

ITEM	ESTIMATED	QUANTITIES		AS-BUILT TYPE	SUPPLIER
		QUANTITIES	AS-BUILT TYPE		
8" PVC SDR-35	2273 L.F.	2273	SDR-35	L.B. WATER	
8" CL 92 D.I.P.	349 L.F.	349	CL-92	L.B. WATER	
8" AMMA C900 PVC	202 L.F.	202	C-900	L.B. WATER	
6" PVC SDR-35	518 L.F.	518	SDR-35	L.B. WATER	
4" PVC SDR-35	1426 L.F.	1426	SDR-35	L.B. WATER	
8" PLUG	1 EACH	1	D.I.P.	L.B. WATER	
MANHOLES	27 EACH	27	PRE-CAST	CONTR PRE-CAST	
CLEAN-OUTS	126 EACH	126	SDR-35	L.B. WATER	
8" PVC DE-18	2,693 L.F.	2693	C-900	L.B. WATER	
8" HDPE SDR-11	168 L.F.	168	SDR-11	L.B. WATER	
8" PVC DE-18	69 L.F.	69	C-900	L.B. WATER	
1-1/2" WVC	1,383 L.F.	1383	K COPPER	L.B. WATER	
8" X 8" TEE	6 EACH	6	D.I.P.	L.B. WATER	
8" X 8" F.H. TEE	5 EACH	5	D.I.P.	L.B. WATER	
8" X 8" CROSS	1 EACH	1	D.I.P.	L.B. WATER	
8" VALVE	18 EACH	18	GATE	L.B. WATER	
6" VALVE	5 EACH	5	GATE	L.B. WATER	
1/8" H.B.	3 EACH	3	D.I.P.	L.B. WATER	
1/16" H.B.	2 EACH	2	D.I.P.	L.B. WATER	
1/32" H.B.	4 EACH	4	D.I.P.	L.B. WATER	
1" H.D.C.	2 EACH	2	P.V.C.	L.B. WATER	
4" H.D.C.	3 EACH	3	P.V.C.	L.B. WATER	
8" PLUG & BUTTRESS	7 EACH	7	D.I.P.	L.B. WATER	
FIRE HYDRANT	5 EACH	5	B 84 B	L.B. WATER	
CONTINUITY TEST STATION	5 EACH	5	PRE-CAST	CONTR PRE-CAST	
12" TAPPING SLAB	1 EACH	1	C228-C227	L.B. WATER	
8" TAPPING VALVE	1 EACH	1	GATE	L.B. WATER	
SINGLE METER SETTING	26 EACH	26	AV McDONALD	L.B. WATER	
TWIN METER SETTING	50 EACH	50	AV McDONALD	L.B. WATER	

NAME OF UTILITY CONTRACTOR: **GAINES**
 SURVEY & DRAFTING DIVISION AS-BUILT DATE: **5/4/2018**

BENCHMARK INFORMATION
 B.M.#1 - HOWARD COUNTY CONTROL STATION #38CA - HORIZONTAL - NAD '83 (LOCATED ALONG RAILROAD AVENUE, JUST SOUTH OF RYAN AVENUE, APPROX. 22.6' NORTH FROM THE CENTER LINE OF RAILROAD AVENUE.)
 N 955,897.3373
 E 1,390,132.0933
 ELEVATION = 80.783 - VERTICAL - (NAVD '80)
 B.M.#2 - HOWARD COUNTY CONTROL STATION #43CB - HORIZONTAL - (NAD '83) (LOCATED ALONG THE SOUTHSIDE OF DORSEY ROAD, APPROX. 2.2' OFF THE EDGE OF PAVING, APPROX. 46.7' EAST OF POWER POLE NO. 19)
 N 952,084.2466
 E 1,392,292.4190
 ELEVATION = 144.391 - VERTICAL - (NAVD '80)

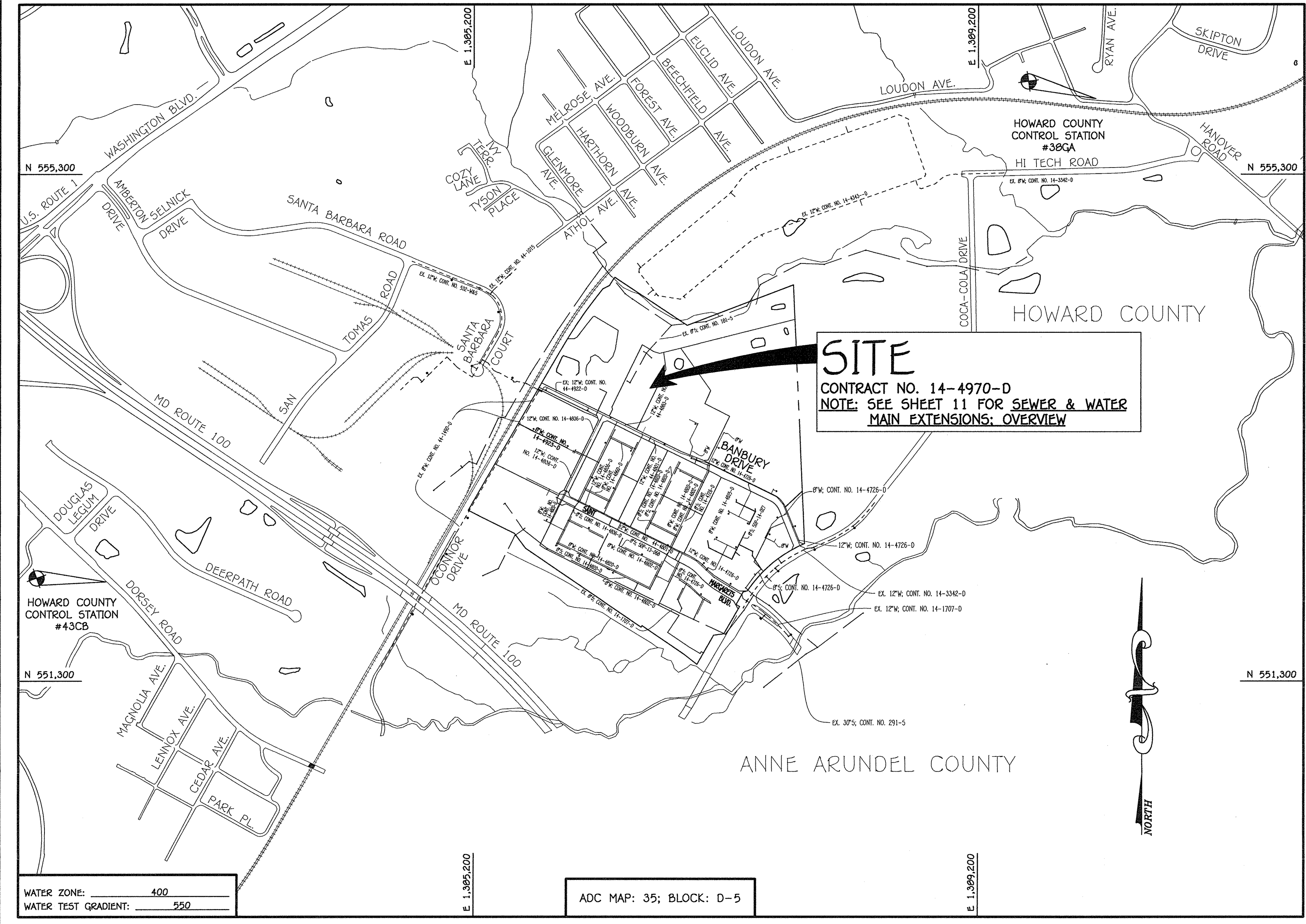
DEVELOPER'S CERTIFICATION
 I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
 Paul W. Kriebel, FOR:
 LENNAR
 SIGNATURE OF DEVELOPER
 04-11-17
 DATE

ENGINEER'S CERTIFICATION
 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.
 Paul W. Kriebel, FOR:
 LENNAR
 SIGNATURE OF ENGINEER
 04/11/17
 DATE

SEDDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 3009 OF THE HOWARD COUNTY DESIGN MANUAL - VOLUME IV: STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND AS SHOWN ON THE SITE DEVELOPMENT PLAN, SDP-16-052.
 Paul W. Kriebel, FOR:
 LENNAR
 SIGNATURE OF DEVELOPER
 04-11-17
 DATE

GP-17-024

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED:
 Steve C. Lee
 CHIEF, BUREAU OF UTILITIES
 4/30/17
 DATE



TYPE OF BUILDING:	SINGLE FAMILY ATTACHED TOWNHOUSES
NUMBER OF PARCELS:	2
NO. OF WATER HOUSE CONNECTIONS:	126
NO. OF SEWER HOUSE CONNECTIONS:	126
SEWER SHED:	PATAPSCO
TREATMENT PLANT:	PATAPSCO WASTEWATER TREATMENT PLANT CITY OF BALTIMORE

LOCATION MAP
 SCALE: 1" = 600'

DESIGN MANUAL WAIVER NOTE:
 SEE SHEET 10 FOR A LIST OF APPROVED DESIGN MANUAL WAIVERS APPLICABLE TO THIS CONTRACT.

CONTRACT NO. 14-4970-D

OXFORD SQUARE

RIVER OVERLOOK

LOTS 246 THRU 371 AND

OPEN SPACE LOTS 372 THRU 375 & 378

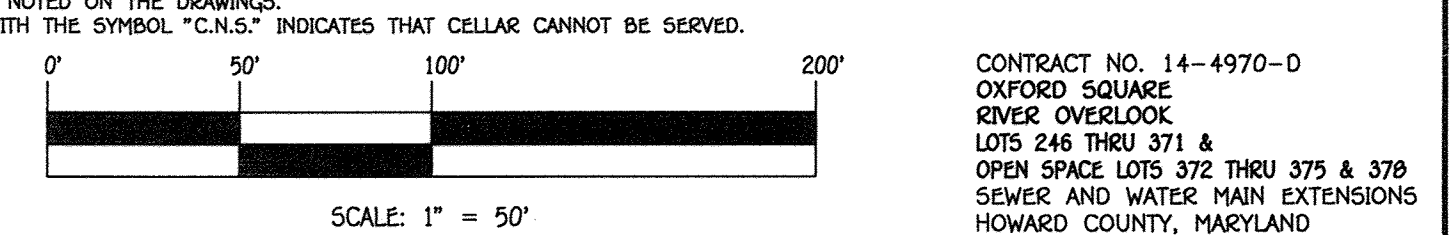
SEWER AND WATER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

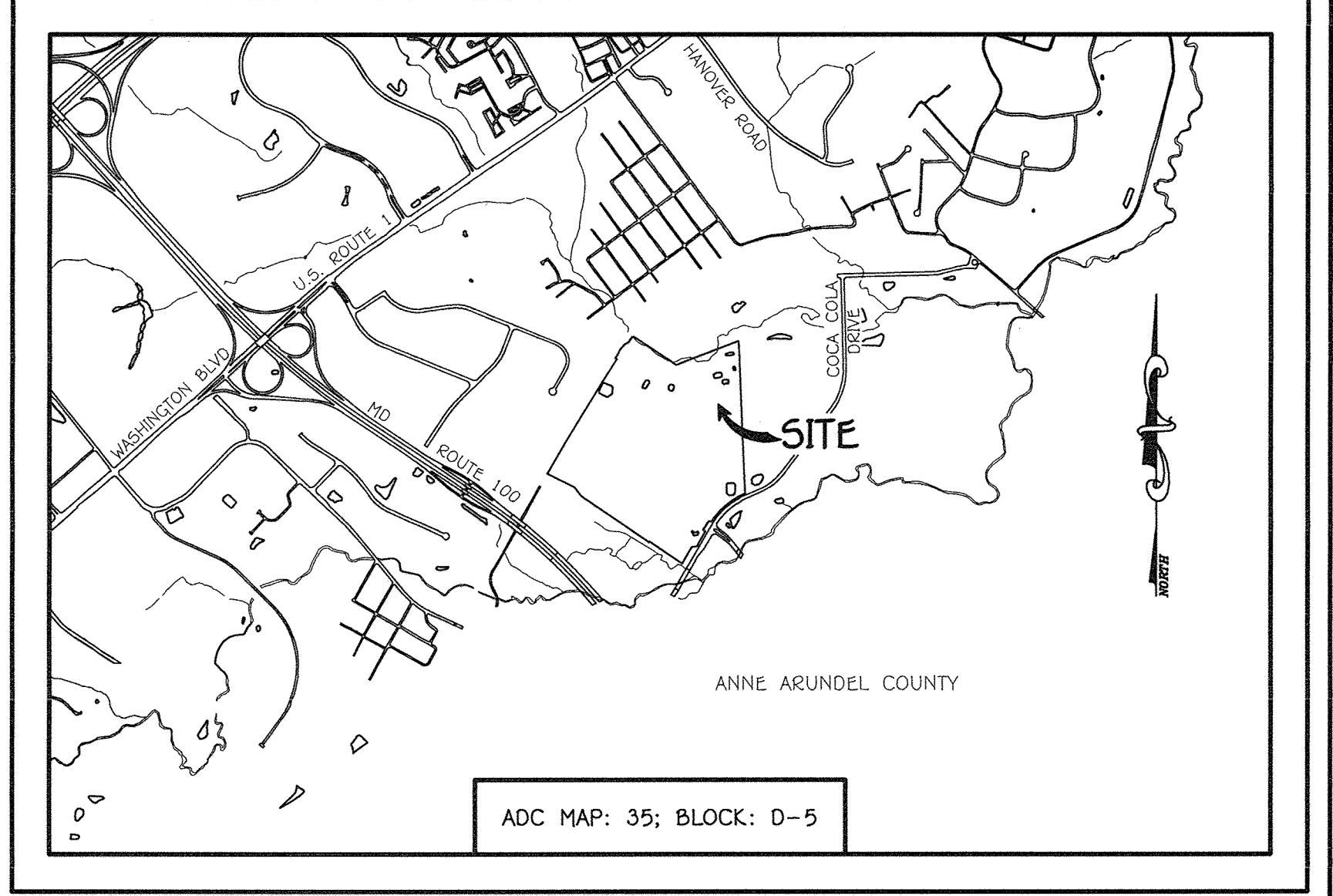
SYMBOL	DESCRIPTION
----	EX. WATER MAIN
----	EX. SEWER MAIN
○	EX. SEWER MANHOLE
- - - -	EX. SEWER, WATER & UTILITY EASEMENT
●	EX. FIRE HYDRANT
◇	EX. VALVE
----	PROP. WATER MAIN
----	PROP. SEWER MAIN
○	PROP. SEWER MANHOLE
- - - -	PROP. SEWER, WATER & UTILITY EASEMENT
----->	PROP. WHC
----->	PROP. SHC
+	PROP. FIRE HYDRANT
◇	PROP. VALVE

OWNER
 U.S. HOME CORPORATION
 10201 WILCOXON CIRCLE, SUITE 500
 GAITHERSBURG, MARYLAND 20894
 888.410.463-4660

DEVELOPER
 PRESTON • SCHEFFENACKER PROPERTIES
 100 WEST ROAD, SUITE 304
 TOWSON, MARYLAND 21284
 PHONE: 410-296-3800

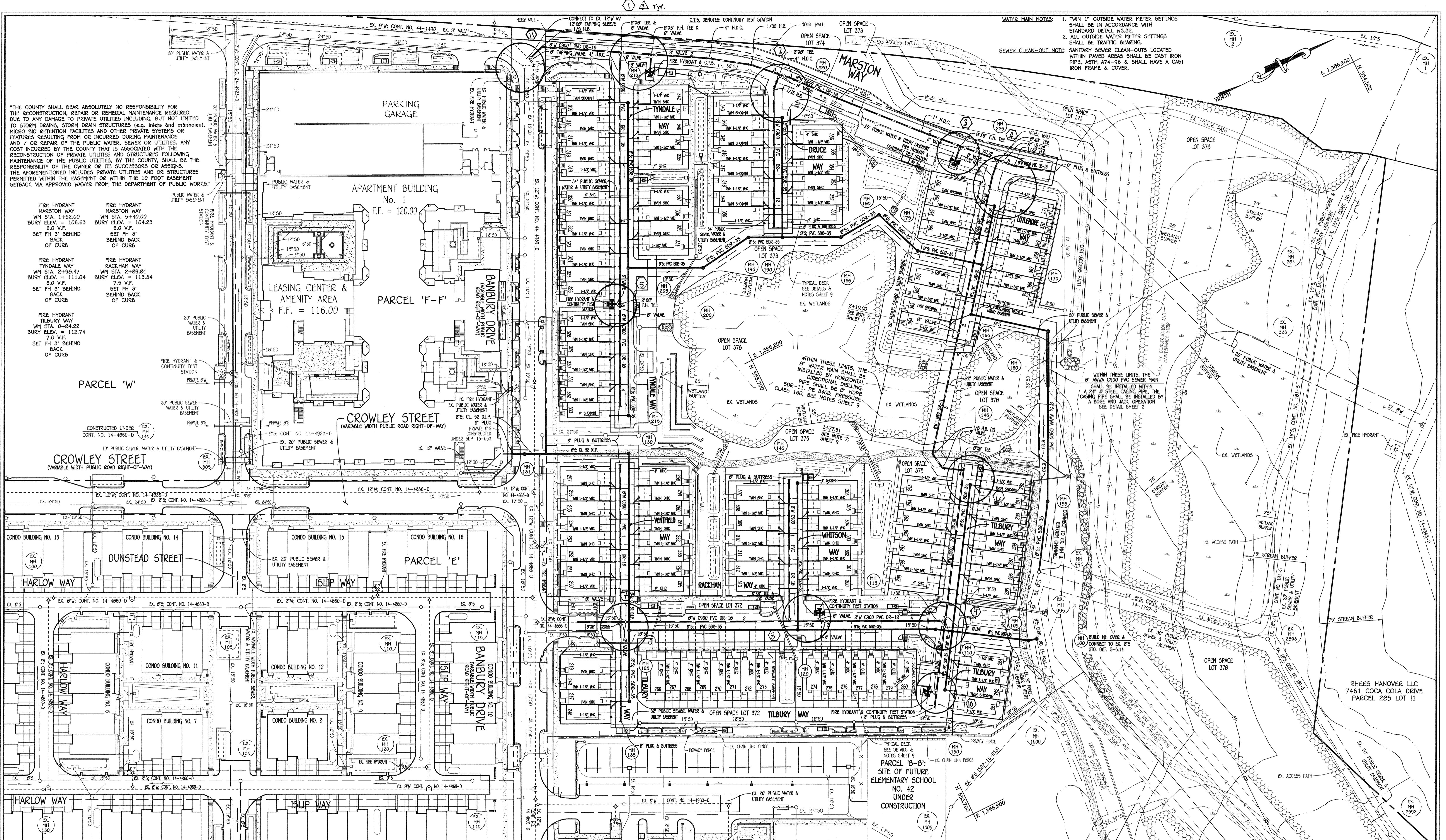


DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12043 EXPIRATION DATE IS 7/16/18. FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK - 10272 BALPORE NATIONAL, FFC ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2999 PAUL W. KRIEBEL	DESIGNED BY: B.C.R. DRAWN BY: B.C.R. CHECKED BY: P.W.K. DATE: APRIL 2017	600' SCALE MAP NO. 30 BLOCK NO. 19 & 20 F.C.C. WORK ORDER NO. 09014-3015 FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN	OXFORD SQUARE RIVER OVERLOOK LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378 SEWER AND WATER MAIN EXTENSIONS CONTRACT NO. 14-4970-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 10
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- GENERAL NOTES**
 SCALE: 1" = 2000'
- PART A**
- 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 OR ABOUT MAY, 2010 BY FISHER, COLLINS & CARTER, INC.
 - 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. 38CA & NO. 43CB.
 ALL VERTICAL CONTROLS ARE BASED ON NAVD '80. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS.
 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 BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF THE 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 SITE.
 - 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 FITS 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 1-800-252-1153
 BGE (CONTRACTOR SERVICES) 410-637-8713
 BGE (EMERGENCY) 410-695-0123
 BUREAU OF UTILITIES 410-513-4900
 COLONIAL PIPELINE CO 410-709-1990
 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.
 - 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 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 18.11(4) OF THE HOWARD COUNTY CODE.
- PART B: WATER MAIN GENERAL NOTES**
- ALL WATER MAINS SHALL BE AMMA C900 PVC DE-18.
 - TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-0" 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 1009 OF THE STANDARD SPECIFICATIONS.
 - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
 - TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL D.I.P. AND PVC WATER MAINS IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL.
 - FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AMMA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS 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, SEVENTEEN (17) POUND SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS, AND DETAILS FOR CONSTRUCTION; MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. ZINC ANODES SHALL BE INSTALLED ON ALL STANDARD STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.
 - PROPER ASSEMBLY OF GASKETED PVC JOINTS: THE MANUFACTURER'S INSTALLATION 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 INSET OR UNDER INSET 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 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, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.
 - PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL 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 AMMA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
 - FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DE-18 MEETING THE REQUIREMENTS OF AMMA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR-10 OR EQUAL.
 - WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AMMA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSERT DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR FIT INTO THE BELL 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 HIGH-STOP, AS MANUFACTURED BY EDMA IRON, INC. OR APPROVED EQUAL.
- PART C: SEWER MAIN GENERAL NOTES**
- 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 10" WALLS ARE FOR BRICK MANHOLES ONLY.
 - MANHOLES DESIGNATED "W.I." IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVER, STANDARD DETAIL GS-52. WHERE WATER-TIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-0" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 - HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

I:\2009\0901A\Wg\Water & Sewer\Contract\14-4970-D (SDP-16-052)\P17-005\14-4970-D\Finals\0901A-3019 Water and Sewer Contract Plan.dwg



"THE COUNTY SHALL BEAR ABSOLUTELY NO RESPONSIBILITY FOR THE RECONSTRUCTION, REPAIR OR REMEDIAL MAINTENANCE REQUIRED DUE TO ANY DAMAGE TO PRIVATE UTILITIES INCLUDING, BUT NOT LIMITED TO STORM DRAINS, STORM DRAIN STRUCTURES (e.g. inlets and manholes), MICRO AND RETENTION FACILITIES AND OTHER PRIVATE SYSTEMS OR FEATURES RESULTING FROM OR INCURRED DURING MAINTENANCE AND / OR REPAIR OF THE PUBLIC WATER, SEWER OR UTILITIES. ANY COST INCURRED BY THE COUNTY THAT IS ASSOCIATED WITH THE RECONSTRUCTION OF PRIVATE UTILITIES AND STRUCTURES FOLLOWING MAINTENANCE OF THE PUBLIC UTILITIES, BY THE COUNTY, SHALL BE THE RESPONSIBILITY OF THE OWNER OR ITS SUCCESSORS OR ASSIGNS. THE AFORESAID INCLUDES PRIVATE UTILITIES AND OR STRUCTURES PERMITTED WITHIN THE EASEMENT OR WITHIN THE 10 FOOT EASEMENT SETBACK VIA APPROVED WAIVER FROM THE DEPARTMENT OF PUBLIC WORKS."

