QUANTITIES

ITEM	ESTIMATED	AS-BUILT QUANTITIES	AS-BUILT TYPE	AS-BUILT SUPPLIER
8"S PVC; SDR-35	2,555 L.F.	2550	National Pipe & Plastics	FERGUSON
8"S; CL. 52 D.I.P.	1,373 L.F.	1409	McWane Inc.	" "
4"S PVC; SDR-35	1,921 L.F.	1849	National Pipe & Plastics	" "
CLEAN-OUT	69 EACH	64	Horne Concrete	HORNE
MANHOLE	23 EACH	22	Atlantic Precast	ATLANTIC CONCRETE
8"W C900 PVC; DR-18	4,306 L.F.	4415	National Pipe & Plastics	FERGUSON
6"W C900 PVC; DR-18	256 L.F.	241	National Pipe & Plastics	" "
1-1/2" WHC	2,619 L.F.	2595	Mueller Industries	" "
OUTSIDE METER SETTING	101 EACH	98	A.Y. McDonald	" "
1/8 H.B.	6 EACH	6	Tyler/Union	" "
1/16 H.B.	5 EACH	1	Tyler/Union	" "
1/32 H.B.	5 EACH	6	Tyler/Union	" "
2" H.D.C.	3 EACH	1	Certainteed	" "
3" H.D.C.	1 EACH	—	Certainteed	" "
8" VALVE	10 EACH	11	Mueller Comp.	" "
6" VALVE	9 EACH	10	Mueller Comp.	" "
8"X8" TEE	2 EACH	2	—	" "
8"X6" F.H. TEE	9 EACH	9	Tyler/Union	" "
FIRE HYDRANT	9 EACH	9	Mueller Comp.	" "
CONTINUITY TEST STATION	9 EACH	9	Vestal Manufacturing	" "
8" PLUG & BUTTRESS	2 EACH	2	Tyler/Union	" "
8"x 4" TEE	1 EACH	1	—	" "
4" VALVE	1 EACH	1	—	" "
4" PLUG & BUTTRESS	1 EACH	1	—	" "
4"W C900 PVC; DR-18	295 L.F.	291	—	" "

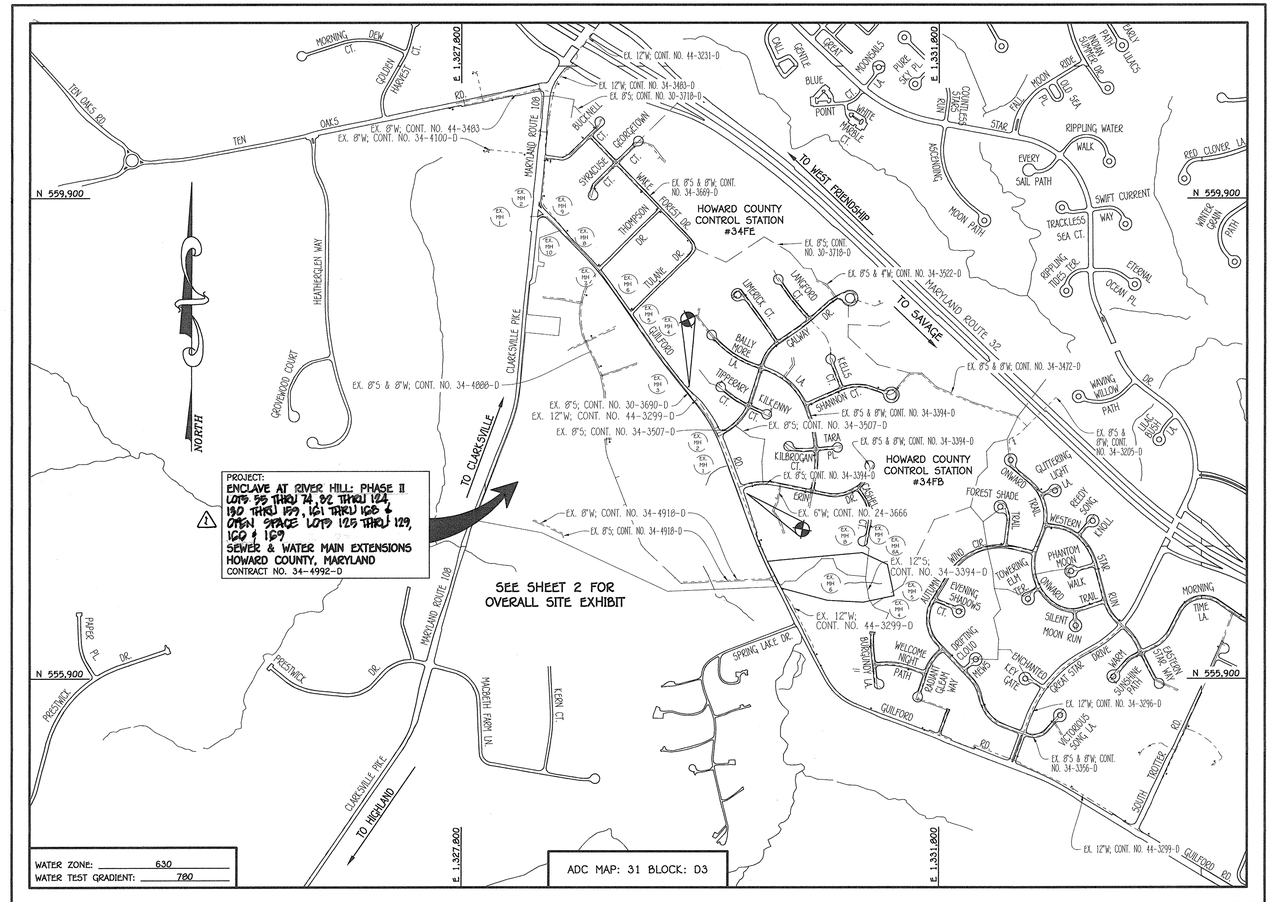
NAME OF UTILITY CONTRACTOR: UTILITIES UNLIMITED, INC.

SURVEY & DRAFTING DIVISION AS-BUILT DATE:

BENCHMARK INFORMATION

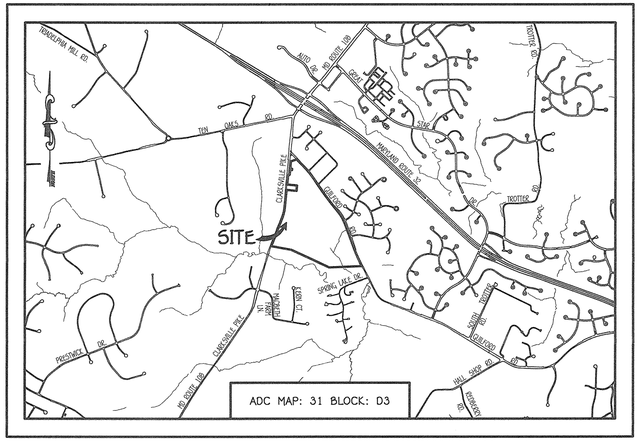
B.M.#34FB – HOWARD COUNTY CONTROL STATION #34FB – HORIZONTAL – NAD '83)
LOCATED EAST OF ERIN DRIVE, ALONG QUILFORD ROAD, APPROX. 21' BEHIND EDGE OF PAVING
N 557,439.911
E 1,330,191.324
ELEVATION = 406.147 – VERTICAL – (NAVD '88)

B.M.#34FE – HOWARD COUNTY CONTROL STATION #34FE – HORIZONTAL – (NAD '83)
LOCATED WEST OF GALWAY DRIVE, ALONG QUILFORD ROAD EAST OF DRIVEWAY #221. SET BEHIND THE EXISTING FIRE HYDRANT
N 558,339.599
E 1,329,709.033
ELEVATION = 431.115 – VERTICAL – (NAVD '88)



LOCATION MAP

SCALE: 1" = 600'



VICINITY MAP

SCALE: 1" = 2000'

GENERAL NOTES

PART A
1. 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.
2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON OR ABOUT FEBRUARY, 2014 BY FISHER, COLLINS & CARTER, INC.
3. 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. 34FB & NO. 34FE.
ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. 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.
6. 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.
7. 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.
8. 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 (CONTRACTOR SERVICES)	410-637-8713
BGE (EMERGENCY)	410-685-0123
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033 / 410-224-9210

9 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.
10. 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.
11. 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.

PART B: WATER MAIN GENERAL NOTES
1. ALL WATER MAINS SHALL BE AWWA C900 PVC; DR-18.
2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
7. 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.
8. FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA 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.
9. 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 HARNESSES. 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.
10. 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.
11. ALL CHANGES IN HORIZONTAL OR VERTICAL 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, 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 ½-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 CERTAINTEED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.

FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR-18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR-18 OR EQUAL.

12. 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 INSERT 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 IRON, INC. OR APPROVED EQUAL.
13. TO ACCOMMODATE A SPRINKLER SYSTEM, ALL RESIDENTIAL DWELLING UNITS SHALL HAVE A 1-1/2" WATER HOUSE CONNECTION WITH A 1" OUTSIDE METER SETTING; STD. DET. W-3.28.

PART C: SEWER MAIN GENERAL NOTES
1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
3. FORCE MAINS SHALL BE D.I.P. ONLY.
4. MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
5. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

TYPE OF BUILDING:	RESIDENTIAL: SINGLE FAMILY DETACHED
NUMBER OF LOTS:	(101) BUILDABLE(S)
NO. OF WATER HOUSE CONNECTIONS:	101
NO. OF SEWER HOUSE CONNECTIONS:	69
SEWER SHED:	MIDDLE PATUXENT
TREATMENT PLANT:	LITTLE PATUXENT WASTEWATER RECLAMATION PLANT SAVAGE, MARYLAND

PLAN REFERENCE NUMBERS:
F-17-003 (PUBLIC ROADS & RECORD PLAT)
SDP-18-032

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: BEAZER HOMES, LLC — 06-30-17
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."

Paul W. Kriebel — 06/30/17
SIGNATURE OF ENGINEER — DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE HOWARD COUNTY DESIGN MANUAL – VOLUME IV: STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND AS SHOWN ON THE ROAD CONSTRUCTION PLANS: F-17-003, AND ON THESE PLANS.

FOR: BEAZER HOMES, LLC — Paul W. Kriebel — 06-30-17
SIGNATURE OF DEVELOPER — DATE

F-17-003

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

APPROVED: John L. Robertson — 7/19/17
HOWARD SOIL CONSERVATION DISTRICT — DATE

LEGEND	
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

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, ⚠ 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

AS-BUILT
Date 11/2/18

OWNER	DEVELOPER
TIERNEY FARMS – CLARKSVILLE, L.P. 24151 VENTURA BOULEVARD CALABASAS, CALIFORNIA 91302 PH: (818) 385-3697	BEAZER HOMES, LLC 9965 GUILFORD ROAD SUITE 290 COLUMBIA, MARYLAND 21046 PH: (765) 894-0182

0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, ⚠ 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — 7/2/17 DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — 7/10/17 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
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

#12043 STATE OF MARYLAND PAUL WALTER KRIEBEL PROFESSIONAL ENGINEER
Paul W. Kriebel
PAUL W. KRIEBEL

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

BY	NO.	REVISION	DATE
FCC	⚠	REVISE QUANTITIES TO INCLUDE 8"S & 4"W TO LOTS 160 THRU 169 REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	9/20/18

SEWER & WATER MAIN EXTENSIONS TITLE SHEET

600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

ENCLAVE AT RIVER HILL: PHASE II

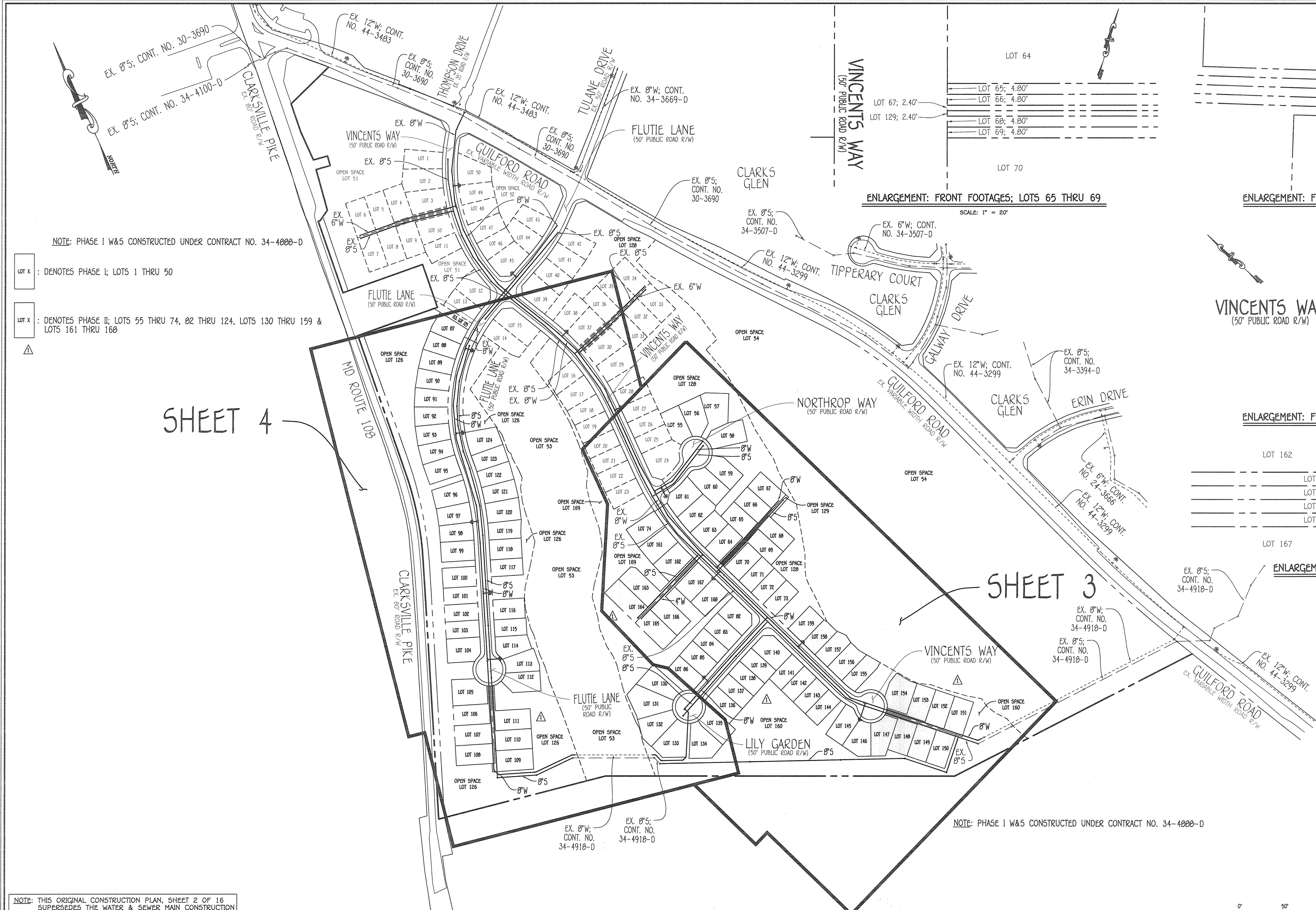
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & ⚠ OPEN SPACE LOTS 125 THRU 129, 160 & 169

SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 16

N:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Finals\13008-3001 Water & Sewer Contract Plan.dwg



