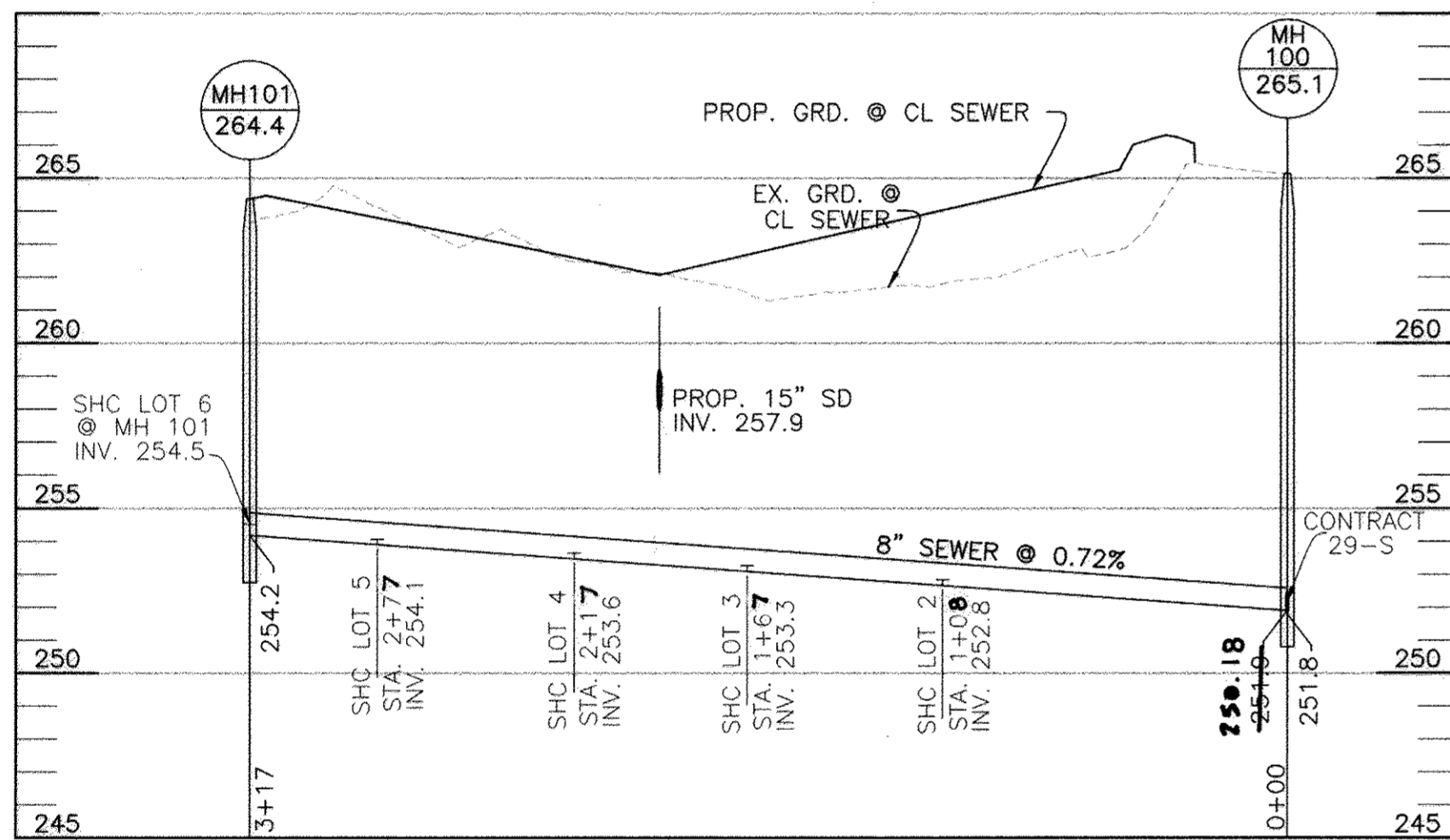