FIRE HYDRANT MARSTON WAY
 WM STA. 1+52.00
 BURY ELEV. = 106.63
 6.0 V.F.
 SET FH 3' BEHIND BACK OF CURB

FIRE HYDRANT TYNDALE WAY
 WM STA. 2+99.47
 BURY ELEV. = 111.04
 6.0 V.F.
 SET FH 3' BEHIND BACK OF CURB

FIRE HYDRANT TILBURY WAY
 WM STA. 0+94.22
 BURY ELEV. = 112.74
 7.0 V.F.
 SET FH 3' BEHIND BACK OF CURB

FIRE HYDRANT TYNDALE WAY
 WM STA. 2+99.47
 BURY ELEV. = 111.04
 6.0 V.F.
 SET FH 3' BEHIND BACK OF CURB

FIRE HYDRANT RACKHAM WAY
 WM STA. 2+99.81
 BURY ELEV. = 113.34
 7.5 V.F.
 SET FH 3' BEHIND BACK OF CURB

CONSTRUCTED UNDER
 CONT. NO. 14-4860-D

10' PUBLIC SEWER, WATER & UTILITY EASEMENT

30' PUBLIC SEWER, WATER & UTILITY EASEMENT

CONDO BUILDING NO. 13

CONDO BUILDING NO. 14

CONDO BUILDING NO. 15

CONDO BUILDING NO. 16

CONDO BUILDING NO. 11

CONDO BUILDING NO. 12

CONDO BUILDING NO. 9

CONDO BUILDING NO. 8

CONDO BUILDING NO. 7

CONDO BUILDING NO. 6

CONDO BUILDING NO. 10

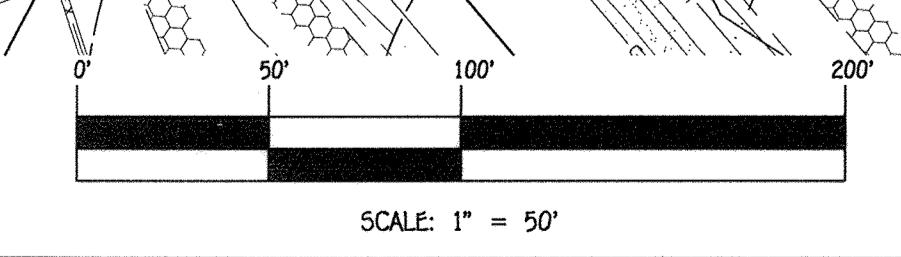
WATER MAIN NOTES:

1. TWIN 1" OUTSIDE WATER METER SETTINGS SHALL BE IN ACCORDANCE WITH STANDARD DETAIL W3.32.
2. ALL OUTSIDE WATER METER SETTINGS SHALL BE TRAFFIC BEARING.

SEWER CLEAN-OUT NOTE:

SANITARY SEWER CLEAN-OUTS LOCATED WITHIN PAVED AREAS SHALL BE CAST IRON PIPE, ASTM A74-96 & SHALL HAVE A CAST IRON FRAME & COVER.

NOTE: SEE SHEET 12 FOR SEDIMENT & EROSION CONTROL PLAN



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

CHIEF, BUREAU OF UTILITIES

4/25/17
 DATE

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION

2.19.17
 DATE

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. 12043 EXPIRATION DATE IS 7/16/18.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

10722 BALDORNE NATIONAL PARK
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2995



DESIGNED BY: B.C.R.

DRAWN BY: B.C.R.

CHECKED BY: P.W.K.

DATE: APRIL 2017

REVISION

5/7/16
 11/9/17

SEWER AND WATER MAIN EXTENSIONS PLAN

60' SCALE MAP NO. 30 BLOCK NO. 19 & 20

F.C.C. WORK ORDER NO. 09014-3015

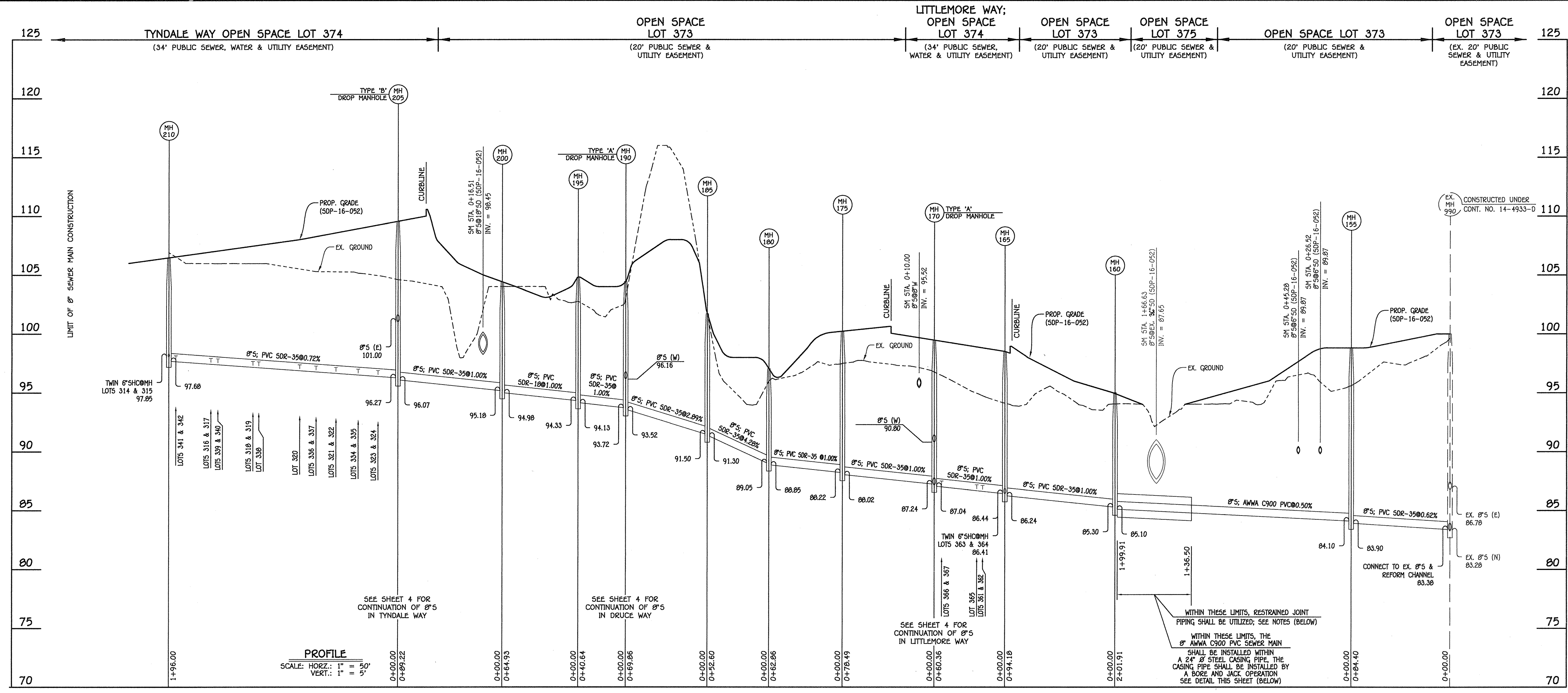
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OXFORD SQUARE RIVER OVERLOOK
 LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 CONTRACT NO. 14-4970-0
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 2 OF 13

CONTRACT NO. 14-4970-0
 OXFORD SQUARE RIVER OVERLOOK
 LOTS 246 THRU 371 & 378
 SEWER AND WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

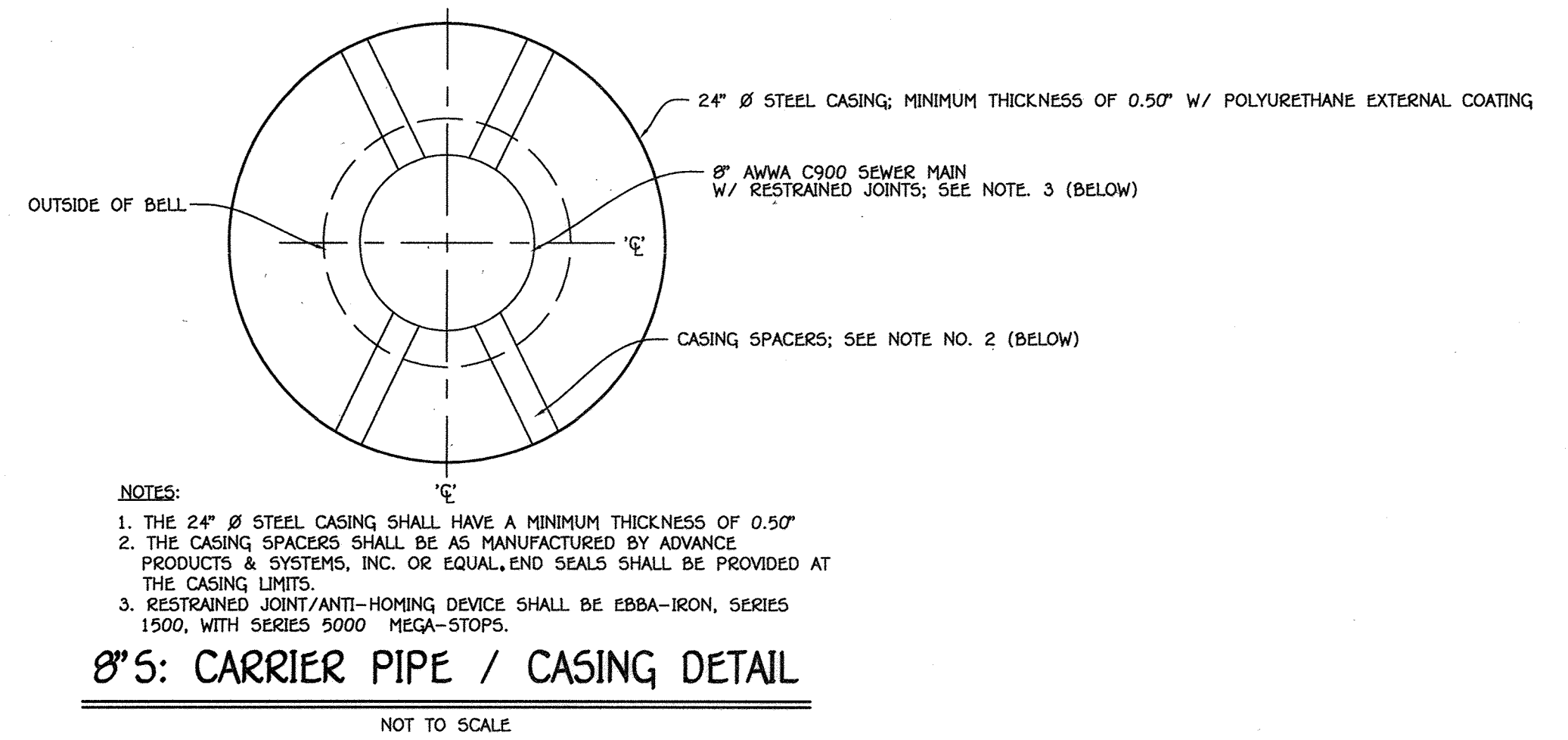


8" SEWER MAIN: EX. MH 990 TO MH 210

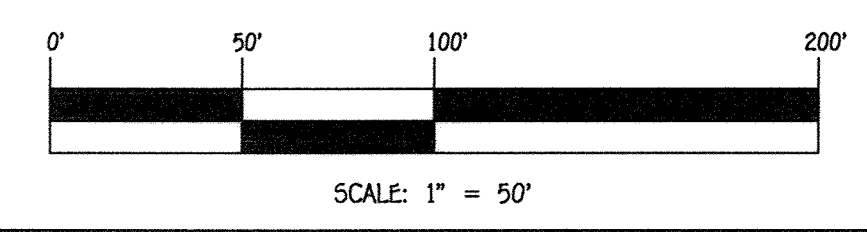
SEWER HOUSE CONNECTION CHART					
STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	B.E. / SLAB
MH 160 TO MH 165					
●MH 165 LT.	364	86.41	86.91	90.81	100.33
●MH 165 RT.	363	86.41	86.91	90.81	100.33
MH 165 TO MH 170					
0+19 LT.	362	86.71	87.15	91.05	101.00
0+19 RT.	361	86.71	87.21	91.11	101.00
0+24 RT.	365	86.85	87.09	90.99	100.66
0+54 RT.	366	87.06	87.30	91.20	101.33
0+54 RT.	367	87.06	87.36	91.26	101.33
MH 205 TO MH 210					
0+17 LT.	324	96.47	96.91	100.81	111.01
0+17 RT.	323	96.47	96.97	100.87	111.01
0+34 RT.	334	96.59	96.83	100.73	110.10
0+34 RT.	335	96.59	96.89	100.79	110.10
0+53 LT.	322	96.73	97.17	101.07	110.34
0+53 LT.	321	96.73	97.23	101.13	110.34
0+70 RT.	336	96.85	97.09	100.99	110.10
0+70 RT.	337	96.85	97.15	101.05	109.43
0+84 LT.	320	97.04	97.48	101.38	109.67
1+19 RT.	338	97.30	97.54	101.44	108.70
1+24 LT.	319	97.24	97.68	101.58	109.36
1+24 RT.	318	97.24	97.74	101.64	109.36
1+54 RT.	339	97.46	97.70	101.60	108.70
1+54 RT.	340	97.46	97.76	101.66	108.70
1+60 LT.	317	97.50	97.94	101.84	109.36
1+60 LT.	316	97.50	98.00	101.90	108.69
1+90 RT.	341	97.72	97.96	101.86	108.03
1+90 RT.	342	97.72	98.02	101.92	108.03
●MH 210 LT.	315	97.85	98.29	102.19	108.69
●MH 210 LT.	314	97.85	98.35	102.25	108.02

MANHOLE TABULATION CHART				
NO.	NORTHING	EASTING	RIM ELEVATION	
155	553942.82	1386506.39	98.80	
160	554032.47	1386325.48	95.00	
165	553958.66	1386266.98	98.50	
170	553996.15	1386219.68	99.50	
175	553934.63	1386170.93	100.17	
180	553912.19	1386112.22	97.31	
185	553899.71	1386115.80	101.71	
190	553796.94	1386085.13	104.44	
195	553760.42	1386067.29	104.81	
200	553696.04	1386075.72	104.41	
205	553615.88	1386036.55	109.55	
210	553701.93	1385860.46	106.24	

NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.



8" S: CARRIER PIPE / CASING DETAIL



CONTRACT NO. 14-4970-D
 OXFORD SQUARE
 RIVER OVERLOOK
 LOTS 246 THRU 371 &
 OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

1. 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. 12243 EXPIRATION DATE IS 7/16/18.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALDORCK NATIONAL FEE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2899

DESIGNED BY: B.C.R.
 DRAWN BY: B.C.R.
 CHECKED BY: P.W.K.
 DATE: APRIL 2017

DATE: 5.19.17

CHIEF, BUREAU OF UTILITIES

CHIEF, DEVELOPMENT ENGINEERING DIVISION

OXFORD SQUARE
 RIVER OVERLOOK
 LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 CONTRACT NO. 14-4970-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

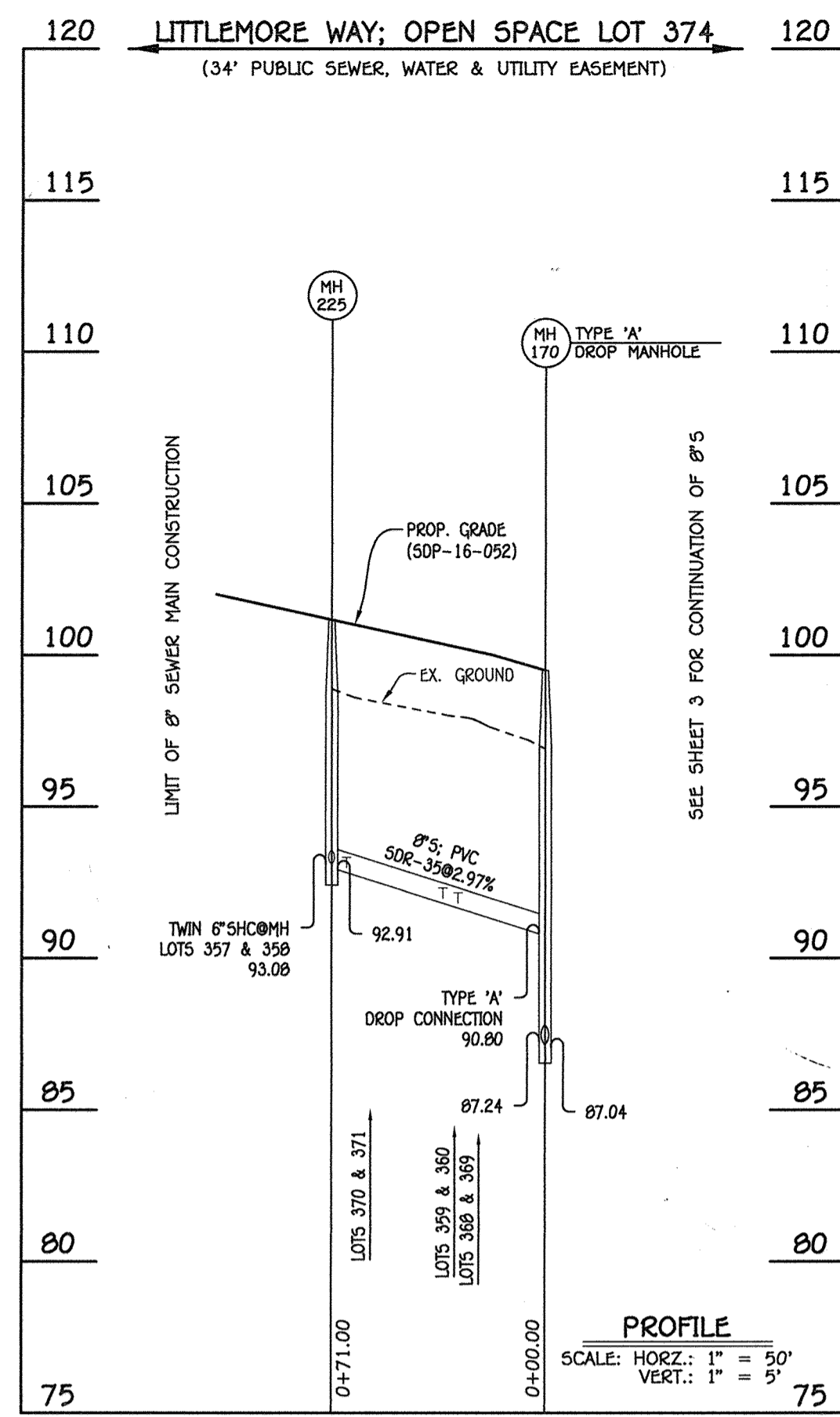
SCALE AS SHOWN

SHEET 3 OF 12

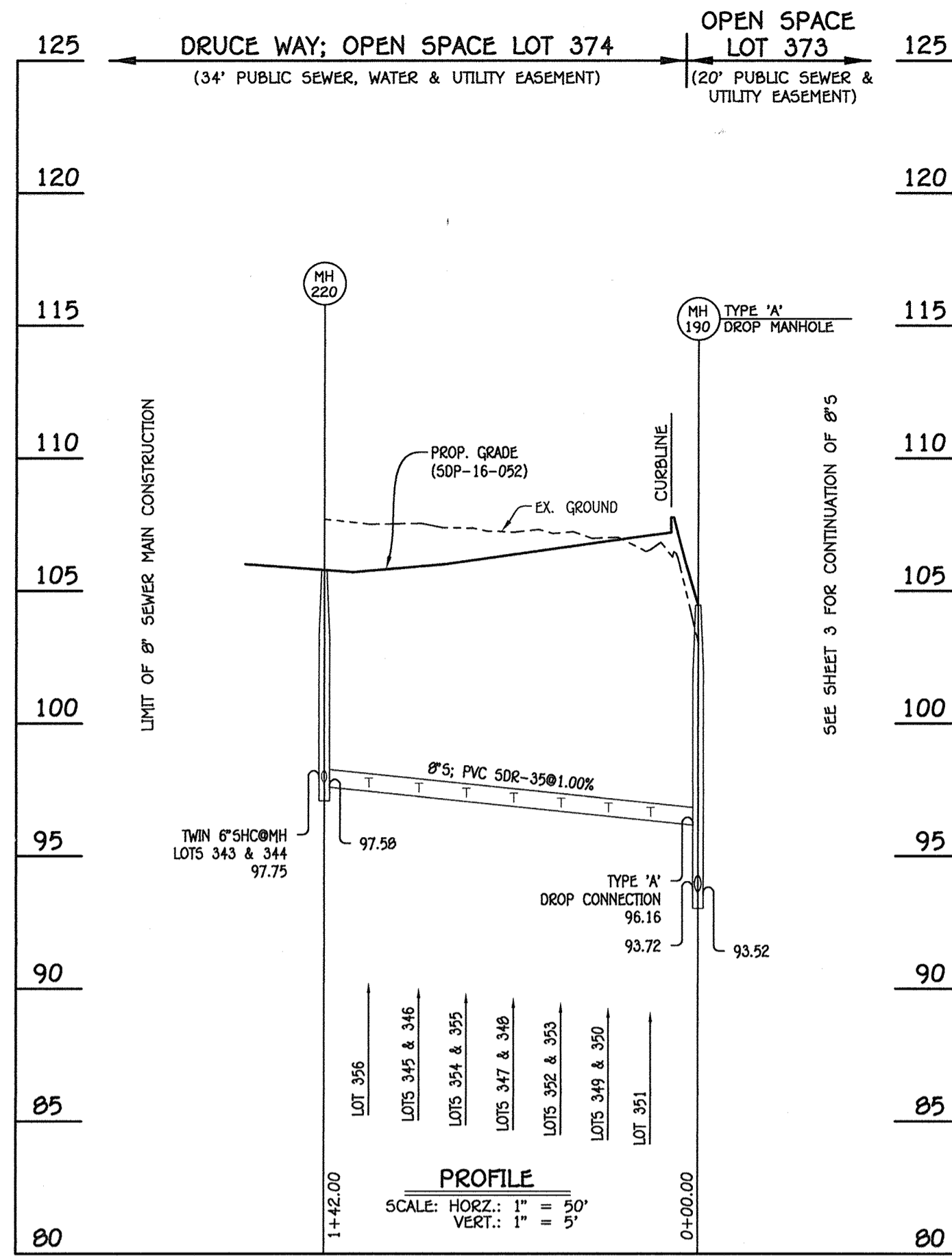
SEWER MAIN EXTENSIONS
 PROFILE & CHARTS

600' SCALE MAP NO. 38 BLOCK NO. 19 & 20
 F.C.C. WORK ORDER NO. 09014-3015
 FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

