

1.0 INTRODUCTION

Western Municipal Water District (Western) is a “Special District” with the mission of providing water supply, wastewater disposal, and water resource management to the public in a safe, reliable, environmentally sensitive, and financially responsible manner.

1.01 PURPOSE

This manual was developed to guide Developers and their Engineers through the process of design and construction of new water and sewer facilities. Staff has included information pertinent to tract development and small commercial buildings. If, after utilizing this handbook, you have any questions or comments regarding the contents, please contact Development Services at (951) 789-5000.

1.02 BACKGROUND

Western Municipal Water District, a California special district, provides water supply, wastewater disposal, and water resource management to the public in a safe, reliable, environmentally sensitive, and financially responsible manner.

Created in 1954 to provide imported water to the western portion of Riverside County, Western is a member agency of the Metropolitan Water District of Southern California (MWD) and purchases water from that entity. Both Colorado water and State Water Project water are delivered into Western’s service area. Since 1983, Western has also provided sewer service in areas where sewers have been constructed and treatment capacity is available.

Western strongly supports and encourages wise water use by our customers as well as the general public.

Western offers a variety of programs invoking an important part of its mission statement – to provide resource management to the public in a safe, reliable, environmentally sensitive and financially responsible manner. The establishment, continued funding, and staff support of an education program began in the 1990s reaching thousands of students at schools within Western’s general service area. *Landscapes Southern California Style* is Western’s renowned water conservation education garden created in 1989. This one-acre demonstration garden showcases water efficient plants, shrubs, and trees in a wide range of themes. The garden is located at the northeast corner of Alessandro Boulevard and Mission Grove Parkway, and is open daily from 10:00 a.m. to 4:00 p.m. Western strongly advocates voluntary water conservation and provides assistance in planning landscape and irrigation systems for outdoor water conservation through free workshops and materials. Much of Western’s background, history and invaluable water conservation information can be found on its web site at www.wmwd.com.

1.03 GENERAL SERVICE CRITERIA

Within the Design Manual, the term “Western” means Western Municipal Water District of Riverside County. “Developer’s Engineer” means a currently licensed Registered Civil Engineer by the State of California, retained by the Owner or Developer to perform engineering for water and sewer systems in conjunction with land division development.

Water facilities include water pipelines, related appurtenances, and may include offsite facilities such as pump stations, water storage reservoirs, and pressure regulating stations that are necessary to deliver sufficient water at adequate volume and pressure to the development.

Sewer facilities include sewer pipelines, manholes, clean outs, and lift stations necessary to convey wastewater to a treatment facility.

If water or sewer service is desired within an existing service area, service can normally be provided if the Developer meets the following conditions:

1. Pays all applicable fees and rates.
2. Designs, constructs, and dedicates to Western the necessary facilities. Western will review all plans, and may revise, modify or request the redesign of any concepts, plans or details submitted. All plans must be approved and signed by Western prior to the issuance of a Notice to Proceed for construction. Treatment facilities (water or sewer) must already exist or their creation will be part of the obligation of the Developer.
3. Grants fee title parcels to Western on Western's Grant of Deed forms for all facilities not located within public right-of-way. Fee title parcels shall be a minimum of 30 feet in width unless otherwise approved by Western.
4. Pays current applicable charges in addition to completing the requirements listed above. Fees may include: Plan Check Fees, Connection Charges, Inspection Fees, Added Facilities Charges, Zone of Benefit Fees, Front Footage Charges, Participation Charges, Service Connection Fees, and meter charges or other charges authorized by Western's Board of Directors. Western should be consulted for current and applicable fees.