NOTE: PHASE I W&S CONSTRUCTED UNDER CONTRACT NO. 34-4888-D

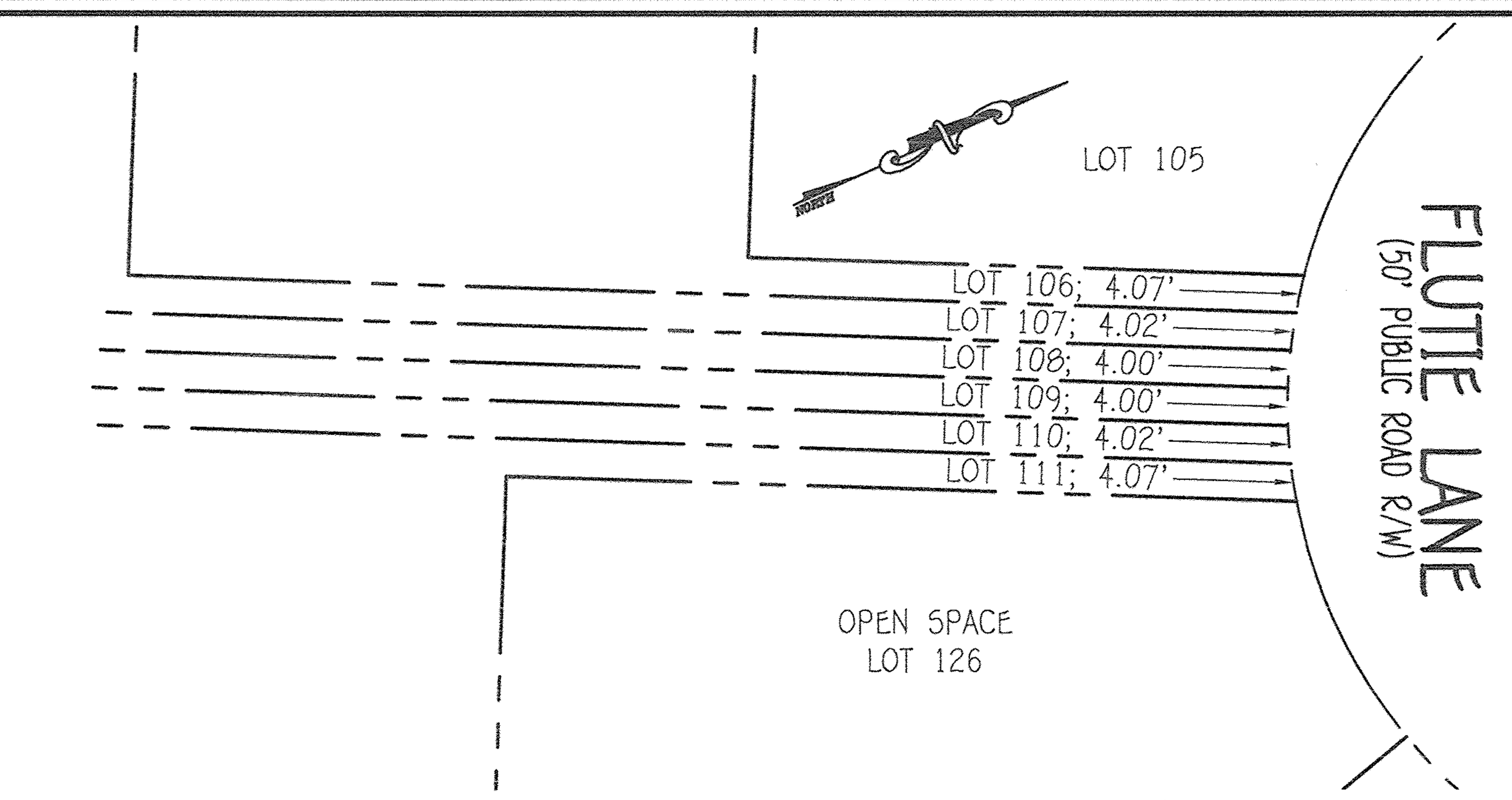
LOT X : DENOTES PHASE I; LOTS 1 THRU 50

LOT X : DENOTES PHASE II; LOTS 55 THRU 74, 82 THRU 124, LOTS 130 THRU 159 & LOTS 161 THRU 168 ⚠1

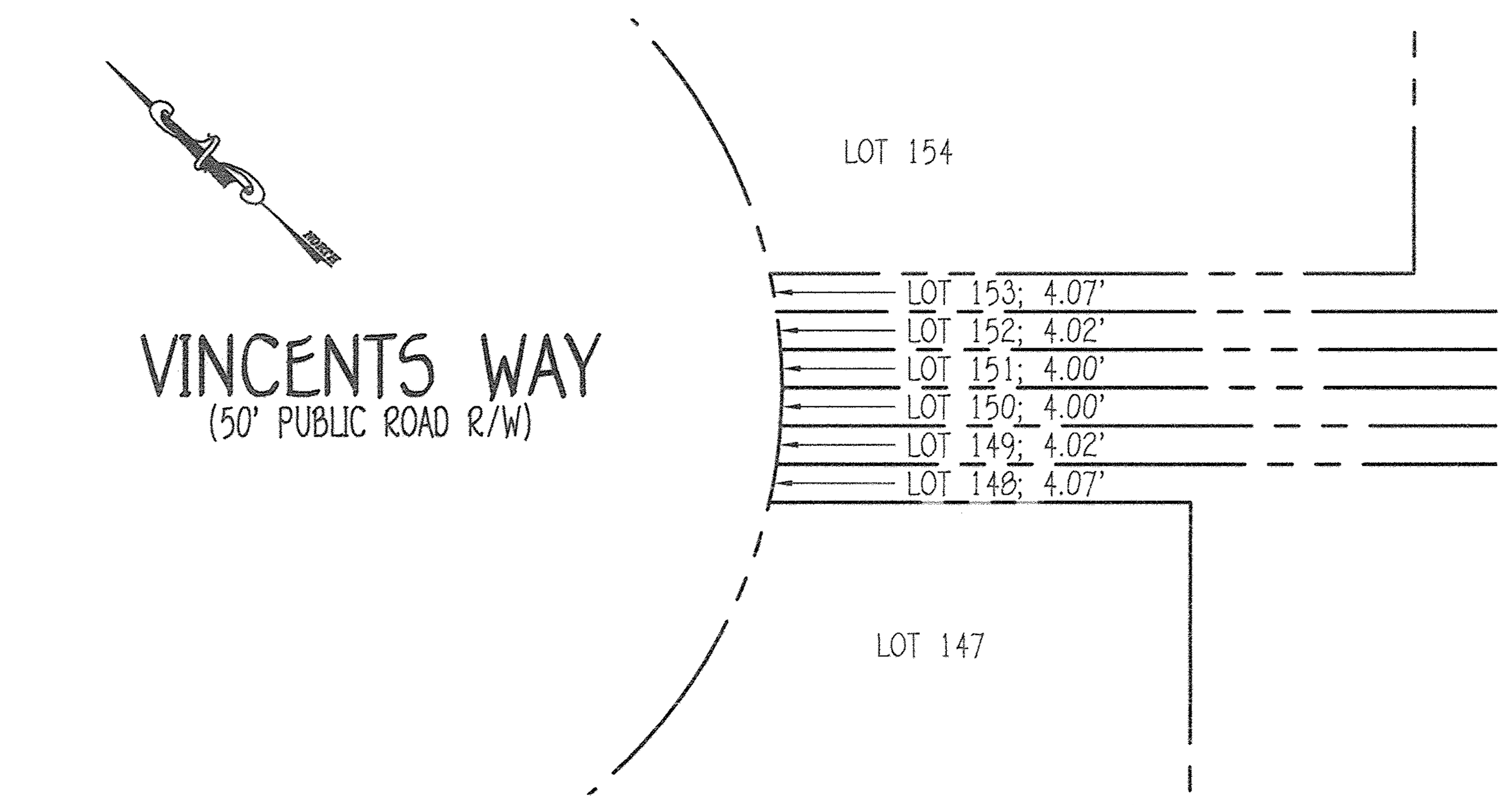
NOTE: PHASE I W&S CONSTRUCTED UNDER CONTRACT NO. 34-4888-D

PLAN
SCALE: 1" = 150'

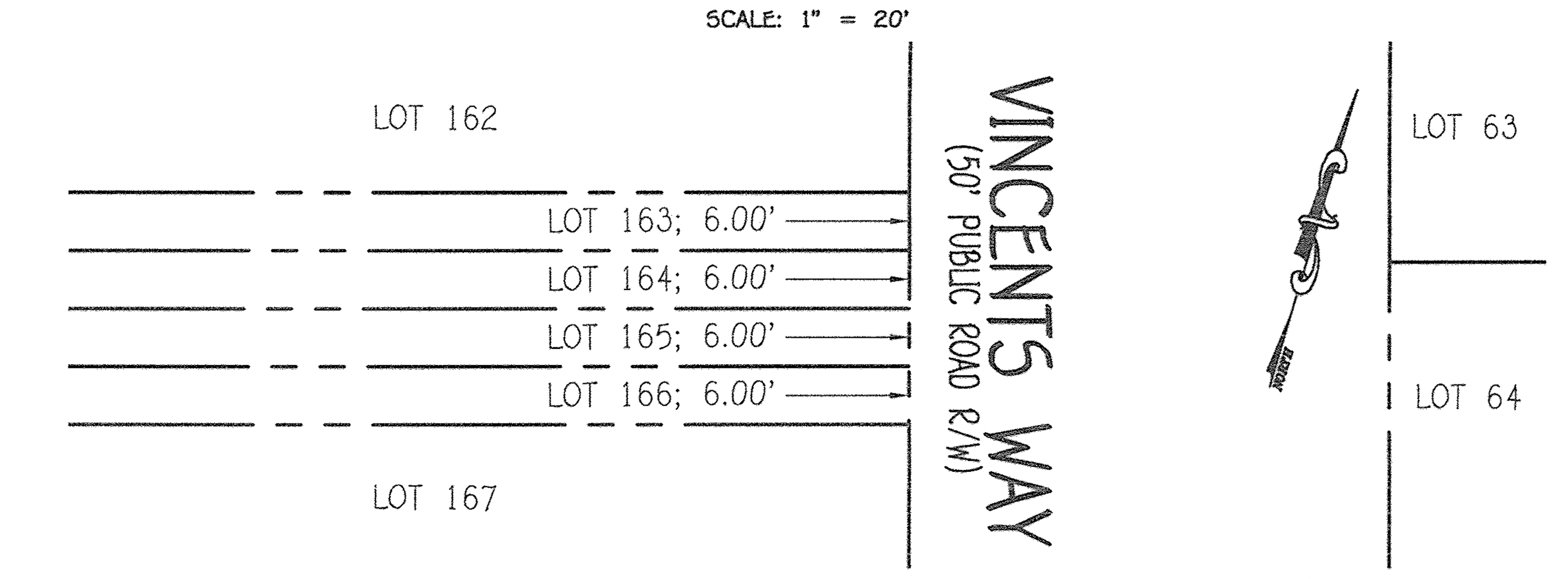
ENLARGEMENT: FRONT FOOTAGES; LOTS 65 THRU 69
SCALE: 1" = 20'



ENLARGEMENT: FRONT FOOTAGES; LOTS 106 THRU 111
SCALE: 1" = 20'



ENLARGEMENT: FRONT FOOTAGES; LOTS 148 THRU 153
SCALE: 1" = 20'



ENLARGEMENT: FRONT FOOTAGES; LOTS 163 THRU 166 ⚠1
SCALE: 1" = 20'

AS-BUILT
By [signature] Date 11/2/18

0' 50' 100' 200'
SCALE: 1" = 50'

⚠1
CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 2 OF 16 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON JULY 21, 2017.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[signature] 2-23-18
CHIEF, BUREAU OF UTILITIES — DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
[signature] 3.9.18
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — 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
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

02/16/18 #12043 STATE OF MARYLAND PAUL WALTER KRIEBEL No. 12043 PROFESSIONAL ENGINEER
[signature]
PAUL W. KRIEBEL

DESIGNED BY : B.C.R.				
DRAWN BY : B.C.R.	FCC	⚠1	ADD FRONT FOOTAGE ENLARGEMENT FOR LOTS 163 THRU 168	1-5-18
	FCC	⚠1	REVISE LOT LINES: LOTS 55 THRU 58, 136 THRU 159 & LOTS 161 THRU 168	1-5-18
CHECKED BY : P.W.K.	FCC	⚠1	REVISE LOT LINES: LOTS 105 THRU 111	1-5-18
DATE : FEBRUARY, 2018	FCC	⚠1	REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	1-5-18
	BY	NO.	REVISION	DATE

OVERALL SITE EXHIBIT
PLAN
FRONT FOOTAGE ENLARGEMENTS
600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

⚠1 ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 2 OF 16

I:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Redline #1 - December, 2017\13008-3001 Water & Sewer Contract Plan.dwg, 2/15/2018 6:37:23 PM

NOTE: SEE SHEET 12 FOR SEDIMENT & EROSION CONTROL PLAN; SEWER MAIN & SHC INSTALLATION FROM EX. MH 760 TO MH 800

NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 3 OF 16 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON JULY 21, 2017.

PLAN

SCALE: 1" = 50'

0' 50' 100' 200'

SCALE: 1" = 50'

△1 CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

2-23-18

CHIEF, BUREAU OF UTILITIES — DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

3-9-18

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 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
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

02/16/18 — STATE OF MARYLAND — PAUL WALTER KRIEBEL — PROFESSIONAL ENGINEER — #12043

PAUL W. KRIEBEL

DESIGNED BY : B.C.R.
DRAWN BY : B.C.R.
CHECKED BY : P.W.K.
DATE : FEBRUARY, 2018

BY	NO.	REVISION	DATE
FCC	△1	RELOCATE FIRE HYDRANT ALONG VINCENTS WAY TO STA. 2+89.34	1-5-18
FCC	△1	REVISE LOT LINES: LOTS 55 THRU 58, 136 THRU 159 & LOTS 161 THRU 168	1-5-18
FCC	△1	ADD W&S MAIN EXTENSIONS FOR LOTS 163-166	1-5-18
FCC	△1	ADD TWO (2) LOTS OFF VINCENTS WAY, BETWEEN LOTS 162 & 167	1-5-18
FCC	△1	REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	1-5-18

SEWER & WATER MAIN EXTENSIONS PLAN

600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

△1 ENCLAVE AT RIVER HILL: PHASE II

LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 &
OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 4 OF 16 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON JULY 21, 2017.

For locations 6, 7, 8, 9, 10 and 11 see Sheet 13 of 16.

