

OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF SEWER COLLECTION SYSTEM

1. INTENTION: THE DECLARED AND ACKNOWLEDGED INTENTION TO SECURE A NEW SEWER COLLECTION SYSTEM, COMPLETE, IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, AND CONTRACT DOCUMENTS. ALL NEW WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES."
2. GENERAL: ALL MATERIALS SHALL BE NEW AND UNUSED. MATERIALS SHALL BE WARRANTED BY THE CONTRACTOR AS TO MATERIALS, WORKMANSHIP, AND ACCURACY OF AS-BUILT DRAWINGS FOR A PERIOD OF ONE YEAR FROM THE DATE OF BENEFICIAL USE OF THE FACILITIES. WORKMANSHIP SHALL BE OF GOOD QUALITY; I.E., SEWERS SHALL BE LAID TRUE TO LINE AND GRADE, FITTINGS SHALL BE PROPERLY INSTALLED AND RESTRAINED, TRENCHES SHALL BE PROPERLY EXCAVATED AND BACKFILLED, MANHOLES SHALL BE INSTALLED AT LOCATIONS AND TO ELEVATIONS SHOWN ON THE PLANS.
3. SURVEYS: THE UTILITY CONTRACTOR SHALL PROVIDE ALL SURVEYS NECESSARY FOR THE LAYOUT AND CONSTRUCTION OF THE WORK OF HIS CONTRACT.
4. EARTHWORK: EARTHWORK SHALL INCLUDE ALL EXCAVATION, FILL AND BACKFILL (MACHINE), COMPACTION AND ROUGH GRADING OF MATERIALS ENCOUNTERED. NO UNSUITABLE MATERIAL INCLUDING, BUT NOT LIMITED TO, CLAY, MUCK, OR PEAT, REMOVED FROM PIPE TRENCHES ARE TO BE USED FOR BACKFILL. ALL FILL OR BACKFILL SHALL BE EITHER SAND OR SANDY CLAY, FREE FROM ROOTS, TRASH, OR OTHER DEBRIS. ALL OTHER BACKFILL SHALL BE COMPACTED BY MACHINE OPERATION CAREFULLY TO 95% (OUTSIDE OF PAVING), 98% (UNDER PAVING) OF ITS OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698, LATEST.
5. JOINT RESTRAINT: ALL FORCEMAIN FITTINGS SHALL BE PROPERLY AND ADEQUATELY RESTRAINED AGAINST LATERAL MOVEMENT AT ALL TEES, CROSSES, VALVES, AND BENDS. RESTRAINERS SHALL BE MEGA-LUG TYPE FOR MECHANICAL JOINTS AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
6. HIGH DENSITY POLYETHYLENE PIPE: POLYETHYLENE PIPES AND FITTINGS SHALL COMPLY WITH THE FOLLOWING STANDARDS. STANDARD FOR POLYETHYLENE PIPES (ASTM F714) LATEST, STANDARD SPECIFICATION FOR POLYETHYLENE PLASTIC PIPES AND FITTING MATERIALS (ASTM D3350) LATEST, DIP MMJ ADAPTERS AND FLANGED ASTM D3350-02. HIGH DENSITY POLYETHYLENE PIPING COMPONENTS SHALL BE MADE FROM PRESSURE-RATED PE 3408, EXTRA-HIGH MOLECULAR WEIGHT, HIGH-DENSITY POLYETHYLENE. PIPE OUTER DIAMETER (OD) SHALL BE COMPATIBLE WITH STANDARD DUCTILE IRON PIPE SIZES. HDPE PIPES FOR FORCEMAINS SHALL BE DR 11 AND MANUFACTURED WITH A GREEN LONGITUDINAL COLOR STRIPE PATTERN OF THREE EQUALLY SPACED PAIRS OF COLOR STRIPES EXTRUDED INTO THE PIPE WITH TRACER WIRE.
7. STEEL CASING PIPE: STEEL CASING PIPE, WHEN REQUIRED, SHALL BE OF SIZE INDICATED ON THE DRAWINGS AND SHALL CONFORM TO ASTM A139, WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI.