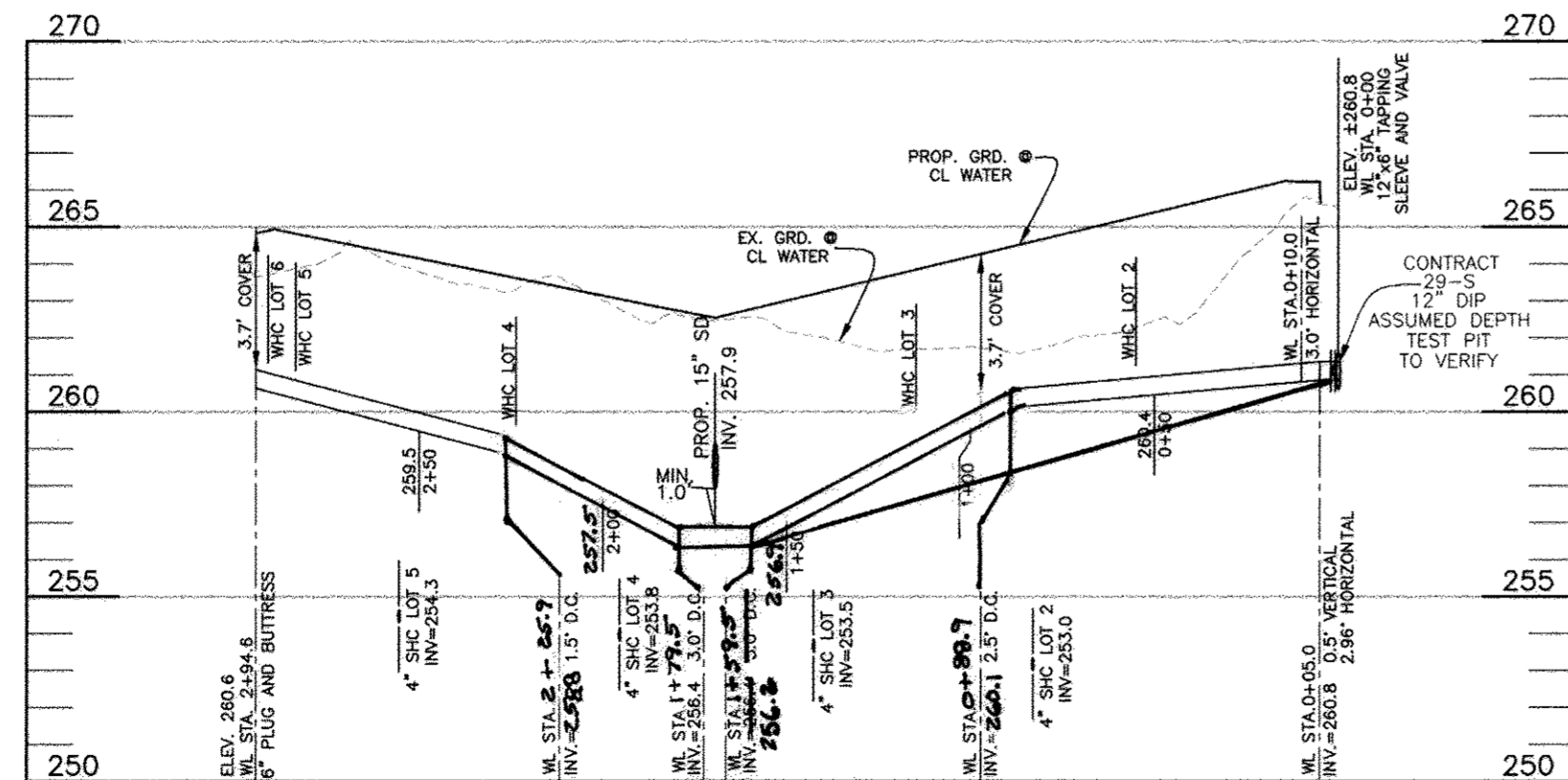