The procedures for the development of water and/or sewer systems for Tract Map, Parcel Map, and Single Lot development differ only slightly. The design standards contained herein are primarily prepared for Tract Map development, but can be used for all three types. The applicable minimum requirements are as follows:

- Design required facilities to Western's standards.
- Prepare water and/or sewer plans. Western has the authority to waive this requirement.
- Submit Water and/or sewer plans for Western review and approval
- Dedicate right-of-way for all facilities to be owned and operated by Western.
- Provide detailed cost estimate of all improvements.
- Post all necessary fees.
- Execute a water and/or sewer system construction agreement with Western, post bonds with the County of Riverside, or the City of Riverside, retain a qualified licensed Contractor, and provide proof of insurance.
- Fund and obtain inspection services by Western.
- Obtain a written Notice to Proceed before construction begins.
- Have an engineer certify that the proposed final road grade (as shown on the plans and approved by the County of Riverside, or the City of Riverside) over the pipeline alignment has been achieved. If the existing surface of the alignment is not to be changed, it will be necessary to so certify.
- Construct facilities to Western's standards under continuous Western inspection.

- Complete and submit draft “as-built” plans (field changes recorded on the original mylars) for Western approval.
 - Transfer title (Grant Deed) for the constructed water and/or sewer facilities to Western.
 - a. See Flow Chart Section 5.03.01.
5. Developer must make necessary financial arrangements with Western to accomplish above.

1.04 OTHER PUBLIC AGENCY REQUIREMENTS

The requirements for the design of water and sewer plans and systems specified herein do not waive nor are they intended to contradict any requirements required by other legal governing public agencies.

Engineers designing water and sewer plans and systems for inclusion in Western’s system must be knowledgeable of and comply with the regulations of the State of California, the County of Riverside, the City of Riverside, City of Murrieta or any other local agency having jurisdiction. These shall include Administrative Codes, Civil Codes, and Health Regulations.

1.05 WATER AND SEWER PLAN APPROVAL PROCESS

The Developer’s engineer must design the facilities and prepare the “water and/or sewer construction” drawings to Western’s requirements. Developer’s engineer shall submit to Western’s staff all water and sewer construction drawings for review. Western may revise, modify, or require redesign of any concepts, drawings, or details submitted. Construction must begin within one year of approval of the water and/or sewer construction drawings. If more than one year has elapsed, the project must go through plan check procedure again before starting construction. The steps required to obtain plan or project site map approval are as follows:

1. Attend Preliminary Planning Meeting.

Call Western’s Engineering Department to arrange a preliminary planning meeting to discuss the proposed project. At the preliminary planning meeting, submit a tentative tract map, or project site map with the preliminary water and/or sewer facilities shown. Upon review of the project, Western may require a preliminary report and/or hydraulic network analysis.

Western will discuss the general location and size of required facilities as well as provide information on known existing Western facilities in the area. If available, Western’s staff will provide as-built plans for existing facilities.

Western provides water and/or sewer service to customers directly when the customer’s property is located within the retail service area. If customers are outside Western existing retail service area then they need to meet with Western to establish conditions for service.

2. Submit Deposit for Preliminary Engineering Review by Western Staff (if necessary).

Depending on the extent of preliminary engineering required, Western's staff may require a deposit to cover staff time before plan check begins. In any case, the Engineering and Plan Check Deposit must be submitted prior to Western's staff reviewing any preliminary reports, hydraulic network analyses, or plan checks.

3. Submit Preliminary Report and/or Hydraulic Network Analyses (if required).

If required, the preliminary report and hydraulic network analyses must be submitted to Western's staff for review and comments. The preliminary report and/or hydraulic network analyses must be approved prior to submittal of any drawings for plan check. Once Western's staff and the Developer's engineer have agreed on a conceptual design, detailed plans may be prepared and submitted.

4. Submit first plan check with plan check deposit.

The normal plan check deposit is 5% of estimated water and sewer improvement construction costs with a minimum fee of \$2,500.00. Any unused plan check funds will be refunded to the payee. After review and approval of the preliminary report and/or hydraulic network analyses, Developer's engineer must submit the following, for the first plan check:

1. Two copies of the water construction drawings.
2. Two copies of the sewer construction drawings.
3. One copy of the street improvement drawings.
4. One copy of the grading plans.
5. One copy of the storm drain plans.
6. Two copies of tentative Tract/Parcel Map.
7. Two copies of Tract Phasing Map (including lot numbers and street names).
8. Fire flow requirements.
9. Soils Report (steel pipe installations only).