PLAN

SCALE: 1" = 50'

0' 50' 100' 200'

SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 2-23-18 CHIEF, BUREAU OF UTILITIES — DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND 3-9-18 CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — 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 CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042 (410) 461 – 2855	02/16/18 STATE OF MARYLAND PAUL WALTER KRIEBEL PROFESSIONAL ENGINEER No. 12043 #12043 PAUL W. KRIEBEL	DESIGNED BY : B.C.R. DRAWN BY : B.C.R. CHECKED BY : P.W.K. DATE : FEBRUARY, 2018	

BY	NO.	REVISION	DATE
FCC	1	REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	1-5-18

SEWER & WATER MAIN EXTENSIONS PLAN

600' SCALE MAP NO. 34 BLOCK NO. 18

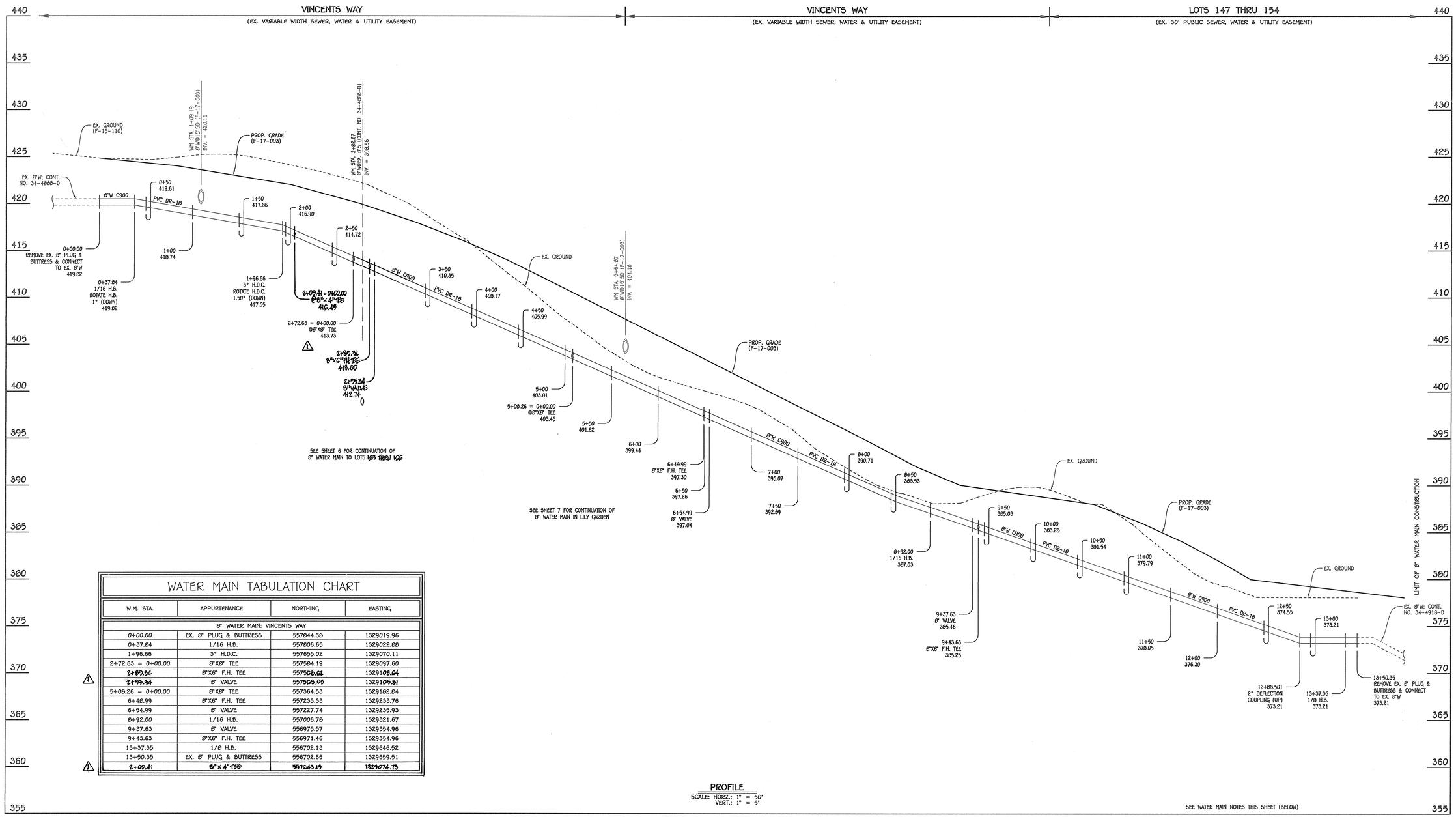
F.C.C. WORK ORDER NO. 13008-3001

FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

ENCLAVE AT RIVER HILL: PHASE II

LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 &
OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN



WATER MAIN TABULATION CHART

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: VINCENTS WAY			
0+00.00	EX. 8" PLUG & BUTTRESS	557844.38	1329019.96
0+37.84	1/16 H.B.	557806.65	1329022.88
1+96.66	3° H.O.C.	557655.02	1329070.11
2+72.63 = 0+00.00	8"X8" TEE	557584.19	1329097.60
~~2+89.31~~	~~8"X6" F.H. TEE~~	~~557568.02~~	~~1329103.64~~
~~2+95.34~~	~~8" VALVE~~	~~557563.05~~	~~1329105.81~~
5+08.26 = 0+00.00	8"X8" TEE	557364.53	1329182.84
6+48.99	8"X6" F.H. TEE	557233.33	1329233.76
6+54.99	8" VALVE	557227.74	1329235.93
8+92.00	1/16 H.B.	557006.78	1329321.67
9+37.63	8" VALVE	556975.57	1329354.96
9+43.63	8"X6" F.H. TEE	556971.46	1329354.96
13+37.35	1/8 H.B.	556702.13	1329646.52
13+50.35	EX. 8" PLUG & BUTTRESS	556702.66	1329659.51
~~2+09.41~~	~~8"x 4"-45°~~	~~557643.19~~	~~1329076.73~~

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

8" WATER MAIN: VINCENTS WAY

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.

AS-BUILT
Date 11/2/18

0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 7/3/17

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — DATE 7/24/17

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 IS 7/16/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

#12043 STATE OF MARYLAND PAUL WALTER KAEBEL PROFESSIONAL ENGINEER
PAUL W. KAEBEL

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

BY	NO.	REVISION	DATE
FCC	1	REVISE WM PROFILE & CHART TO ADD 8"x 4"-45° & REVISE WM LOCATION REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	9/20/18

WATER MAIN EXTENSIONS
PROFILE, CHART & NOTES

600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

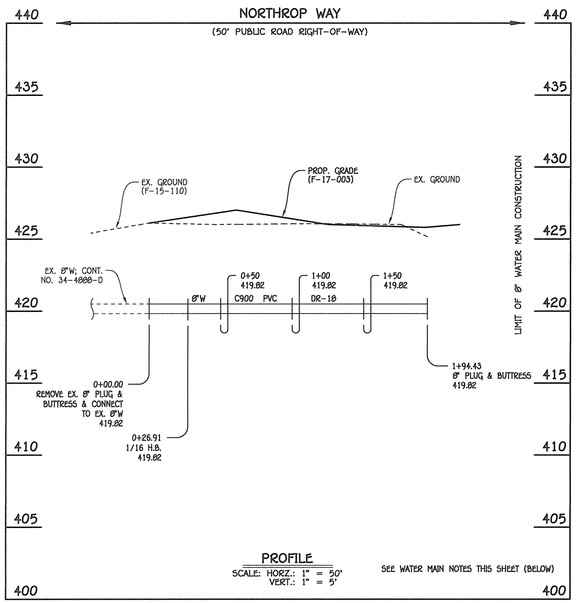
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169

SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

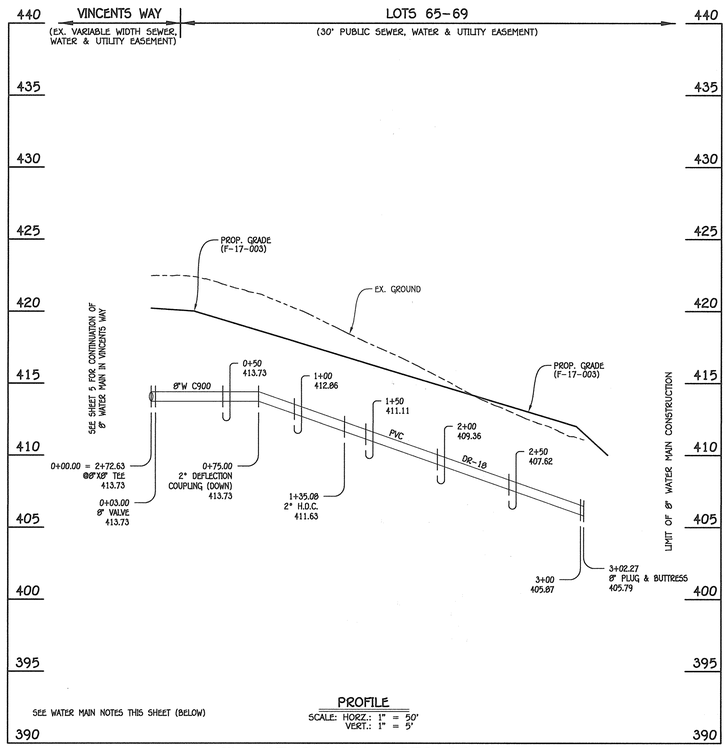
SHEET 5 OF 16

I:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Finals\13008-3001 Water & Sewer Contract Plan.dwg



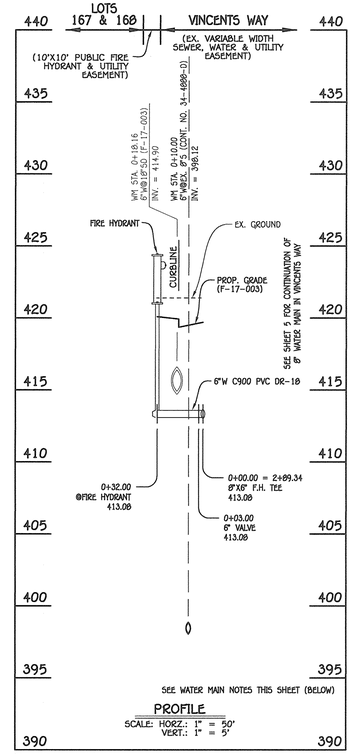
8" WATER MAIN: NORTHROP WAY

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: NORTHROP WAY			
0+00.00	EX. 8" PLUG & BUTTRESS	557903.86	1329056.30
0+26.91	1/16 H.B.	557905.93	1329083.13
1+94.43	8" PLUG & BUTTRESS	557983.41	1329231.65



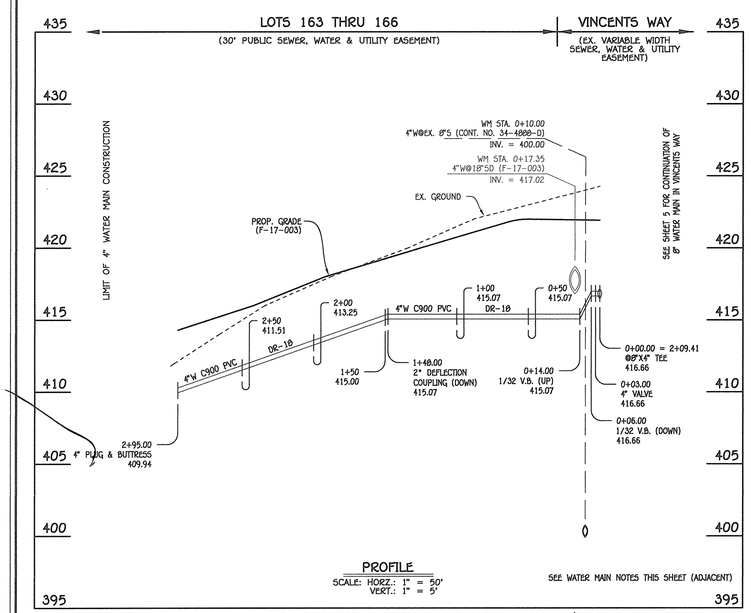
8" WATER MAIN: LOTS 65-69

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: LOTS 65-69			
0+00.00 = 2+72.63	8"X8" TEE	557584.19	1329097.60
0+03.00	8" VALVE	557585.28	1329100.40
1+35.08	2" H.D.C.	557633.06	1329223.53
3+02.27	8" PLUG & BUTTRESS	557699.38	1329377.00



⚠ 6" FIRE HYDRANT LEAD: VINCENTS WAY

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
6" FIRE HYDRANT LEAD : VINCENTS WAY			
0+00.00 = 2+89.34	8"X6" F.H. TEE	557568.62	1329103.64
0+03.00	6" VALVE	557567.54	1329100.84
0+32.00	FIRE HYDRANT	557557.04	1329073.81



4" WATER MAIN: LOTS 163 THRU 166 ⚠

⚠

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
4" WATER MAIN: LOTS 163 THRU 166			
0+00.00 = 2+09.41	8"X4" TEE	557643.13	1329074.73
0+03.00	4" VALVE	557642.05	1329071.93
2+95.00	4" PLUG & BUTTRESS	557536.41	1328799.71

AS-BUILT
By [illegible] Date 11/2/18

NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 6 OF 16 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON JULY 21, 2017.

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.

0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D ⚠
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 160 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 2-23-18

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — DATE 3.9.18

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
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

#12043 STATE OF MARYLAND PAUL WALTER KREBEL PROFESSIONAL ENGINEER
02/16/18
PAUL W. KREBEL

DESIGNED BY : B.C.R.
DRAWN BY : B.C.R.
CHECKED BY : P.W.K.
DATE : FEBRUARY, 2018

BY	NO.	REVISION	DATE
FCC	⚠	REVISE F.H. PROFILE TO REFLECT NEW LOCATION	1-5-18
FCC	⚠	ADD 4"W PROFILE FOR LOTS 163 THRU 166	1-5-18
FCC	⚠	REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	1-5-18

WATER MAIN EXTENSIONS
PROFILES, CHARTS & NOTES

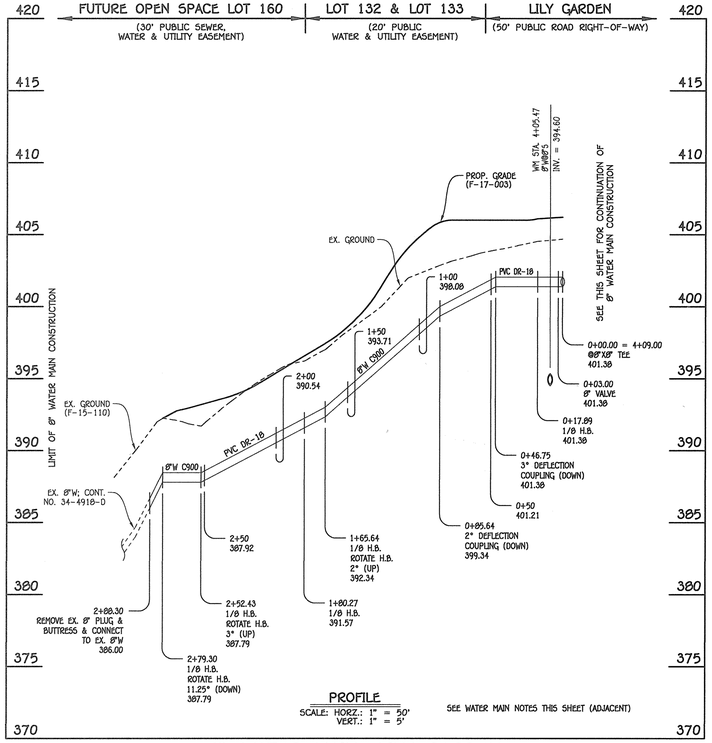
600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

⚠ ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 160 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