8. GATE VALVES AND BOXES: GATE VALVES SHALL BE NON-RISING STEM TYPE RESILIENT WEDGE AND SHALL BE SUITABLE FOR 175 PSI (3"-12") AND 150 PSI (14"-48") WORKING PRESSURE GATE VALVE, WHICH, SHALL BE MECHANICAL JOINT. GATE VALVES SHALL HAVE A 2" OPERATING NUT AND OPEN COUNTER-CLOCKWISE. GATES VALVES SHALL HAVE JOINTS SUITABLE FOR THE TYPE OF MAIN ON WHICH INSTALLED. GATE VALVES 4" AND LARGER SHALL BE IRON BODY, BRONZE FITTED WITH RESILIENT SEAT. VALVES SHALL BE OF DOMESTIC (AMERICAN) MANUFACTURE AND SHALL BE CLOW, KENNEDY VALVE, MUELLER, OR APPROVED EQUAL. VALVE BOXES SHALL BE 5 1/4" DIAMETER, CAST IRON, SLIDING TYPE WITH CENTERING DEVICE, ADJUSTABLE WITH THE WORD "SEWER" CAST IN THE COVER. ALL SECTIONS OF THE VALVE BOX SHALL BE INTERCHANGEABLE WITH OLD BUFFALO FOUNDRY BOXES: STYLE #5001. VALVE BOXES SHALL BE BINGHAM AND TAYLOR OR APPROVED EQUAL.
9. MANHOLES: MANHOLE BASES, SECTIONS AND CONES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C478, SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS. CEMENT SHALL MEET THE REQUIREMENTS OF ASTM C150, SPECIFICATIONS FOR PORTLAND CEMENT, TYPE II. CONCRETE SHALL MEET THE MINIMUM REQUIREMENTS FOR CLASS "A" CONCRETE WORK. MINIMUM WALL THICKNESS SHALL BE 1/12 THE INSIDE DIAMETER IN INCHES PLUS ONE (1) INCH. BASES FOR MANHOLES SHALL BE CAST INTEGRALLY WITH THE BOTTOM MANHOLE SECTION. JOINT CONTACT SURFACES SHALL BE FORMED WITH MACHINED CASTINGS; THEY SHALL BE EXACTLY PARALLEL WITH A 2 DEGREE SLOPE AND NOMINAL 1/16 INCH CLEARANCE WITH THE TONGUE EQUIPPED WITH A PROPER RECESS FOR THE INSTALLATION OF AN O-RING RUBBER GASKET, CONFORMING TO ASTM C443. GRADE RINGS SHALL BE USED TO ADJUST FRAME HEIGHT. GRADE RINGS SHALL BE PRECAST CONCRETE DONUTS, BRICKS ARE NOT ACCEPTABLE GRADE RINGS. PRECAST CONCRETE MANHOLES SHALL BE MANUFACTURED BY FORT MILLER OR APPROVED EQUAL.
10. MANHOLE FRAMES AND COVERS: CAST IRON MANHOLE FRAMES AND COVERS. CAST IRON MANHOLE FRAMES AND COVERS SHALL BE AS DETAILED ON DRAWINGS. CASTINGS SHALL MEET THE REQUIREMENTS OF ASTM A48, SPECIFICATIONS FOR GRAY IRON CASTINGS, CLASS NO. 30, OR GRADE 65-45-12, DUCTILE IRON MEETING THE REQUIREMENTS OF ASTM A536, STANDARD SPECIFICATION FOR DUCTILE IRON CASTINGS. IN EITHER CASE, MANHOLE FRAME AND COVER SHALL BE DESIGNED TO WITHSTAND AN HS20-44 LOADING DEFINED IN THE ASSHTO SPECIFICATIONS. FRAMES AND COVERS SHALL BE MACHINED OR GROUND AT TOUCHING SURFACES SO AS TO SEAT FIRMLY AND PREVENT ROCKING. FRAMES AND COVER SHALL BE CAMPBELL 1009 WITH PICKHOLES.
