


CITY OF COMPTON

WATER UTILITY SPECIFICATIONS

PUBLIC WORKS DEPARTMENT
WATER UTILITY DIVISION
205 SOUTH WILLOWBROOK AVENUE
COMPTON, CALIFORNIA 90220
(310) 605-5524

ALL DEVELOPERS, CONTRACTORS, AND OTHER INDIVIDUALS OR COMPANIES PERFORMING ANY WORK ON THE CITY OF COMPTON'S WATER SYSTEM SHALL COMPLY WITH THESE SPECIFICATIONS. IT IS THEIR RESPONSIBILITY THAT THEY HAVE THE MOST CURRENT COPY BY CONTACTING THE WATER UTILITY DIVISION.

APPROVED  DATE 9.1.15
GLEN KAU
DIRECTOR OF PUBLIC WORKS

INTRODUCTION

These Water Utility Division Specifications (Specifications) are to be used as a guide by Developers, Engineers, and Contractors in the design and installation of all additions, replacements, and modifications to the City of Compton's public water system. It is the intent that these Specifications will provide uniformity in materials and installation of piping, valves, fire hydrants, service laterals, meters, and other water system appurtenances. The Specifications shall also provide construction methods and controls to be used by contractors to construct, pressure test, disinfect and place in service all improvements and modifications to the City's public water system.

CITY OF COMPTON

WATER UTILITY DIVISION SPECIFICATIONS

TABLE OF CONTENTS

SECTION 1 - GENERAL

- 1-01 PLANS AND SPECIFICATIONS
- 1-02 DEFINITIONS
- 1-03 ABBREVIATIONS
- 1-04 LICENSES, PERMITS, AND FEES
- 1-05 INSPECTION
- 1-06 GUARANTEE

SECTION 2 - OPEN TRENCH OPERATIONS: EXCAVATION, BEDDING, BACKFILL, AND RESURFACING

- 2-01 OPEN TRENCH OPERATIONS
 - 2-01.01 Permits and Licenses
 - 2-01.02 Inspection
 - 2-01.03 Traffic Control
 - 2-01.04 Surveying
 - 2-01.05 Potholing
 - 2-01.06 Sheeting and Shoring
 - 2-01.07 Secured Trenches
 - 2-01.08 Tie-Ins
 - 2-01.09 Interruption of Water Service
- 2-02 TRENCH EXCAVATION
 - 2-02.01 Removal of Surface Improvements
 - 2-02.02 Abandoning Structures
 - 2-02.03 Protecting and Replacing Existing Structures
 - 2-02.04 Excess Excavated Material
- 2-03 TRENCH BEDDING
- 2-04 TRENCH BACKFILL
- 2-05 COMPACTION TESTS
- 2-06 TEMPORARY RESURFACING
- 2-07 TRENCH RESURFACING

SECTION 3 - BACKFLOW PREVENTION ASSEMBLIES AND FIRELINES

- 3-01 PUBLIC WATER SYSTEM PROTECTION
- 3-02 APPROVES BACKFLOW PREVENTION ASSEMBLIES
- 3-03 TESTING
- 3-04 LOCATION OF ASSEMBLIES
- 3-05 FIRELINES
- 3-06 PAINTING
- 3-07 AESTHETICS