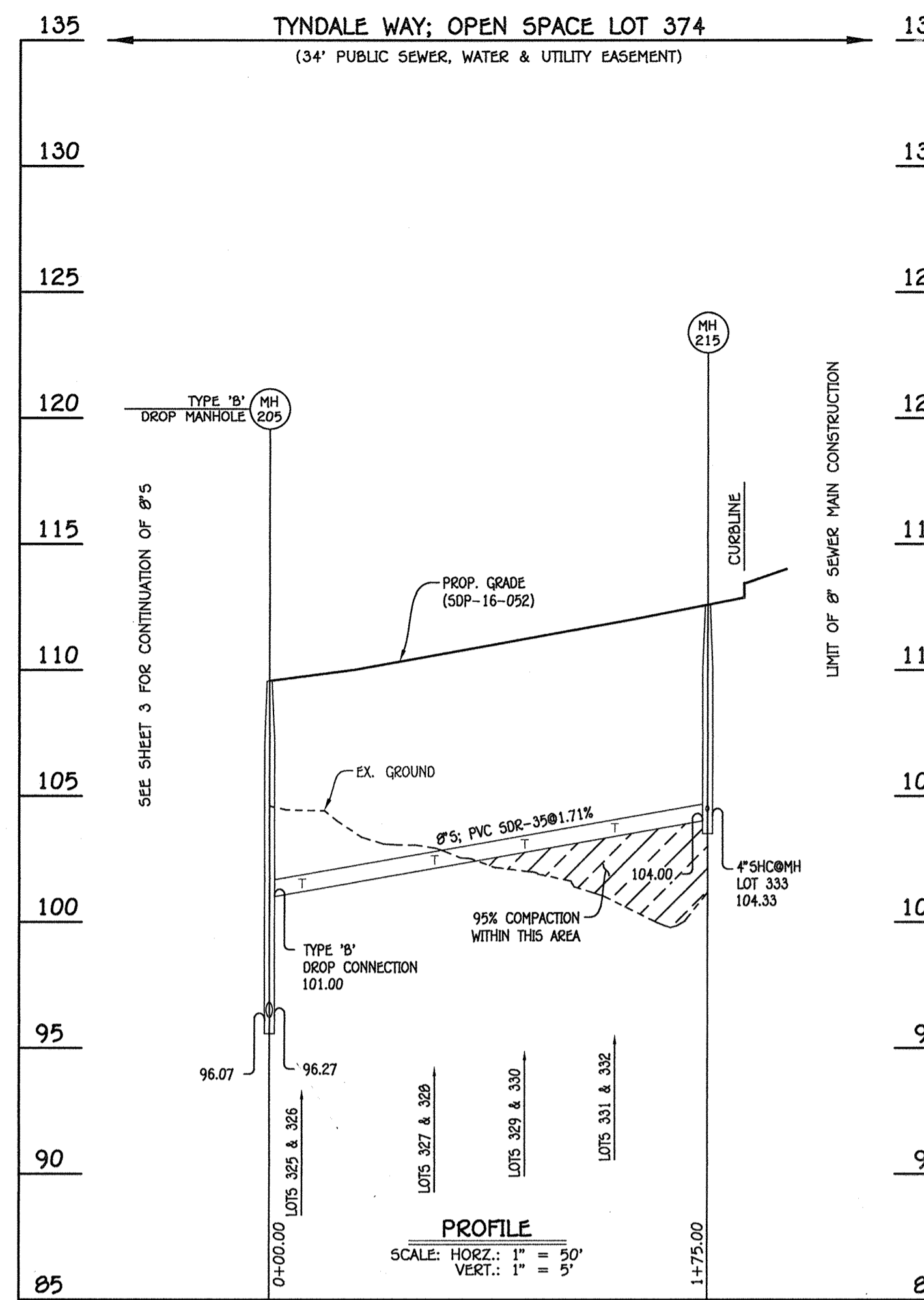
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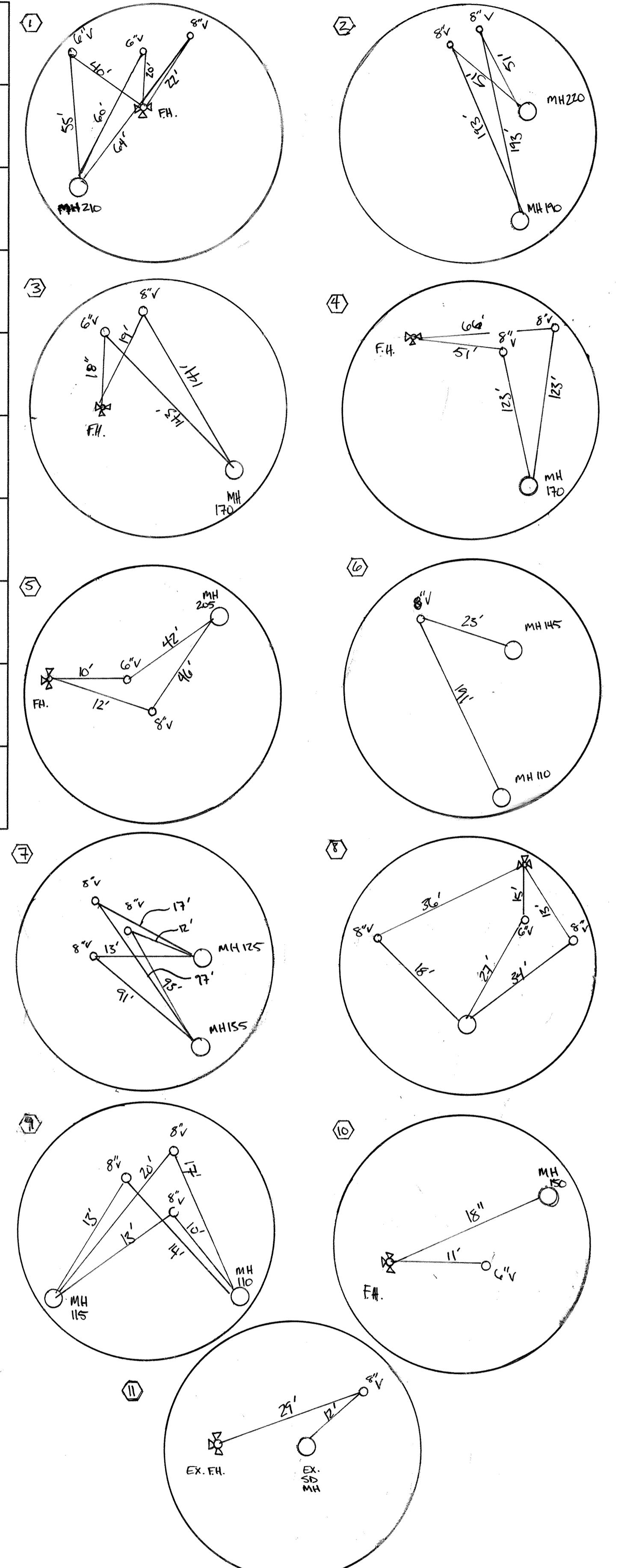
8" SEWER MAIN: LITTLEMORE WAY



8" SEWER MAIN: DRUCE WAY



8" SEWER MAIN: TYNDALE WAY



NO.	NORTHING	EASTING	RIM ELEVATION
225	554040.24	1386164.03	101.17

NOTE: SET MH RIM FLUSH W/PROPOSED GRADE.

NO.	NORTHING	EASTING	RIM ELEVATION
220	553859.28	1385957.55	105.78

NOTE: SET MH RIM FLUSH W/PROPOSED GRADE.

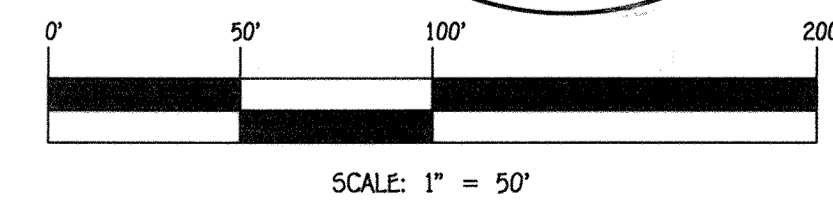
NO.	NORTHING	EASTING	RIM ELEVATION
215	553539.05	1386193.79	112.58

NOTE: SET MH RIM FLUSH W/PROPOSED GRADE.

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	SLAB
MH 170 TO MH 225					
0+29 RT.	368	91.74	91.98	95.88	102.00
0+29 RT.	369	91.74	92.04	95.94	102.00
0+34 LT.	360	91.89	92.33	96.23	103.09
0+34 LT.	359	91.89	92.39	96.29	103.76
0+66 RT.	370	92.84	93.08	96.98	102.67
0+66 RT.	371	92.84	93.14	97.04	103.34
⊙MH 225 LT.	358	93.08	93.52	97.42	104.43
⊙MH 225 LT.	357	93.08	93.58	97.48	105.10

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	SLAB
MH 190 TO MH 220					
0+18 RT.	351	96.51	96.75	100.65	108.84
0+34 LT.	350	96.58	97.02	100.82	109.50
0+34 LT.	349	96.58	97.08	100.88	109.50
0+52 RT.	352	96.76	97.00	100.90	108.17
0+52 RT.	353	96.76	97.06	100.96	108.17
0+70 LT.	348	96.94	97.38	101.18	108.83
0+70 LT.	347	96.94	97.44	101.24	108.83
0+88 RT.	354	97.12	97.36	101.26	108.17
0+88 RT.	355	97.12	97.42	101.32	108.17
1+06 LT.	346	97.30	97.74	101.54	108.16
1+06 LT.	345	97.30	97.80	101.60	108.16
1+25 RT.	356	97.58	97.82	101.72	107.50
⊙MH 220 LT.	344	97.75	98.19	101.99	108.16
⊙MH 220 LT.	343	97.75	98.25	102.05	108.16

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	B.E.
MH 205 TO MH 215					
0+13 RT.	325	101.30	101.74	105.54	111.68
0+13 RT.	326	101.30	101.80	105.60	111.68
0+66 RT.	327	102.21	102.65	106.45	112.35
0+66 RT.	328	102.21	102.71	106.51	113.02
1+02 RT.	329	102.82	103.26	107.06	113.02
1+02 RT.	330	102.82	103.32	107.12	113.69
1+38 RT.	331	103.44	103.88	107.68	113.69
1+38 RT.	332	103.44	103.94	107.74	114.36
⊙MH 215 RT.	333	104.33	104.77	108.57	114.36



CONTRACT NO. 14-4970-D
OXFORD SQUARE
RIVER OVERLOOK
LOTS 246 THRU 371 &
OPEN SPACE LOTS 372 THRU 375 & 378
SEWER AND WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
John C. Lee
CHIEF, BUREAU OF UTILITIES
DATE: 4/25/17

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
John C. Lee
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5.19.17

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. 15243 EXPIRATION DATE 5/7/16/18.
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
OXFORD SQUARE OFFICE PARK - 10272 BALDORNE NATIONAL Pkwy.
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2895



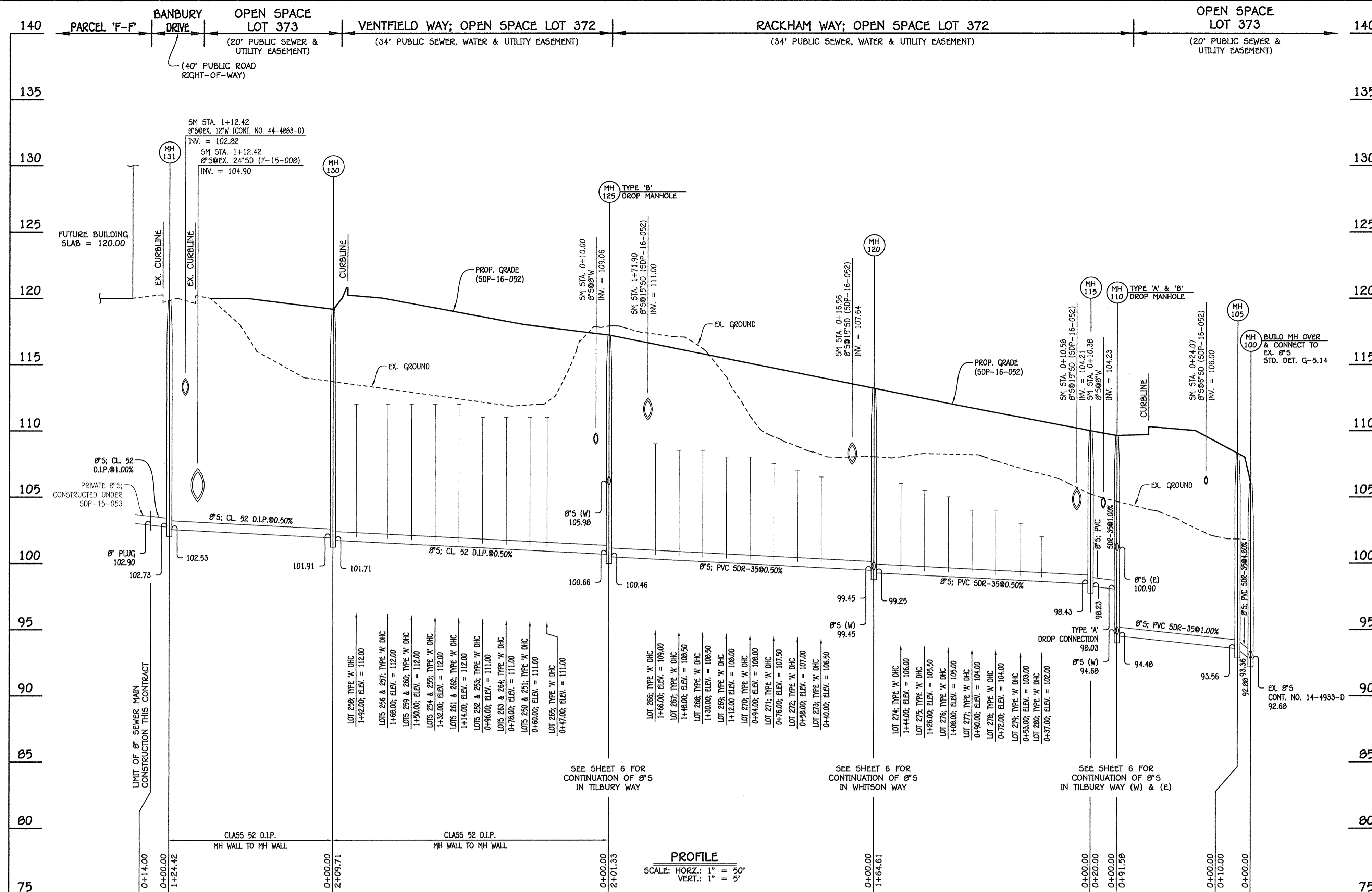
DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.W.K.
DATE: APRIL 2017
BY NO. REVISION

SEWER MAIN EXTENSIONS
PROFILES & CHARTS
600' SCALE MAP NO. 38 BLOCK NO. 19 & 20
F.C.C. WORK ORDER NO. 09014-3013
FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

OXFORD SQUARE
RIVER OVERLOOK
LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
SEWER AND WATER MAIN EXTENSIONS
CONTRACT NO. 14-4970-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 4 OF 12

1/2009/09014/UtilityWater & Sewer Contracts/3013 - Contract No. 14-4970-D (SDP-16-032) (F-17-005) (A-A) (Z) (Final) (09014-3013) Water and Sewer Contract Plan.dwg

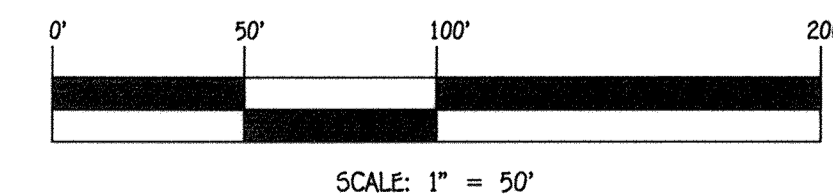


8" SEWER MAIN: MH 100 TO MH 131; PARCEL 'F-F'

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
100	553859.22	1386647.17	106.00
105	553849.57	1386644.55	108.29
110	553772.93	1386594.41	109.62
115	553756.19	1386583.46	109.99
120	553608.27	1386511.24	113.18
125	553427.35	1386422.92	117.21
130	553519.35	1386234.46	119.16
131	553407.55	1386179.87	119.82
8" FLUG	553394.97	1386173.73	---

NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.

SEWER HOUSE CONNECTION CHART					
STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	H.C.E.	SLAB
MH 115 TO MH 120					
0+37 LT.	280 (DHC)	102.00	102.54	106.24	114.51
0+53 LT.	279 (DHC)	103.00	103.54	107.24	114.51
0+72 LT.	278 (DHC)	104.00	104.54	108.24	114.51
0+90 LT.	277 (DHC)	104.00	104.54	108.24	115.18
1+08 LT.	276 (DHC)	105.00	105.54	109.24	115.18
1+26 LT.	275 (DHC)	105.50	106.04	109.74	115.85
1+44 LT.	274 (DHC)	106.00	106.54	110.24	115.85
MH 120 TO MH 125					
0+40 LT.	273 (DHC)	106.50	107.04	110.74	116.70
0+58 LT.	272 (DHC)	107.00	107.54	111.24	116.70
0+76 LT.	271 (DHC)	107.50	108.04	111.74	116.70
0+94 LT.	270 (DHC)	108.00	108.54	112.24	116.70
1+12 LT.	269 (DHC)	108.00	108.54	112.24	117.37
1+30 LT.	268 (DHC)	108.50	109.04	112.74	117.37
1+48 LT.	267 (DHC)	108.50	109.04	112.74	117.37
1+66 LT.	266 (DHC)	109.00	109.54	113.24	118.04
MH 125 TO MH 130					
0+47 RT.	285 (DHC)	111.00	111.24	115.14	119.60
0+60 LT.	250 (DHC)	111.00	111.44	115.34	121.07
0+60 LT.	251 (DHC)	111.00	111.52	115.42	121.07
0+78 RT.	264 (DHC)	111.00	111.24	115.14	120.27
0+78 RT.	263 (DHC)	111.00	111.30	115.20	120.27
0+96 LT.	252 (DHC)	111.00	111.44	115.34	121.74
0+96 LT.	253 (DHC)	111.00	111.50	115.40	121.74
1+14 RT.	262 (DHC)	112.00	112.24	116.14	120.94
1+14 RT.	261 (DHC)	112.00	112.30	116.20	120.94
1+32 LT.	254 (DHC)	112.00	112.44	116.34	122.41
1+32 LT.	255 (DHC)	112.00	112.50	116.40	122.41
1+50 RT.	260 (DHC)	112.00	112.24	116.14	121.61
1+50 RT.	259 (DHC)	112.00	112.30	116.20	121.61
1+68 LT.	256 (DHC)	112.00	112.44	116.34	122.41
1+68 LT.	257 (DHC)	112.00	112.50	116.40	122.41
1+92 RT.	258 (DHC)	112.00	112.24	116.14	122.28



CONTRACT NO. 14-4970-D
 OXFORD SQUARE
 RIVER OVERLOOK
 LOTS 246 THRU 371 &
 OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

DATE: 4/25/17

DATE: 5-19-17

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. 12043 EXPIRATION DATE 5/7/16/18.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTONAL SQUARE OFFICE PARK - 10272 BALDOROE NATIONAL Pkwy.
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2895

PAUL W. KRIEDEL

DESIGNED BY: B.C.R.

