

SWM Plan Submittal and Review

A.1 WATER SYSTEM PLAN SUBMITTAL PROCEDURES AND GENERAL REQUIREMENTS

All plans for water main extensions, improvements and modifications shall be submitted to the District manager. All plans must be approved by the District manager, District engineer, Denver Water Department, and applicable fire department prior to initiation of construction. Plans shall be submitted and reviewed in accordance with the following procedures and requirements.

A.1.1 Submittals

In order to initiate construction plan review the following items must be submitted to the District.

1. Construction Plans

Three sets of water system construction plans stamped and signed by a Professional Engineer licensed to practice in the State of Colorado. All plans and specifications submitted shall be in strict compliance with the standards and specifications contained herein and shall meet any special conditions that may be reasonably required. The design and installation of all facilities shall ensure development of an integrated water system. No work shall commence on any facilities until the plans and specifications are approved in writing by Southwest Metropolitan Water and Sanitation District, Denver Water Department and the fire department having jurisdiction in the area. Plans and specifications should not be submitted for work that will not be installed within six months of the approval date.

- a. Three sets of detailed plans and specifications for system extensions shall be submitted to the District for approval. The copies shall contain the requirements stated below:
 1. Water main in plan view (24" x 36") showing:
 - a. Location and dimensions of dedicated street, easements, and right-of-way.
 - b. Lots to be served.
 - c. All existing or proposed curb and gutter.
 - d. The proposed alignment of the water main and the location of all proposed water facilities such as valves, fire hydrants, fittings, etc.

- e. A profile shall also be required on this plan for all water mains 16 inches in diameter and larger, and all water mains to be constructed within unpaved easements.
 - f. Proposed upstream and downstream hydraulic gradients on pressure regulating valves.
2. Combined utilities plan view (separate from the water main plan) containing or showing:
- a. Location and dimensions of dedicated streets, easements and rights-of-way.
 - b. Lots to be served.
 - c. All existing or proposed curb and gutter
 - d. All existing or proposed utilities. Sewer information may be submitted on a separate sheet.
 - e. All existing or proposed obstructions such as vaults, catch basins, traffic islands, etc.
 - f. The proposed alignment of the water mains and the location of all proposed facilities, (i.e. valves, fire hydrants, fittings, etc.).
3. Typical street cross-sections showing:
- a. Property lines or easement lines.
 - b. Street curb and gutter, and existing or proposed utilities complete with dimensions to the property lines or easement lines.
4. Centerline profile of the streets showing:
- a. Official street grades.
 - b. Existing ground line.
 - c. Any proposed or existing utility crossing the proposed water main.
 - d. Top of pipe profile of proposed 16-inch and larger water mains, and top of pipe profile of 12-inch water mains and all water mains within easements, if requested by the District.

5. A detail sheet showing all relevant information such as: rodding, hydrant installations, blow-off installations, proposed crossings, etc.

6. Additionally, all plans shall:

a. Be made from actual field surveys by a land surveyor registered in the State of Colorado, referenced to land corners or other official survey control points and be of sufficient accuracy so that the facilities can be accurately staked for installation and can be readily located after installation for maintenance, tapping and control.

b. Show the approved permanent water source which can supply sufficient water for chlorination, flushing, and hydrostatic testing and the anticipated water demand for this purpose.

c. Show sufficient adjacent area to give the relation of new facilities to existing facilities.

d. Contain the following statement and appropriate signature on the cover sheet of the plans (insert the name of the fire department having jurisdiction):

"All fire hydrants shall be installed according to District and Denver Water Department Standards. The number and location(s) of fire hydrant(s) and fire flow as shown in this water main installation is correct as specified by the _____ Fire Department.

Fire Flow = _____ g.p.m.

Signature of Fire Chief or Designated Representative

_____/_____/_____
Date Signed

e. Contain the signature and stamp of the Professional Engineer registered in the State of Colorado responsible for the design of the system extension.

7. The Specifications shall:

- a. State that the trench shall be excavated and the pipe exposed for inspection at any location on the project if so ordered by the District or Denver Water Department.
 - b. State that sterilization and flushing of all mains shall be inspected and certified by the health department having jurisdiction and that one copy of the certification shall be sent to the District. The certification shall state the location of the main, that the main has been inspected by a representative of the health department having jurisdiction and was found to comply with the procedures set forth by that department.
8. Submittals for planned development complexes shall additionally show all existing and proposed structures, driveways, and parking facilities, on both the water main plan and combined plan.

2. Applications and Agreements for Water Main Extensions

Four copies of Southwest Metropolitan's [\[Application and Agreement for Water Main Extensions\]](#). All copies must be signed as originals by individuals authorized to sign on behalf of the Applicant.

3. Payment of Plan Review Fees

Payment of applicable District and Denver Water Department plan review fees. A [\[fee schedule\]](#) is available from the District upon request. Fees are subject to change without notice.