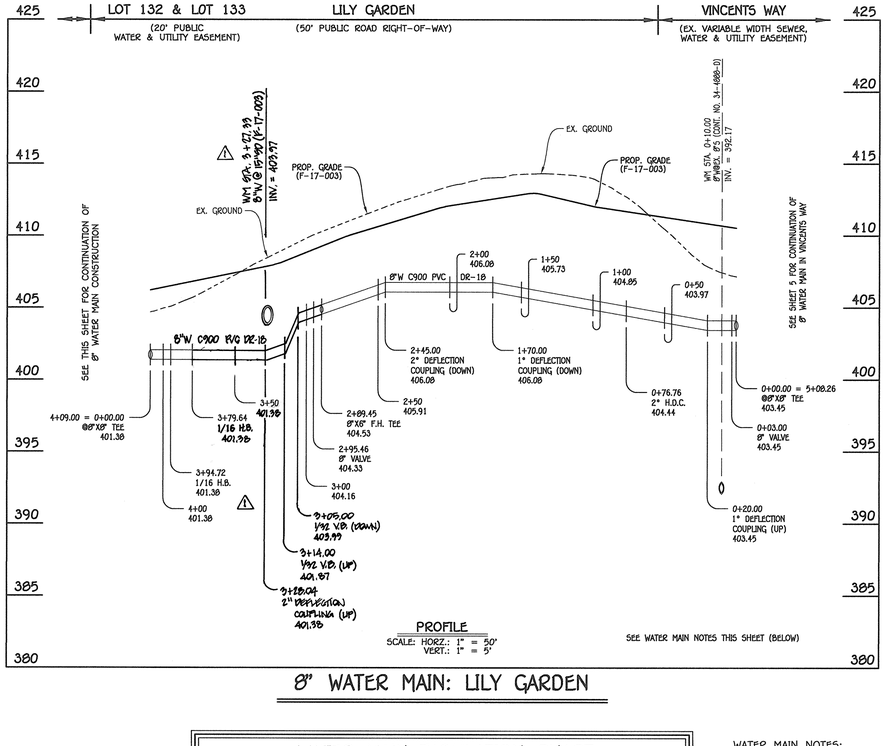
SHEET 6 OF 16

I:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Redline #1 - December, 2017\13008-3001 Water & Sewer Contract Plan.dwg, 2/16/2018 11:00:45 AM



8" WATER MAIN: LILY GARDEN

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: LILY GARDEN			
0+00.00 = 4+09.00	@8"X8" TEE	557205.72	1328805.98
0+03.00	8" VALVE	557202.97	1328807.16
0+17.39	@8"X8" TEE	557189.76	1328812.83
1+65.64	1/8 H.B.	557058.40	1328744.09
1+80.27	1/8 H.B.	557053.54	1328730.29
2+52.43	1/8 H.B.	557082.41	1328664.15
2+79.30	1/8 H.B.	557107.77	1328655.27
2+88.30	EX. 8" PLUG & BUTTRESS	557111.54	1328647.10



8" WATER MAIN: LILY GARDEN

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: LILY GARDEN			
0+00.00 = 5+08.26	8"X8" TEE	557364.53	1329182.84
0+03.00	8" VALVE	557363.44	1329180.05
0+76.76	2" H.D.C.	557336.76	1329111.28
2+85.45	8"X6" F.H. TEE	527252.87	1328915.84
2+91.45	8" VALVE	557250.51	1328910.32
4+09.00 = 0+00.00	@8"X8" TEE	557205.72	1328805.98

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.

AS-BUILT
Date 11/2/18

0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 7-12-17

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/10/17

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 IS 7/16/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

#12043 STATE OF MARYLAND PAUL WALTER KRIEBEL PROFESSIONAL ENGINEER
PAUL W. KRIEBEL

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

BY	NO.	REVISION	DATE
PCC	1	REVISE 8"WM PROFILE IN LILY GARDEN TO CLEAR 15"HDP CROSSING, REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	2/20/18

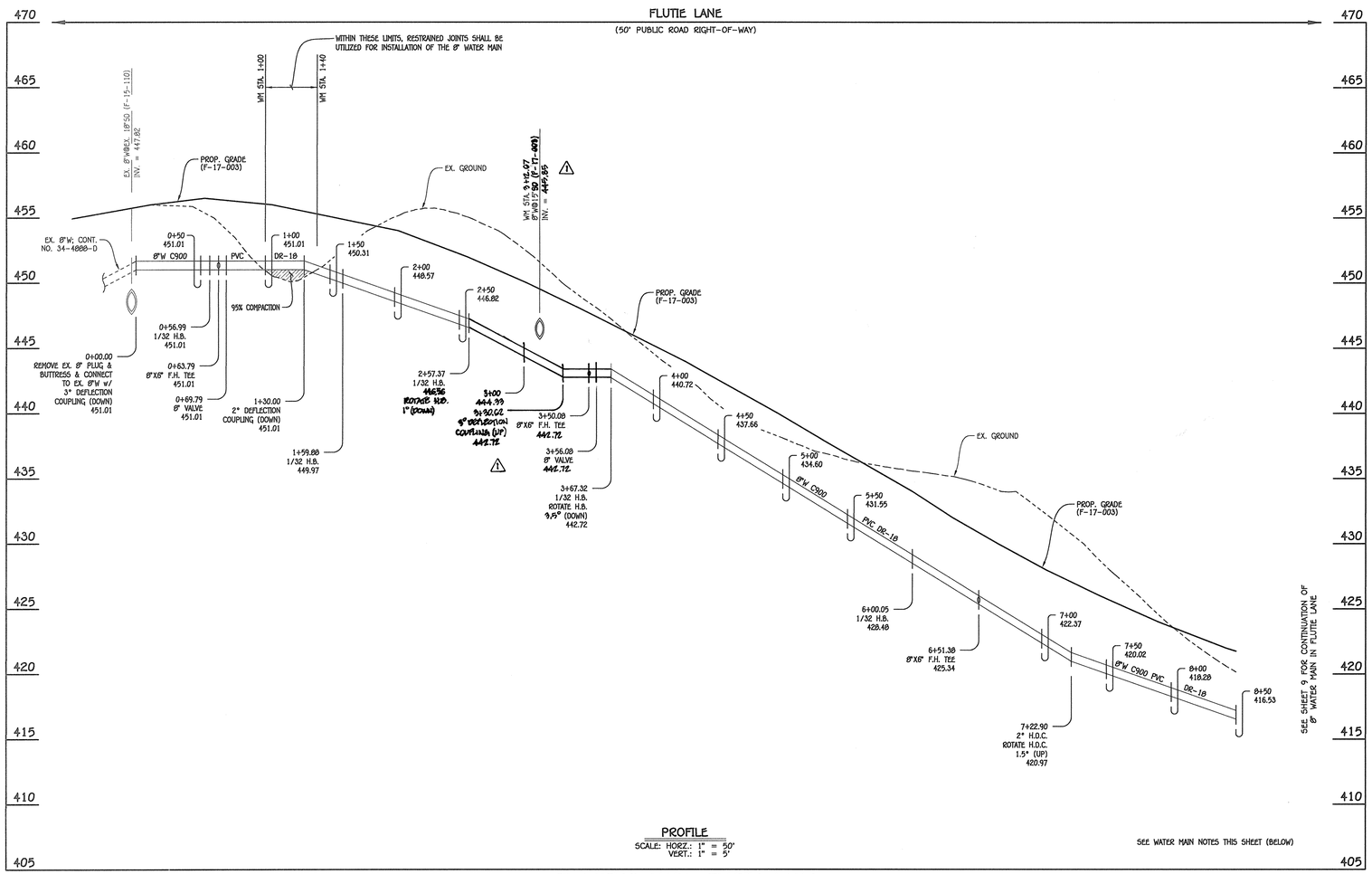
WATER MAIN EXTENSIONS
PROFILE, CHART & NOTES

600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & 1
OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 7 OF 16



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

SEE WATER MAIN NOTES THIS SHEET (BELOW)

8" WATER MAIN: FLUTIE LANE

WATER MAIN TABULATION CHART

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: FLUTIE LANE			
0+00.00	EX. 8" PLUG & BUTTRESS	558632.36	1328692.96
0+56.99	1/32 H.B.	558598.33	1328647.26
0+63.79	8"X6" F.H. TEE	558593.30	1328642.68
0+69.79	8" VALVE	558588.86	1328638.65
1+59.88	1/32 H.B.	558522.19	1328578.05
2+57.37	1/32 H.B.	558438.61	1328527.85
3+50.08	8"X6" F.H. TEE	558351.35	1328496.56
3+56.08	8" VALVE	558345.70	1328494.53
3+67.32	1/32 H.B.	558335.11	1328490.74
6+00.05	1/32 H.B.	558104.55	1328459.11
6+51.38	8"X6" F.H. TEE	558056.02	1328442.38
7+22.90	2" H.O.C.	557988.40	1328419.07

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.

AS-BUILT
By [illegible] Date 11/2/18

0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
⚠ LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 7/24/17

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — DATE 7/24/17

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 IS 7/16/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

#12043
STATE OF MARYLAND
PAUL WALTER KRIEBEL
PROFESSIONAL ENGINEER
PAUL W. KRIEBEL

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

BY	NO.	REVISION	DATE
FCC	⚠	REVISE WM PROFILE TO CLEAR STORM DRAIN CROSSING AT STA. 3+72.07 REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	2/20/18

WATER MAIN EXTENSIONS
PROFILE, CHART & NOTES

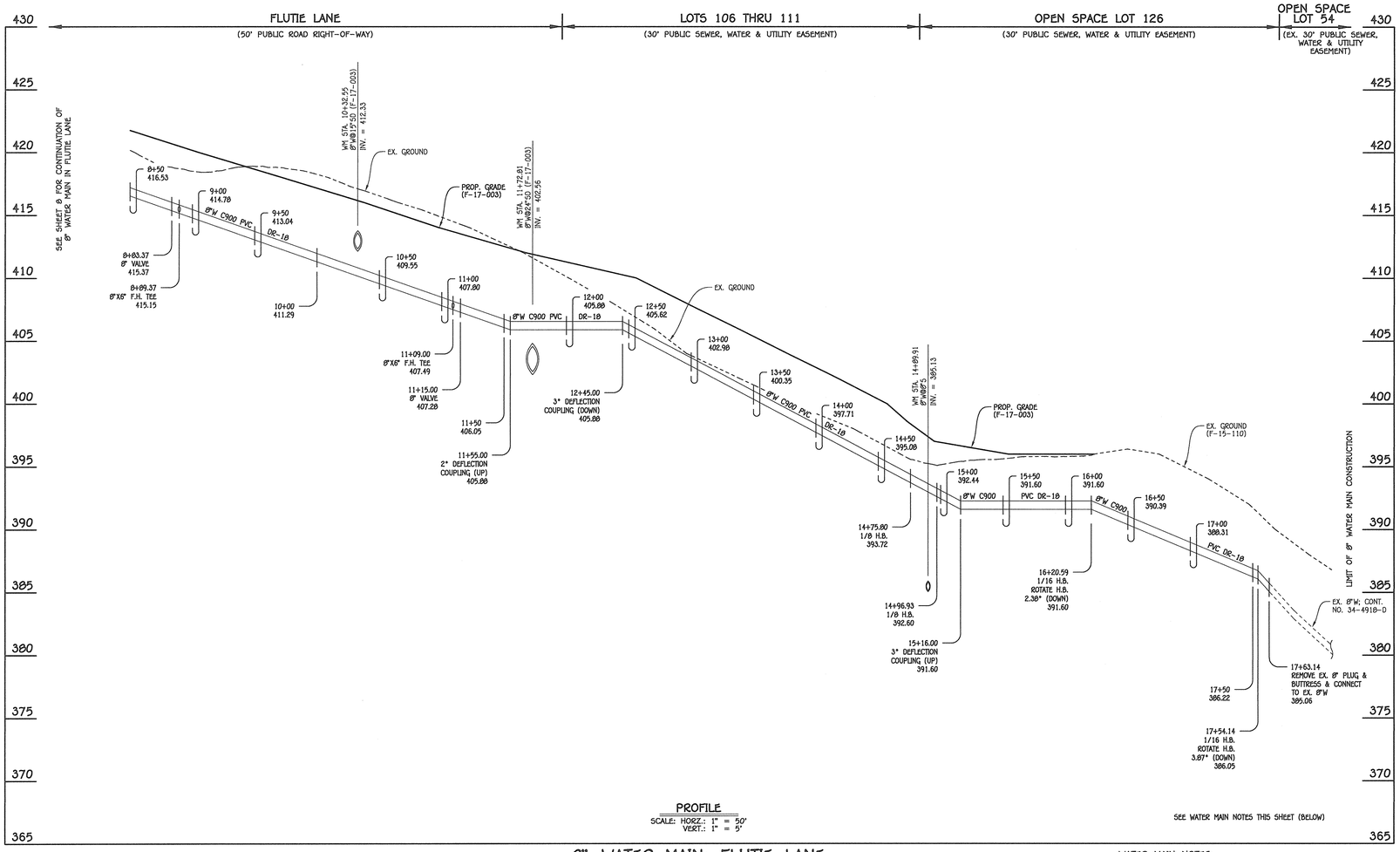
600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & ⚠ OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 8 OF 16

I:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Finals\13008-3001 Water & Sewer Contract Plan.dwg

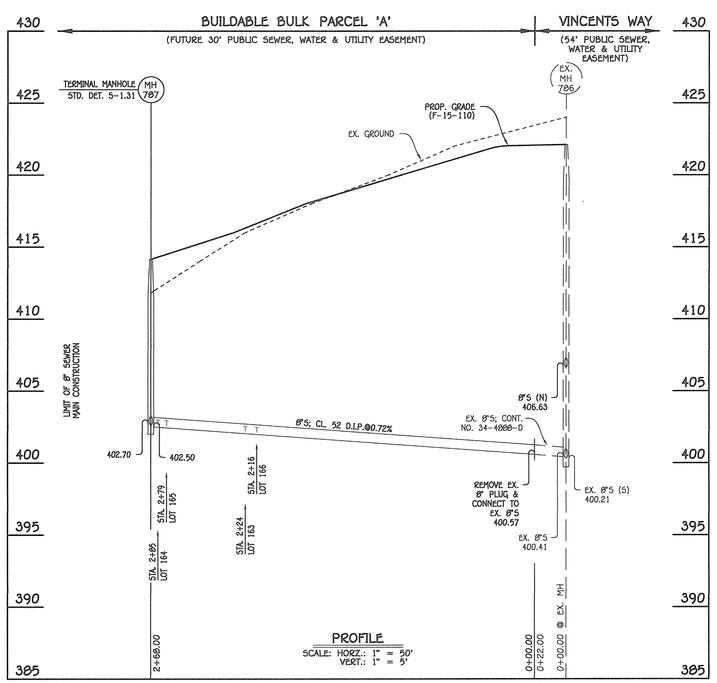


8" WATER MAIN: FLUTIE LANE

WATER MAIN TABULATION CHART

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: FLUTIE LANE			
8+83.37	8" VALVE	557838.83	1328360.95
8+89.37	8"X6" F.H. TEE	557833.23	1328358.78
11+09.00	8"X6" F.H. TEE	557628.52	1328279.23
11+15.00	8" VALVE	557622.93	1328277.05
14+75.80	1/8 H.B.	557286.63	1328146.37
14+96.93	1/8 H.B.	557267.31	1328154.93
16+20.59	1/16 H.B.	557223.00	1328270.38
17+54.14	1/16 H.B.	557223.97	1328403.92
17+63.14	EX. 8" PLUG & BUTTRESS	557220.19	1328412.09

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" SEWER MAIN: EX. 8" PLUG TO MH 707; LOTS 163 THRU 166

MANHOLE TABULATION CHART

NO.	NORTHING	EASTING	RIM ELEVATION
EX. 8" PLUG	557640.88	1329041.28	---
707 (TERMINAL)	557543.92	1328791.43	414.14

NOTE: SET MH RIM FLUSH W/PROPOSED GRADE.