DRAWN BY: B.C.R.

CHECKED BY: P.W.K.

DATE: APRIL 2017

FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

SEWER MAIN EXTENSIONS PROFILE & CHARTS

600' SCALE MAP NO. 38 BLOCK NO. 19 & 20

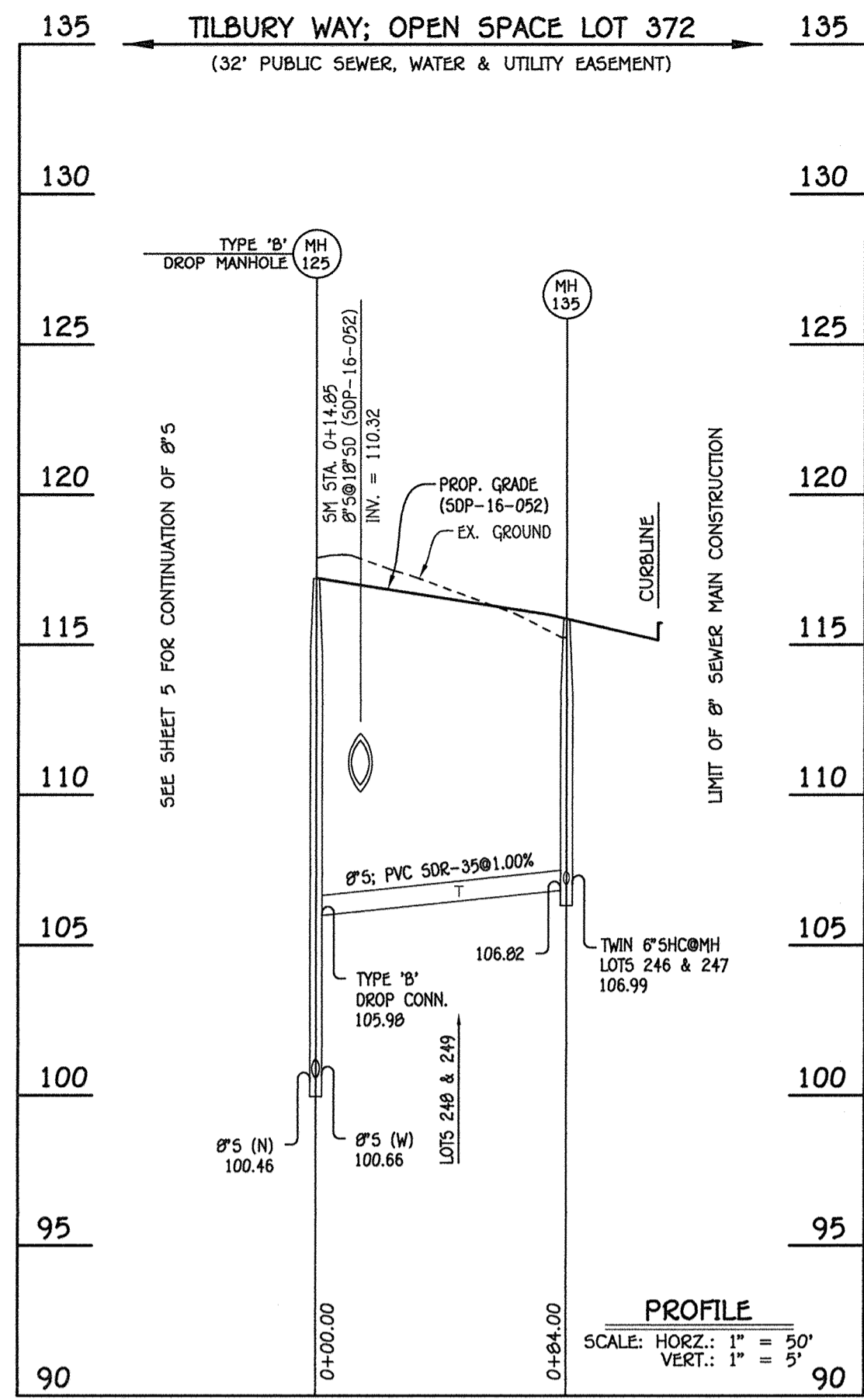
F.C.C. WORK ORDER NO. 09014-3015

OXFORD SQUARE RIVER OVERLOOK
 LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 CONTRACT NO. 14-4970-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

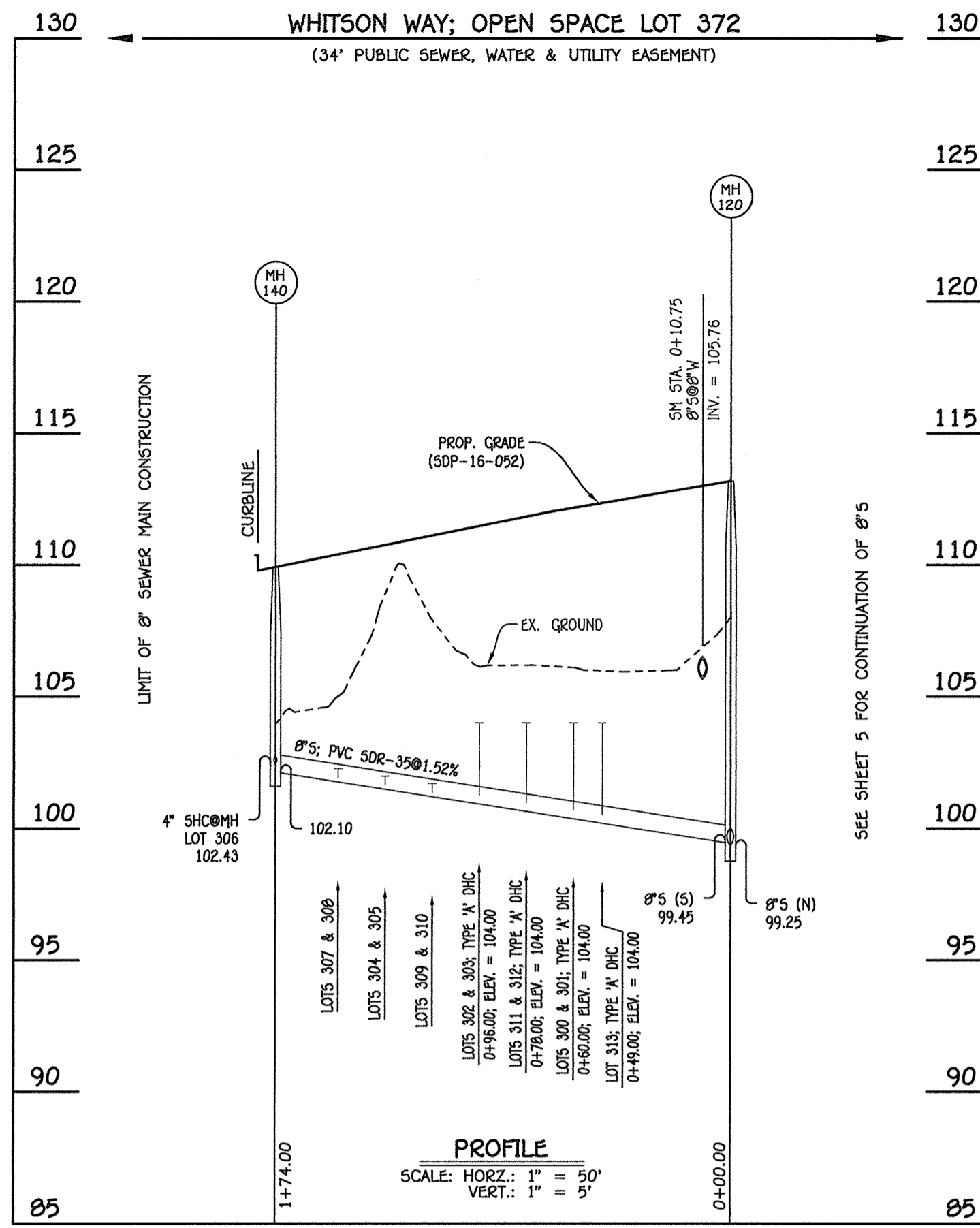
SCALE AS SHOWN

SHEET 5 OF 13

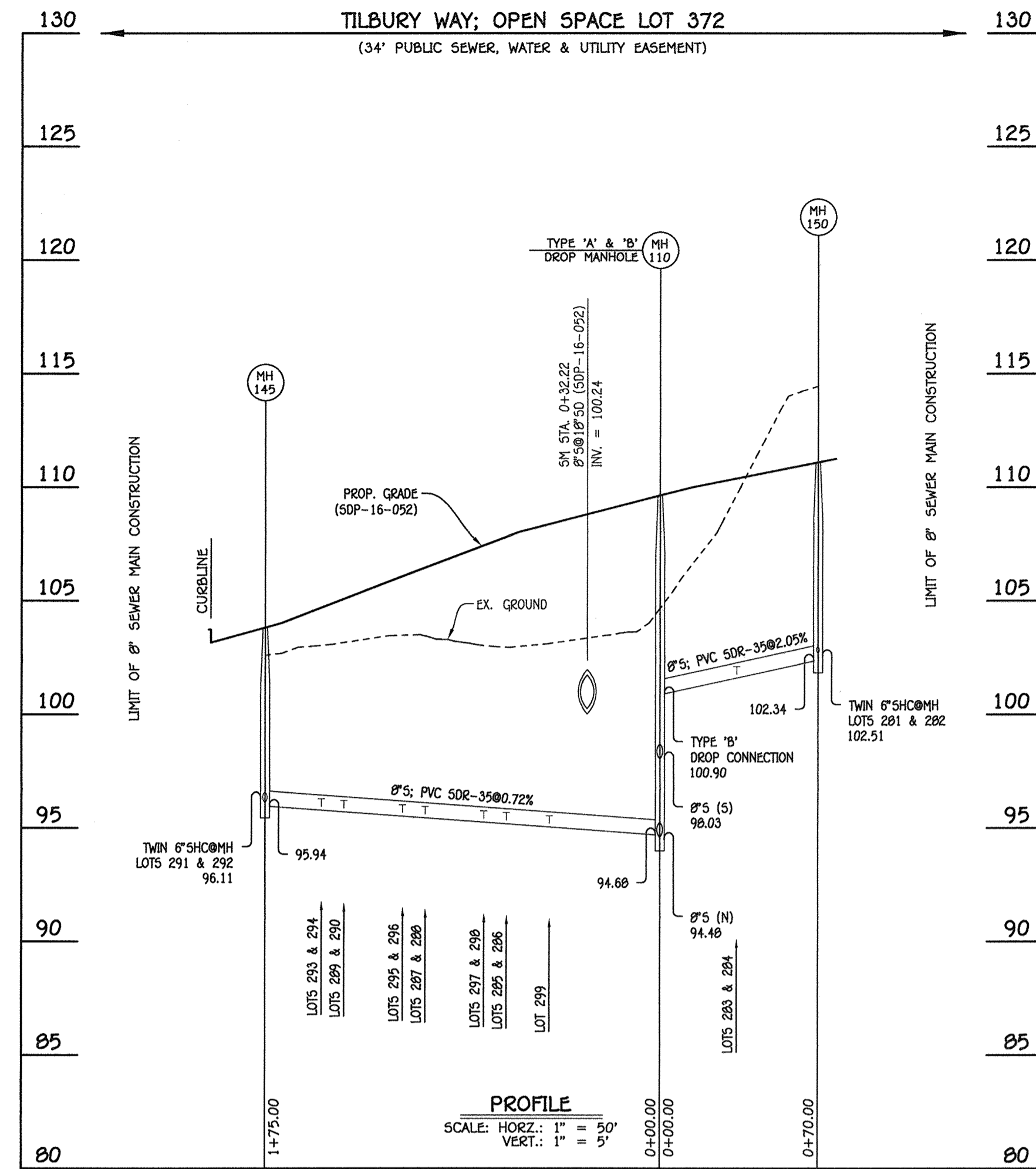
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8" SEWER MAIN: TILBURY WAY



8" SEWER MAIN: WHITSON WAY



8" SEWER MAIN: TILBURY WAY

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
135	553390.49	1386498.40	115.86

NOTE: SET MH RIM FLUSH W/PROPOSED GRADE.

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
140	553684.60	1386354.88	109.91

NOTE: SET MH RIM FLUSH W/PROPOSED GRADE.

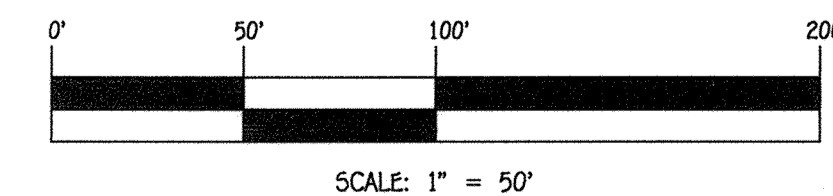
SEWER HOUSE CONNECTION CHART					
STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	SLAB
MH 125 TO MH 135					
0+48 RT.	249	106.54	106.98	110.88	120.00
0+48 RT.	248	106.54	107.04	110.94	119.33
●MH 135 RT.	247	106.99	107.43	111.33	118.66
●MH 135 RT.	246	106.99	107.49	111.39	117.99

SEWER HOUSE CONNECTION CHART					
STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	SLAB
MH 120 TO MH 140					
0+49 LT.	313	104.00	104.44	108.34	115.80
0+60 RT.	300	104.00	104.24	108.14	114.00
0+60 RT.	301	104.00	104.30	108.20	114.00
0+78 LT.	312	104.00	104.44	108.34	115.13
0+78 LT.	311	104.00	104.50	108.40	114.46
0+96 RT.	302	104.00	104.24	108.14	113.33
0+96 RT.	303	104.00	104.30	108.20	113.33
1+14 LT.	310	101.26	101.70	105.60	114.46
1+14 LT.	309	101.26	101.76	105.66	114.46
1+32 RT.	304	101.54	101.78	105.68	112.66
1+32 RT.	305	101.54	101.84	105.74	111.99
1+50 LT.	308	101.81	102.25	106.15	113.12
1+50 LT.	307	101.81	102.31	106.21	112.45
●MH 140 RT.	306	102.43	102.67	106.57	111.99

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
145	553868.72	1386447.96	103.81
150	553734.61	1386652.99	111.09

NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.

SEWER HOUSE CONNECTION CHART					
STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	SLAB
MH 110 TO MH 145					
0+49 LT.	299	95.20	95.64	99.54	112.20
0+68 RT.	285	95.25	95.55	99.45	109.50
0+68 RT.	286	95.25	95.49	99.39	109.50
0+78 LT.	298	95.32	95.76	99.66	111.53
0+78 LT.	297	95.32	95.82	99.72	110.86
1+04 RT.	287	95.51	95.81	99.71	108.83
1+04 RT.	288	95.51	95.75	99.65	108.16
1+14 LT.	296	95.58	96.02	99.92	110.19
1+14 LT.	295	95.58	96.08	99.98	109.52
1+40 RT.	289	95.77	96.01	99.91	107.49
1+40 RT.	290	95.77	96.07	99.97	106.82
1+50 LT.	294	95.84	96.28	100.18	108.85
1+50 LT.	293	95.84	96.34	100.24	108.18
●MH 145 RT.	291	96.11	96.35	100.25	106.15
●MH 145 RT.	292	96.11	96.41	100.31	105.48
MH 110 TO MH 150					
0+34 LT.	284	101.68	101.92	105.82	112.73
0+34 LT.	283	101.68	101.98	105.88	112.73
●MH 150 LT.	282	102.51	102.75	106.65	113.40
●MH 150 LT.	281	102.51	102.81	106.71	113.40

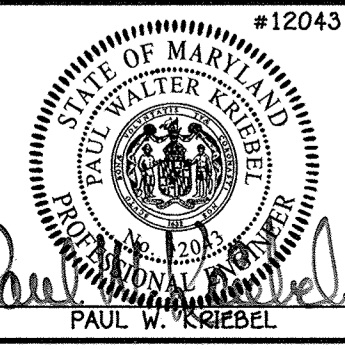


CONTRACT NO. 14-4970-D
OXFORD SQUARE
RIVER OVERLOOK
LOTS 246 THRU 371 &
OPEN SPACE LOTS 372 THRU 375 & 378
SEWER AND WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES
DATE: 4/28/17

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5-17-17

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. 15243 EXPIRATION DATE 5/7/16/18.
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALDORF NATIONAL PkE.
ELICOTT CITY, MARYLAND 21042
(410) 461-2895



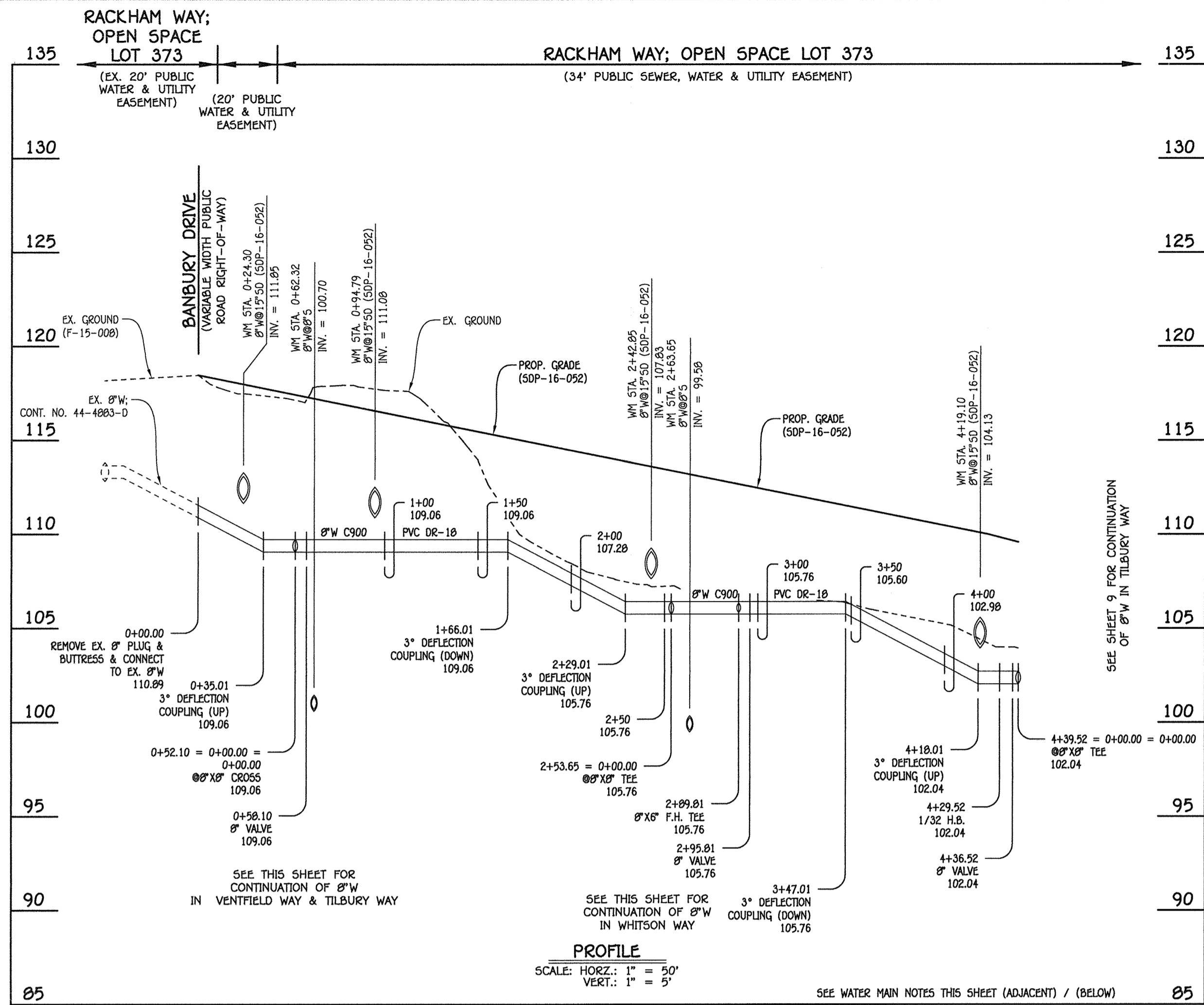
DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.W.K.
DATE: APRIL 2017
BY: POC
REVISION: 11/9/17
RENAME TOTAL SHEET NUMBER TO 13!