PLAN VIEW
SCALE: 1" = 50'



SEWER PROFILE
SCALE: 1"=50' HORIZ., 1"=5' VERT.



WATER PROFILE
SCALE: 1"=50' HORIZ., 1"=5' VERT.

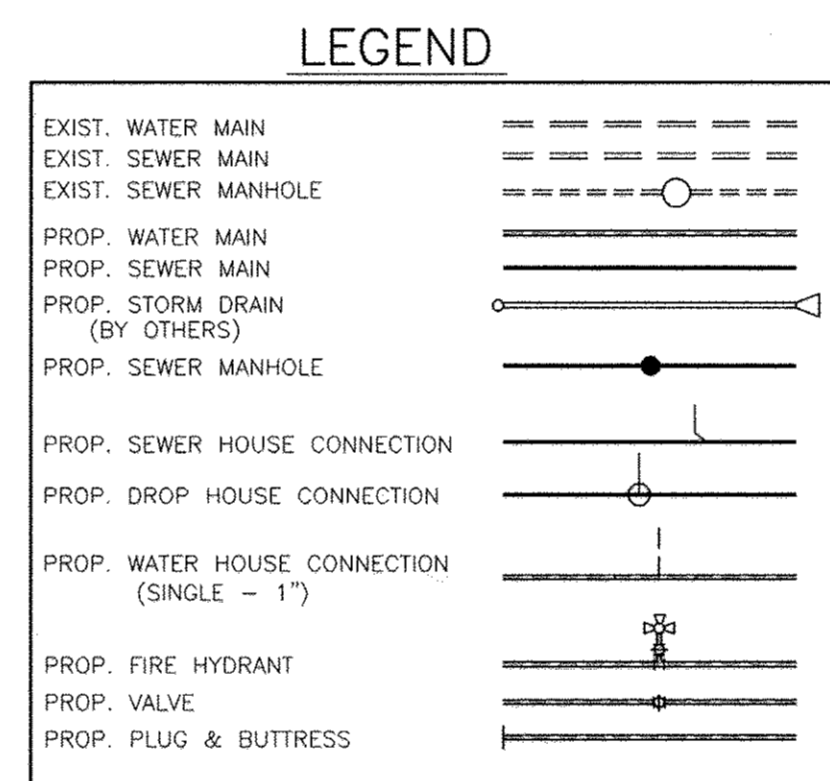
QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
1 1/2" WHC	49 L.F.	88 L.F.	'K'	CAMBRIDGE LEE
12"x8" TS&V	1 EACH	1 EACH	432	JC M
6" PVC	296 L.F.	309 L.F.	C-900	NATIONAL PIPE
6" CAP	1 EACH	1 EACH	M3/D.I.	STAR
4" SHC	91 L.F.	105 L.F.	SDR-35	NATIONAL PIPE
8" SEWER	317 L.F.	317 L.F.	SDR-35	NATIONAL PIPE
MANHOLES	2 EACH	2 EACH		ATLANTIC

SHC TABLE					
LOT NO.	INVERT AT MAIN OR MH	INVERT AT ESMT.	INVERT AT HOUSE	MCE	REMARKS
2	252.8	253.2	253.9	257.1	
3	253.3	253.7	254.4	257.5	
4	253.6	254.0	254.7	257.8	
5	254.1	254.5	255.2	258.4	
6	254.5	254.7	255.4	258.6	

