTHING EASTING
10+84.07 WATERLINE - 'D-B'	REMOVE TEMP. BLOW-OFF CAP & BUTTRESS (WATERLINE 'D-B')	N 596349.66 E 1363116.55
13+61.63 WATERLINE - 'D-B'	8"X8" TEE & (3) VALVES (WATERLINE 'D-B')	N 596597.30 E 1363296.33

PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 49808, EXPIRATION DATE: 7/3/2017

BOHLER ENGINEERING
901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987
www.BohlerEngineering.com



DES. J.A.					
DRN. R.L.B.					
CHK. B.R.R.					
DATE: 4/13/16	REV.	DATE	DESCRIPTION	BY	

PHASE II WATER FITTING CHARTS	
PARCEL NO.	N/A
600' SCALE MAP NO.	17 BLOCK NO. 5

ESTATES AT PATAPSCO PARK
ROGERS AVENUE
BUILDABLE LOTS 318 - 320, 338 - 372, 386 - 397 (W&S)
BUILDABLE LOTS 321 - 337 (WATER ONLY)
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO.: 14-4966-D

THE FOLLOWING STATES REQUIRE NOTIFICATION BY
EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO
DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE
IN VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND
DELAWARE CALL - 811
(WV 1-800-245-4848) (PA 1-800-245-1776) (DC 1-800-257-7777)
(VA 1-800-552-7001) (MD 1-800-221-7777) (DE 1-800-282-8555)

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
Steve C...
CHIEF, BUREAU OF UTILITIES DATE 5/16/16

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
Phil...
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 5/16/16