11. FLEXIBLE MANHOLE CONNECTOR: ALL CONNECTIONS BETWEEN SEWER PIPE AND PRE-CAST CONCRETE MANHOLES SHALL BE ACCOMPLISHED BY A FLEXIBLE CONNECTOR, "KOR-N-SEAL", AS MANUFACTURED BY NATIONAL POLLUTION CONTROL SYSTEMS, INC. OR APPROVED EQUAL.
12. POLYVINYL CHLORIDE PIPE: POLYVINYL CHLORIDE SEWER PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3034, SDR 35. PIPE SHALL BE CLEARLY MARKED IN 5 FT. INTERVALS OR LESS, INDICATING MANUFACTURERS NAME, NOMINAL SIZE, CELL CLASSIFICATION AND LEGEND. JOINTS SHALL BE PUSH-ON RUBBER GASKETED, CONFORMING TO ASTM D-3034. PIPE INSTALLED DEEPER THAN 11'-0" FROM GRADE TO INVERT OR AOB SHALL BE HEAVY WALL SDR-26. MAXIMUM DEPTH OF GRAVITY SEWER WITHOUT PRIOR APPROVAL SHALL BE 15 FEET.
13. INSTALLATION: ALL SEWER LINES, MANHOLES, AND APPUR- TENANCIES SHALL BE CONSTRUCTED TO THE DIMENSIONS AND ELEVATIONS INDICATED ON THE DRAWINGS. TRENCHES SHALL BE EXCAVATED TO A WIDTH APPROXIMATELY TWELVE INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE PIPE. EACH SECTION OF PIPE SHALL BE INSPECTED FOR DEFECTS PRIOR TO BEING LOWERED INTO THE TRENCH. THE INSIDE OF EACH BELL AND THE OUTSIDE OF EACH SPIGOT SHALL BE THOROUGHLY CLEANED OF ALL FOREIGN MATTER, PRIOR TO MAKING THE JOINT. ALL SEWER LINES SHALL BE CONSTRUCTED WITH THE SPIGOT ENDS POINTING IN THE DIRECTION OF THE FLOW. BOTH THE BELL AND THE SPIGOT OF EACH JOINT SHALL BE LUBRICATED WITH THE LUBRICANT RECOMMENDED BY THE PIPE MANUFACTURER. ALL SEWER LINES SHALL BE CLEANED OF FOREIGN MATTER AS CONSTRUCTION PROGRESSES, AND SHALL BE IN A CLEAN CONDITION UPON COMPLETION OF CONSTRUCTION OPERATIONS. PIPE MATERIALS SHALL REMAIN THE SAME ON RUNS BETWEEN MANHOLES AND / OR OTHER STRUCTURES. CONTRACTOR SHALL INSTALL STONE BEDDING PER DETAIL AS SHOWN ON THE PLANS. WHERE EXCESSIVE WATER IS PRESENT IN PIPE TRENCHES ADDITIONAL CRUSHED STONE #1 AND #2 SHALL BE PLACED AS REQUIRED BY THE ENGINEER.