SEWER HOUSE CONNECTION CHART

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	B.E.	F.F.
EX. 8" PLUG TO MH 707; LOTS 163 THRU 166						
2+16 LT.	166	402.14	402.54	407.04	410.58	420.73
2+24 RT.	163	402.19	402.39	407.09	410.58	420.73
2+79 LT.	165	402.59	402.99	407.59	408.10	418.25
2+85 RT.	164	402.63	402.83	407.33	408.10	418.25

AS-BUILT
11/2/18

NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 9 OF 16 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON JULY 21, 2017.

0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 2-23-18

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — DATE 3.9.18

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
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

#12043 STATE OF MARYLAND PAUL WALTER KNEBEL PROFESSIONAL ENGINEER
8/16/18
PAUL W. KNEBEL

DESIGNED BY :	B.C.R.
DRAWN BY :	B.C.R.
CHECKED BY :	P.W.K.
DATE :	FEBRUARY, 2018

BY	NO.	REVISION	DATE
FCC	⚠	ADD 8"S PROFILE & CHARTS FOR LOTS 163 THRU 166	1-5-18
FCC	⚠	REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	1-5-18

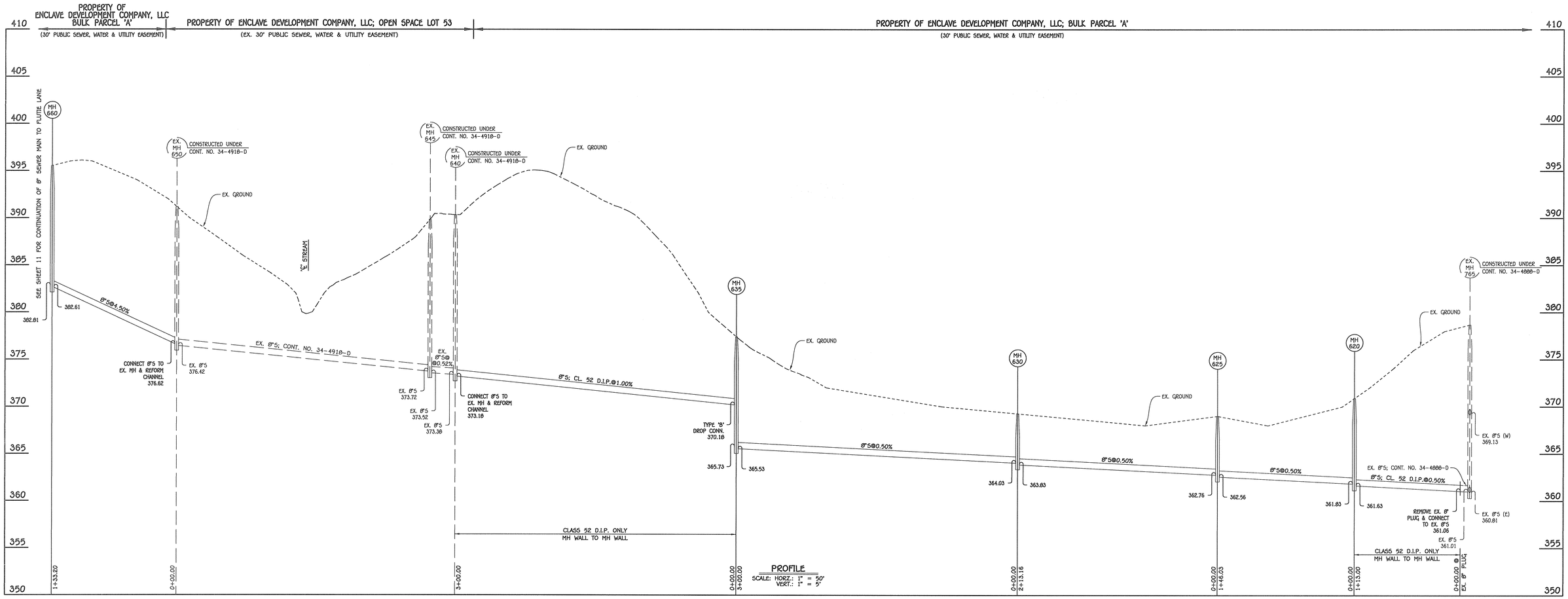
SEWER & WATER MAIN EXTENSIONS
PROFILES, CHARTS & NOTES

600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

⚠ ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 9 OF 16



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

8" SEWER MAIN OUTFALL: EX. MH 765 TO MH 660

MANHOLE TABULATION CHART

NO.	NORTHING	EASTING	RIM ELEVATION
620	556649.77	1329507.92	370.91
625	556749.67	1329401.41	369.00
630	556834.95	1329206.05	369.25
635	556954.96	1328931.10	377.39
660	557212.99	1328268.56	395.52

NOTE: SET MH RIMS FLUSH W/EXISTING GROUND.

AS-BUILT
11/2/18

SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169 ⚠
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 2/2/18

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.C. — DATE 2/28/17

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 IS 7/16/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

#12043 STATE OF MARYLAND PAUL WALTER KRIEBEL PROFESSIONAL ENGINEER
PAUL W. KRIEBEL

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

BY	NO.	REVISION	DATE
FCC	⚠	REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	2/12/18

SEWER MAIN EXTENSIONS
PROFILE & CHART

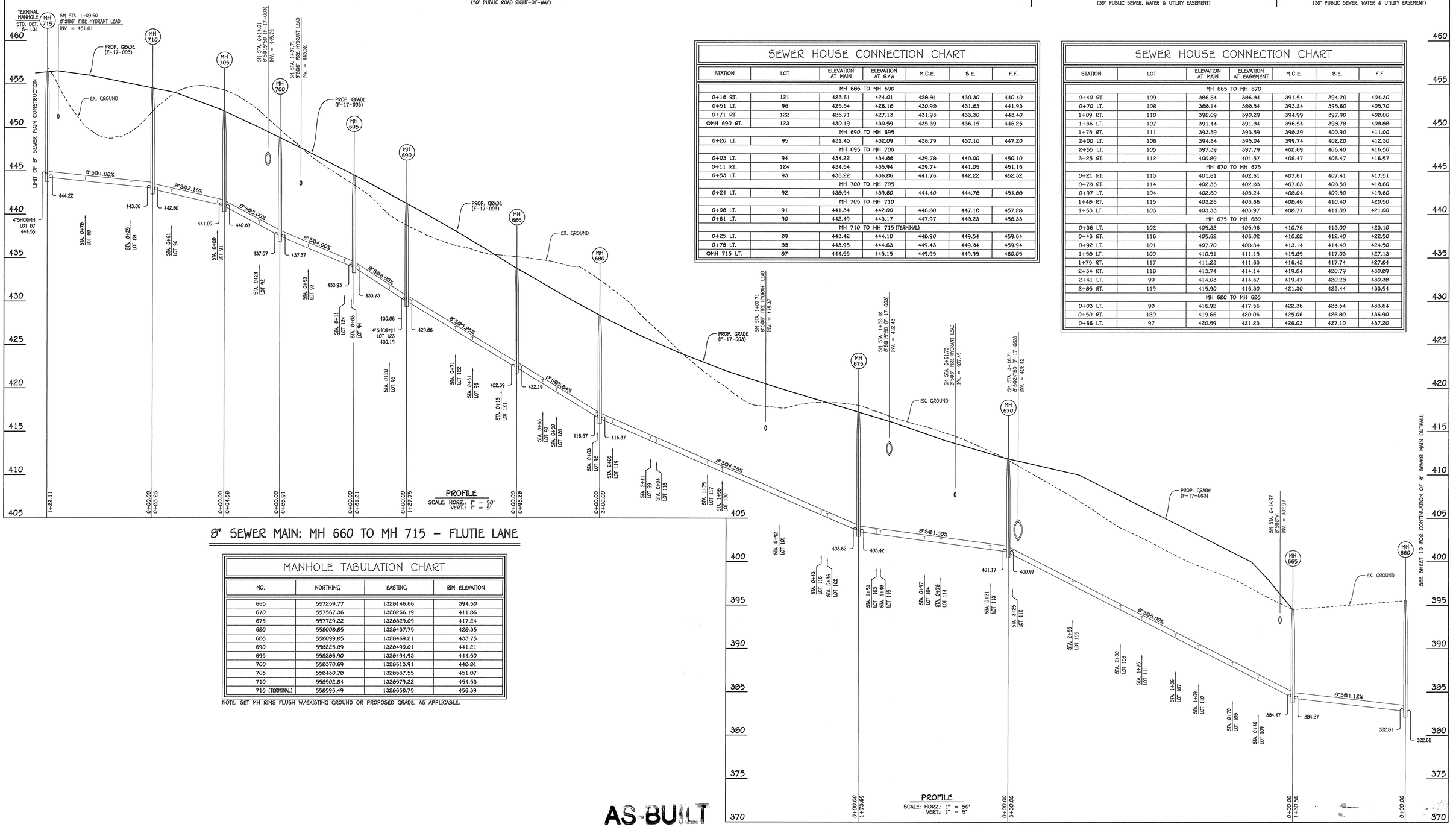
600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & ⚠
OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 10 OF 16

I:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Final\13008-3001 Water & Sewer Contract Plan.dwg



SEWER HOUSE CONNECTION CHART

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT R/W	M.C.E.	B.E.	F.F.
MH 685 TO MH 690						
0+18 RT.	121	423.61	424.01	428.81	430.30	440.40
0+51 LT.	96	425.54	426.18	430.98	431.83	441.93
0+71 RT.	122	426.71	427.13	431.93	433.30	443.40
@MH 690 RT.	123	430.19	430.59	435.39	436.15	446.25
MH 690 TO MH 695						
0+20 LT.	95	431.43	432.09	436.79	437.10	447.20
MH 695 TO MH 700						
0+03 LT.	94	434.22	434.88	439.78	440.00	450.10
0+11 RT.	124	434.54	435.94	439.74	441.05	451.15
0+53 LT.	93	436.22	436.86	441.76	442.22	452.32
MH 700 TO MH 705						
0+24 LT.	92	438.94	439.60	444.40	444.78	454.88
MH 705 TO MH 710						
0+08 LT.	91	441.34	442.00	446.80	447.18	457.28
0+61 LT.	90	442.49	443.17	447.97	448.23	458.33
MH 710 TO MH 715 (TERMINAL)						
0+25 LT.	89	443.42	444.10	448.90	449.54	459.64
0+78 LT.	88	443.95	444.63	449.43	449.84	459.94
@MH 715 LT.	87	444.55	445.15	449.95	449.95	460.05

SEWER HOUSE CONNECTION CHART

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	B.E.	F.F.
MH 665 TO MH 670						
0+40 RT.	109	386.64	386.84	391.54	394.20	404.30
0+70 LT.	108	388.14	388.54	393.24	395.60	405.70
1+09 RT.	110	390.09	390.29	394.99	397.90	408.00
1+36 LT.	107	391.44	391.84	396.54	398.78	408.88
1+75 RT.	111	393.39	393.59	398.29	400.90	411.00
2+00 LT.	106	394.64	395.04	399.74	402.20	412.30
2+55 LT.	105	397.39	397.79	402.69	406.40	416.50
3+25 RT.	112	400.89	401.57	406.47	406.47	416.57
MH 670 TO MH 675						
0+21 RT.	113	401.61	402.61	407.61	407.41	417.51
0+78 RT.	114	402.35	402.83	407.63	408.50	418.60
0+97 LT.	104	402.60	403.24	408.04	409.50	419.60
1+48 RT.	115	403.26	403.66	408.46	410.40	420.50
1+53 LT.	103	403.33	403.97	408.77	411.00	421.00
MH 675 TO MH 680						
0+36 LT.	102	405.32	405.96	410.76	413.00	423.10
0+43 RT.	116	405.62	406.02	410.82	412.40	422.50
0+92 LT.	101	407.70	408.34	413.14	414.40	424.50
1+58 LT.	100	410.51	411.15	415.85	417.03	427.13
1+75 RT.	117	411.23	411.63	416.43	417.74	427.84
2+34 RT.	118	413.74	414.14	419.04	420.79	430.89
2+41 LT.	99	414.03	414.67	419.47	420.28	430.38
2+85 RT.	119	415.90	416.30	421.30	423.44	433.54
MH 680 TO MH 685						
0+03 LT.	98	416.92	417.56	422.36	423.54	433.64
0+50 RT.	120	419.66	420.06	425.06	426.80	436.90
0+66 LT.	97	420.59	421.23	426.03	427.10	437.20

8" SEWER MAIN: MH 660 TO MH 715 - FLUTIE LANE

MANHOLE TABULATION CHART

NO.	NORTHING	EASTING	RIM ELEVATION
665	557259.77	1328146.66	394.50
670	557567.36	1328266.19	411.86
675	557729.22	1328329.09	417.24
680	558008.85	1328437.75	428.35
685	558099.85	1328469.21	433.75
690	558225.89	1328490.01	441.21
695	558286.90	1328494.93	444.50
700	558370.69	1328513.91	448.81
705	558430.78	1328537.55	451.87
710	558502.84	1328579.22	454.53
715 (TERMINAL)	558595.49	1328658.75	456.39

NOTE: SET MH RIMS FLUSH W/EXISTING GROUND OR PROPOSED GRADE, AS APPLICABLE.

AS-BUILT
Date 11/2/18

8" SEWER MAIN: MH 660 TO MH 715 - FLUTIE LANE

NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 11 OF 16 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON JULY 21, 2017.

