

SECTION 6 – SUPPLEMENT TO DENVER WATER ENGINEERING STANDARDS

CHAPTER 8 – PIPE INSTALLATION

6.1. GENERAL CONSTRUCTION STANDARDS

The following is in addition to Denver Water Engineering Standards Chapter 8 - Pipe Installation.

All excavations affecting or involving any part of the District System, and all work on Main Extensions, Taps, or other District facilities shall be performed in conformity with and are subject to the requirements and conditions set forth herein. Whenever any provision of these Specifications or the Rules and Regulations imposes a duty addressed in this Section upon a Contractor, the term "Contractor" in such context shall be deemed to apply also to the Property Owner.

6.1.1. 8.01 – APPROVAL BY DENVER WATER

Contractor shall comply with all District, Denver Water, State and Federal Rules, Regulations, Standards and Specifications.

6.1.2. PERMITS

The Contractor shall be solely responsible for determining and obtaining any and all permits required for the work from other governmental entities or agencies having jurisdiction, and shall perform the work in accordance with any and all applicable ordinances, regulations, laws and orders of, or permits issued by such entities or agencies.

6.1.3. SUBSURFACE STRUCTURES

The District will make available to the Contractor record drawings showing the location of its facilities and such information as it has about other subsurface structures in the vicinity of the work, but the Contractor shall be finally and solely responsible for notifying all owners or operators thereof of the intent to excavate in the area, and determining the existence and location of all subsurface structures in such area.

If a Contractor damages any District facilities during construction, the Contractor shall immediately notify the District and take such measures as may be reasonably necessary or appropriate to minimize damage to the District System, prevent the escape of water from the District System, and prevent and mitigate damage from fugitive water. The District shall perform all repairs of District facilities and may assess the costs thereof to Contractor, as provided in Sections 9-5 and 9-8 of the Rules and Regulations.

Any Contractor who damages District facilities shall indemnify and hold the District harmless against any and all claims for damage resulting therefrom, and shall indemnify and hold the District harmless against any and all claims for damage to any such structures.

6.1.4. WARRANTY

All materials and workmanship furnished by the Contractor shall conform to the Denver Water Engineering Standards, these specifications and to all plans and design approved by

the District, and shall be free from all defects due to faulty or non-conforming materials or workmanship.

6.1.5. INDEPENDENT INVESTIGATION

Contractor shall thoroughly examine the work site to ascertain all soil, geological, groundwater and other conditions to be encountered which might affect the work being undertaken. The Contractor shall enter into such work relying on their own investigation and information, and not on any statements or representations, if any, that have been made by the District.

6.1.6. INDEMNIFICATION

By undertaking any work subject to this section, Contractor agrees to indemnify and hold harmless the District from any and all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, or any other loss of any kind whatsoever, which arise out of or are in any manner connected with any work subject to this section if such injury, loss, or damage is caused in whole or in part by, or is claimed to be caused in whole or in part by, the act, omission, error, professional error, mistake, negligence, or other fault of Contractor, or which arise out of any Worker's Compensation claim of any employee of the Contractor. Contractor agrees to investigate, handle, respond to, and to provide defense for and defend against such liability, claims or demands at the sole expense of Contractor. The Contractor also agrees to bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not any such liability, claims, or demands alleged are groundless, false, or fraudulent. Nothing in this subsection shall be deemed to impose upon Contractor any obligation to defend or hold the District harmless against claims for damages legally caused by any unlawful act or omission of the District.

6.2. REQUIRED SUBMITTALS

No Contractor shall begin work on any Main Extension, Tap, or other District facilities until the Contractor has obtained the prior approval of the District therefor, and has submitted, in addition to any other materials required elsewhere herein, the following, approved as to form by the District:

6.2.1. WRITTEN AGREEMENT

If required by the District, a writing duly signed by Contractor (1) acknowledging their consent to be bound by the provisions of Section 6.1 of these Specifications; (2) warranting that the work will conform to such provisions and will be free from defects due to faulty or non-conforming materials and workmanship; (3) agreeing to indemnify the District as provided in Section 6.1.6 of these Specifications, and (4) agreeing to pay any and all applicable fees and charges provided by these Specifications and the Rules and Regulations in connection with the work.

6.2.2. FEES

The full amount of all fees payable in advance, or any required costs deposits, or both.