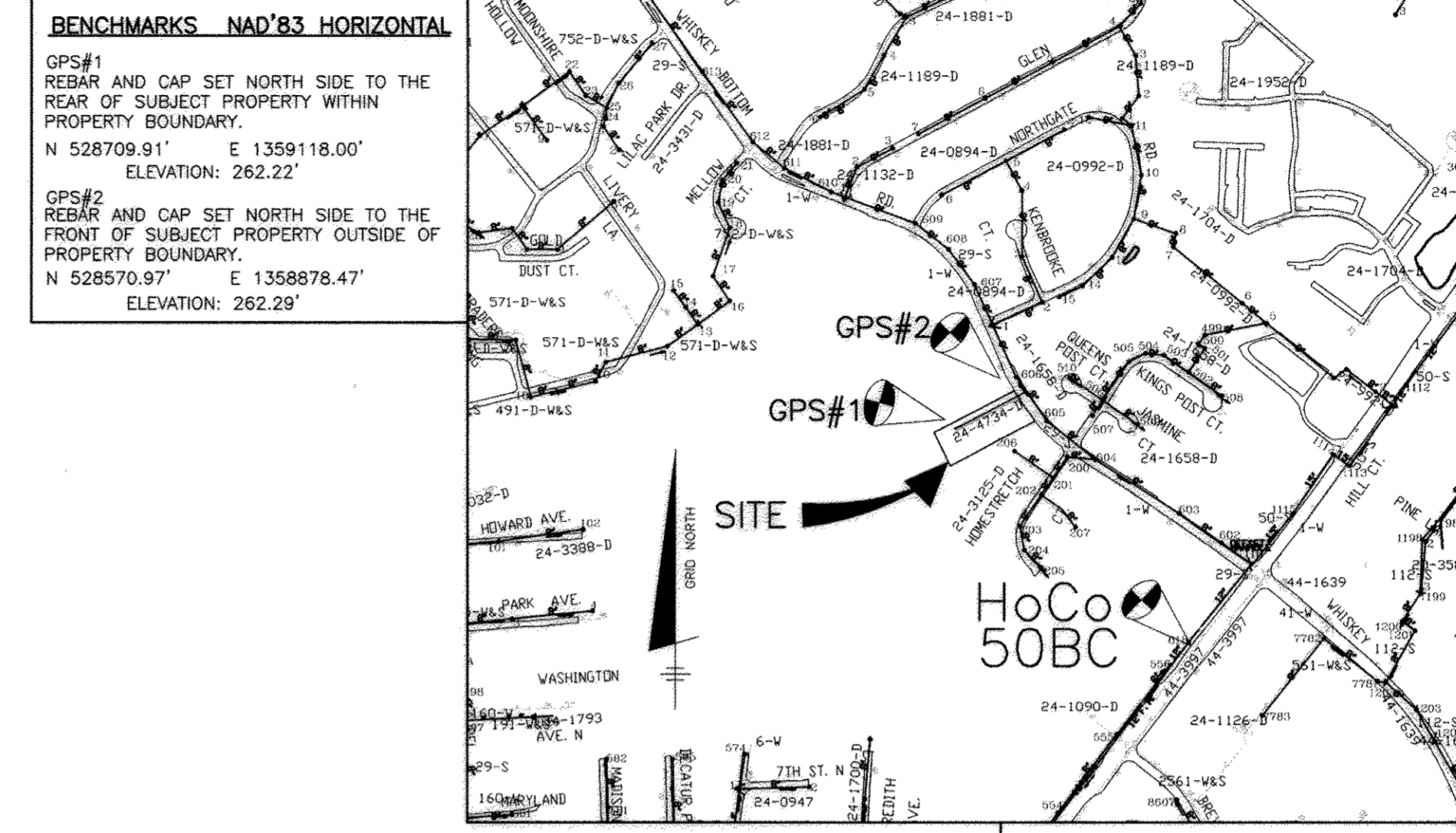
WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT NO.	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 2	WHISKEY BOTTOM ROAD	TO TEST STA. - 31'	TO SHC LOT 2 - 31'
LOT 3	WHISKEY BOTTOM ROAD	TO SHC LOT 2 - 31'	TO SHC LOT 3 - 31'
LOT 4	WHISKEY BOTTOM ROAD	TO SHC LOT 4 - 28'	TO SHC LOT 5 - 32.5'
LOT 5	WHISKEY BOTTOM ROAD	TO SHC LOT 5 - 29'	TO TEST STA. - 28'
LOT 6	WHISKEY BOTTOM ROAD	TO WHC LOT 5 - 6.5'	TO SHC LOT 6 - 10.5'