0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 2-23-18

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — DATE 3-9-18

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
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

#12043 STATE OF MARYLAND PAUL WALTER RABBEL PROFESSIONAL ENGINEER
10/16/18
PAUL W. RABBEL

DESIGNED BY :	B.C.R.
DRAWN BY :	B.C.R.
CHECKED BY :	P.W.R.
DATE :	FEBRUARY, 2018

BY	NO.	REVISION	DATE
FCC	1	REVISE 8"S PROFILE & CHARTS FROM MH 675 TO 715; LOWER TO SERVE B.E.'s	1-5-18
FCC	2	REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	1-5-18

SEWER MAIN EXTENSIONS
PROFILE & CHARTS

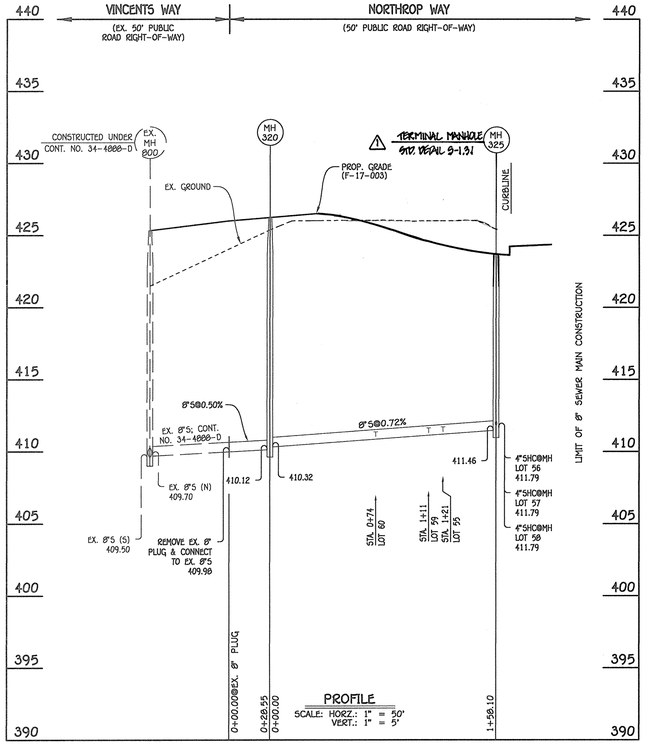
600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 11 OF 16

I:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Redline #1 - December, 2017\13008-3001 Water & Sewer Contract Plan.dwg, 2/16/2018 11:20:00 AM



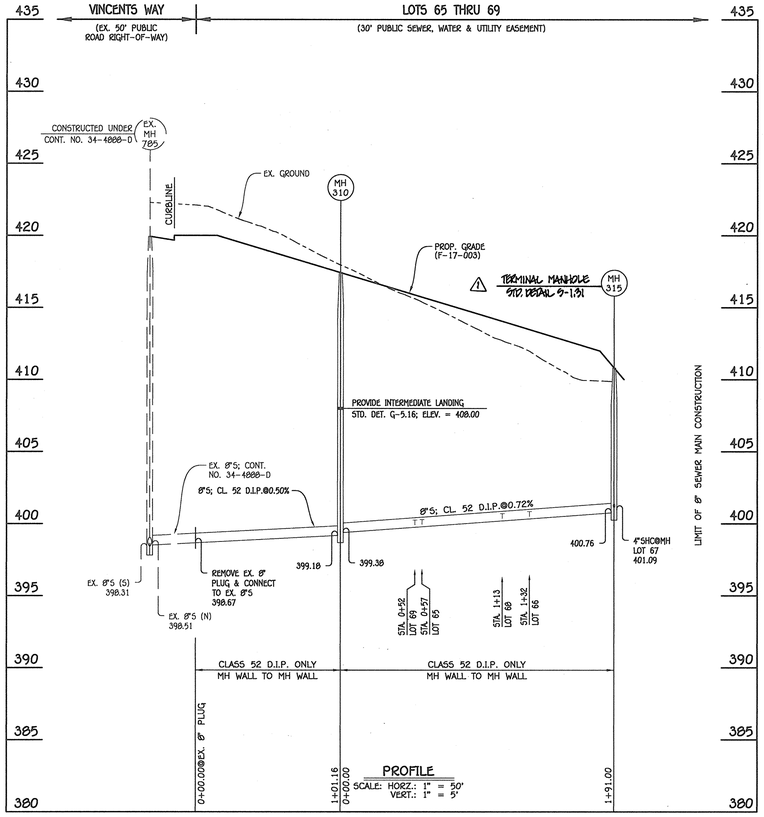
8" SEWER MAIN: NORTHROP WAY

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
320	557896.13	1329085.69	426.24
325 (TERMINAL)	557969.25	1329225.87	423.76

⚠ NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.

SEWER HOUSE CONNECTION CHART						
STATION	LOT	ELEVATION AT MAIN	ELEVATION AT R/W	M.C.E.	B.E.	F.F.
MH 320 TO MH 325 (TERMINAL MANHOLE)						
0+74 RT.	60	411.02	411.54	416.34	421.25	430.40
1+11 RT.	59	411.29	412.31	417.41	420.25	429.40
1+21 LT.	55	411.36	412.60	417.40	421.25	430.40
@MH 325 LT.	56	411.79	412.67	417.77	420.75	429.90
@MH 325 CEN.	57	411.79	412.27	418.27	420.25	429.40
@MH 325 RT.	58	411.79	412.27	417.17	420.25	429.40

⚠



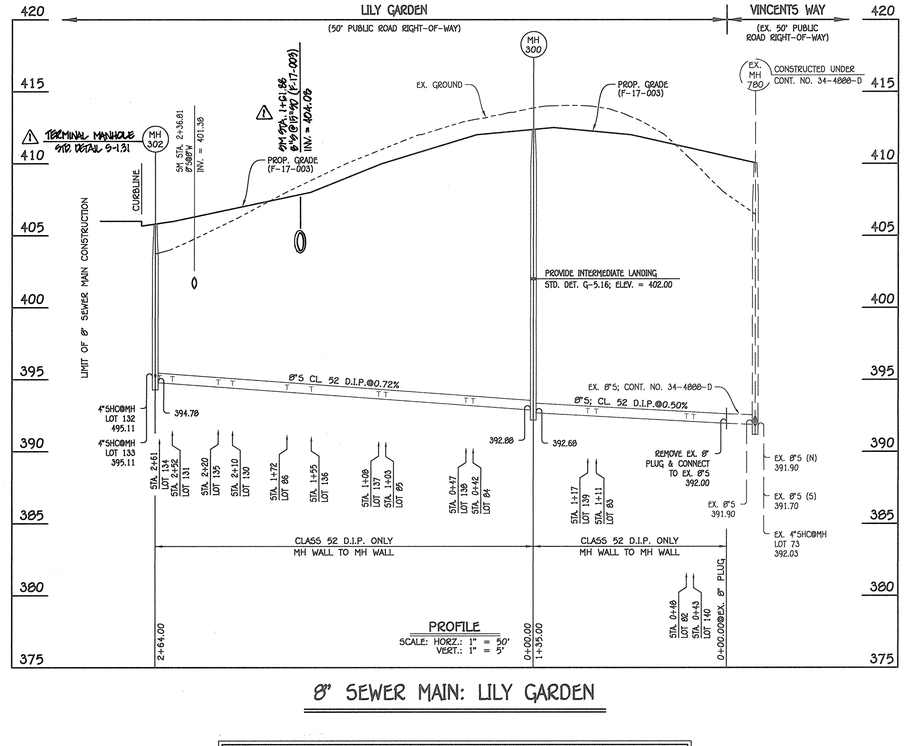
8" SEWER MAIN: LOTS 65 THRU 69

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
310	557619.00	1329216.20	417.43
315 (TERMINAL)	557694.77	1329391.53	410.80

⚠ NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.

SEWER HOUSE CONNECTION CHART						
STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	B.E.	F.F.
MH 310 TO MH 315 (TERMINAL MANHOLE)						
0+52 RT.	69	399.92	400.12	404.82	409.75	418.90
0+57 LT.	65	399.96	400.36	405.06	409.75	418.90
1+13 RT.	68	400.36	400.56	405.26	408.55	417.70
1+32 LT.	66	400.50	400.90	405.70	408.55	417.70
@MH 315 LT.	67	401.49	401.19	406.29	406.25	415.40

⚠



8" SEWER MAIN: LILY GARDEN

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
300	557292.35	1329033.91	412.37
302 (TERMINAL)	557186.65	1328791.99	405.81

⚠ NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.

SEWER HOUSE CONNECTION CHART						
STATION	LOT	ELEVATION AT MAIN	ELEVATION AT R/W	M.C.E.	B.E.	F.F.
EX. MH 780 TO MH 300						
0+43 LT.	140	392.29	392.73	397.73	406.45	415.60
0+48 RT.	82	392.31	392.95	397.75	407.25	416.40
1+11 RT.	83	392.63	393.29	398.09	407.25	416.40
1+17 LT.	139	392.66	393.06	397.86	406.75	415.90
MH 300 TO MH 302 (TERMINAL MANHOLE)						
0+42 RT.	84	393.35	393.99	398.69	407.25	416.25
0+47 LT.	138	393.39	393.79	398.69	406.75	415.90
1+03 RT.	85	393.79	394.43	399.23	406.50	415.20
1+08 LT.	137	393.83	394.23	399.13	405.75	414.90
1+55 LT.	136	394.17	394.57	399.47	403.75	412.90
1+72 RT.	86	394.29	395.13	399.93	403.75	412.90
2+10 RT.	130	394.56	395.74	400.94	400.75	409.90
2+20 LT.	135	394.63	395.61	400.31	401.75	410.90
2+52 RT.	131	394.86	396.02	400.92	400.25	409.40
2+61 LT.	134	394.93	395.69	400.39	400.25	409.40
@MH 302 RT.	132	395.11	395.87	400.87	399.75	408.90
@MH 302 LT.	133	395.11	395.61	400.81	399.75	408.90

AS-BUILT
Date 11/2/18

0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169 ⚠
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 7/13/17

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — DATE 7/10/17

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 IS 7/16/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

#12043 STATE OF MARYLAND PAUL WALTER KRIEBEL PROFESSIONAL ENGINEER
PAUL W. KRIEBEL — 7/10/17

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

BY	NO.	REVISION	DATE
FCC	⚠	ADD 18" SW CROSSING TO 8"SW PROFILE IN LILY GARDEN; REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	7/10/18

SEWER MAIN EXTENSIONS
PROFILES & CHARTS

600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169 ⚠
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 12 OF 16

I:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Finals\13008-3001 Water & Sewer Contract Plan.dwg

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE

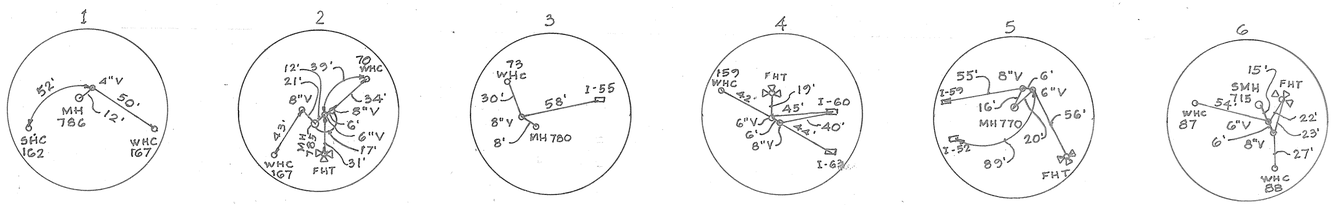
LOT NUMBER	4" PVC ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
55	63'	CO - 9' - WHC - 55	CO - 73' - MH - 325
56	46'	CO - 24' - WHC - 56	CO - 48' - MH - 325
57	19'	CO - 17' - WHC - 57	CO - 25' - MH - 325
58	22'	CO - 22' - WHC - 58	CO - 17' - CO - 57
59	27'	CO - 27' - WHC - 59	CO - 45' - CO - 60
60	26'	CO - 14' - WHC - 60	CO - 45' - CO - 59
65	15'	CO - 12' - WHC - 65	CO - 35' - WHC - 69
66	18'	CO - 11' - WHC - 66	CO - 43' - WHC - 67
67	18'	CO - 17' - WHC - 67	CO - 34' - MH -
68	8'	CO - 13' - WHC - 68	CO - 34' - WHC - 66
69	8'	CO - 13' - WHC - 69	CO - 53' - MH - 310
82	31'	CO - 12' - WHC - 82	CO - 57' - MH - 780
83	31'	CO - 12' - WHC - 83	CO - 56' - WHC - 139
84	31'	CO - 10' - WHC - 84	CO - 53' - MH - 300
85	31'	CO - 10' - WHC - 85	CO - 21' - FHT
86	33'	CO - 22' - WHC - 86	CO - 26' - I - 51
87	32'	CO - 14' - WHC	CO - 62' - FHT
88	30'	CO - 12' - WHC	CO - 40' - SMH - 710
89	30'	CO - 12' - WHC	CO - 92' - SMH - 710
90	30'	CO - 9' - WHC	CO - 77' - SMH - 705
91	30'	CO - 10' - WHC	CO - 37' - SMH - 705
92	31'	CO - 10' - WHC	CO - 47' - SMH - 700
93	31'	CO - 18' - WHC	CO - 44' - FHT
94	31'	CO - 10' - WHC	CO - 34' - SMH - 695
95	30'	CO - 10' - WHC	CO - 45' - SMH - 690
96	32'	CO - 10' - WHC	CO - 57' - WHC - 122
97	30'	CO - 9' - WHC	CO - 30' - FHT
98	31'	CO - 11' - WHC	CO - 34' - SMH - 680
99	32'	CO - 12' - WHC	CO - 55' - SMH - 680
100	31'	CO - 10' - WHC	CO - 74' - FHT
101	31'	CO - 10' - WHC	CO - 44' - FHT
102	31'	CO - 9' - WHC	CO - 56' - SMH - 675
103	30'	CO - 11' - WHC	CO - 34' - SMH - 675
104	32'	CO - 11' - WHC	CO - 33' - I - 34
105	18'	CO - 10' - WHC	CO - 76' - WHC - 111
106	18'	CO - 12' - WHC	CO - 35' - WHC - 111
107	18'	CO - 10' - WHC	CO - 34' - WHC - 110
108	20'	CO - 12' - WHC	CO - 34' - WHC - 109
109	10'	CO - 13' - WHC	CO - 44' - SMH - 665
110	10'	CO - 11' - WHC	CO - 43' - WHC - 108
111	10'	CO - 11' - WHC	CO - 48' - WHC - 106
112	42'	CO - 16' - WHC	CO - 42' - SMH - 670
113	51'	CO - 10' - WHC	CO - 55' - SMH - 670
114	25'	CO - 34' - WHC	CO - 18' - FHT
115	18'	CO - 11' - WHC	CO - 33' - SMH - 675
116	18'	CO - 10' - WHC	CO - 56' - SMH - 675
117	20'	CO - 12' - WHC	CO - 55' - WHC - 100
118	20'	CO - 17' - WHC	CO - 56' - SMH - 680
119	20'	CO - 8' - WHC	CO - 21' - SMH - 680
120	20'	CO - 12' - WHC	CO - 53' - FHT
121	20'	CO - 10' - WHC	CO - 35' - SMH - 685
122	22'	CO - 13' - WHC	CO - 31' - I - 40
123	19'	CO - 10' - WHC	CO - 27' - I - 40
124	18'	CO - 13' - WHC	CO - 31' - SMH - 695
130	57'	CO - 24' - WHC - 130	CO - 42' - CO - 131
131	57'	CO - 18' - WHC - 131	CO - 26' - CO - 130
132	36'	CO - 9' - WHC - 132	CO - 35 - CO - 131
133	22'	CO - 14' - WHC - 133	CO - 30 - I - 51
134	37'	CO - 25' - WHC - 134	CO - 25 - WHC - 134
135	41'	CO - 10' - WHC - 135	CO - 69' - MH - 302
136	19'	CO - 11' - WHC - 136	CO - 14' - I - 67
137	19'	CO - 11' - WHC - 137	CO - 55' - FHT
138	19'	CO - 11' - WHC - 138	CO - 54' - CO - 84
139	18'	CO - 11' - WHC - 139	CO - 55' - CO - 83
140	18'	CO - 14' - WHC - 140	CO - 50' - MH - 780
163	8'	CO - 17' - WHC - 163	CO - 34' - CO - 166
164	8'	CO - 14' - WHC - 164	CO - 12' - MH - 787
165	18'	CO - 34' - WHC - 165	CO - 24' - MH - 787
166	18'	CO - 35' - WHC - 166	CO - 34' - CO - 63
70	33'	CO - 12' - WHC - 70	CO - 24' - I - 57
71	33'	CO - 10' - WHC - 71	CO - 47' - I - 57
72	34'	CO - 11' - WHC - 72	CO - 46' - WHC - 73
73	28'	CO - 20' - WHC - 73	CO - 49' - I - 55
74	18'	CO - 10' - WHC - 74	CO - 25' - MH - 795
141	19'	CO - 17' - WHC - 141	CO - 19' - I - 63
142	19'	CO - 11' - WHC - 142	CO - 55' - I - 63
143	19'	CO - 10' - WHC - 143	CO - 57' - WHC - 156
144	19'	CO - 11' - WHC - 144	CO - 29' - I - 52
145	34'	CO - 13' - WHC - 145	CO - 22' - FHT
146	51'	CO - 9' - WHC - 146	CO - 35' - FHT
147	9'	CO - 11' - WHC - 147	CO - 42' - CO - 154
148	9'	CO - 12' - WHC - 148	CO - 38' - CO - 153
149	9'	CO - 10' - WHC - 149	CO - 30' - WHC - 152
150	9'	CO - 11' - WHC - 150	CO - 36' - MH - 765
151	19'	CO - 10' - WHC - 151	CO - 28' - MH - 765
152	19'	CO - 10' - WHC - 152	CO - 35' - CO - 149
153	19'	CO - 12' - WHC - 153	CO - 58' - CO - 148
154	19'	CO - 10' - WHC - 154	CO - 42' - CO - 147
155	31'	CO - 12' - WHC - 155	CO - 16 - I - 59
156	31'	CO - 11' - WHC - 156	CO - 58' - WHC - 143
157	31'	CO - 11' - WHC - 157	CO - 60' - I - 60
158	31'	CO - 20' - WHC - 158	CO - 18' - I - 60
159	31'	CO - 12' - WHC - 159	CO - 26' - FHT
167	22'	CO - 12' - WHC - 167	CO - 26' - FHT
168	22'	CO - 11' - WHC - 168	CO - 25' - I - 46