SECTION 4 - MATERIALS

- 4-01 GENERAL
 - 4-01.01 Protection of Metal Surfaces
- 4-02 DUCTILE IRON PIPE
 - 4-02.01 Pipe Joints
 - 4-02.02 Lining and Coating
 - 4-02.03 Polyethylene Protective Wrapping
- 4-03 SPECIAL APPLICATIONS USING POLYVINYL CHLORIDE PIPE
 - 4-03.01 Pipe Joints
 - 4-03.02 Pipe Services and Appurtenances
 - 4-03.03 Restrained Joint PVC Pipe
 - 4-03.04 Installation of Curvature
 - 4-03.05 Markings
 - 4-03.06 Workmanship
 - 4-03.07 Fittings for PVC Main Line
 - 4-03.08 Tracer Wire and Warning Tape
- 4-04 THRUST RESTRAINING MATERIALS
 - 4-04.01 Mechanical Joints
 - 4-04.02 Flanged Adapters
 - 4-04.03 Push-On Pipe Joints
 - 4-04.04 Concrete
- 4-05 MAIN LINE COUPLINGS
- 4-06 SLEEVES AND CLAMPS
 - 4-06.01 Tapping Sleeves
 - 4-06.02 Repair Clamps
- 4-07 MAIN LINE PIPE FITTINGS
 - 4-07.01 Mechanical Joints
 - 4-07.02 Flanged Joints
 - 4-07.03 Gaskets
 - 4-07.04 Bolts and Nuts for Mechanical Joints and Flanged Fittings
- 4-08 MAIN LINE VALVES
 - 4-08.01 General
 - 4-08.02 Gate Valves
 - 4-08.03 Butterfly Valves
 - 4-08.04 End Connections and Gasket Materials
 - 4-08.05 Combination Air Release Valves
 - 4-08.06 Valve Can Assembly
- 4-09 FIRE HYDRANT ASSEMBLY
 - 4-09.01 Materials
 - 4-09.02 Hydrant Bury and Extensions (Spools)
 - 4-09.03 Hydrant Protection
 - 4-09.04 Hydrant Reflective Markers
- 4-10 SERVICE LATERAL INSTALLATION
 - 4-10.01 Corporation Stops
 - 4-10.02 Angle Meter Valves
 - 4-10.03 Copper Tubing
 - 4-10.04 Red Brass Pipe
 - 4-10.05 Service Saddles
 - 4-10.06 Meter Boxes
- 4-11 LARGE SERVICE INSTALLATION
 - 4-11.01 Meter Assembly

- 4-11.02 Tapping Tees
- 4-11.03 Backflow Prevention Assemblies and Fire Lines
- 4-11.04 Guard Posts
- 4-12 METERS
 - 4-12.01 Positive Displacement Types
 - 4-12.02 Turbine Types
 - 4-12.03 Compound Types
- 4-13 DEVIATION FROM SPECIFICATIONS
- 4-14 MATERIAL CERTIFICATIONS

SECTION 5 - INSTALLATION OF DUCTILE IRON AND PVC PIPE, VALVES, FITTINGS, FIRE HYDRANTS, AND APPURTENANCES

- 5-01 GENERAL
- 5-02 CONSTRUCTION MATERIALS
- 5-03 INSTALLING WATER MAIN PIPE
 - 5-03.01 Laying Ductile Iron Pipe, Bends, and Fittings
 - 5-03.02 Laying PVC (C900 & C905) Pipe
 - 5-03.03 Cutting Pipe
 - 5-03.04 Polyethylene Protective Wrapping
 - 5-03.05 Protection of Metal Surfaces
 - 5-03.06 Thrust Restraints
 - 5-03.07 Flushing
- 5-04 VALVE BOX ASSEMBLY
- 5-05 FIRE HYDRANT ASSEMBLY
- 5-06 LARGE SERVICE LATERALS, BACKFLOW ASSEMBLIES, AND FIRE LINES
 - 5-06.01 Meters
 - 5-06.02 Backflow Assemblies
 - 5-06.03 Fire Lines
- 5-07 SMALL SERVICE LATERALS
 - 5-07.01 Backfill Compaction
 - 5-07.02 Backflow Assemblies
- 5-08 CONNECTION TO THE EXISTING DISTRIBUTION SYSTEM
 - 5-08.01 Pressure Tapping
 - 5-08.02 Shutdown of Main
 - 5-08.03 Transfer of Jurisdiction of Completed Work
- 5-09 ABANDONMENT OF EXISTING WATER MAINS, VALVES, AND APPURTENANCES
- 5-10 FIELD PAINTING
 - 5-10.01 Surface Preparation
 - 5-10.02 Primer Finished Coat