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT NO.	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 2	WHISKEY BOTTOM ROAD	TO WHC LOT 2 - 31'	TO WHC LOT 3 - 31'
LOT 3	WHISKEY BOTTOM ROAD	TO WHC LOT 3 - 30'	TO SHC LOT 4 - 50.5'
LOT 4	WHISKEY BOTTOM ROAD	TO SHC LOT 3 - 60.5'	TO WHC LOT 4 - 28.5'
LOT 5	WHISKEY BOTTOM ROAD	TO WHC LOT 4 - 32.5'	TO WHC LOT 5 - 29'
LOT 6	WHISKEY BOTTOM ROAD	TO WHC LOT 6 - 10.5'	TO SHM-101 - 30'

SANITARY SEWER MANHOLE DATA						
NO.	TYPE	LOCATION	SHC INV.	INV. IN.	INV. OUT.	REMARKS
100	4.0' PRECAST	STA. 11+41.14 WHISKEY BOTTOM ROAD, 8.28' RT	-	251.9	251.6	HO. CO. STD. G-5.14
101	STD. 4.0' PRECAST	N 528,562.49 E 1,358,913.66	254.3 (2)	-	254.2	HO. CO. STD. G-5.11



FRONTAGE EXHIBIT
SCALE: 1" = 20'



ADC MAP 5169 GRP F1
VICINITY MAP
SCALE: 1" = 600'

PART 2 - WATER CONT.

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 DEPTHS OF INSERTION OF THE SPIGOT INTO THE BELL. THE SPIGOT SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF PVC PIPE.
11. ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE OUTSIDE OF THE BENCHS. 2-DEGREE SLOPES AT 4" HIGH DEFLECTION (4" D) IS PERMITTED. WHEN HIGH DEFLECTION IS REQUIRED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE FITTING. A VERIFICATION PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE JOINT SHALL BE USED. MAKING CARE NOT TO USE COMPACTOR EQUIPMENT DIRECTLY OVER THE FITTING.
12. WHEN HIGH DEFLECTION COUPLINGS ARE USED, THE COUPLING SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENT OF AN AWWA 5300 SHALL HAVE HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTY PVC HIGH DEFLECTION (HD) 5000 PSI COUPLING OR EQUAL.
13. FIVE DEGREE SLOPES SHALL BE BELL BY SPIGOT RATED FOR A MAXIMUM 225 PSI. DR IS MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI-FITTING (IFX) BLUE POLYDRIB.
14. WHEN HIGH DEFLECTION COUPLINGS OR 2-DEGREE SLOPES ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENT OF AN AWWA C900 PVC PIPE LINE, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON BOTH SIDES OF THE FITTING. A VERIFICATION PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE JOINT SHALL BE USED. MAKING CARE NOT TO USE COMPACTOR EQUIPMENT DIRECTLY OVER THE FITTING.
15. THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON BOTH SIDES OF THE FITTING. A VERIFICATION PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE JOINT SHALL BE USED. MAKING CARE NOT TO USE COMPACTOR EQUIPMENT DIRECTLY OVER THE FITTING.
16. THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON BOTH SIDES OF THE FITTING. A VERIFICATION PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE JOINT SHALL BE USED. MAKING CARE NOT TO USE COMPACTOR EQUIPMENT DIRECTLY OVER THE FITTING.