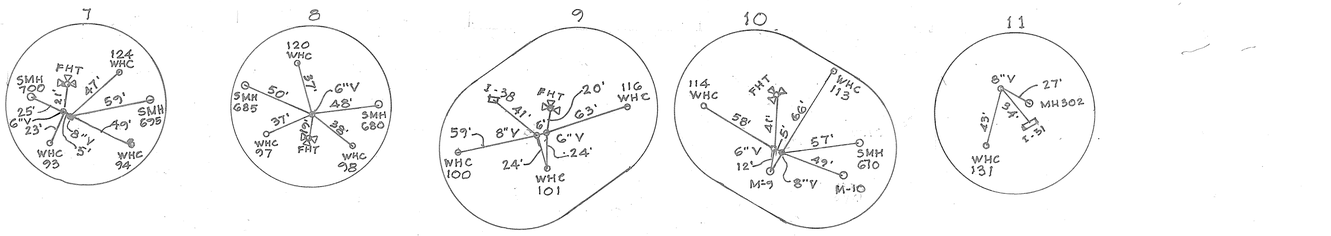
WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT NUMBER	1½" COPPER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
55	55'		WHC - 9' - CO	WHC - 69' - MH - 325
56	20'		WHC - 24' - CO	WHC - 35' - MH - 325
57	17'		WHC - 17' - CO	WHC - 31' - MH - 325
58	48'		WHC - 22' - CO	WHC - 38' - CO - 57
59	57'		WHC - 27' - CO	WHC - 66' - CO - 60
60	46'		WHC - 14' - CO	WHC - 51' - CO - 59
61	21'		WHC - 10' - CO	WHC - 45' - MH - 795
62	18'		WHC - 28' - CO	WHC - 56' - MH - 930
63	19'		WHC - 11' - CO	WHC I - 50
64	22'		WHC - 15' - CO	WHC - 43' - MH - 786
65	8'		WHC - 12' - CO	WHC - 39' - CO - 69
66	8'		WHC - 11' - CO	WHC - 35' - CO - 68
67	8'		WHC - 17' - CO	WHC - 28' - MH - 315
68	20'		WHC - 13' - CO	WHC - 43' - CO - 66
69	22'		WHC - 13' - CO	WHC - 41' - MH - 310
70	21'		WHC - 12' - CO	WHC - 34' - I - 57
71	21'		WHC - 10' - CO	WHC - 38' - I - 57
72	21'		WHC - 11' - CO	WHC - 46' - CO - 71
73	19'		WHC - 20' - CO	WHC - 69' - I - 55
74	29'		WHC - 10' - CO	WHC - 30' - MH - 795
141	32'		WHC - 8' - CO	WHC - 25' - I - 49
142	34'		WHC - 14' - CO	WHC - 52' - MH - 786
143	22'		WHC - 17' - CO	WHC - 35' - CO - 166
144	22'		WHC - 14' - CO	WHC - 19' - MH - 787
169	12'		WHC - 34' - CO	WHC - 46' - MH - 787
160	11'		WHC - 35' - CO	WHC - 51' - CO - 163
167	33'		WHC - 12' - CO	WHC - 37' - FHT
82	18'		WHC - 12' - CO	WHC - 67' - MH - 780
83	20'		WHC - 12' - CO	WHC - 54' - CO - 139
84	20'		WHC - 10' - CO	WHC - 46' - MH - 300
85	20'		WHC - 10' - CO	WHC - 31' - FHT
86	19'		WHC - 22' - CO	WHC - 15' - I - 51
87	23'		WHC - 14' - CO	WHC - 64' - FHT
88	24'		WHC - 12' - CO	WHC - 50' - FHT
89	24'		WHC - 12' - CO	WHC - 49' - SMH - 710
90	24'		WHC - 9' - CO	WHC - 34' - SMH - 710
91	24'		WHC - 10' - CO	WHC - 57' - SMH - 705
92	23'		WHC - 10' - CO	WHC - 44' - SMH - 705
93	22'		WHC - 18' - CO	WHC - 44' - FHT
94	23'		WHC - 10' - CO	WHC - 64' - FHT
95	22'		WHC - 10' - CO	WHC - 44' - SMH - 695
96	20'		WHC - 10' - CO	WHC - 72' - SMH - 690
97	23'		WHC - 9' - CO	WHC - 59' - SMH - 685
98	22'		WHC - 11' - CO	WHC - 33' - FHT
99	22'		WHC - 12' - CO	WHC - 56' - SMH - 680
100	10'		WHC - 10' - CO	WHC - 46' - I - 38
101	10'		WHC - 10' - CO	WHC - 44' - FHT
102	9'		WHC - 9' - CO	WHC - 56' - SMH - 675

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT NUMBER	1½" COPPER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
103	11'		WHC - 11' - CO	WHC - 34' - SMH - 675
104	11'		WHC - 11' - CO	WHC - 33' - I - 34
105	10'		WHC - 10' - CO	WHC - 34' - WHC - 111
106	12'		WHC - 12' - CO	WHC - 48' - CO - 111
107	10'		WHC - 10' - CO	WHC - 39' - WHC - 110
108	12'		WHC - 12' - CO	WHC - 34' - SMH - 665
109	13'		WHC - 13' - CO	WHC - 56' - SMH - 665
110	11'		WHC - 11' - CO	WHC - 34' - CO - 107
111	11'		WHC - 11' - CO	WHC - 76' - CO - 105
112	16'		WHC - 16' - CO	WHC - 48' - SMH - 670
113	10'		WHC - 10' - CO	WHC - 36' - FHT
114	34'		WHC - 34' - CO	WHC - 51' - FHT
115	11'		WHC - 11' - CO	WHC - 24' - SMH - 675
116	10'		WHC - 10' - CO	WHC - 56' - FHT
117	12'		WHC - 12' - CO	WHC - 79' - FHT
118	17'		WHC - 17' - CO	WHC - 55' - SMH - 680
119	8'		WHC - 8' - CO	WHC - 21' - SMH - 680
120	12'		WHC - 12' - CO	WHC - 54' - FHT
121	10'		WHC - 10' - CO	WHC - 35' - SMH - 685
122	13'		WHC - 13' - CO	WHC - 49' - SMH - 690
123	10'		WHC - 10' - CO	WHC - 32' - SMH - 690
124	13'		WHC - 13' - CO	WHC - 30' - FHT
130	50'		WHC - 24' - CO	WHC - 18' - CO - 131
131	48'		WHC - 26' - CO	WHC - 26' - CO - 131
132	48'		WHC - 9' - CO	WHC - 57' - CO - 131
133	11'		WHC - 14' - CO	WHC - 40' - I - 51
134	8'		WHC - 25' - CO	WHC - 25' - CO - 155
135	56'		WHC - 10' - CO	WHC - 73' - MH - 302
136	30'		WHC - 11' - CO	WHC - 20' - I - 67
137	29'		WHC - 11' - CO	WHC - 57' - FHT
138	28'		WHC - 11' - CO	WHC - 52' - CO - 84
139	28'		WHC - 11' - CO	WHC - 56' - CO - 83
140	29'		WHC - 14' - CO	WHC - 60' - MH - 780
141	21'		WHC - 17' - CO	WHC - 18' - I - 63
142	28'		WHC - 11' - CO	WHC - 45' - I - 63
143	28'		WHC - 10' - CO	WHC - 58' - CO - 156
144	18'		WHC - 11' - CO	WHC - 38' - I - 52
145	30'		WHC - 19' - CO	WHC - 36' - FHT
146	62'		WHC - 9' - CO	WHC - 27' - FHT
147	20'		WHC - 11' - CO	WHC - 48' - CO - 154
148	20'		WHC - 12' - CO	WHC - 43' - CO - 153
149	20'		WHC - 10' - CO	WHC - 40' - WHC - 152
150	20'		WHC - 11' - CO	WHC - 46' - MH - 765
151	10'		WHC - 10' - CO	WHC - 36' - MH - 765
152	10'		WHC - 10' - CO	WHC - 30' - CO - 149
153	18'		WHC - 12' - CO	WHC - 39' - CO - 148
154	11'		WHC - 10' - CO	WHC - 36' - CO - 147
155	32'		WHC - 12' - CO	WHC - 41' - MH - 775
156	18'		WHC - 11' - CO	WHC - 90' - MH - 775
157	18'		WHC - 11' - CO	WHC - 50' - I - 60
158	19'		WHC - 20' - CO	WHC - 18' - I - 60
159	19'		WHC - 12' - CO	WHC - 32' - FHT
168	30'		WHC - 11' - CO	WHC - 35' - I - 46





For locations 1, 2, 3, 4 and 5 see Sheet 3 of 16.
For locations 6, 7, 8, 9, 10 and 11 see Sheet 4 of 16.

AS-BUILT

Date 11/2/18

0' 50' 100' 200'

SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

CHIEF, BUREAU OF UTILITIES — DATE 2/2/18

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 1/31/17

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 IS 7/16/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

#12043 STATE OF MARYLAND PAUL WALTER KRIEBEL PROFESSIONAL ENGINEER
PAUL W. KRIEBEL

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

BY	NO.	REVISION	DATE
FCC	1	REVISE CHARTS TO INCLUDE LOTS 168 THRU 169 REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	2/20/18

SEWER & WATER MAIN EXTENSIONS
"AS-BUILT" LOCATION TABLES

600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

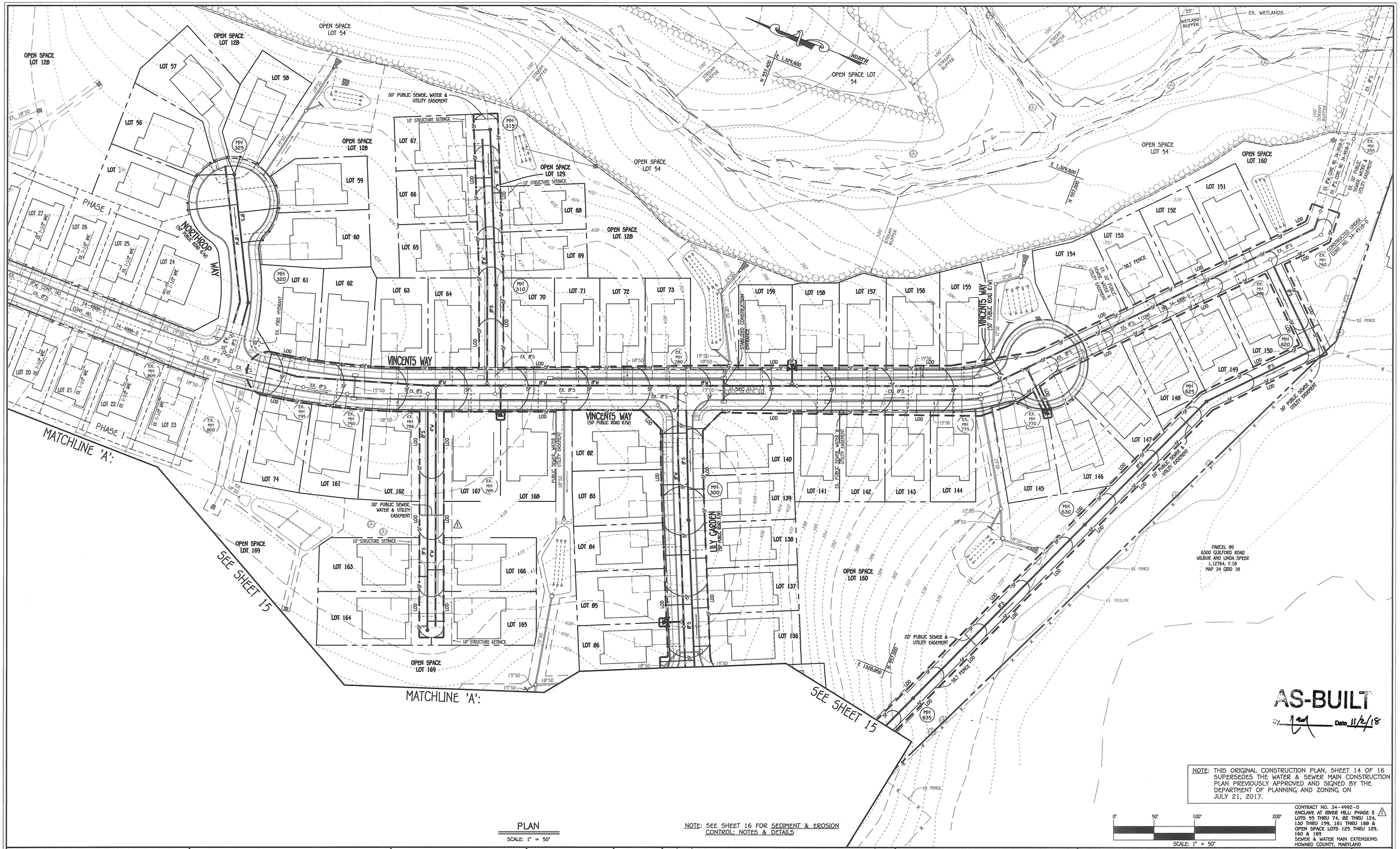
ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169

SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 13 OF 16

I:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Finals\13008-3001 Water & Sewer Contract Plan.dwg



PLAN
SCALE: 1" = 50'

NOTE: SEE SHEET 16 FOR SEDIMENT & EROSION CONTROL: NOTES & DETAILS

AS-BUILT
By _____ Date 11/2/18

NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 14 OF 16 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON JULY 21, 2017.

0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II ⚠
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
2-22-18
CHIEF, BUREAU OF UTILITIES — DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
3.9.18
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — 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
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

07/16/18 #12043 STATE OF MARYLAND PAUL WALTER KREBBEL PROFESSIONAL ENGINEER
PAUL W. KREBBEL

DESIGNED BY : B.C.R.
DRAWN BY : B.C.R.
CHECKED BY : P.W.K.
DATE : FEBRUARY, 2018

BY	NO.	REVISION	DATE
FCC	⚠	ADD SEDIMENT CONTROL AND L.O.D. TO LOTS 163 THRU 168	1-5-18
FCC	⚠	REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	1-5-18

SEDIMENT & EROSION CONTROL PLAN

600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

⚠ ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 14 OF 16

I:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Redline #1 - December, 2017\13008-3001 Water & Sewer Contract Plan.dwg, 2/16/2018 11:01:43 AM

NOTE: SEE SHEET 16 FOR SEDIMENT & EROSION CONTROL: NOTES & DETAILS

NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 15 OF 16 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON JULY 21, 2017.