14. INSPECTION: EACH SECTION OF THE COMPLETED SEWER SYSTEM SHALL BE INSPECTED FOR PROPER ALIGNMENT. INSPECTION SHALL CONSIST OF "LAMPING" FROM MANHOLE TO MANHOLE. ANY SECTION OF THE SEWER SYSTEM WHICH DOES NOT DISPLAY TRUE, CONCENTRIC ALIGNMENT SHALL BE REINSTALLED AT NO ADDITIONAL EXPENSE TO THE OWNER. DEFLECTION TESTING WITH 5% MANDREL IS ALSO REQUIRED. ANY SECTION NOT PASSING THE MANDREL TEST SHALL BE CORRECTED. A WRITTEN LOG OF INSPECTIONS SHALL BE KEPT INDICATING LOCATION OF TEST, POTENTIAL PROBLEMS IN SEWER, DIPS AND DEPTH OF WATER, SERVICE LOCATIONS, AND OTHER IRREGULARITIES IN THE PIPE LINES. TELEVISION INSPECTION (CCTV) WILL BE REQUIRED ON ALL NEW GRAVITY SEWERS CONSTRUCTED. THIS SERVICE SHALL BE PROVIDED BY THE CONTRACTOR AS A PART OF THIS CONTRACT. THE NEWLY CONSTRUCTED SEWERS SHALL BE TELEVIEWED IN THE PRESENCE OF THE ENGINEER. A FULL REPORT AS TO THE CONDITION OF PIPE, TYPE, DEPTH, LOCATION OF SERVICES, LENGTH, TYPE, JOINT AND DISTANCE BETWEEN MANHOLES, ETC. SHALL BE FURNISHED TO THE ENGINEER AND OWNER PRIOR TO THE FINAL ACCEPTANCE OF THE SYSTEM. ANY PIPE FOUND TO BE CRACKED, LEAKING OR OTHERWISE DEFECTIVE SHALL BE REMOVED AND REPLACED WITH NEW PIPE AT NO ADDITIONAL COSTS TO THE OWNER. A DVD SHALL BE MADE OF THE TELEVISION INSPECTION AND SUBMITTED TO THE ENGINEER AND THE OWNER.
15. TESTING: AFTER COMPLETION OF CONSTRUCTION, THE SEWER SYSTEM SHALL BE TESTED BY LOW PRESSURE AIR TEST METHOD IN ACCORDANCE WITH "UNI-BELLS" RECOMMENDED PRACTICE FOR LOW PRESSURE AIR TESTING OF INSTALLED SEWER PIPE (UNI-B-6). THIS METHOD OF TESTING SHALL APPLY TO ALL PIPE MATERIALS AND DIAMETERS. IN ADDITION, IF THE AIR TEST ON A SECTION OF SEWER IS MARGINAL (AS TO PASSING), THE ENGINEER CAN ORDER A CORROBORATIVE HYDROSTATIC TEST ON THE SECTION IN QUESTION, AT NO ADDITIONAL COST TO THE OWNER.
16. ABANDONMENT OF EXISTING SEWERS AND APPURTENANCES: EXISTING SEWERS TO BE ABANDONED IN PLACE SHALL BE PHYSICALLY SEPARATED FROM THE MANHOLES AND THE CONTRACTOR SHALL PLUG PIPES CONCRETE PLUG WITH BRICKS AND HYDRAULIC CEMENT. ALL STRUCTURES TO BE ABANDONED SHALL HAVE THEIR TOP SECTIONS REMOVED, CUT HOLES IN THE BOTTOM OF STRUCTURE, BACKFILLED STRUCTURE WITH STONE, SELECT FILL, OR FLOWABLE FILL AOE.

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL EXAMINE AND VERIFY, IN THE FIELD, ALL CONDITIONS AND DIMENSIONS. DIMENSIONS OF THE EXISTING STRUCTURES SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE ORIGINAL CONSTRUCTION OR SUBSEQUENT REHABILITATION DRAWINGS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL SUCH FIELD MEASUREMENTS TO ASSURE PROPER FIT OF THE FINISHED WORK, AND THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. IF FIELD CONDITIONS AND DIMENSIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL USE THE FIELD CONDITIONS AND DIMENSIONS AND MAKE THE APPROPRIATE CHANGES TO THOSE SHOWN ON THE PLANS, AS APPROVED BY THE ENGINEER. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS MADE SHALL BE INDICATED ON THE SHOP DRAWINGS SUBMITTED FOR REFERENCE OF THE REVIEWER.