Submittals must be complete or they will be rejected. Each submittal shall include a transmittal listing all items submitted. Details regarding design criteria are included in Sections 2.0 for water and 3.0 for sewer. Details regarding preparation of plans and grant deed documents are included in Section 4.0.

After Western's staff reviews the first plan check submittal for completeness, the plans will be sent to Western's consultant for a detailed review. Western's staff will provide comments on one set of the water and sewer construction drawings and return them to Developer's Engineer for revisions. In addition, Western's staff will provide a copy of Section 1.05.01 listing all required submittals. All subsequent plan checks will be sent to Western's consultant. Western staff's goal is to complete the first plan check within 15 to 20 days of receipt of a complete submittal. Plan review time varies depending on the number of plans in the review process, size of project, complexity of plans, and completeness of plans.

After the first set of check prints are returned, no changes except those requested or approved by Western shall be made by the Developer's engineer. If the

Developer's engineer wishes to make a change other than that requested by Western, a print marked with the proposed change in red pencil shall be submitted for approval. Only after written approval shall the original be changed. The authorized change shall be highlighted on the next recheck submittal. Drawings that do not follow the requirements contained in the Design Manual and/or that are unclear, misleading, or confusing will be subject to rejection without review.

5. Submit subsequent plan checks.

For each subsequent plan check, Developer's engineer must submit the following:

- Previous Western plan check set.
- One copy of revised construction drawings.
- Any additional material requested.

Submittals must be complete or they will be rejected. If drawings are not yet satisfactory, Western will make comments on one set of the drawings and return same to Developer's engineer for revisions. This procedure will be repeated as necessary until drawings are complete. If Developer's Engineer does not return previous Western plan check set, the plan check procedure will start from the beginning.

Western staff's goal is to complete the second plan check within 10 to 15 working days of receipt of a complete submittal and the third plan check within 3 to 5 working days of the receipt of a complete submittal. Plan review time varies depending on the number of plans in the review process, size of project, complexity of plans, and completeness of plans.

6. Submit final Plans for approval, and all items required per Section 1.05.01

After all plan checks are completed and the plans are acceptable to Western's staff, the original mylars must be submitted to Western's staff for signature. Prior to final approval of the construction drawings, Developer must pay the outstanding balance for the plan check work order and meet the required items on "Developer's Engineer's Required Items" (Section 1.05.01).

7. Western Signs Plans.

Once all submittals have been completed to Western staff's satisfaction, the mylars will be signed. The Developer's engineer is required to obtain signatures from all other agencies and provide Western's staff with the original mylars and 5 bond copies. Original water and sewer plan mylars become the property of Western. Western's staff will furnish the Developer with a fee letter and pre-construction requirements.

Once signed, the originals cannot be modified without written permission from Western. Any modification after signing shall be noted in the revision block and the cover sheet revision block.

Plans checks resubmitted after one year, regardless of number of previous submittals, will be deemed "expired". "Expired" plan checks resubmitted will be

subject to Western's current Western design requirements and considered a "first plan check submittal".