MATCHLINE 'A'
SEE SHEET 14
VINCENT'S WAY (50' PUBLIC ROAD R/W)
FLUTIE LANE (50' PUBLIC ROAD R/W)
LILY GARDEN (50' PUBLIC ROAD R/W)
OPEN SPACE LOT 169
OPEN SPACE LOT 53
OPEN SPACE LOT 126
EX. WETLANDS
100' STREAM BUFFER
25' WETLAND BUFFER
NORTH
EX. 30' PUBLIC SEWER, WATER & UTILITY EASEMENT
CONSTRUCTED UNDER CONT. NO. 34-4918-D
PARCEL 89 6300 GUILFORD ROAD WILBUR AND LINDA SPEER L.12764, F.18 MAP 34 GRID 18
SILT FENCE
LOD
10' STRUCTURE SETBACK
EX. BGE EASEMENT
MD ROUTE 108
CLARKSVILLE PIKE EX. 80' ROAD R/W
EX. PAVING
PARCEL 48 12598 CLARKSVILLE PIKE TIRU LIANG L.12444, F.467 MAP 34 GRID 12
PARCEL 199 12602 CLARKSVILLE PIKE SRIDHAR CHATRATHI L.6092, F.627 MAP 34 GRID 18
PARCEL 418 12620 CLARKSVILLE PIKE KIRITSINI AND RASHMI PARMAR L.5574, F.297 MAP 34 GRID 18
PARCEL 417 12620 CLARKSVILLE PIKE KIRITSINI AND RASHMI PARMAR L.2627, F.507 MAP 34 GRID 18
PARCEL 87 12670 CLARKSVILLE PIKE DENNIS AND SUSAN KEILHOLTZ L.743, F.4 MAP 34 GRID 18
PARCEL 0251 12674 CLARKSVILLE PIKE RAJIV M. JIHAVERI AND ASHA VALI L.9502, F.631 MAP 34 GRID 18
PARCEL 0086 12680 CLARKSVILLE PIKE ALAN WHITWORTH L.4449, F.16 MAP 34 GRID 18
PARCEL 0102 12701 CLARKSVILLE PIKE THUR AND JUNE PICKETT L.286, F.419 MAP 34 GRID 18
EX. DWELLING
EX. BUILDING
AS-BUILT
By Date 11/2/18
PLAN
SCALE: 1" = 50'
0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL: PHASE II (1)
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND CHIEF, BUREAU OF UTILITIES — DATE 2-23-18	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — DATE 3.9.18	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 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855	02/16/18 STATE OF MARYLAND PAUL WALTER KRIEBEL PROFESSIONAL ENGINEER #12043 PAUL W. KRIEBEL	DESIGNED BY : B.C.R. DRAWN BY : B.C.R. CHECKED BY : P.W.K. DATE : FEBRUARY, 2018

BY	NO.	REVISION	DATE
FCC	1	REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	1-5-18

SEDIMENT & EROSION CONTROL PLAN

600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

(1) ENCLAVE AT RIVER HILL: PHASE II

LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

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

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

A. SEEDBED 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 PLOWS 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 RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

I. SOIL PH BETWEEN 6.0 AND 7.0.
II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
III. 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 LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.

C. 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.

D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.

E. 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 FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. 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.

2. 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.

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT 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.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:

A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 INCHES IN DIAMETER.

B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

6. TOPSOIL APPLICATION

A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.

B. 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 SODDING 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.

C. 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)

1. 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.

2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER 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 WARRANTY OF THE PRODUCER.

3. 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.

4. 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.

5. 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:

A.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

B.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

PERMANENT SEEDING NOTES (B-4-5)

A. SEED MIXTURES

1. GENERAL USE

A. 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.

B. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, 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.

C. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.

D. 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.

2. TURFGRASS MIXTURES

A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

B. 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.

I. 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.

II. 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 INTENSIVE MANAGEMENT. 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.

III. TALL FESCUE/KENTUCKY BLUEGRASS:
FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.

IV. 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 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 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

C. 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) SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

D. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

E. 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 ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.3): 8					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P_2O_5	K_2O	
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	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 AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

CRITERIA

1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
2. 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.
3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
7. 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.
8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER 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.

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

1. 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.

2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.1):				Fertilizer Rate (10-20-20)	Lime Rate
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
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

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:

A. PRIOR TO THE START OF EARTH DISTURBANCE,
B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING,
C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT,
D. 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.

2. ALL VEGETATIVE AND STRUCTURAL 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 THERETO.
3. 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, DIKES, 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.
4. 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 BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
5. 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.
6. SITE ANALYSIS:

TOTAL AREA OF SITE:	88.960	ACRES
AREA DISTURBED:	4.1000	ACRES
AREA TO BE ROOFED OR PAVED:	2.8900	ACRES
AREA TO BE VEGETATIVELY STABILIZED:	1.2100	ACRES
TOTAL CUT:	0	CU. YDS.
TOTAL FILL:	0	CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION:	N/A	

7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8. 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 (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
- BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
- EVIDENCE OF SEDIMENT DISCHARGES
- 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, MDE).

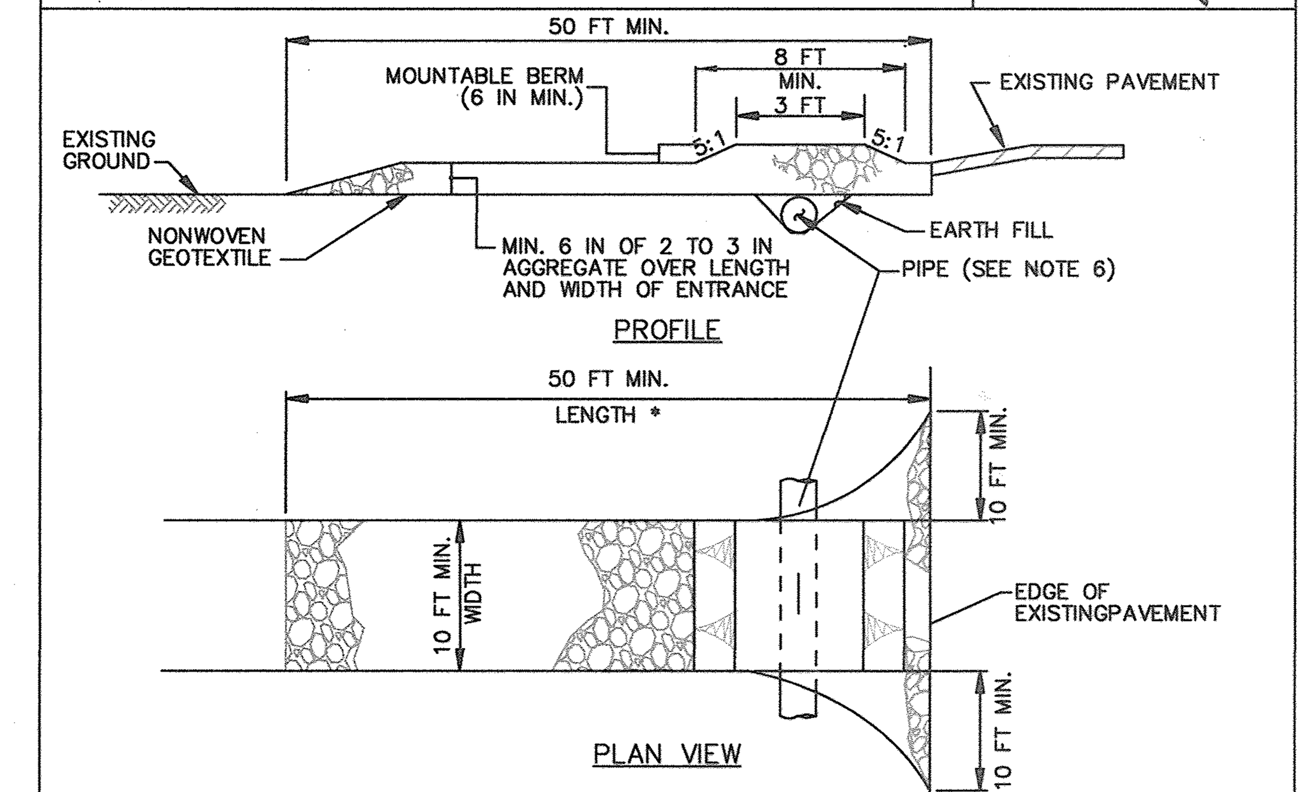
9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY BE ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE 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.
12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):

- USE I: AND IP: MARCH 1 - JUNE 15
- USE III: AND IIIP: OCTOBER 1 - APRIL 30
- USE IV: MARCH 1 - MAY 31

16. 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

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

1. 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.

2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 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.

3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.

4. 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.

5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD 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 ADJACENT 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

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 — 06/30/17
SIGNATURE OF ENGINEER — DATE

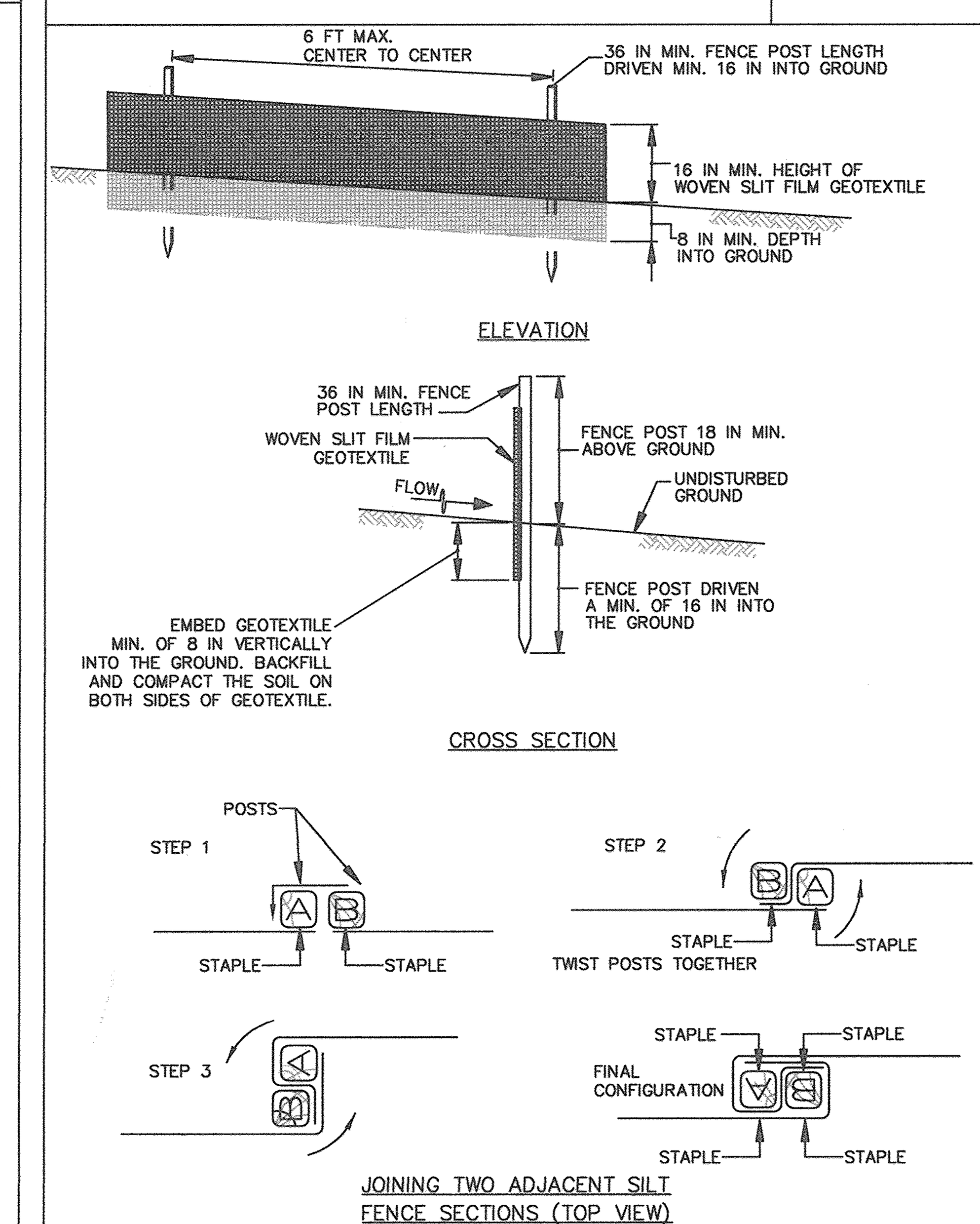
DEVELOPER'S CERTIFICATION

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. Paul W. Kriebel;

FOR: BEAZER HOMES, LLC — 06-30-17
SIGNATURE OF DEVELOPER — DATE

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: —SF—



CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. 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.
4. 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.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. 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.
8. 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

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT. (10 DAYS)
2. 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.
3. REQUEST FOR A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY. (3 DAYS)
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT CONTROLS AS INDICATED ON SHEETS 14 & 15. THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON ALL SEDIMENT CONTROL DEVICES/PRACTICES ON A DAILY BASIS AND IMMEDIATELY AFTER A RAINFALL. (5 DAYS)
5. CLEARING AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF THE WATER & SEWER MAINS. (1 DAY)
6. INSTALL REMAINING PERIMETER CONTROL MEASURES AND INSTALL TEMPORARY SEEDING AS REQUIRED. (1 DAY)
7. CONSTRUCT WATER & SEWER MAINS AND CONNECTIONS. (8 WEEKS)
8. APPROVAL OF THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF SEDIMENT CONTROLS. (1 DAY)
9. REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS. (2 DAYS)

AS-BUILT
By [signature] Date 11/2/18

NOTE: SEE SHEETS 14 & 15 FOR SEDIMENT & EROSION CONTROL: PLAN

0' 50' 100' 200'
SCALE: 1" = 50'

CONTRACT NO. 34-4992-D
ENCLAVE AT RIVER HILL- PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[signature] 2/2/18
CHIEF, BUREAU OF UTILITIES — DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
[signature] 7/21/17
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. — 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
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

STATE OF MARYLAND — PAUL WALTER KRIEBEL — PROFESSIONAL ENGINEER — NO. 12043
#12043
PAUL W. KRIEBEL

DESIGNED BY : B.C.R.				
DRAWN BY : B.C.R.				
CHECKED BY : P.W.K.				
DATE : JULY, 2017	FCC	1	REVISE CONTRACT TITLE & PLAN TO REFLECT LOT NUMBER CHANGES	2/20/18
	BY	NO.	REVISION	DATE

SEDIMENT & EROSION CONTROL NOTES & DETAILS

600' SCALE MAP NO. 34 BLOCK NO. 18
F.C.C. WORK ORDER NO. 13008-3001
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN

ENCLAVE AT RIVER HILL: PHASE II
LOTS 55 THRU 74, 82 THRU 124, 130 THRU 159, 161 THRU 168 & OPEN SPACE LOTS 125 THRU 129, 160 & 169
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-4992-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 16 OF 16

I:\2013\13008\dwg\Water & Sewer Contracts\Water & Sewer Contract No. 34-4992-D (Phase 2)\Finals\13008-3001 Water & Sewer Contract Plan.dwg