SECTION 6 - PIPELINE FLUSHING, HYDROSTATIC TESTING AND DISINFECTING

- 6-01 GENERAL REQUIREMENTS
- 6-02 TEMPORARY PIPING AND APPURTENANCES FOR FLUSHING, TESTING, AND DISINFECTING
- 6-03 FLUSHING
- 6-04 HYDROSTATIC PRESSURE TESTING
 - 6-04.01 Preparation for Hydrostatic Test
 - 6-04.02 Procedures for Hydrostatic Testing
 - 6-04.03 Repetition of Hydrostatic Test
 - 6-04.04 After Satisfactory Hydrostatic Test

- 6-05 DISINFECTING
 - 6-05.01 Preparation for Disinfecting Pipe Lines
 - 6-05.02 Forms of Chlorine for Disinfection
 - 6-05.02.01 Calcium Hypochlorite Tablets
 - 6-05.02.02 Calcium Hypochlorite (Granules)
 - 6-05.02.03 Sodium Hypochlorite (Solution)
 - 6-05.02.04 Liquid Chlorine Solution
 - 6-05.03 Methods of Chlorination
 - 6-05.03.01 Calcium Hypochlorite Tablets
 - 6-05.03.02 Continuous Feed
 - 6-05.04 Retention Period Required and Required Residual
 - 6-05.05 Final Flushing
 - 6-05.06 Bacteriological Tests
- 6-06 DISPOSAL OF TEST WATER
- 6-07 CONNECTING TO EXISTING DISTRIBUTION SYSTEM
- 6-08 REMOVAL OF TEMPORARY PIPING AND APPURTENANCES

SECTION 7 - SEPARATION OF WATER MAINS AND SANITARY SEWERS

- 7-01 BASIC SEPARATION STANDARDS
- 7-02 EXCEPTIONS TO BASIC SEPARATION STANDARDS
- 7-03 SPECIAL RESTRICTIONS
- 7-04 ALTERNATE CONSTRUCTION CRITERIA
- 7-05 CASE 1: NEW SEWER LINES BEING INSTALLED
- 7-06 CASE 2: NEW WATER MAINS BEING INSTALLED

SECTION 8 - REFERENCED CITY OF COMPTON WATER STANDARD DRAWINGS

- 601 1" WATER SERVICE INSTALLATION
- 602 2" WATER SERVICE INSTALLATION
- 603 3" AND 4" METER INSTALLATION
- 604 ¾" TO 2" REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY
- 605 1" RESIDENTIAL FIRE/DOMESTIC SERVICE INSTALLATION
- 606 2" RESIDENTIAL FIRE/DOMESTIC SERVICE INSTALLATION
- 610 STANDARD FIRE HYDRANT INSTALLATION
- 611 TRENCH PLATING
- 612 RESIDENTIAL STREET PIPE TRENCH BEDDING AND BACKFILL
- 613 ARTERIAL STREET PIPE TRENCH BEDDING AND BACKFILL
- 615 FIRE HYDRANT GUARD POST
- 621 2" BLOW-OFF ASSEMBLY
- 624 4" SAND BLOW-OFF ASSEMBLY
- 627 1" AND 2" COMBINATION AIR RELEASE VALVE ASSEMBLY
- 630 WATER QUALITY SAMPLING STATION
- 646 2" AND SMALLER SERVICE LATERAL ABANDONMENT
- 648 4" THROUGH 12" ABANDONMENT OF FITTINGS AND VALVES
- 650 STANDARD VALVE BOX ASSEMBLY
- 651 STEEL VALVE STEM EXTENSION
- 701 4" THROUGH 12" SERVICE LATERALS AND NEW MAIN INSTALLATION
- 721 FIRELINE DOUBLE CHECK DETECTOR ASSEMBLY
- 725 MANIFOLD INSTALLATION