1.05.01 DEVELOPER'S ENGINEER REQUIRED ITEMS CHECKLIST (EXHIBIT D)

REQUIRED ITEMS FROM DEVELOPER'S ENGINEER

WMWD MCWD-WO _____

Date: _____

Developer: _____

To: _____

Extension #: _____ WO#: _____

Phone: _____

Fax: _____

GRID: _____ ID# _____

SEC _____, T _____ S, R _____ W

Track/PM #: _____

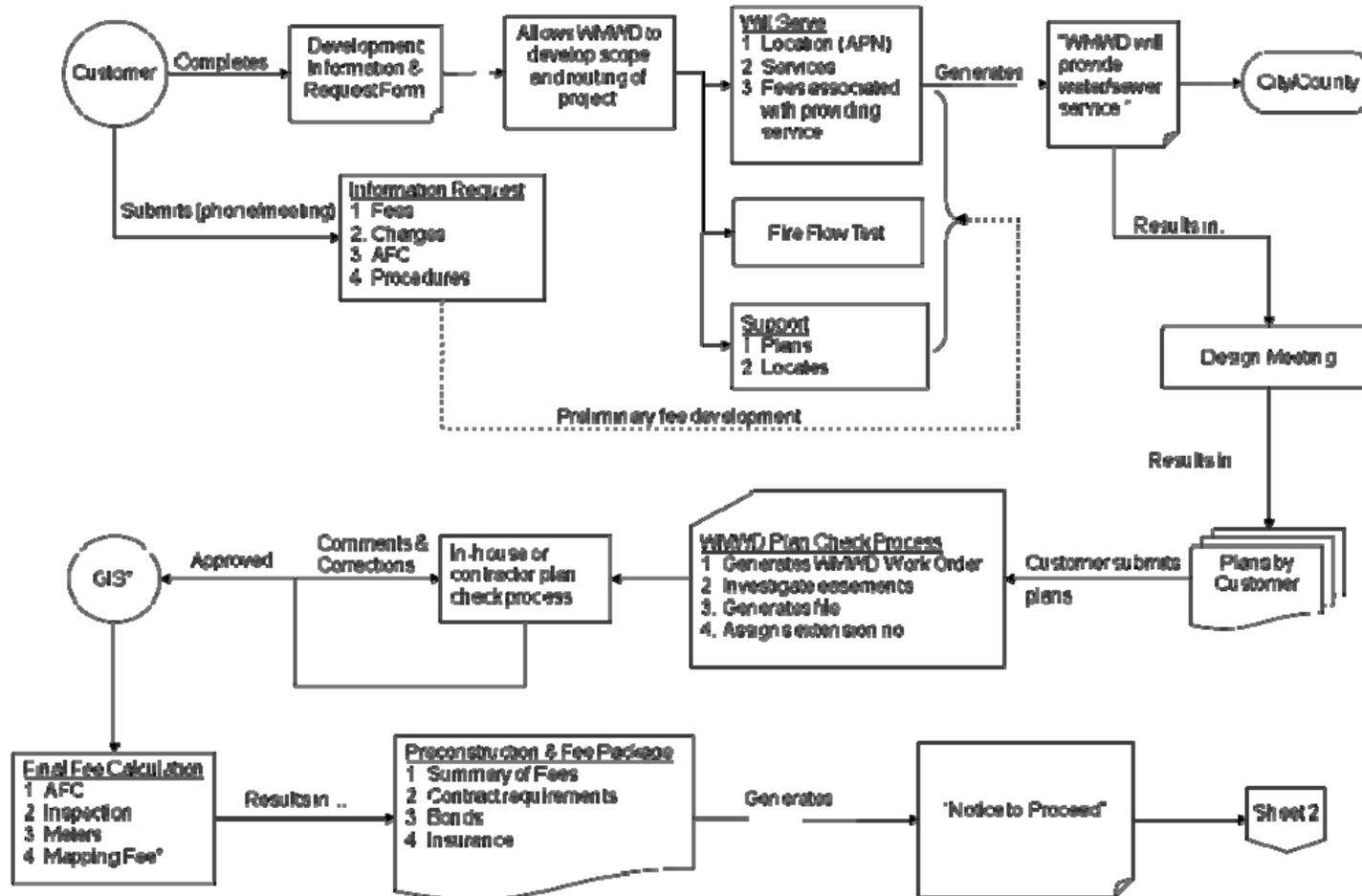
Western must receive the following items before plans will be signed (**checked boxes only**).