2. THERE SHALL BE NO CLAIM AGAINST THE OWNER MADE BY THE CONTRACTOR FOR WORK PERTAINING TO MODIFICATIONS, AS MAY BE REQUIRED, DUE TO ANY DIFFERENCE BETWEEN ACTUAL FIELD CONDITIONS AND THOSE SHOWN BY THE DETAILS AND DIMENSIONS ON THE CONTRACT PLANS. THE CONTRACTOR WILL BE PAID AT THE UNIT BID PRICE FOR THE ACTUAL QUANTITIES OF MATERIALS USED OR FOR THE WORK PERFORMED, AS INDICATED BY THE VARIOUS ITEMS IN THE CONTRACT. THE CONTRACTOR SHOULD NOTE THAT ADDITIONAL WORK MAY BE REQUIRED AS THE CONTRACT PROGRESSES, WHICH IS NOT SHOWN OR NOTED ON THE PLANS. THIS WORK SHALL BE PERFORMED BY THE CONTRACTOR, AS ORDERED BY THE ENGINEER, AND PAYMENT SHALL BE MADE AT THE BID PRICE FOR THE APPROPRIATE ITEMS. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT, DUE TO THE NATURE OF REPLACEMENT PROJECTS, THE EXACT EXTENT OF REPLACEMENT WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO THE COMMENCEMENT OF WORK. THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTION AND OTHER INFORMATION AVAILABLE AT THE TIME. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO CONSTRUCTION DETAILS AND WORK QUANTITIES. THE CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH FIELD CONDITIONS.
3. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING STRUCTURES CAUSED BY HIS OPERATIONS WHICH IS NOT INCLUDED AS PART OF THIS WORK. ALL DAMAGE TO THE EXISTING STRUCTURES WHICH IS NOT PART OF THE INTENDED WORK SHALL BE REPAIRED BY THE CONTRACTOR WITHOUT COST TO THE OWNER, AND TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL CONDUCT HIS REMOVAL OPERATIONS TO THE SATISFACTION OF THE ENGINEER SO AS NOT TO UNDULY DISTURB UNDERLYING MATERIALS WHICH ARE TO REMAIN IN PLACE. THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE OWNER, WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE OWNER, THE DAMAGED MATERIAL SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
4. WHENEVER ITEMS IN THE CONTRACT REQUIRE MATERIALS TO BE REMOVED AND DISPOSED, THE COST OF SUPPLYING A LEGAL DISPOSAL AREA AND TRANSPORTATION TO THE AREA SHALL BE INCLUDED IN THE PRICE BID.
5. THE CONTRACTOR IS TO VISIT THE SITE BEFORE BIDDING, TO BECOME FAMILIAR WITH THE FIELD CONDITIONS AND TO JUDGE THE EXTENT AND NATURE OF THE WORK TO BE DONE UNDER THIS CONTRACT. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR BECAUSE OF THE CONTRACTOR'S FAILURE TO INCLUDE IN THEIR BID ALL ITEMS AND MATERIALS WHICH THEY ARE REQUIRED TO FURNISH IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. ALL WORK AREAS AT THE SITE SHALL BE COMPLETELY SECURED, CONFORMING WITH OSHA REGULATIONS, TO THE SATISFACTION OF THE ENGINEER, TO PROTECT THE PUBLIC AND PREVENT UNAUTHORIZED ENTRY. THE COST OF THIS WORK IS TO BE INCLUDED IN THE VARIOUS ITEMS OF THE CONTRACT.
7. IT WILL BE THE CONTRACTOR'S OBLIGATION AND RESPONSIBILITY TO USE METHODS AND EQUIPMENT WHICH WILL INSURE THE SATISFACTORY COMPLETION OF THE REQUIRED WORK WITHIN THE TIME FRAME STIPULATED IN THE CONTRACT.
8. THE CONTRACTOR SHALL PROVIDE SURVEY AND STAKE OUT FOR THIS PROJECT. THE COST FOR THE SURVEY AND STAKE OUT SHALL BE INCLUDED IN THE UNIT PRICES BID FOR VARIOUS ITEMS OF THE CONTRACT.