SEWER MAIN EXTENSIONS
PROFILES & CHARTS
600' SCALE MAP NO. 38 BLOCK NO. 19 & 20
F.C.C. WORK ORDER NO. 09014-3015
FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

OXFORD SQUARE
RIVER OVERLOOK
LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
SEWER AND WATER MAIN EXTENSIONS
CONTRACT NO. 14-4970-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

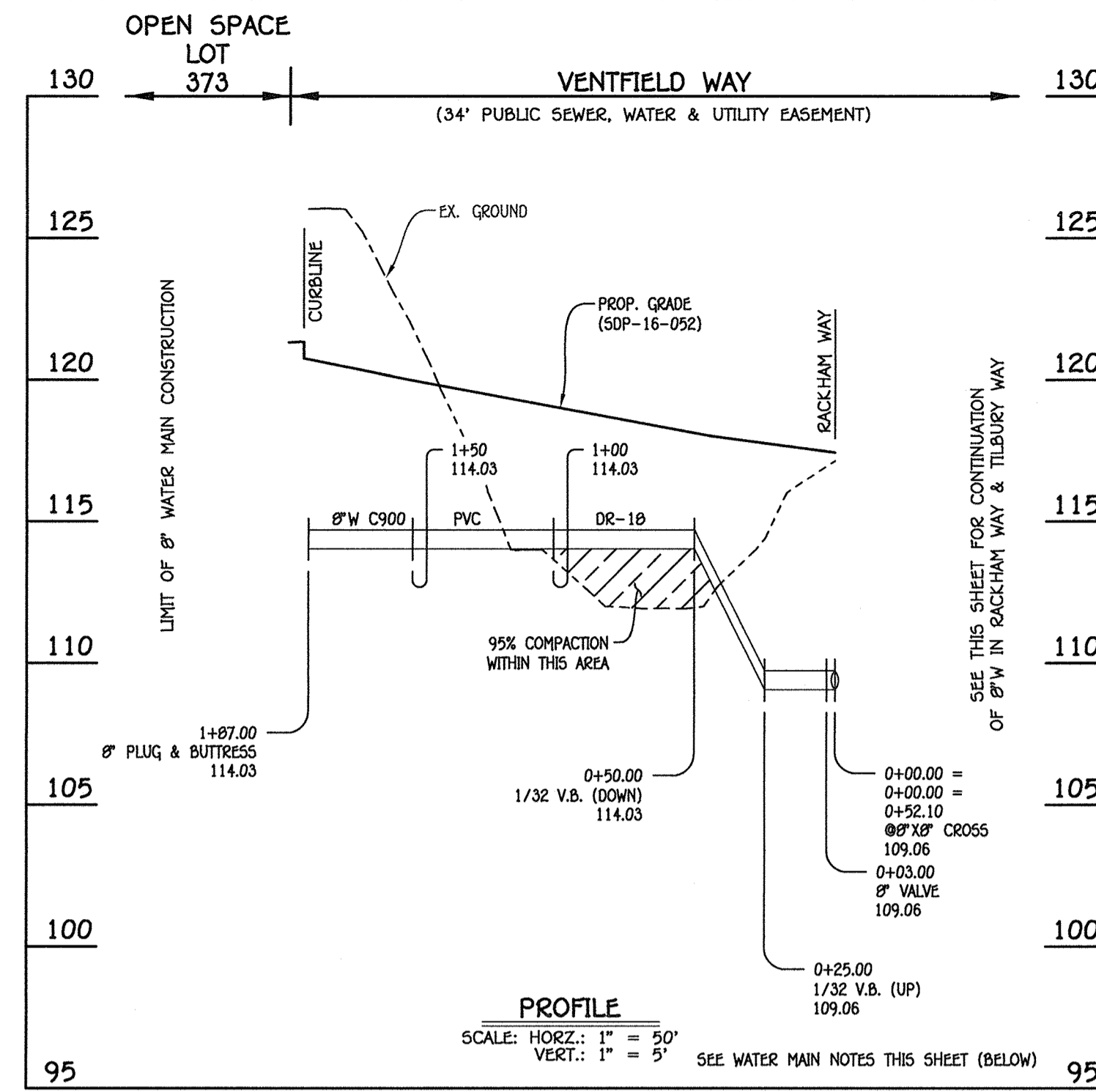
SCALE AS SHOWN
SHEET 6 OF 13

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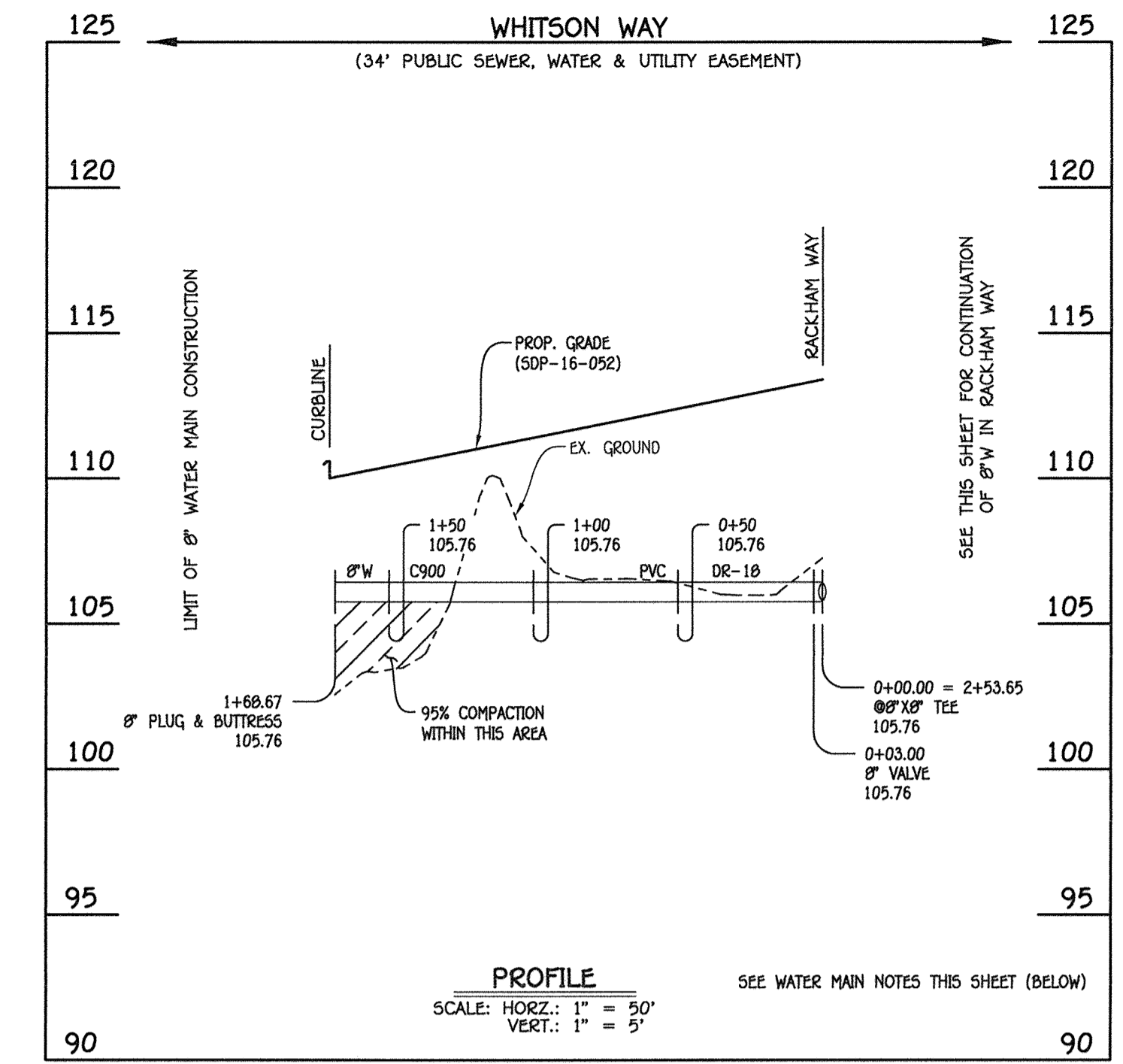
8" WATER MAIN: RACKHAM WAY

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: RACKHAM WAY			
0+00.00	EX. 8" PLUG & BUTTRESS	553375.73	1386386.59
0+52.10	8" X8" CROSS	553422.54	1386409.44
0+58.10	8" VALVE	553427.94	1386412.07
2+53.65	8" X8" TEE	553603.67	1386497.87
2+99.81	8" X8" F.H. TEE	553636.16	1386513.73
2+95.81	8" VALVE	553641.55	1386516.37
4+29.52	1/32" H.B.	553761.71	1386575.03
4+36.52	8" VALVE	553767.56	1386578.86
4+39.52 = 0+00.00	8" X8" TEE	553770.07	1386580.50



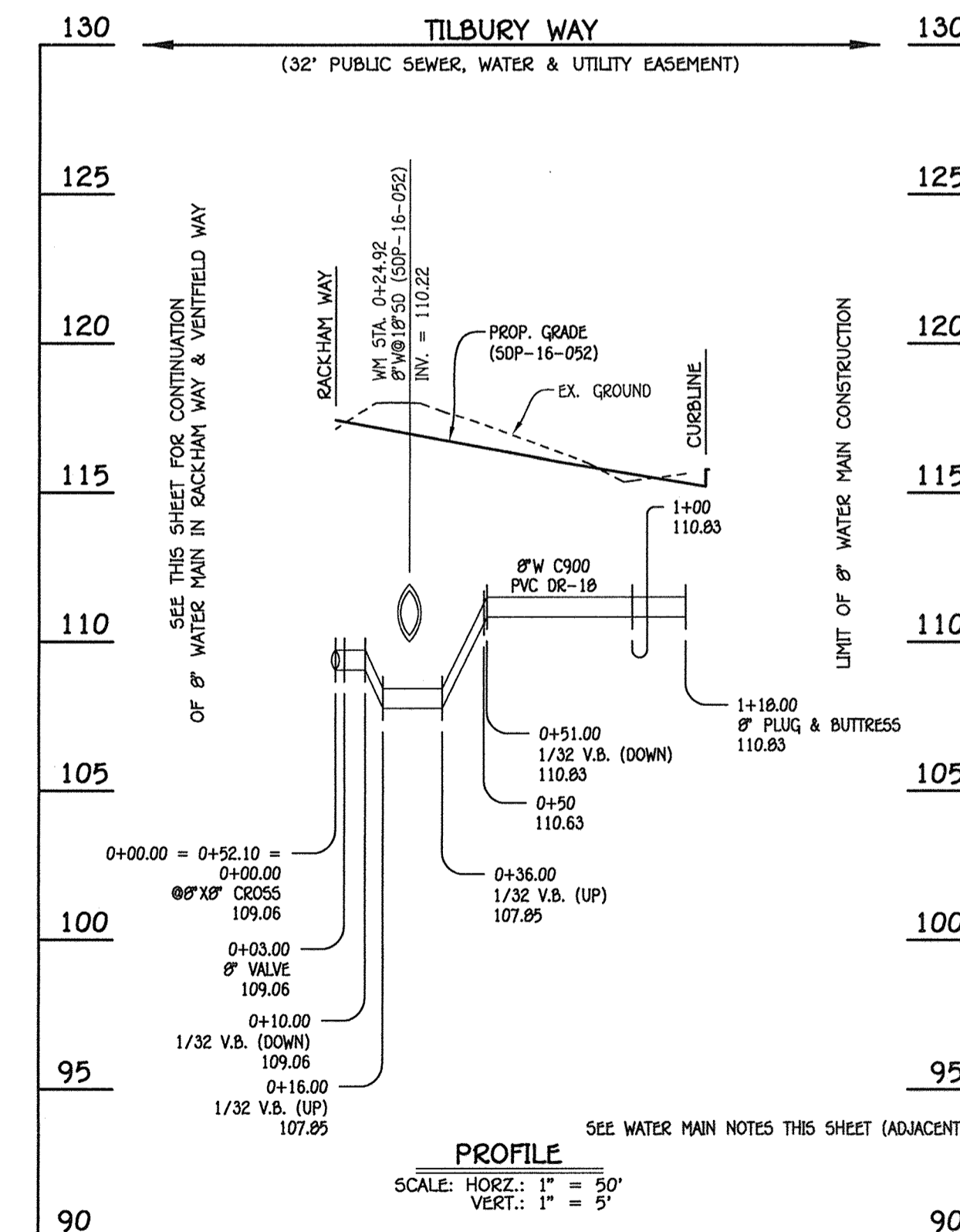
8" WATER MAIN: VENTFIELD WAY

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: VENTFIELD WAY			
0+00.00	8" X8" CROSS	553422.54	1386409.44
0+03.00	8" VALVE	553423.86	1386406.75
1+87.00	8" PLUG & BUTTRESS	553504.64	1386241.43



8" WATER MAIN: WHITSON WAY

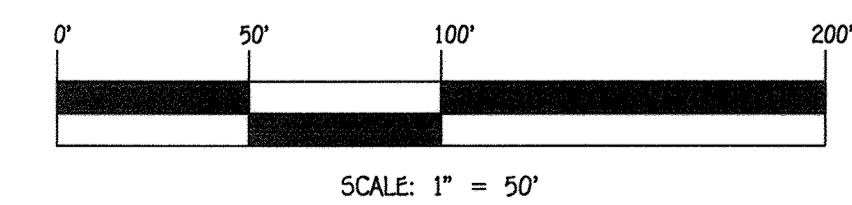
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: WHITSON WAY			
0+00.00	8" X8" TEE	553603.67	1386497.87
0+03.00	8" VALVE	553604.98	1386495.17
1+86.67	8" PLUG & BUTTRESS	553677.67	1386346.30



8" WATER MAIN: TILBURY WAY

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: TILBURY WAY			
0+00.00	8" X8" CROSS	553422.54	1386409.44
0+03.00	8" VALVE	553421.23	1386412.14
1+18.00	8" PLUG & BUTTRESS	553370.77	1386515.48

- WATER MAIN NOTES:**
1. ALL WATER MAINS SHALL BE ANWA C900 PVC PIPE; DR-18.
 2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR ANWA C900 PVC WATER PIPE INSTALLATION.
 3. DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.
 4. ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.

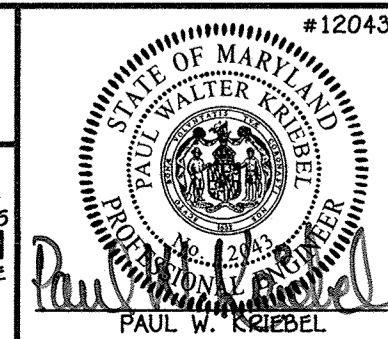


CONTRACT NO. 14-4970-D
OXFORD SQUARE
RIVER OVERLOOK
LOTS 246 THRU 371 &
OPEN SPACE LOTS 372 THRU 375 & 378
SEWER AND WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
S. C. COEN
CHIEF, BUREAU OF UTILITIES
DATE: 4/15/17

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
M. G.
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5/19/17

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. 12243 EXPIRATION DATE 5/7/16/18.
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALDORNE NATIONAL PARK
ELLIOTT CITY, MARYLAND 21042
(410) 461-2895

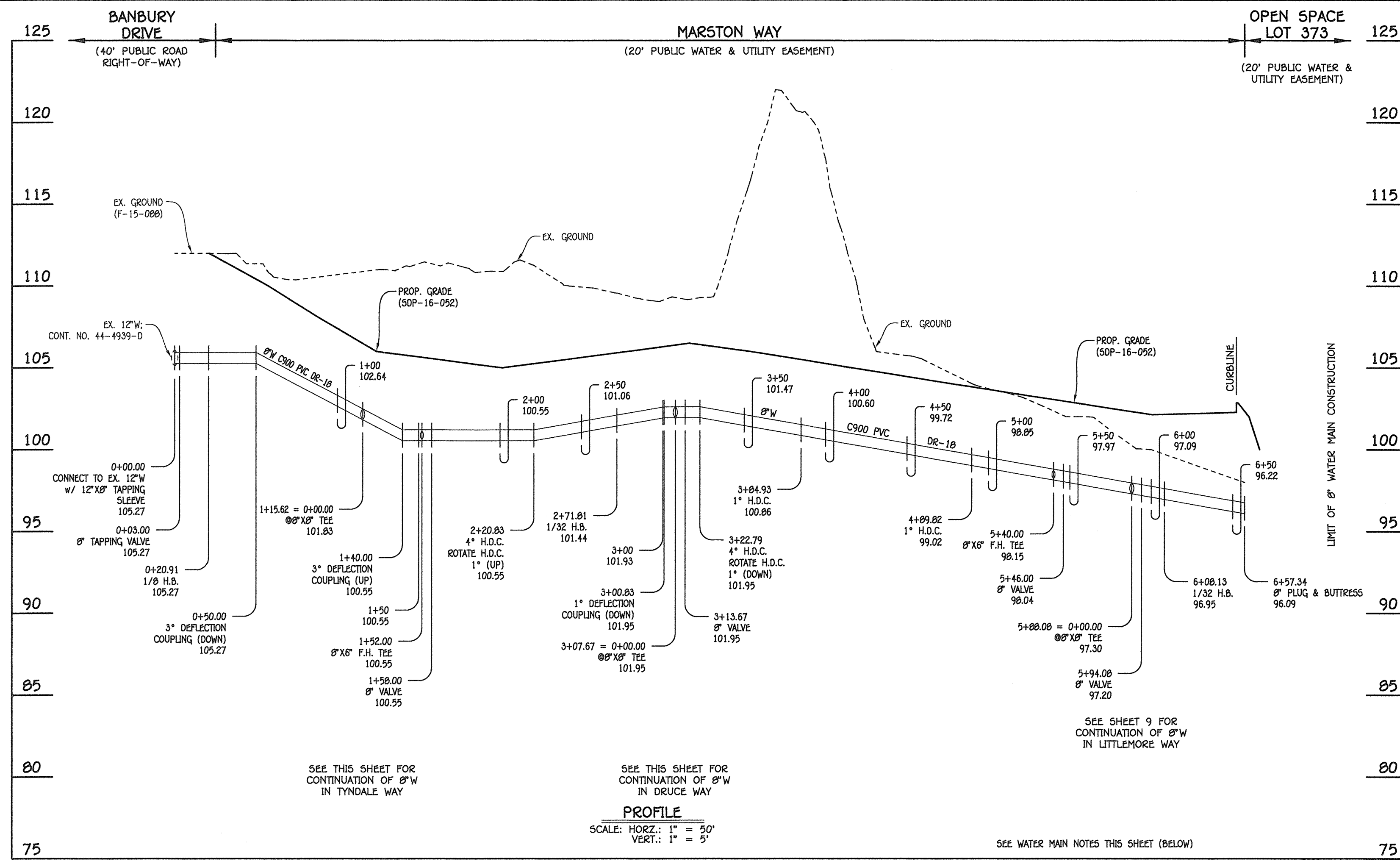


DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.W.K.
DATE: APRIL 2017
BY: NO. REVISION

WATER MAIN EXTENSIONS
PROFILES, CHARTS & NOTES
600' SCALE MAP NO. 38 BLOCK NO. 19 & 20
F.C.C. WORK ORDER NO. 09014-3015
FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

OXFORD SQUARE
RIVER OVERLOOK
LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
SEWER AND WATER MAIN EXTENSIONS
CONTRACT NO. 14-4970-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

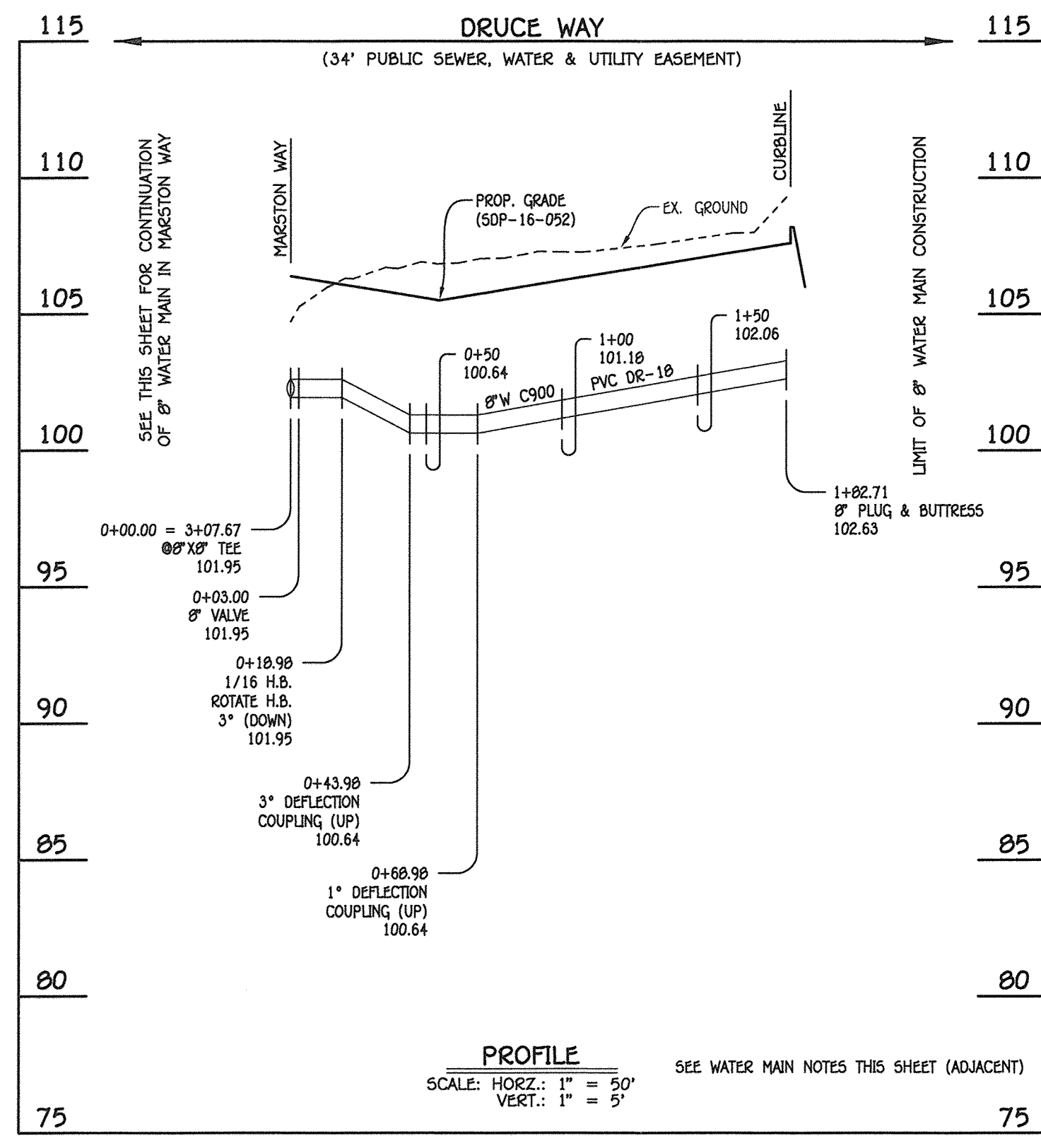
SCALE AS SHOWN
SHEET 7 OF 12



W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: MARSTON WAY			
0+00.00	12" X 8" TAPPING SLEEVE	553618.79	1305762.13
0+03.00	8" TAPPING VALVE	553621.64	1305761.19
0+20.91	1/8" H.B.	553630.66	1305755.64
1+15.62	8" X 8" TEE	553720.62	1305803.12
1+52.00	8" X 6" F.H. TEE	553752.09	1305821.35
1+58.00	8" VALVE	553757.29	1305824.36
2+20.83	4" H.D.C.	553811.65	1305895.86
2+71.81	1/32" H.B.	553853.46	1305895.03
3+07.67 = 0+00.00	8" X 8" TEE	553879.01	1305910.19
3+13.67	8" VALVE	553883.28	1305914.40
3+22.79	4" H.D.C.	553889.78	1305920.80
3+84.93	1" H.D.C.	553930.23	1305967.97
4+89.82	1" H.D.C.	554000.57	1306045.78
5+40.00	8" X 6" F.H. TEE	554035.19	1306082.11
5+46.00	8" VALVE	554039.33	1306086.45
5+88.08 = 0+00.00	8" X 8" TEE	554068.37	1306116.91
5+94.08	8" VALVE	554072.51	1306121.26
6+08.13	1/32" H.B.	554082.20	1306131.43
6+57.34	8" PLUG & BUTTRESS	554122.68	1306159.41