4. Subdivision Plat

One sepia mylar of the recorded subdivision plat. If the plat has not been recorded, two blue line copies of the most current preliminary plat shall be submitted. A sepia mylar of the recorded plat must be furnished as soon as it becomes available.

5. Easement Checklist

Three copies of the District's [\[easement checklist\]](#) together with all supplemental information (see exhibit A). This information is required for all facilities to be constructed outside of dedicated public rights of way.

6. Soils Information

Geotechnical information specifying the resistivity of the soil may be required at the sole discretion of the District.

7. County Approvals

A written statement from a representative of the appropriate county planning department stating that none of the proposed facilities lie within or impact a Flood Plain Overlay Zone or Geo-Hazard Area. In the event facilities do lie within, or impact, a Flood Plain Overlay Zone District or Geo-Hazard Area, proof that the owner-developer has applied for a Flood Plain Development Permit or Geo-Hazard Development Permit will be required. In addition, the owner-developer must furnish a statement from the appropriate county approving the design of the facilities impacting the Flood Plain or Geo-Hazard Area.

A.1.2 Engineering

All plans and specifications submitted to the District for review, comment, and approval of a system extension or modification shall be prepared by, or under the direct supervision of a professional engineer registered by the State of Colorado. Said professional engineer shall be responsible for the design, the plans, determining the material specifications and conducting the field survey. All submitted plans and specifications shall include the professional engineer's seal prior to approval for construction.

The applicant, contractor, and professional engineer associated with said plans shall be responsible for the adequacy and satisfactory performance of the designs and the installation of all items therein, and any failure or unsatisfactory performance of the system, so constructed, shall not be a cause for action against the District. The District does not perform engineering services for any person or entity in connection with its review of plans. Approval of plans by the District signifies only that the plans meet the minimum requirements of these standards and specifications based upon the information provided to the District by the professional engineer and/or owner/developer and makes no finding, representation, or warranty that the system and associated components will perform any certain function.

If the professional engineer responsible for the plans disagrees with any changes made to the submitted plans that may be required by the District as a result of the District's review of the plans, such disagreement must be brought to the attention of the District for resolution prior to construction of the project set forth in said plans. The seal of the professional engineer on plans so corrected and approved for construction will signify that he has reviewed, approved and authorized said corrected plans for construction.

A.1.3 Surveying

Line and grade for water mains shall be established by a professional engineer or by a surveyor licensed to practice in the State of Colorado or his authorized representative. All work shall be done in workmanlike manner.

Correct alignment and elevation of the water mains as shown on the approved drawings is the responsibility of the professional engineer. Inspection of the staked alignment and elevations by the District does not relieve the Professional engineer in any manner from the responsibility for field errors. Sufficient pipe shall be staked to ensure continual work progress. Under no circumstances shall pipe be installed without line and grade stakes set by the professional engineer or land surveyor.

Exception: If a main is to be extended in an existing street and if the professional engineer who prepared the plans can show that the finished grade can show that the finish grade of the street is to remain unchanged, no grade stakes need to be set. The main shall be installed with 4½ feet of cover.

A.1.4 Plan Review Process

Upon receipt of all information described under section A.1.1, the District will initiate review of the construction plans and other pertinent information. The plans will be reviewed by the District and the District engineer. If modifications to the plans are required, the plans will be returned to the design engineer for revision.

Subsequent to approval of the plans by the District, they will be sent to the Denver Water Department for review and approval. If further modifications are required, the plans will be returned by the Denver Water Department to the District for return to the design engineer. When revised, the plans must be returned to the District for review prior to re-submittal to the Denver Water Department.

NOTE: The approval of water system construction plans signifies only that the plans meet the minimum requirements of the District's standards and specifications based on the information provided by the design engineer, owner-developer, and contractor. Approval is not a representation or warranty that the system and associated components will perform any certain function.

Approved plans will be stamped with the District stamp and be signed by the District manager and District engineer.

A.1.5 Expiration of Plan Approval

Plans and specifications are approved for a six month period only. If construction has not begun within this six month period, or if it has been halted and not restarted prior to expiration of the approval period, the plans must be resubmitted for review and approval.

A.1.6 Preconstruction Meeting

When construction plans and all other pertinent information has been approved by the District and the Denver Water Department, the approved plans will be retained by the

District until a preconstruction meeting is held. The preconstruction meeting will be scheduled by the District upon request of the contractor, design engineer, or owner-developer.

Representatives of the owner-developer, contractor, design engineer, District, and/or District engineer must be in attendance at the preconstruction meeting.

A.1.7 Authorization to Proceed

Authorization to commence construction will be granted by the District's manager upon approval of plans by the District and the Denver Water Department, payment of applicable District and Denver Water Department construction inspection fees, and completion of the preconstruction meeting.

A copy of the construction plan review schedule is available upon request. Fees are subject to change without notice.