9. LOCATION OF UTILITIES, PUBLIC AND/OR PRIVATE, INDICATED AS EXISTING AND/OR TO BE CONSTRUCTED AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THEIR EXACT LOCATION SHALL BE DETERMINED IN THE FIELD. ADDITIONAL UTILITY LINES, WHETHER ABANDONED OR IN SERVICE, MAY EXIST AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT HIS OPERATIONS AND TAKE THE NECESSARY PRECAUTIONS TO PREVENT INTERFERENCE WITH, OR DAMAGE TO, THESE OR OTHER FACILITIES DURING THE COURSE OF CONSTRUCTION.
10. IN THE EVENT THE CONTRACTOR DAMAGES AN EXISTING UTILITY SERVICE CAUSING AN INTERRUPTION IN SAID SERVICE, THEY SHALL IMMEDIATELY COMMENCE WORK TO RESTORE SERVICE AND MAY NOT CEASE THE WORK OPERATION UNTIL SERVICE IS RESTORED.
11. THE CONTRACTOR SHALL CALL DIG SAFELY NEW YORK (DSNY) (1-800-962-7962) A MINIMUM OF THREE WORKING DAYS PRIOR TO ANY EXCAVATION TO HAVE EXISTING UNDERGROUND UTILITIES LOCATED IN THE FIELD. CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN ALL UTILITY LOCATIONS THROUGHOUT PROJECT.
12. AREAS DISTURBED BY THE CONTRACTOR AS PART OF THE WORK TO BE PERFORMED UNDER THIS CONTRACT, SHALL BE RESTORED TO PRECONSTRUCTION STANDARDS AND TO THE SATISFACTION OF THE ENGINEER. ALL THE DISTURBED GRASS AREAS SHALL BE GRADED AND SEEDED IN A MANNER APPROVED BY THE ENGINEER.
13. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ADEQUATE EROSION AND DUST CONTROL AT ALL TIMES. THE CONTRACTOR SHALL SUBMIT, IF REQUIRED, FOR REVIEW TO THE ENGINEER A STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
14. AS-BUILT DRAWINGS: DURING THE DAILY PROGRESS OF WORK, THE CONTRACTOR'S JOB SUPERINTENDENT SHALL RECORD ON THE FIELD SET OF DRAWINGS ALL WORK INSTALLED. ALL PIPING, VALVES, FITTINGS, FIRE HYDRANTS, ETC. SHALL BE LOCATED IN TWO DIRECTIONS. ONE LOCATION SHALL BE REFERENCED PERPENDICULAR TO THE RIGHT OF WAY LINES AND/OR PROPERTY LINES (PREFERABLY BOTH). SIZE, TYPE, AND CLASS OF WATER MAINS, VALVES, FITTINGS, FIRE HYDRANTS, ETC. SHALL BE SHOWN (I.E. 8" CL 52 D.I.P., 6" GATE VALVE). ALL LOCATIONS WHERE THE TOP OF THE WATER MAIN IS LESS THAN 60" DEEP OR MORE THAN 96" DEEP SHALL BE NOTED ON THE AS-BUILTS.
15. CONSTRUCTION WARRANTY AND WARRANTY SECURITY PERIOD: CONTRACTOR SHALL WARRANTY OWNER AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP. THE CONTRACTOR SHALL PROVIDE A WRITTEN AND FULLY ASSIGNABLE WARRANTY THAT THE SYSTEM INSTALLED WILL BE AND REMAIN FREE FROM ALL DEFECTS, LATENT OR OTHERWISE WITH RESPECT TO WORKMANSHIP, MATERIALS, INSTALLATION, AND ACCURACY OF THE AS-BUILT DRAWINGS IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE BENEFICIAL USE OF THE FACILITIES.
16. CLEAN-UP: ALL SURPLUS MATERIALS OF CONSTRUCTION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AS PART OF THE CONTRACT WITH THE OWNER.
17. PERMITS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR PERFORMING WORK UNDER HIS CONTRACT, EXCEPT THAT THE NYSDEC PERMITS, NYSDOH PERMITS, AND WETLAND PERMITS, IF REQUIRED, WILL BE SECURED BY THE OWNER.