6.3. STOP WORK ORDERS

6.3.1. ORDER

The District may revoke any approval for work and issue a Stop Work Order upon a determination that the Contractor has violated or is about to violate any condition of any plan approval, any provision of these Specifications or Rules and Regulations, or any other standard, specification, or rule imposed by the District. A Stop Work Order shall take effect immediately upon the entry thereof by the District and notice to the Contractor, and shall remain in full force and effect until rescinded in writing by the District.

6.3.2. EFFECT

It is unlawful for any person to do any work in violation of the terms of any Stop Work Order issued pursuant to this section except such as may be permitted by the District in order to render the construction site safe and secure.

6.4. CURE OF DEFECTS

6.4.1. ORDER TO CURE

If the District determines that any part of the work was not performed in conformity with these Specifications, Rules or Regulations or approved plans, or is defective, of poor or unworkmanlike quality, or is otherwise not in conformity, with any applicable warranty, it may give written notice thereof to the Contractor. Such notice shall specify the nonconformity, direct the Contractor at their cost to perform specified remedial work, and specify the period of time determined by the District reasonably necessary for completion of the remedial work.

6.4.2. DISTRICT CURE

If the Contractor fails within the time stated following such notice to cure the nonconformity specified therein, the District, in addition to and without waiving any of its other remedies, may perform the work and charge the Contractor for its actual costs incurred in connection therewith, calculated in accordance with the rates set forth in the Rules and Regulations applicable to invoicing and collection of fees and charges shall apply to any charges assessed to Contractor under this section.

6.5. PRE-CONSTRUCTION

A Pre-Construction Meeting shall be arranged by the District and held prior to the start of any work. The District Engineer, Denver Water, Contractor, Soils Engineer, Surveyor, and Developer, or Developer's Engineer, must be represented at this meeting, which shall generally be held at the District Office. After the Pre-Construction Meeting is held, the Contractor shall, at least 48 hours prior to the start of construction, notify the District of its construction schedule and start date.

6.6. CONSTRUCTION PLANS

Construction plans shall be reviewed and signed by the District. The signed plans and a copy of these Specifications shall be kept on the project site by the Contractor at all times.

6.7. DEFECTIVE MATERIALS

All materials not conforming to the requirements of the District or the Denver Water Engineering Standards shall be considered defective. Whether in place or not, such material shall be removed immediately from the site of the work, unless otherwise permitted by the District. Rejected material, the defects of which have been subsequently corrected, shall not be used until the District has reviewed them and found them acceptable. The District will not consider conveyance and acceptance of a project if the contractor fails to comply promptly with any order of the District made under the provisions of this section.

6.8. DESIGN REVISIONS DURING CONSTRUCTION

Should the Contractor encounter field conditions that prevent construction to occur in conformance with the reviewed and signed plans, a meeting shall be scheduled by the Contractor with the Owner's Engineer and District to discuss an alternative design. The Contractor's construction shall not deviate from the signed plans without the prior review and approval of the District, and the Owner's Engineer.

6.9. WATER SHUTOFF AND NOTIFICATIONS

Existing valves owned and operated by the District may only be operated by District personnel. The Contractor shall be responsible for notifying Southgate a minimum of 2 business days prior to any necessary valve operation. Valves installed by the Contractor may be operated by the Contractor until the District accepts the system.

The Contractor shall be responsible for notifying any affected homeowner or business owner a minimum of 48 hours prior to any water shutoff. The Contractor shall schedule the work in order to minimize service outages to affected customers.

6.10. CONNECTIONS BY WET TAP

Connections to District infrastructure by wet tap are acceptable only when deemed appropriate by the District. Connections must conform to all requirements of the Denver Water Engineering Standards and be performed by a contractor on Denver Water's Prequalified Contractor List which can be found for review from Denver Water's website (www.denverwater.org).

6.11. CONSTRUCTION WATER

The Contractor shall be responsible for obtaining any water required for various phases of construction. Arrangement and coordination of permits shall be made through Denver Water and thereafter the District. A hydrant-specific permit must be applied for through the District and applicable fees shall be paid at the District office. An approved water meter and subsequent meter permit must first be obtained from Denver Water. Information regarding temporary water service through Denver Water can be found at [Denver Water Operating Rules Chapter 3 – Temporary Water Service](#).

6.12. RECORD DRAWINGS

See APPENDIX E for a complete listing of how record drawings shall be processed by the Owner and approved by the Engineer.

6.13. REPLACEMENT OF EXISTING IMPROVEMENTS

In areas where existing pavement, concrete improvements, storm or drainage improvements are removed during construction, they shall be replaced in kind to the limits disturbed by water line construction. All replacement shall be in accordance with the appropriate City, County, or State Highway Department.