Required / Date Received

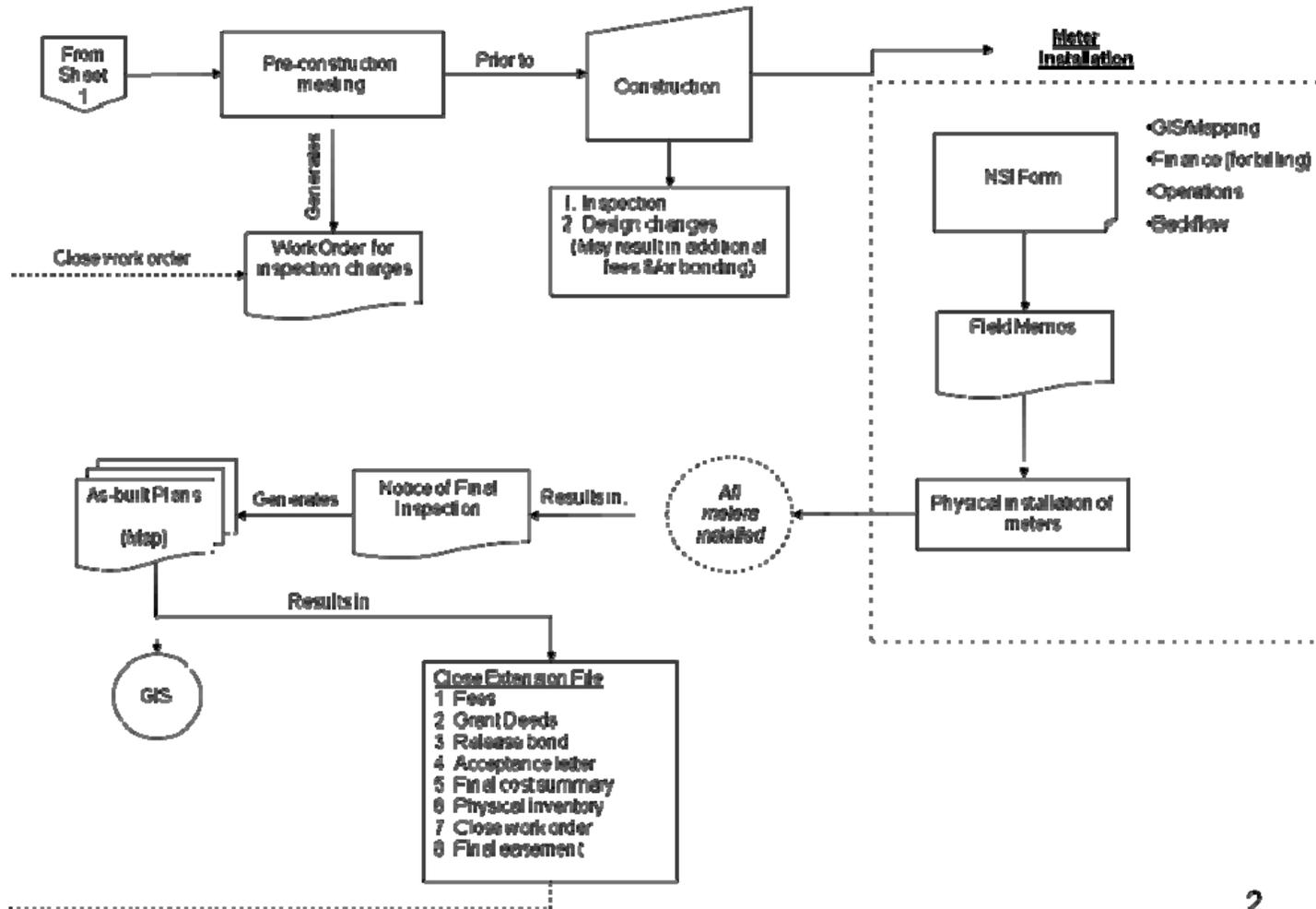
- _____ **GRADING INSPECTION DEPOSIT:** If grading is to be completed near Western's existing facilities prior to or during the plan check process, a grading inspection deposit of \$1,000 is due
- _____ **FIRE FLOW CALCULATIONS:** Western will review fire flow requirements of project and determine if detailed fire-flow calculations are required. *Due before 2nd plan check.*
- _____ **SOILS REPORT:** Please provide a soils report from a certified geotechnical firm. Report to include corrosivity of soil.
- _____ **EASEMENT OR FEE TITLE PARCEL:** Required for locations where Western's facilities are not in a dedicated public right of way.
- _____ **QUITCLAIM DEED:** Quitclaim Deed(s) to the Developer will be required for locations where Western is abandoning easements. Quitclaim document(s) shall include the legal description. Please allow sufficient time (at least 2 months) for this item as it requires Board approval. Legal Description and plat map will be required.
- _____ **ENGINEER'S COST ESTIMATE:** Please send an updated Engineer's Cost Estimate to Western. The Engineer's Cost Estimate shall include an itemization and unit cost for each item that is listed on the quantity estimate on plans. *Required prior to Western's signature on mylars.*
- _____ **DIGITAL FILE SUBMITTAL:** An AutoCAD file needs to be submitted (CD or email) in accordance with **Western's Standard Specification and Design Manual, Section 4.10**. The file should contain the plan information that is ready to be approved so that all plan check comments are reflected. ***Provided when mylars are submitted for signature.***
- _____ **RECORD MAP:** **If the Tract Map has not been recorded, then a blanket easement will be required.** *Must be provided for final acceptance of water system. Tracts only.*
- _____ **LANDSCAPE PLANS:** Landscape plans must be submitted for Model homes and common areas.
- _____ **SEQUENCE LIST & PAD ELEVATIONS:** Building sequence list of Lot No's, Phases and Addresses for all lots within the tract in digital format. Excel spreadsheet: Lot # and Pad Elevation.
- _____ **VERIFICATION OF "STAND ALONE" TRACT:** All Tracts must "Stand Alone". Any Offsite facilities that are not part of tract must be built to serve the tract. Those facilities must be bonded for and plans must be submitted. All applicable easements or Right of Way (R.O.W.) must also be provided.
- _____ **HYDRAULIC CALCULATIONS:** A detailed Hydraulic Analysis Report may be required to show adequate calculations of a proposed water system to service the project that is within WMWD jurisdiction.