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: TYNDALE WAY			
0+00.00	8" X 8" TEE	553720.62	1305803.12
0+03.00	8" VALVE	553719.11	1305805.71
0+22.85	4" H.D.C.	553709.16	1305822.89
2+98.47	8" X 6" F.H. TEE	553586.16	1306070.52
3+04.47	8" VALVE	553585.52	1306075.91
4+19.96	8" PLUG & BUTTRESS	553534.81	1306179.68

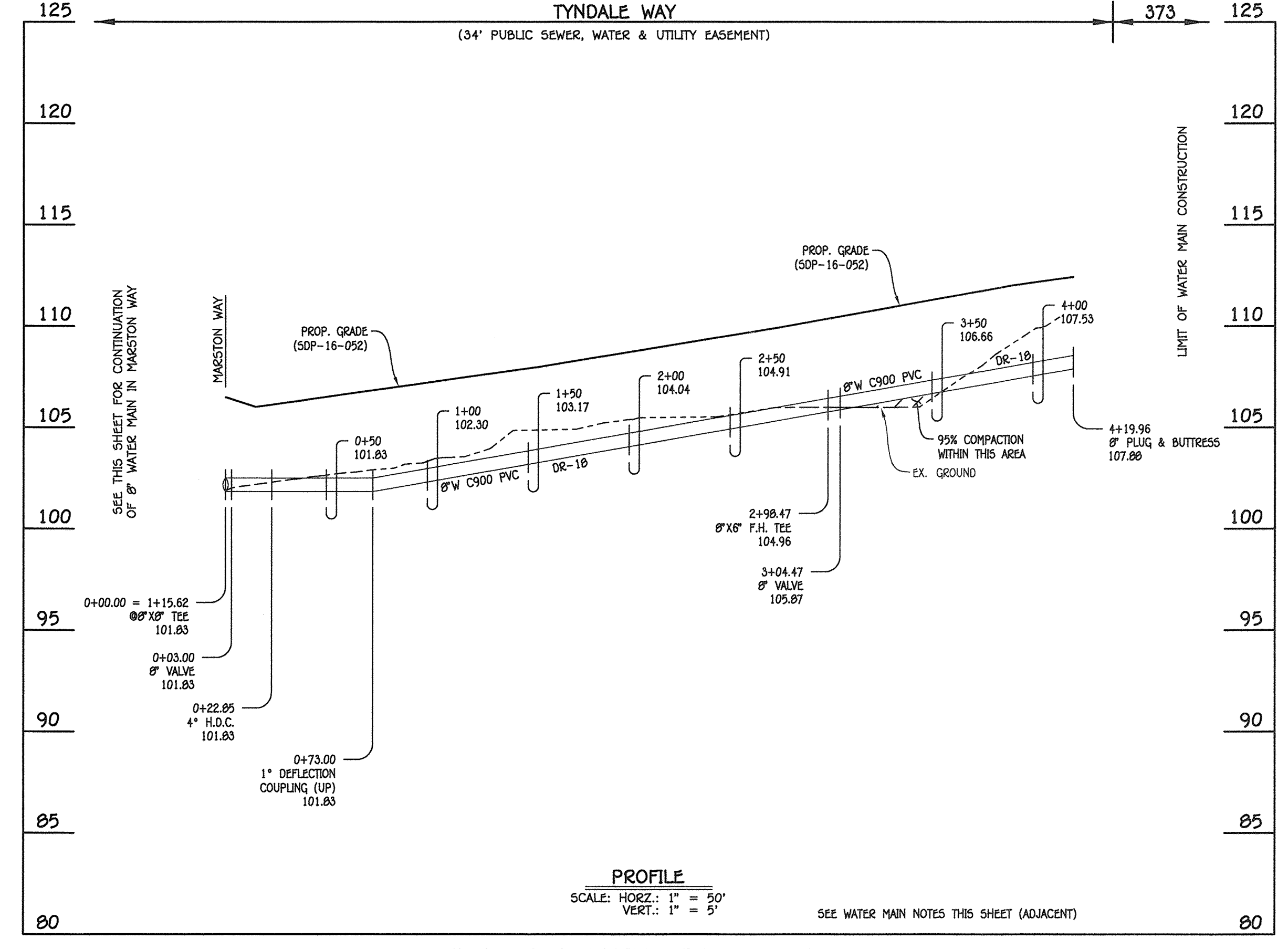
8" WATER MAIN: MARSTON WAY



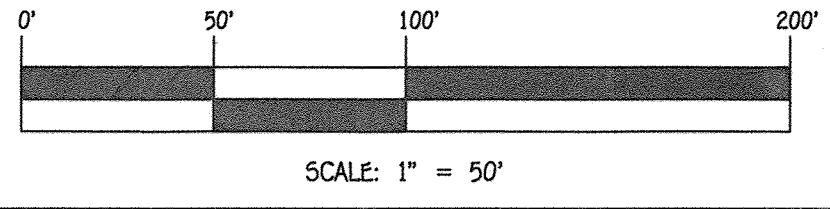
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: DRUCE WAY			
0+00.00	8" X 8" TEE	553879.01	1305910.19
0+03.00	8" VALVE	553876.80	1305912.22
0+18.98	1/16" H.B.	553865.02	1305923.03
1+82.71	8" PLUG & BUTTRESS	553793.14	1306070.14

- WATER MAIN NOTES:**
1. ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE; DR-18.
 2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
 3. DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.
 4. ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.

8" WATER MAIN: DRUCE WAY



8" WATER MAIN: TYNDALE WAY



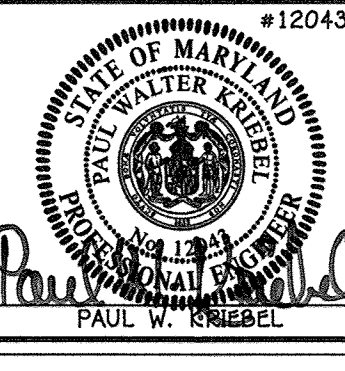
CONTRACT NO. 14-4970-D
 OXFORD SQUARE
 RIVER OVERLOOK
 LOTS 246 THRU 371 &
 OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

130209(001)Water & Sewer Contract 3018 - Contract No. 14-4970-D (SOP-16-052)IF-17-085(A-N/Z)Fwash09014-3018 Water and Sewer Contract Planning

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 Date: 4/18/17

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 Date: 5-19-17

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. 12043 EXPIRATION DATE 5/7/18
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL Pk.
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2895

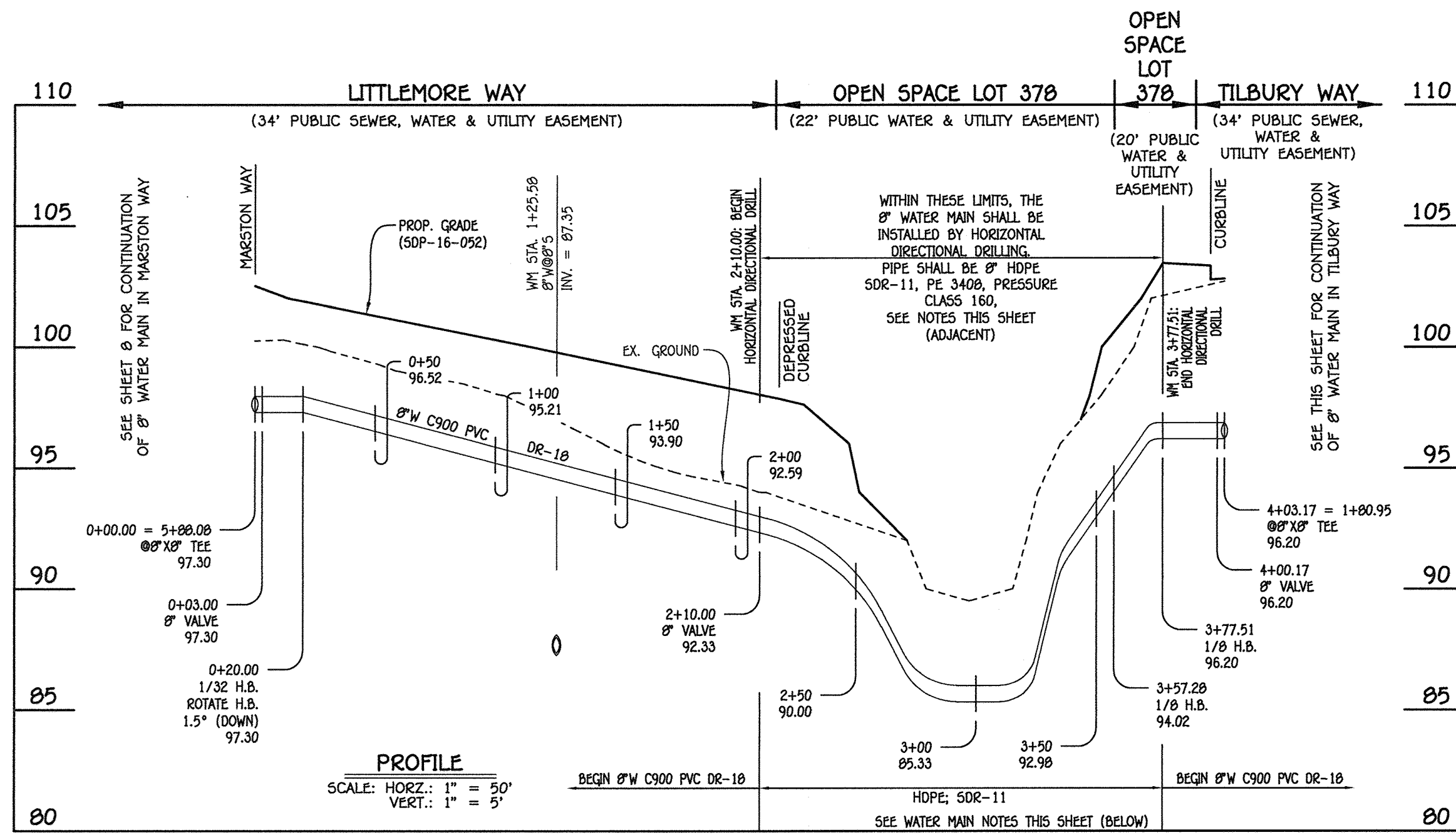


DESIGNED BY: B.C.R.
 DRAWN BY: B.C.R.
 CHECKED BY: P.W.K.
 DATE: APRIL, 2017
 FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

**WATER MAIN EXTENSIONS
 PROFILES, CHARTS & NOTES**
 600' SCALE MAP NO. 38 BLOCK NO. 19 & 20
 F.C.C. WORK ORDER NO. 09014-3015

**OXFORD SQUARE
 RIVER OVERLOOK**
 LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 CONTRACT NO. 14-4970-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

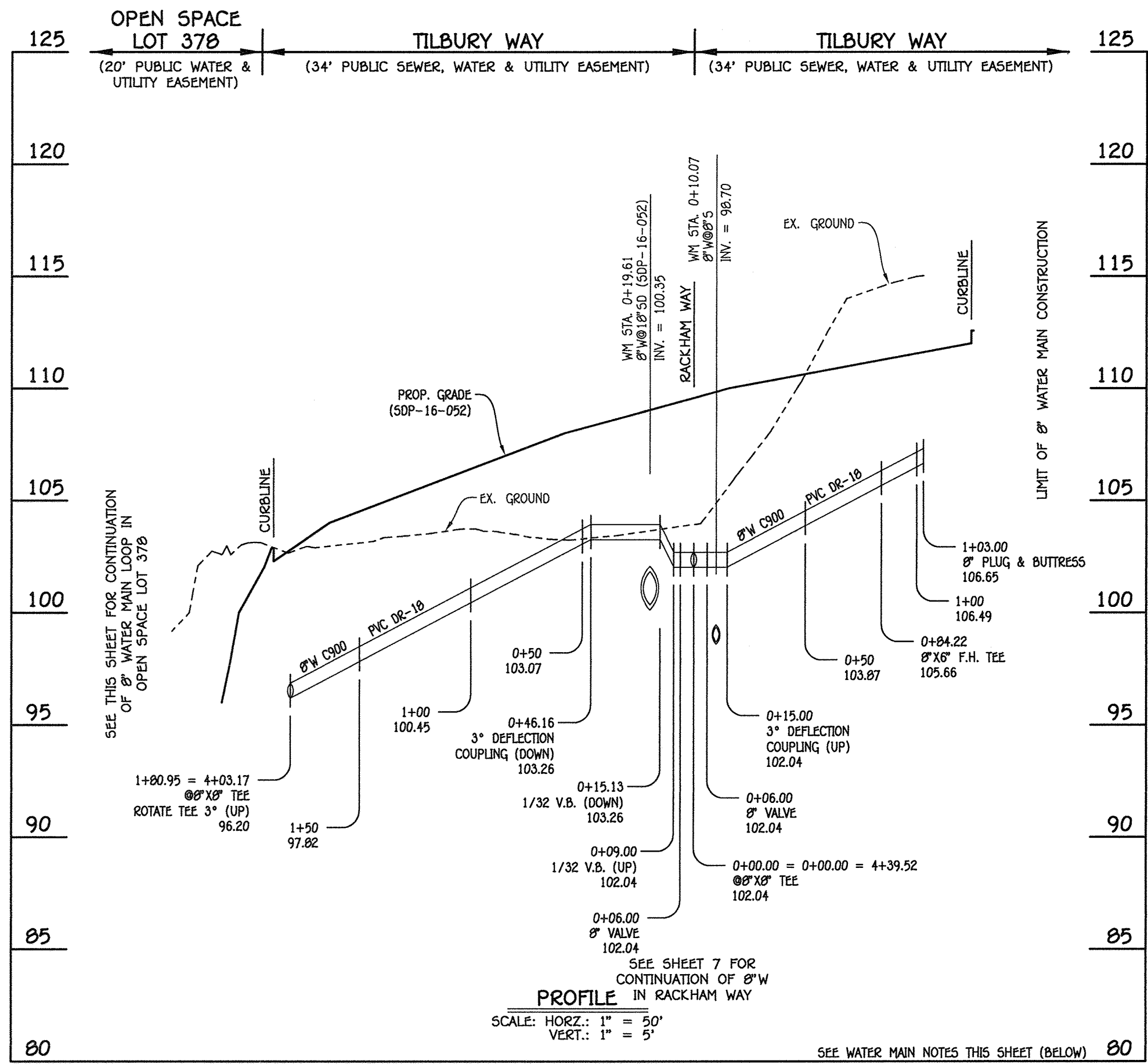
SCALE AS SHOWN
 SHEET 8 OF 13



8" WATER MAIN: LITTLEMORE WAY & OPEN SPACE LOT 378

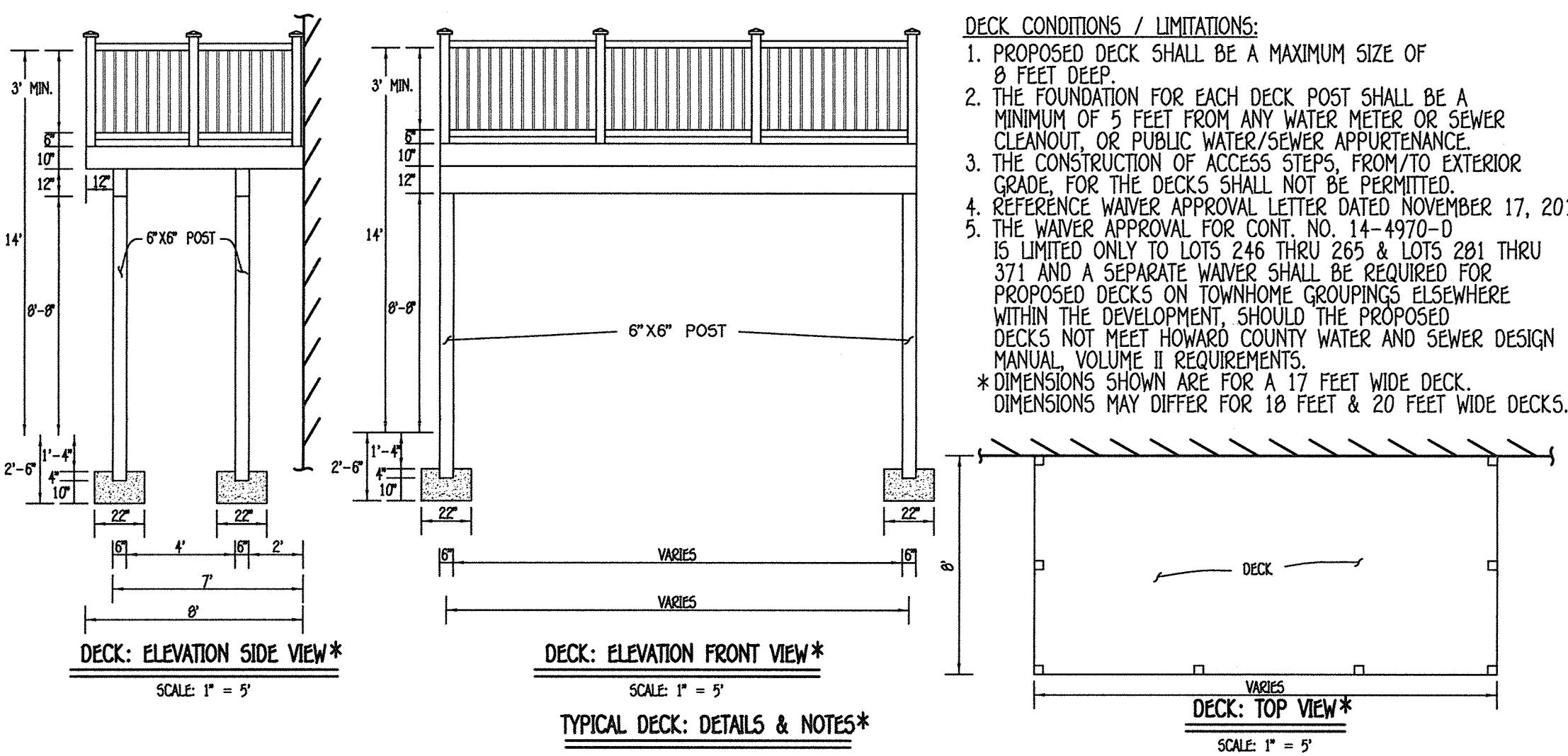
WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: LITTLEMORE WAY & OPEN SPACE LOT 378			
0+00.00	8" X 8" TEE	554068.37	1386116.91
0+03.00	8" VALVE	554066.20	1386118.99
0+20.00	1/32 H.B.	554053.89	1386130.71
2+10.00	8" VALVE	553935.88	1386279.62
3+57.28	1/8 H.B.	553844.41	1386395.05
3+77.51	1/8 H.B.	553847.65	1386415.02
4+00.17	8" VALVE	553866.62	1386427.43
4+03.17 = 1+80.95	8" X 8" TEE	553869.13	1386429.07

- 8" WATER MAIN: HORIZONTAL DIRECTIONAL DRILL
- NOTES:
1. THE MANUFACTURE AND INSTALLATION OF HOPE PRESSURE PIPE SHALL MEET THE LATEST REQUIREMENTS OF AWWA C900, POLYETHYLENE (PE) PRESSURE PIPE AND FITTINGS, 4 INCH THROUGH 63 INCH FOR WATER DISTRIBUTION AND TRANSMISSION.
 2. ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA C900 STANDARD SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE.
 3. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT.
 4. ALL HOPE PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.
 5. ALL BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH COUNTY DESIGN STANDARDS FOR PVC WATER PIPE INSTALLATION.
 6. METALLIC FITTINGS AND APPURTENANCES SHALL BE CATHODICALLY PROTECTED.
 7. AT THE TERMINATIONS OF THE HORIZONTAL DIRECTIONAL DRILL THE 8" HOPE WATER MAIN SHALL BE ANCHORED AND RESTRAINED TO PREVENT ANY SEPARATION FROM THE CONNECTING / CONTINUING 8" WATER MAIN EXTENSION.