6.14. REPAIR OF EXISTING DISTRICT INFRASTRUCTURE

Repair of existing District infrastructure will be evaluated on a case-by-case basis. When leaks or damage to existing waterlines can be repaired by use of a repair clamp, the repair clamp shall be Smith-Blair Model 262 or District-approved equal. When damage to existing waterlines exceeds the capabilities of a repair clamp, the extents of damaged piping shall be removed and replaced with similar-sized PVC piping conforming to the Denver Water Engineering Standards. Connections to undamaged PVC or ductile iron piping shall be made by restrained solid sleeves. Connections to undamaged asbestos concrete piping shall be made by transition couplings.

6.15. SAFETY AND TRAFFIC CONTROL

The Contractor shall determine, initiate, maintain and supervise all measures necessary to protect the public during construction. It is the Contractor's responsibility to obtain and maintain any necessary permits as required by the jurisdictional City, County, or State Highway Department.

Traffic shall be controlled at those locations throughout the project area in order to maintain an efficient and orderly vehicular and pedestrian traffic flow. All traffic control, construction signing, vehicular traffic and residential access, etc., shall be handled in conformance with the Uniform Traffic Control Manual and the appropriate City, County, or State Highway Department Standards.

The Contractor shall furnish, construct, maintain, and finally remove detours, road closures, lights signs, fences, barricades, flares, miscellaneous traffic devices, flaggers, drainage facilities, reconstruct paving and such other items and services as are necessary to adequately safeguard the public, both traveling and otherwise, from hazard and inconvenience. The Contractor shall erect and maintain such warnings and directional signs as may be requested by the City, County, or State Highway Department.

Should the progress of construction require closure of residential access, the Contractor shall notify the residents which may be affected at least 24 hours in advance and provide temporary access. Prior to the start of construction, the Contractor shall notify affected residents as well as the appropriate police and fire departments, giving the approximate starting date expected, completion date, and the name and telephone number of a responsible person representing the Contractor who may be contacted at any hour.

6.16. CONSTRUCTION OBSERVATION

The District shall decide any and all questions that may arise during construction as to the quality and acceptability of the materials furnished, the work performed, or the manner of performance of the work.

No observation or testing will be performed by the District on weekends or holidays without the express agreement of the District secured in advance. Whenever any observation or testing is

required by any specific provision of these Specifications or the Rules and Regulations, or by the terms of any permit or plan approval, the Contractor shall give the District such notice as is required and shall not cover or otherwise obscure the work until the observation or testing has been made. The Contractor shall at their cost uncover or otherwise make such work accessible for observation or testing when ordered to do so by the District if he violates this requirement.

The observations, testing and reviews performed by the District are for the sole and exclusive benefit of the District. No liability shall attach to the District by reason of any observations, testing, or reviews required or authorized by these Specifications or the Rules and Regulations, or by reason of the issuance of any approval or permit for any work subject to this section.

The District is not a guarantor of the construction Contractors' obligations and performance of contract.

Observations of work in progress and on-site visits are not to be construed as a guarantee by the District of the Contractors' performance.

The District is not responsible for safety in, on, or about the Project site, nor for compliance by the appropriate party of any regulations relating thereto.

The District exercises no control of the safety or adequacy of any equipment, building components, scaffolding, forms, or any other work aids used in or about the project, or in the superintending of the same.

6.17. GEOTECHNICAL OBSERVATION

Geotechnical observation and backfill density tests will be performed by the Owner's Soils Engineer to provide acceptable fill control, bedding compaction, and foundation suitability. All supervision necessary to control fill and compaction tests will be at the expense of the Owner. If the first compaction test does not meet with the Specifications, the sub-standard areas shall be reworked and additional compaction tests will be performed until the Specification is met. Any deviation from the plans, Specifications, or soils report must be corrected by the Contractor to the satisfaction of the District. Copies of all compaction tests shall be provided to the District on the working day following the test. The location and frequency of compaction testing shall be per Section 5.4 of these Specifications.

6.18. FEES

Contractor will pay the District all fees imposed and assessed by the District for reviews, observation, tests, approvals, and any other undertakings performed by the District or its professional consultants in connection with the administration and enforcement of these Specifications and the Rules and Regulations, as provided by Article 7 of the Rules and Regulations.

6.19. IMPROVEMENTS AGREEMENT

Conveyance and acceptance by the District of facilities intended to be owned and operated by the District shall be accomplished as provided in Article 6 of the Rules and Regulations.