1.05.02 FLOW CHART - PLAN APPROVAL PROCESS

Western Municipal Water District – Development Services & Plan Check Process



Western Municipal Water District – Development Services & Plan Check Process



1.06 Water Conservation Requirements for model homes

At least one model home, within residential subdivisions, shall demonstrate a water conserving landscape. Western can make available brochures on water conservation for inclusion in your new homebuyers' sales packets. Western's one-acre garden exhibits water-wise landscaping and showcases more than 250 water-efficient plants, opens daily at 10 a.m. closing at 4 p.m. and is free to the public. Virtual tours of the garden are on Western's website – www.wmwd.com - where valuable water conservation information is available.

1.06.01 Western's Residential Model Home Requirements

1. Western as a member agency of Metropolitan Water District of Southern California (MWD) will enforce MWD's Plan for Water Use Guideline requirements for water conservation.
2. Developer's landscape architect required consultation with Western's conservation team to review Western's landscape and irrigation requirements. Contact Western's Engineering Department for the review fee charge.
3. Developer to submit model home landscape plans for Western's review concurrently with the City or County submittal and Western's approval is required prior to a building permit being issued.
4. No water meter installations for model homes will be permitted unless the model home landscape plans have been reviewed and approved by Western.
5. Developer to include water conservation materials, supplied by Western, to buyers upon the sale of each dwelling unit within the development.
6. Developer to display water conservation materials, supplied by Western, inside the model homes.

1.06.02 Riverside County Residential Model Home Requirements

1. Please reference Section 2.2 for current requirements.

1.06.03 City of Riverside and Murrieta Residential Model Home Requirements

1. Please reference Section 2.2 for current requirements.

1.07 FEE TITLE PARCELS

Legal documentation for Fee Title Parcels shall be on Western forms and shall consist of three parts, Grant Deed form (see section 2.08.01), legal description, and plat.