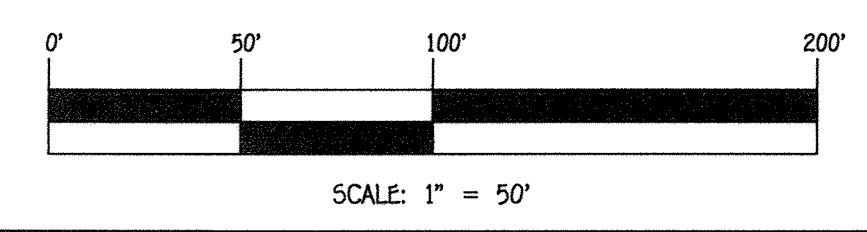
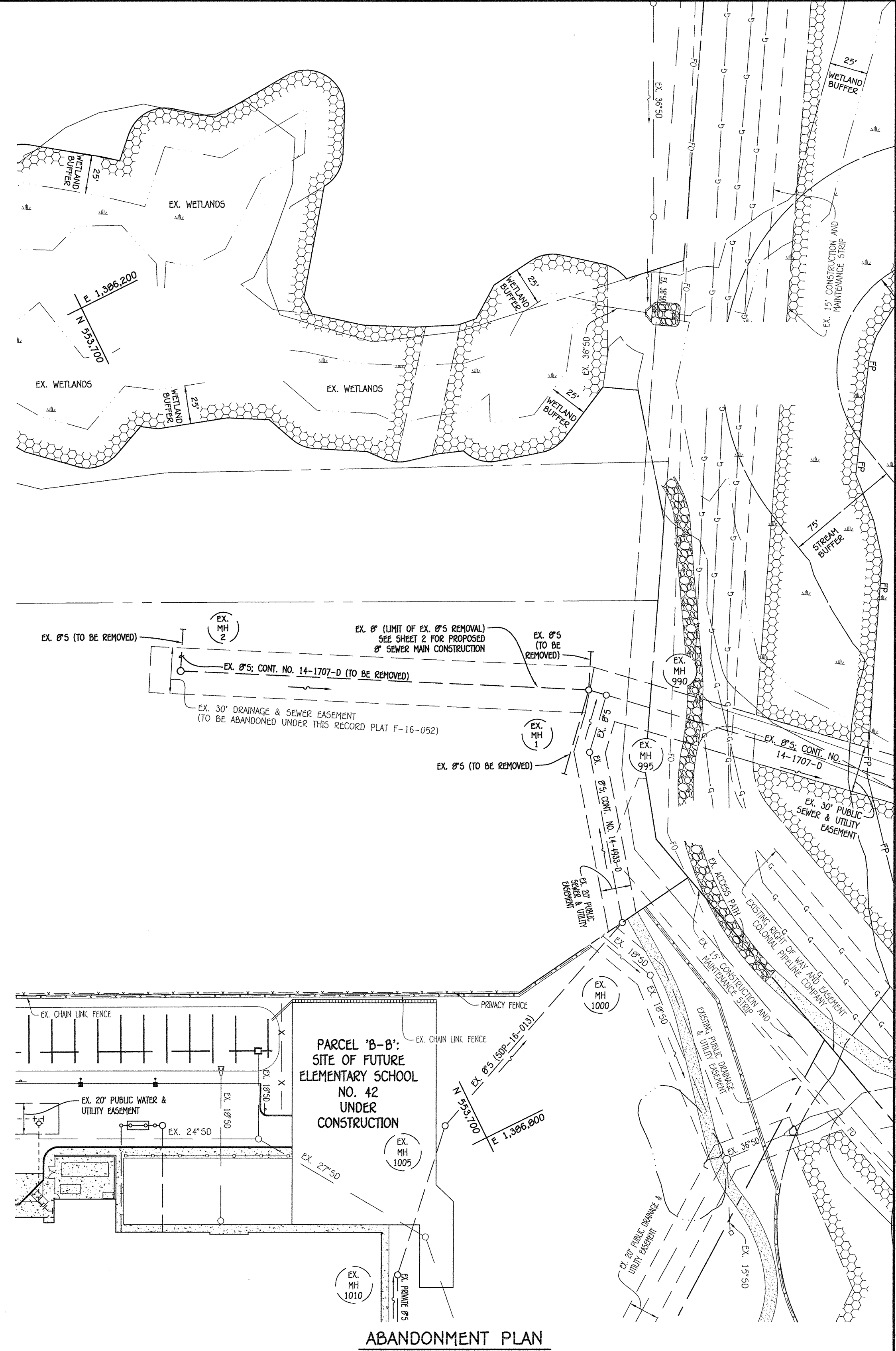


8" WATER MAIN: TILBURY WAY

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: TILBURY WAY			
1+80.95	8" X 8" TEE	553869.13	1386429.07
0+06.00	8" VALVE	553773.36	1386575.48
0+00.00 = 0+00.00 = 4+39.52	8" X 8" TEE	553770.07	1386580.50
0+06.00	8" VALVE	553766.79	1386585.52
0+84.22	8" X 6" F.H. TEE	553723.97	1386650.99
1+03.00	8" PLUG & BUTTRESS	553713.69	1386666.70



- DECK CONDITIONS / LIMITATIONS:
1. PROPOSED DECK SHALL BE A MAXIMUM SIZE OF 8 FEET DEEP.
 2. THE FOUNDATION FOR EACH DECK POST SHALL BE A MINIMUM OF 5 FEET FROM ANY WATER METER OR SEWER CLEANOUT, OR PUBLIC WATER/SEWER APPURTENANCE.
 3. THE CONSTRUCTION OF ACCESS STEPS, FROM/TO EXTERIOR GRADE, FOR THE DECKS SHALL NOT BE PERMITTED.
 4. REFERENCE WAIVER APPROVAL LETTER DATED NOVEMBER 17, 2016.
 5. THE WAIVER APPROVAL FOR CONT. NO. 14-4970-D IS LIMITED ONLY TO LOTS 246 THRU 285 & LOTS 281 THRU 371 AND A SEPARATE WAIVER SHALL BE REQUIRED FOR PROPOSED DECKS ON TOWNHOME GROUPINGS ELSEWHERE WITHIN THE DEVELOPMENT. SHOULD THE PROPOSED DECKS NOT MEET HOWARD COUNTY WATER AND SEWER DESIGN MANUAL VOLUME II REQUIREMENTS.
- * DIMENSIONS SHOWN ARE FOR A 17 FEET WIDE DECK. DIMENSIONS MAY DIFFER FOR 18 FEET & 20 FEET WIDE DECKS.



CONTRACT NO. 14-4970-D
OXFORD SQUARE
RIVER OVERLOOK
LOTS 246 THRU 371 &
OPEN SPACE LOTS 372 THRU 375 & 378
SEWER AND WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

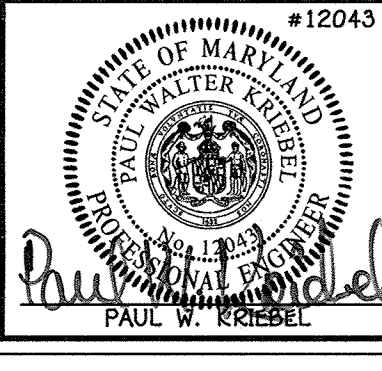
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION

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. 12245 EXPIRATION DATE IS 7/16/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALDORP NATIONAL Pk.
ELLCOTT CITY, MARYLAND 21042
(410) 461-2899



DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.W.K.
DATE: APRIL, 2017

REVISION

**WATER MAIN EXTENSIONS
PROFILES, CHARTS, NOTES,
ABANDONMENT PLAN & DECK DETAILS
& NOTES**

600' SCALE MAP NO. 38 BLOCK NO. 19 & 20
F.C.C. WORK ORDER NO. 09014-3015

FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

**OXFORD SQUARE
RIVER OVERLOOK
LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
SEWER AND WATER MAIN EXTENSIONS
CONTRACT NO. 14-4970-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND**

SCALE AS SHOWN
SHEET 9 OF 19

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE. Table with columns: LOT NUMBER, ADDRESS, LOCATION DIMENSION 1, LOCATION DIMENSION 2. Rows 246-342.

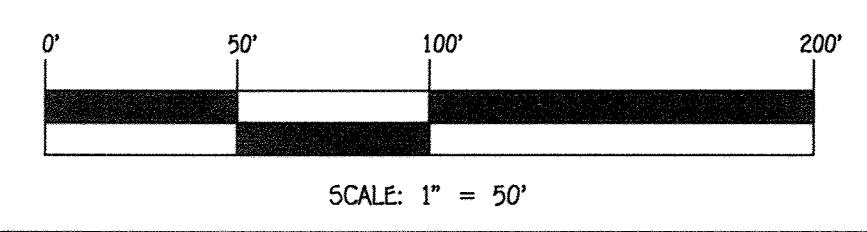
SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE. Table with columns: LOT NUMBER, ADDRESS, LOCATION DIMENSION 1, LOCATION DIMENSION 2. Rows 343-371.

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE. Table with columns: LOT NUMBER, ADDRESS, LOCATION DIMENSION 1, LOCATION DIMENSION 2. Rows 337-371.

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE. Table with columns: LOT NUMBER, ADDRESS, LOCATION DIMENSION 1, LOCATION DIMENSION 2. Rows 246-336.

DESIGN MANUAL WAIVERS

- A. DECKS: BY LETTER DATED NOVEMBER 17, 2016, MR. THOMAS BUILER, DEPUTY DIRECTOR, DEPARTMENT OF PUBLIC WORKS, APPROVED A WAIVER ALLOWING THE CONSTRUCTION OF A DECK 6" DEEP MAXIMUM, ON LOTS 246 THRU 371 & LOTS 246 THRU 371, WHICH PROVIDED A MAXIMUM OF 6" INTO THE 'D' STRUCTURE FROM THE PUBLIC SEWER, WATER & UTILITY EXPOSURE. CONDITIONS: SEE SHEET # FOR DECK CONDITIONS/LIMITATIONS
- B. PRIVATE S/D'S & S/M: BY LETTER DATED NOVEMBER 17, 2016, MR. THOMAS BUILER, DEPUTY DIRECTOR, DEPARTMENT OF PUBLIC WORKS, APPROVED A WAIVER ALLOWING A CROSS-CHECK OF PRIVATE S/D'S & S/M'S & S/M'S AND PRIVATE STORMWATER MANAGEMENT STRUCTURES INTO THE 'D' EXPOSURE FROM THE PUBLIC UTILITY MANHOLE. CONDITIONS: SEE SHEET # FOR NOTE REGARDING RELEASE OF QUALITY RESPONSIBILITY.
- C. NOISE WALL: BY LETTER DATED DECEMBER 09, 2016, MR. THOMAS BUILER, DEPUTY DIRECTOR, DEPARTMENT OF PUBLIC WORKS, APPROVED A WAIVER ALLOWING AN ENCROACHMENT OF UP TO 10' AT A POINT, INTO THE 'D' PUBLIC WATER MAIN EXPOSURE STRUCTURE EXPOSED BY A PROPOSED NOISE WALL, ALONG THE CORNER/RIGHT-OF-WAY BETWEEN WM 524 & 520 TO WM 524 & 520 (MARGENT WAY). CONDITIONS: NONE LISTED
- D. HDD: BY LETTER DATED JANUARY 20, 2017, MR. THOMAS BUILER, DEPUTY DIRECTOR, DEPARTMENT OF PUBLIC WORKS, APPROVED THE USE OF HORIZONTAL DRILLING TO INSTALL AN 8" WATER MAIN ACCESS THE WELLS/AN OPEN SPACE LOT 370 (NOW LOT 370) FROM TILBURY WAY TO LITTLEMORE WAY. APPLICABLE SECTIONS OF THE HANDED COUNTY DESIGN MANUALS & REMINDER IS RESPONSIBLE FOR ALL PERMITTING, COORDINATION & OTHER REQUIREMENTS ESTABLISHED BY REGULATORS, AGENCIES THAT RESULT FROM WELLS/AN OPEN SPACE.
- E. B.P.J: BY LETTER DATED FEBRUARY 16, 2017, MR. THOMAS BUILER, DEPUTY DIRECTOR, DEPARTMENT OF PUBLIC WORKS, APPROVED THE USE OF 3/4" & 1/2" TO INSTALL A SECTION OF 8" SEWER MAIN BETWEEN HT 156 TO HT 100, TO AVOID IMPACT TO THE 8" WELLS/AN BUFFER WITHIN OPEN SPACE LOT 370. CONDITIONS: 1. CASING PIPE - 6" DIAMETER MINIMUM WITH A MINIMUM THICKNESS OF 0.50" INCLUDE CASING STIFFENERS AND END STIFFENERS PER DESIGN MANUAL REQUIREMENTS. 2. CASING BY CASING PIPE SHALL BE 150' TO 100' COMPACTED BETWEEN 150' TO 100' PER FEET RESTRICTIONS WITHIN OPEN SPACE INCLUDING SERIES 5000 MEGA-GROPS. 3. CASING LENGTH SHALL EXCEED A MINIMUM OF 5' UP OUTSIDE LIMITS OF WELLS/AN BUFFER CROSSING. 4. CLEARANCE TO CROSSING UTILITY SHALL BE 12" MINIMUM.



CONTRACT NO. 14-4970-D
OXFORD SQUARE
RIVER OVERLOOK
LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
SEWER AND WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Seth C. Conn
4/20/17
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
Paul W. Kriebel
5.19.17
DATE

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. 12943 EXPIRATION DATE 5/7/16/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALDORP NATIONAL PkE
ELLIOTT CITY, MARYLAND 21042
(410) 481 - 2995

PAUL W. KRIEBEL
#12943
DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.W.K.
DATE: APRIL 2017

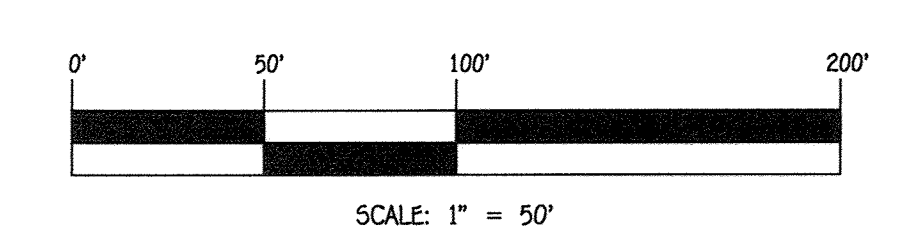
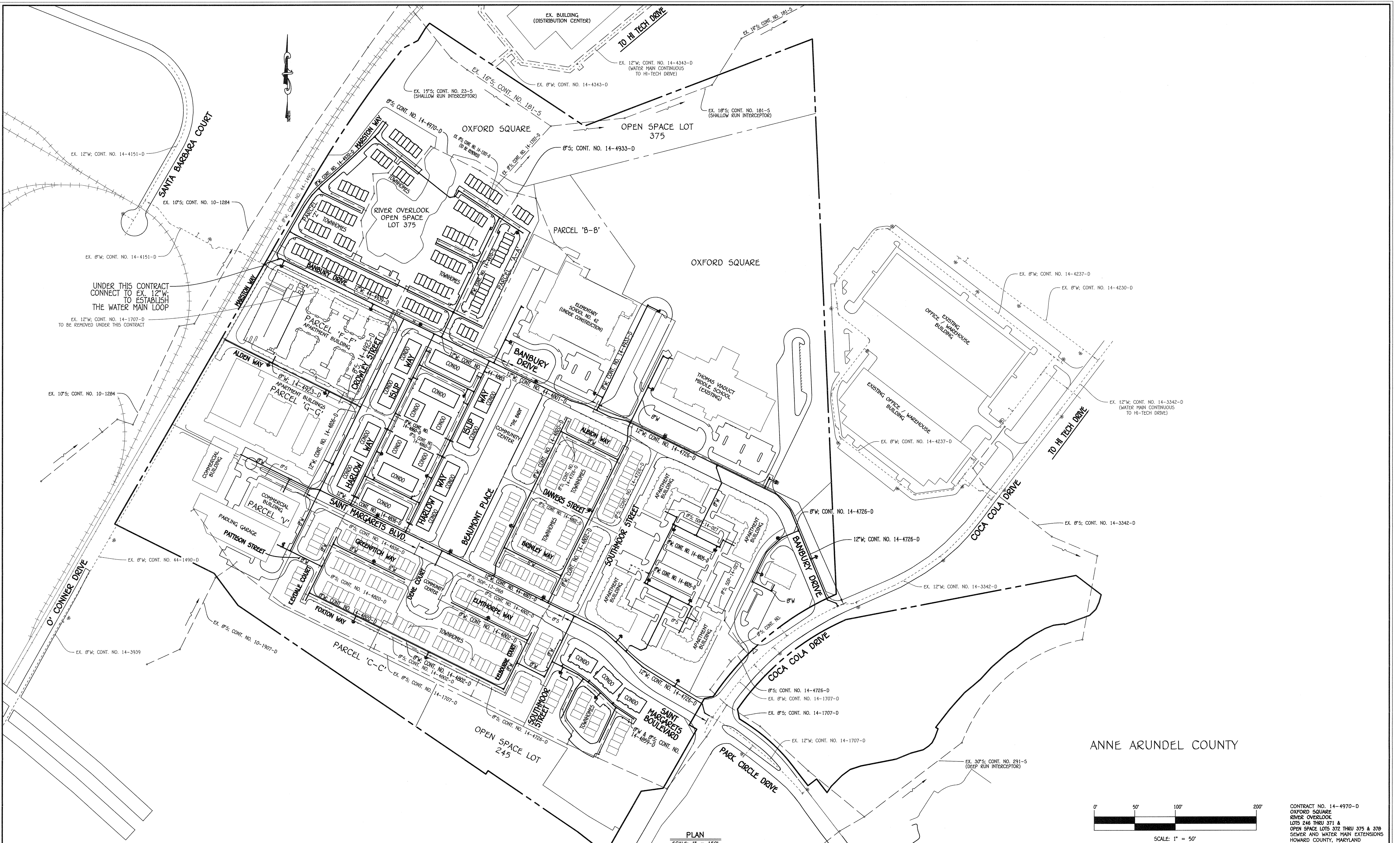
SHC'S & WHC'S: 'AS-BUILT' LOCATION TABLES

600' SCALE MAP NO. 30 BLOCK NO. 19 & 20
F.C.C. WORK ORDER NO. 09014-3015
FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

OXFORD SQUARE RIVER OVERLOOK
LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
SEWER AND WATER MAIN EXTENSIONS
CONTRACT NO. 14-4970-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 10 OF 12

I:\2009\0901A\Water & Sewer Contracts\301B - Sewer Contracts\301B - Contract No. 14-4970-D (SOP-16-052)\Final\0901A-301B Water and Sewer Contract Plan - Sheet 11.dwg

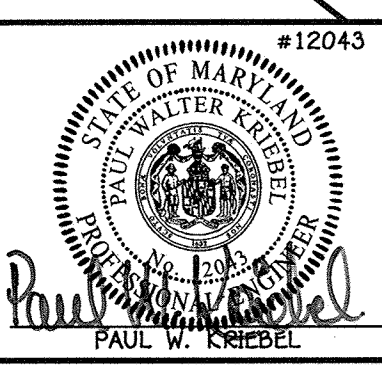


CONTRACT NO. 14-4970-D
 OXFORD SQUARE
 RIVER OVERLOOK
 LOTS 246 THRU 371 &
 OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 5.19.17
 DATE

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. 12043 EXPIRATION DATE IS 7/15/18.
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 NATIONAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PARK
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2999