GENERAL NOTES

- PART 1 - GENERAL
1. APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
 2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED IN SEPTEMBER, 2010 BY BENCHMARK ENGINEERING INC.
 3. THE COORDINATES ON THE DRAWING ARE BASED UPON GLOBAL POSITIONING SYSTEM COORDINATES WHICH ARE BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. GPS#1 AND GPS#2 AS DEFINED ON THIS SHEET WERE USED FOR THIS PROJECT.
 4. ALL VERTICAL CONTROLS ARE BASED ON NAVD '83, PROJECTED FROM GPS#1 AND GPS #2.
 5. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON PLAN.
 6. CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
 7. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATIONS AND DETAIL FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
 8. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL [] AT THE LOCATION OF THE TEST PIT. 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.
 9. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - AT&T.....1-800-252-1133
 - BGE CONSTRUCTION SERVICES.....410-637-8713
 - BGE (EMERGENCY).....410-685-0123
 - 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.....1-800-743-0033/410-224-8210
 10. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP SHALL NOT BE REMOVED OR DAMAGED BY THE CONTRACTOR.
 11. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
 12. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE (5) 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 2 - WATER
1. ALL WATER MAINS TO BE 8" PVC C900 WATER (DR18) UNLESS OTHERWISE NOTED.
 2. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 4.0' COVER UNLESS OTHERWISE NOTED.
 3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 4. ALL FITTINGS SHALL BE BUTTRISSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE 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. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 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 DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
 8. FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 9.1 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 MATERIAL 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, 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. SEVENTEEN (17) GRAIN MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HANDS. FIVE (5) FITTINGS AND JOINTS SHALL BE INSTALLED ON ALL STAINLESS STEEL WITH PVC MAINS SHALL BE DUCTILE IRON.
- PART 3 - SEWER
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 16" WALLS ARE FOR BRICK MANHOLES ONLY.
 5. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERIGHT FRAME AND COVERS, STANDARD DETAIL G5.52. WHERE WATERIGHT MANHOLE FRAME AND COVER IS 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.
 7. COORDINATES SHOWN ARE TO CENTER OF STRUCTURE.

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

John K. Roberts 8/1/13
HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER ROAD CONSTRUCTION PLANS, F-13-065

DEVELOPER/OWNER:
CORNERSTONE HOLDINGS, LLC
9605 NORFOLK AVENUE
LAUREL, MARYLAND 20723
410-792-2565

NOTE: NO IMPROVEMENTS SHALL BE PERMITTED TO BE CONSTRUCTED OR PLACED WITHIN THE PUBLIC WATER, SEWER AND UTILITY EASEMENTS THAT WILL IMPEDE OR HINDER ACCESS TO THE PUBLIC WATER AND SEWER MAINS. IMPROVEMENTS SUCH AS AIR CONDITIONING UNITS, DECKS, FENCING, FOUNDATION PLANTINGS AND TREES SHALL NOT BE PLACED WITHIN THE EASEMENTS.

NOTE: CONTRACTORS TO EXERCISE EXTREME CAUTION WHEN WORKING IN AREA OF EXISTING OVERHEAD LINES.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Stacy Kern</i> 8/1/13 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>William M. G...</i> 8/5/13 CHIEF, DEVELOPMENT ENGINEERING DIVISION	BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 315 & ELLICOTT CITY, MARYLAND 21043 (P) 410-465-8105 (F) 410-465-6644 75 THOMAS JOHNSON DRIVE ASUITE E & FREDERICK, MARYLAND 21702 (P) 301-710-5886 WWW.BE-CIVILENGINEERING.COM	DESIGN: AAM DRAFT: AAM CHK: CAM DATE: JUL 2013	CAB 2 KCF AS-BUILTS BEI 1 CORRECT PVC DESIGN AND EXTENSION WHC AND SHC TO EDGE OF DRIVE BY NO. REVISIONS	FINAL PUBLIC WATER AND SEWER PLAN 600 SCALE MAP NO. 50	PARKSIDE ESTATES LOTS 2-6 AND OPEN SPACE LOTS 1 & 7 TAX MAP 50 - GRID 4 PARCEL 438 - ZONE: R-SC 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND AS SHOWN SHEET NO. 1 OF 1
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CONTRACT NO. 24-4734-D