The legal description shall be designated as Exhibit "A" and if appropriate shall have the assessor's parcel numbers indicated on the upper right corner of the exhibits. The legal description shall be prepared by a California Registered Civil Engineer or Land Surveyor and signed and stamped by said engineer or surveyor.

The plat shall be designated as Exhibit "B" and signed and stamped by a California Registered Land Surveyor.

1.08 FEE TITLE CRITERIA

Water pipelines not located within the public right-of-way must be located in fee title parcels granted to Western on Western's Grant of Deed forms. Fee title parcels shall have a minimum width of 30 feet unless otherwise authorized by Western staff.

Details for fee title parcels are included in Section 4.0 PLAN FORMAT AND REQUIREMENTS – WATER AND SEWER

1.08.01 GRANT DEED FORM

When recorded mail to:

Western Municipal Water District
14205 Meridian Pkwy.
Riverside, California 92518

(Exempt - Gov't Code 6103)

No tax due (Grantee is a Public agency)

Space above this line for recorder

I.D. No. _____

Western's Record No. _____

APN/Tract _____

Western's Extension No. _____

GRANT DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

herein referred to as "Grantor", hereby grants and conveys to WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY, a public agency organized and existing under, and by virtue of, the Municipal Water District Law of 1911, ("Grantee"), the portion of the water system constructed and located within that parcel of land in the County of Riverside, being a portion of Section _____, Township ____ South, Range ____ West, San Bernardino Base & Meridian, and more particularly described as

SEE EXHIBIT "A"

Dated: _____

Entity

Signature

Title

1.08.02 GRANT OF EASEMENT FORM

Recording requested by:

When recorded mail to:

Western Municipal Water District
14205 Meridian Pkwy.
Riverside, CA 92518

(Gov't Code 6103)

No tax due (Grantee is a public agency)

Space above this line for recorder

I.D. No. _____

Western's Record No. _____

APN/Tract _____

Western's Extension No. _____

GRANT OF EASEMENT

For valuable consideration, _____, Grantor, hereby grants to WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY, Grantee, its successors and assigns, an easement and right-of-way in, over, upon, under and across the lands hereinafter described to construct, reconstruct, install, replace, remove, repair, alter, operate, maintain, inspect and utilize a pipeline or pipelines for all purposes, together with any easement roads and appurtenances within the right-of-way including, but not limited to, cables for communication purposes, and for the ingress and egress throughout the entire easement and right-of-way in connection with the exercise of any of the foregoing rights. The property subject to this easement is located in the County of Riverside, State of California, described as follows:

See attached Legal Description, Exhibit "A".

Grantor, and his successors and assigns, shall not increase or decrease, or permit to be increased or decreased, the now existing ground elevations of said easement and right-of-way without the prior written consent of Grantee.

Grantor, and his successors and assigns, further agree that no trees, buildings, fences, walls, or structures of any kind, shall be installed, constructed, erected, placed, planted on any portion of the easement and right-of-way. Grantor, and his successors and assigns, further agree that no changes in the alignment or grading of any road

constructed within the easement and right-of-way will be made without the prior written consent of the Grantee.

Grantee shall have the right to access said easement and the right to construct and utilize an access road within said easement, and to use gates in all fences which cross said easement; and to trim, cut down or clear away any trees and brush whenever in Grantee's judgment it is necessary for the convenient and safe exercise of the rights hereby granted. No additional fences or gates can be constructed across said easement unless approved in writing by Grantee. Grantee shall also have the right to mark the location of said easement in a manner which will not interfere with Grantor's reasonable and lawful use of said easement.

This instrument shall be binding upon and inure to the benefit of the successor and assigns of Grantor.

IN WITNESS WHEREOF, Grantor has executed this instrument this day of ,

.

GRANTOR:

Title:

/

Enc: Exhibit "A"

1.09 RIGHT-OF-WAY POLICY

For all facilities within public right-of-way an encroachment permit must be obtained from the local jurisdictional agency before commencing construction.