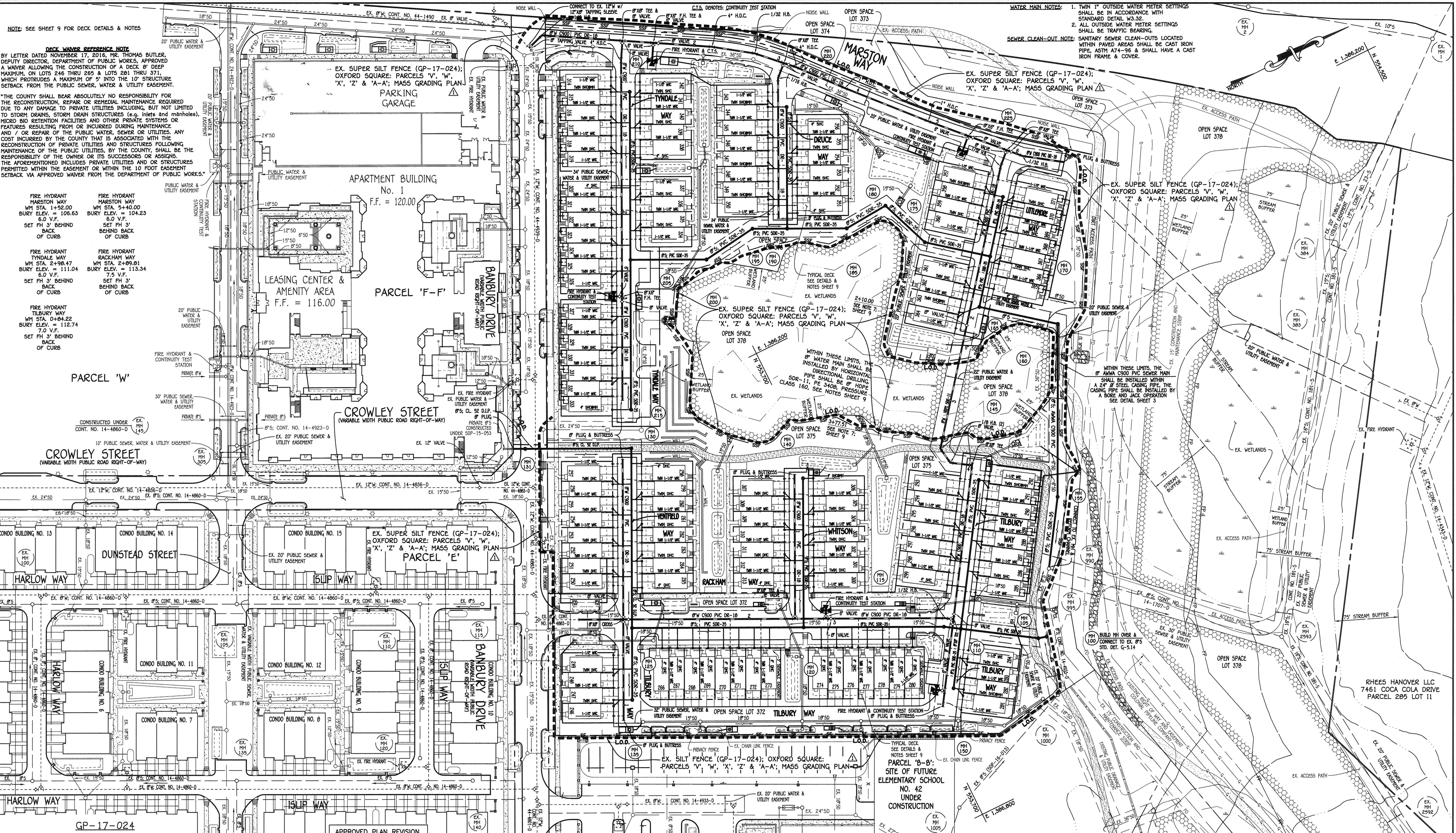


DESIGNED BY:	B.C.R.
DRAWN BY:	B.C.R.
CHECKED BY:	P.W.L.
DATE:	APRIL, 2017
PC	REVISION TOTAL SHEET NUMBER TO 119
BY:	NO.
REVISION:	

SEWER & WATER MAIN EXTENSIONS OVERVIEW	
600' SCALE MAP NO. 30	BLOCK NO. 19 & 20
F.C.C. WORK ORDER NO. 09014-3015	
FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN	

OXFORD SQUARE
 RIVER OVERLOOK
 LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 CONTRACT NO. 14-4970-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 11 OF 19



NOTE: SEE SHEET 9 FOR DECK DETAILS & NOTES

DECK WAIVER REFERENCE NOTE
 BY LETTER DATED NOVEMBER 17, 2016, MR. THOMAS BUTLER, DEPUTY DIRECTOR, DEPARTMENT OF PUBLIC WORKS, APPROVED A WAIVER ALLOWING THE CONSTRUCTION OF A DECK 8" DEEP MAXIMUM, ON LOTS 246 THRU 269 & LOTS 281 THRU 371, WHICH PROTRUDES A MAXIMUM OF 5' INTO THE 10' STRUCTURE SETBACK FROM THE PUBLIC SEWER, WATER & UTILITY EASEMENT.
 THE COUNTY SHALL BEAR ABSOLUTELY NO RESPONSIBILITY FOR THE RECONSTRUCTION, REPAIR OR REMEDIAL MAINTENANCE REQUIRED DUE TO ANY DAMAGE TO PRIVATE UTILITIES INCLUDING, BUT NOT LIMITED TO STORM DRAINS, STORM DRAIN STRUCTURES (e.g. inlets and manholes), MICRO BIO RETENTION FACILITIES AND OTHER PRIVATE SYSTEMS OR FEATURES RESULTING FROM OR INCURRED DURING MAINTENANCE AND / OR REPAIR OF THE PUBLIC WATER, SEWER OR UTILITIES. ANY COST INCURRED BY THE COUNTY THAT IS ASSOCIATED WITH THE RECONSTRUCTION OF PRIVATE UTILITIES AND STRUCTURES FOLLOWING MAINTENANCE OF THE PUBLIC UTILITIES, BY THE COUNTY, SHALL BE THE RESPONSIBILITY OF THE OWNER OR ITS SUCCESSORS OR ASSIGNS. THE AFORESAID INCLUDES PRIVATE UTILITIES AND OR STRUCTURES PERMITTED WITHIN THE EASEMENT OR WITHIN THE 10 FOOT EASEMENT SETBACK VIA APPROVED WAIVER FROM THE DEPARTMENT OF PUBLIC WORKS.

FIRE HYDRANT MARSTON WAY
 WM STA. 1+52.00
 BURY ELEV. = 106.63
 6.0 V.F.
 SET FH 3' BEHIND BACK OF CURB

FIRE HYDRANT TYNDALE WAY
 WM STA. 2+98.47
 BURY ELEV. = 111.04
 6.0 V.F.
 SET FH 3' BEHIND BACK OF CURB

FIRE HYDRANT TILBURY WAY
 WM STA. 0+84.22
 BURY ELEV. = 112.74
 7.0 V.F.
 SET FH 3' BEHIND BACK OF CURB

FIRE HYDRANT RACKHAM WAY
 WM STA. 5+40.00
 BURY ELEV. = 104.23
 6.0 V.F.
 SET FH 3' BEHIND BACK OF CURB

FIRE HYDRANT WHITSON WAY
 WM STA. 2+09.01
 BURY ELEV. = 113.34
 7.5 V.F.
 SET FH 3' BEHIND BACK OF CURB

CONSTRUCTED UNDER
 CONT. NO. 14-4860-D

10' PUBLIC SEWER, WATER & UTILITY EASEMENT
 (VARIABLE WIDTH PUBLIC ROAD RIGHT-OF-WAY)

CONDO BUILDING NO. 13

CONDO BUILDING NO. 14

DUNSTEAD STREET

CONDO BUILDING NO. 11

CONDO BUILDING NO. 12

CONDO BUILDING NO. 7

CONDO BUILDING NO. 8

CONDO BUILDING NO. 9

CONDO BUILDING NO. 6

CONDO BUILDING NO. 10

CONDO BUILDING NO. 5

CONDO BUILDING NO. 4

CONDO BUILDING NO. 3

CONDO BUILDING NO. 2

CONDO BUILDING NO. 1

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

APPROVED: *[Signature]* 12/13/17
 HOWARD SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

12-17-17
 DATE

APPROVED PLAN REVISION

Technical Review Date

1 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. 12043 EXPIRATION DATE IS 7/18/18.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PARK
 ELLICOTT CITY, MARYLAND 21142
 (410) 461-2999

PAUL W. KREIBEL
 #12043

SEDIMENT & EROSION CONTROL PLAN

SCALE: 1" = 50'

DESIGNED BY: B.C.R.
 DRAWN BY: B.C.R.
 CHECKED BY: P.W.K.
 DATE: NOVEMBER 2017

NEW SHEET: ADD SEDIMENT & EROSION CONTROL PLAN PER GP-17-024

60' SCALE MAP NO. 30 BLOCK NO. 19 & 20
 F.C.C. WORK ORDER NO. 09014-3013
 FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

OXFORD SQUARE RIVER OVERLOOK
 LOTS 246 THRU 371 AND OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 CONTRACT NO. 14-4970-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 12 OF 13

CONTRACT NO. 14-4970-D
 OXFORD SQUARE RIVER OVERLOOK
 LOTS 246 THRU 371 & OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

CONTRACT NO. 14-4970-D
 OXFORD SQUARE RIVER OVERLOOK
 LOTS 246 THRU 371 & OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

CONTRACT NO. 14-4970-D
 OXFORD SQUARE RIVER OVERLOOK
 LOTS 246 THRU 371 & OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

CONTRACT NO. 14-4970-D
 OXFORD SQUARE RIVER OVERLOOK
 LOTS 246 THRU 371 & OPEN SPACE LOTS 372 THRU 375 & 378
 SEWER AND WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. SOIL PREPARATION

- TEMPORARY STABILIZATION
- SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOW OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIGIDS RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
- APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
- A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - SOIL PH BETWEEN 6.0 AND 7.0.
 - SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOW-CASSIN CLAY IS PRESENT, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
 - SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

- APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
- GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
- APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
- MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE. REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRAGILE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

- TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
- TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
- TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: A. THE TEXTURE OF THE EXPOSED SUBSOIL MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH; B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS; C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH; D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
- TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
 - TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF COMPLEMENTED BY AN AGROMINORAL OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURE SUBSOLS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CONCRETES, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1/2 INCHES IN DIAMETER.
 - TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERBERIS GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEED, POISON Ivy, THISTLE, OR OTHERS AS SPECIFIED.
- TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGROMINORAL OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- TOPSOIL APPLICATION
 - EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
 - UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES, SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SEEDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

- SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
- FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY SPREADER EQUIPMENT. FERTILIZER MUST BE SUBSTITUTED WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WEIGHT OF THE PRODUCER.
- LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
- LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
- WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

STANDARD STABILIZATION NOTE

- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
- THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DICES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
 - SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

GP-17-024

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

APPROVED: DATE: 12/13/17

HOWARD SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

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. 12043 EXPIRATION DATE: 7/31/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALDORVILLE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461 - 2999

DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.W.K.
DATE: NOVEMBER 2017

NEW SHEET: ADD SEDIMENT & EROSION CONTROL: NOTES & DETAILS

PERMANENT SEEDING NOTES (B-4-5)

A. SEED MIXTURES

- GENERAL USE
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORRELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
 - FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
 - FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
- TURFGRASS MIXTURES
 - AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

- KENTUCKY BLUEGRASS: FULL SUN MIXTURE:
FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
- KENTUCKY BLUEGRASS/PERENNIAL RYE:
FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO HIGH LEVEL OF MAINTENANCE. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
- TALL FESCUE/KENTUCKY BLUEGRASS:
FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MAINTENANCE IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 99 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 6 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
- KENTUCKY BLUEGRASS/FINE FESCUE:
SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 40 TO 50 PERCENT, CERTIFIED FINE FESCUE AND 50 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

- NOTES:**
SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND".
- CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.
- IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5b, 6a) CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6b) EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7b)
 - TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES. LEVEL AND RAKE THE SURFACE TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
 - IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ANOMALOUSLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

Permanent Seeding Summary				Fertilizer Rate (10-20-20)	Lime Rate
Hardiness Zone (from Figure B.3):	Seed Mixture (from Table B.3):				
6b	—				
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depth	
1	TALL FESCUE	100	Mar. 1 - May 15 / Aug. 15 - Oct. 15	1/4" - 1/2" / 1/4" - 1/2"	45 lb. per acre (2 lb/1000 sf) (2 lb/1000 sf)
2					2 tons/ac (90 lb/1000 sf)

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

- DEFINITION**
A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.
- PURPOSE**
TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS. CONDITIONS WHERE PRACTICE APPLIES STOCKPILE AREA IS UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.
- CRITERIA**
- THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
 - THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
 - RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
 - ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
 - CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DICE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
 - WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
 - STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
 - IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LEAK SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.
- MAINTENANCE**
THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

APPROVED PLAN REVISION

Technical Review	Date

TEMPORARY SEEDING NOTES (B-4-4)

- DEFINITION**
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.
- PURPOSE**
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.
- CONDITIONS WHERE PRACTICE APPLIES**
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.
- CRITERIA**
- SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
 - FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
 - WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

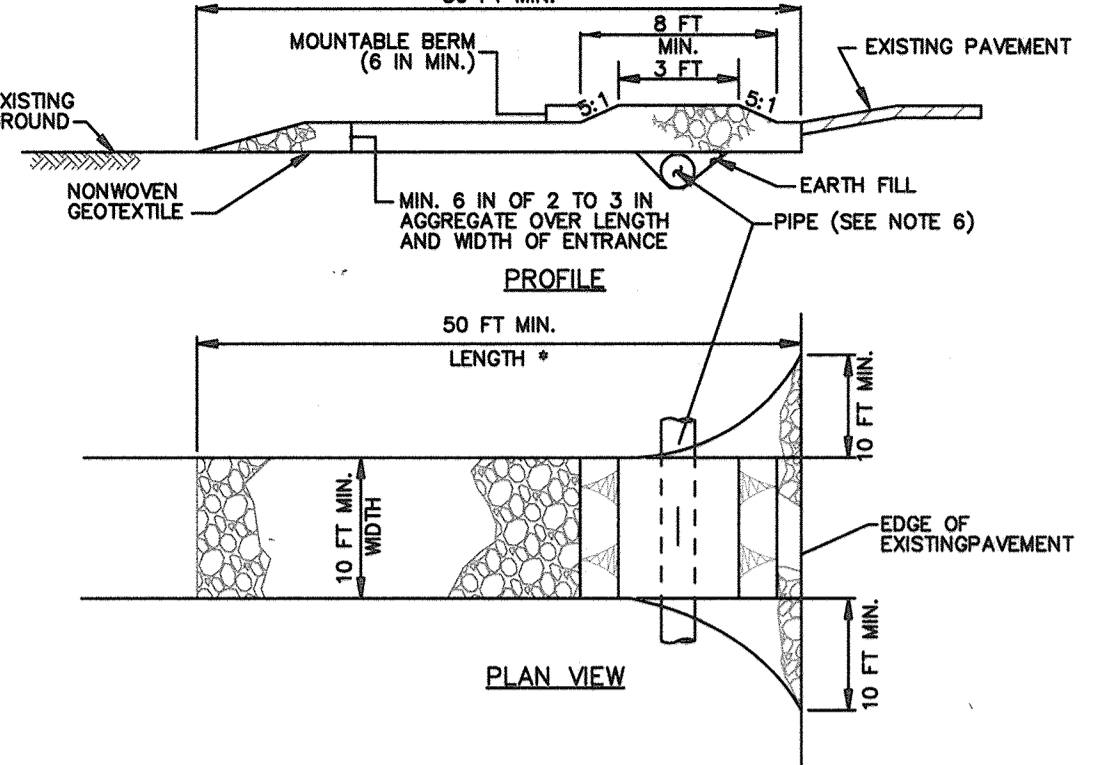
Temporary Seeding Summary				Fertilizer Rate (10-20-20)	Lime Rate
Hardiness Zone (from Figure B.3):	Seed Mixture (from Table B.1):				
6b	—				
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depth		
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 lb/ac (10 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
OATS	72		1"		
RYE	112		1"		

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

- A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1895 AFTER THE FUTURE LEO AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
 - PRIOR TO THE START OF EARTH DISTURBANCE.
 - UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
 - PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.
 - PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DICES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3).
- TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15% OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHING WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
- SITE ANALYSIS:

TOTAL AREA OF SITE:	20.66 ACRES
AREA DISTURBED:	3.01 ACRES
AREA TO BE ROOFED OR PAVED:	0.00 ACRES
AREA TO BE VEGETATIVELY STABILIZED:	3.01 ACRES
TOTAL CUT:	0 CU. YDS.
TOTAL FILL:	0 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION:	N/A
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY, AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
 - INSPECTION DATE
 - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
 - NAME AND TITLE OF INSPECTOR
 - WEATHER INFORMATION (DISBURSE CONDITIONS AS WELL AS THE AMOUNT OF LATEST RECORDED PRECIPITATION)
 - BRIEF DESCRIPTION OF PRODUCTS STATUS (E.G. PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
 - EVIDENCE OF SEDIMENT DEFICIENCIES
 - IDENTIFICATION OF PLAN DEFICIENCIES
 - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
 - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
 - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
 - PHOTOGRAPHS
 - MONITORING/SAMPLING
 - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
 - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION
 - ACTIVITIES (NPDES, HDE).
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY BE ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
- DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MINIMUM AVERAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
- WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
- TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION TO FINAL GRADE.
- ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMPERATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
- STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUDES):
 - USE I: AND IP: MARCH 1 - JUNE 15
 - USE II: AND IP: OCTOBER 1 - APRIL 30
 - USE III: MARCH 1 - MAY 31
- A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE



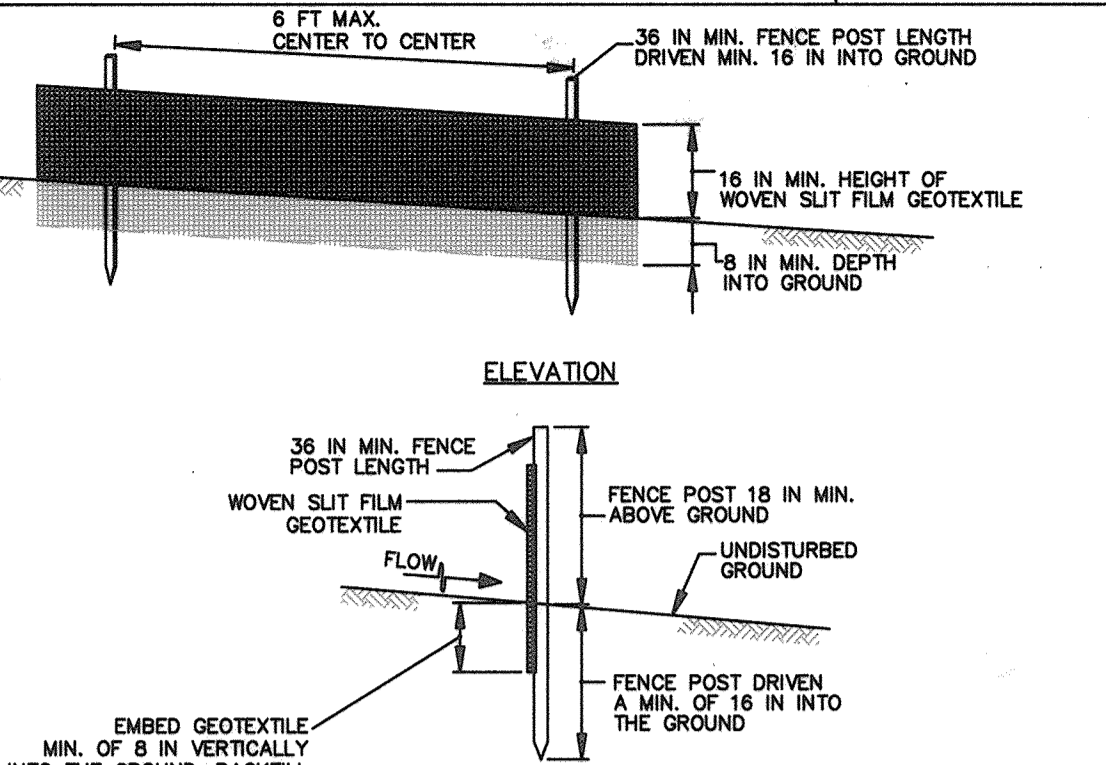
CONSTRUCTION SPECIFICATIONS

- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE. MAINTAIN POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 2:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
- PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT, AD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE. MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED onto ADVANCED ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED onto PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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DETAIL E-1 SILT FENCE



CONSTRUCTION SPECIFICATIONS

- USE WOOD POSTS 1 1/2 X 3/4 INCH (MINIMUM) SQUARE OR ROUND SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "I" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
- USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
- USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF GEOTEXTILE.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
- EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT. (7 DAYS)
- NOTIFY "MISS UTILITY" AT 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 48 HOURS BEFORE STARTING WORK.
- REQUEST FOR A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY. (1 DAY)
- INSTALL SEDIMENT CONTROLS AS INDICATED ON SHEET 12. THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON ALL SEDIMENT CONTROL DEVICES/PRACTICES ON A DAILY BASIS AND IMMEDIATELY AFTER A RAINFALL. (2 DAYS)
- CLEARING AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF THE SEWER MAIN. (2 DAYS)
- INSTALL REMAINING PERIMETER CONTROL MEASURES AND INSTALL TEMPORARY SEEDING AS REQUIRED. (2 DAYS)
- CONSTRUCT SEWER AND WATER MAINS. (25 DAYS)
- APPROVAL OF THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF SEDIMENT CONTROLS. (1 DAY)
- REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS. (3 DAYS)

DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND THAT ALL 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

SIGNATURE OF DEVELOPER

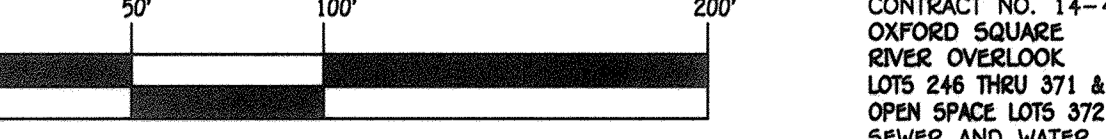
DATE

ENGINEER'S CERTIFICATION

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.

SIGNATURE OF ENGINEER

DATE



CONTRACT NO. 14-4970-D
OXF