18. DEWATERING: THE CONTRACTOR SHALL AT ALL TIME DURINGS CONSTRUCTION PROVIDE AMPLE MEANS AND EQUIPMENT WITH WHICH TO PROMPTLY REMOVE AND DISPOSE OF ALL WATER ENTERING THE TRENCH AND STRUCTURE EXCAVATIONS AND SHALL KEEP SAID EXCAVATIONS ACCEPTABLY DRY, UNTIL THE PIPING AND/OR STRUCTURES TO BE BUILT THEREIN ARE COMPLETED. ALL WATER PUMPED OR DRAINED FROM THE WORK AREA SHALL BE DISPOSED OF IN A MANNER AS TO NOT DAMAGE SEWER, WATER, ELECTRICAL OR ANY OTHER PIPING STRUCTURES OR PROPERTY. NO PIPE SHALL BE LAID IN WATER AND NO WATER SHALL BE ALLOWED TO RISE ABOVE THE BOTTOM OF ANY PIPE WHILE IT IS BEING JOINTED. DEWATERING WITH UP TO A 4" PUMP SHALL BE INCLUDED IN THE CONTRACT PRICE. ADDITIONAL COMPENSATION FOR DEWATERING THAT REQUIRES LARGER PUMPS, WELLPOINTS, OR OTHER METHODS SHALL BE APPROVED BY THE ENGINEER AND THE OWNER PRIOR TO INSTALLATION.
19. CONCRETE: ALL PORTLAND CEMENT CONCRETE MIXES SHALL BE APPROVED IN ADVANCE BY THE ENGINEER. ALL CONCRETE SHALL BE PLACED BEFORE THE INITIAL SET HAS TAKEN PLACE. STALE OR RETEMPERED CONCRETE SHALL NOT BE USED. CONCRETE USED FOR PIPE PLUGS SHALL BE 2500 PSI MINIMUM. CONCRETE USED FOR ALL OTHER PURPOSES SHALL BE 4000 PSI MINIMUM.
20. SEPARATION OF WATER AND SEWER MAINS: A HORIZONTAL SEPARATION OF A MINIMUM OF 10 FEET SHALL BE MAINTAINED BETWEEN PARALLEL WATER MAINS AND SANITARY SEWERS (INCLUDING FORCE MAINS) WHERE PRACTICAL. THE PROJECT ENGINEER MUST APPROVE ANY CROSSINGS WHERE WATER MAINS AND SANITARY SEWERS CROSS WITH LESS THAN 18" VERTICAL CLEARANCE.
21. NEW CONNECTION TO EXISTING MAIN: NEW CONNECTIONS, WHERE NOTED, TO EXISTING MAIN IN SERVICE SHALL BE ACCOMPLISHED BY THE "WET TAP" METHOD UTILIZING FULL CURCLE STAINLESS STEEL TAPPING SLEEVE AND MECHANICAL JOINT TAPPING VALVE. TAPPING SLEEVE SHALL BE RATED AT 200 PSI, NON-SHOCK WORKING PRESSURE CONFORMING TO AWWA STANDARD C110, LATEST REVISION. ROMAC SST OR JCM 432 STAINLESS STEEL TAPPING SLEEVE WITH DUCTILE IRON FLANGE IS PREFERRED. TAPPING VALVE SHALL BE MECHANICAL JOINT ONE END AND STANDARD FLANGED JOINT ON OTHER END.
22. JOBSITE SAFETY: WHILE ON THE JOBSITE, THE CONTRACTOR SHALL AT ALL TIMES OBSERVE ALL FEDERAL, STATE, AND LOCAL SAFETY RULES, REGULATIONS AND LAWS.

DATE: _____
 DRAWN BY: JMF
 SCALE: AS SHOWN
 REVIEWED BY: _____
 PROJECT NO.: _____
 FILE: DETAILS REV6 BIDSET



REVISIONS	
NO.	DESCRIPTION

GENERAL NOTES
 AND TYPICAL DETAILS
 TOWN OF GUILDERLAND, NY

GENERAL SEWER
 CONSTRUCTION
 NOTES

SHEET:
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WARNING - IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2.