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WATER SYSTEM FACILITY REQUIREMENTS AND DESIGN GUIDELINES

Rancho California Water District

42135 Winchester Road
Temecula, CA 92590
(951) 296-6900

November 2017
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GENERAL

To assure a reliable supply of water for the Rancho California area, the Rancho California Water District (RCWD/District) was formed in 1965 for the properties generally east of I-15. A companion Santa Rosa Ranches Water District was formed in 1966 for the properties generally west of I-15. The two Districts were consolidated under its present name in 1977.

RCWD is a public agency governed by an elected seven-member Board of Directors to serve four-year staggered terms. The District is directed by its General Manager, Assistant General Manager, and Chief Financial Officer/Treasurer.

RCWD supplies its customers water for potable, non-potable, and recycled water uses.

Potable water users are supplied from RCWD’s potable water production wells and Metropolitan Water District of Southern California (MWD) potable water aqueducts.

Non-potable water users are supplied from Vail Lake, MWD's non-potable water aqueducts, and RCWD's non-potable water production wells. Recycled water users are supplied from RCWD’s Santa Rosa Water Reclamation Facility and from Eastern Municipal Water District’s Temecula Valley Regional Water Reclamation Facility. RCWD is the responsible agency for the permitting of the use of recycled water to customers within its service area.

Procedures for construction drawing approval for on-site recycled water facilities may be found in RCWD’s On-Site Recycled Water Irrigation Systems manual, available on the District’s website: www.ranchowater.com.

POLICY

RCWD's basic policy is that the user benefiting from the service must pay for the cost of the necessary facilities. The District normally designs and constructs all primary potable and recycled water facilities and the developer normally designs and constructs all secondary potable and recycled water facilities.

Primary potable and recycled water facilities are those facilities required to produce and deliver water to each pressure zone from water sources, whether potable or recycled. Storage facilities, pumping stations, treatment facilities, water production wells, MWD aqueduct connections, and major supply and transmission pipelines are considered to be primary facilities.

Secondary potable and recycled water facilities are designated as those facilities necessary to distribute the required water throughout a pressure zone. Distribution mains, pressure reducing stations, and pipeline appurtenances are considered to be secondary facilities.

In some situations, minor pumping stations, reservoirs, and transmission mains may be considered secondary facilities when their function can be entirely locally defined.

The District may elect, at its discretion, to oversize secondary facilities to meet anticipated future demands. In such cases, the District may fund the oversizing as a primary facility.

The District’s General Manager, at his discretion, may allow deviations from these requirements. All requests for variances to these requirements must be in writing, stating the reasons for the request.

REQUIREMENTS

1. Developer shall design, construct, and dedicate (for ownership, operation, and maintenance) to RCWD the secondary potable and recycled water facilities in accordance with the requirements of RCWD. For all new subdivisions of land, and as determined by the District’s Engineering Manager, developer shall extend secondary water and/or recycled water system facilities so that meters will front the parcels for which they serve. The District reserves the right to make a delineation of the limits of the publicly- versus privately-owned water system on a case-by-case basis for all development types. A guidance memo is provided in Appendix “W” for the more
common determining factors for delineating ownership of the on-site/in-tract water distribution system.

2. Developer shall provide all financial arrangements necessary to plan, design, and construct the secondary water system facilities.

3. Developer is responsible for compliance with the California Environmental Quality Act as it relates to the planning, design, and construction of the on-site and off-site system facilities.

4. Developer shall obtain and dedicate/grant water utility right-of-way to RCWD. The system facilities must be in either dedicated road right-of-way or in easements granted to RCWD.

5. Developer shall pay current applicable fees and deposits (refer to District's Customer Guide-Rates and Charges) in addition to completing those requirements listed above. District staff should be consulted for current and applicable fees. District engineering and inspection services require developer deposits; whereby, staff labor and materials are charged against the developer deposit. If the developer deposit becomes insufficient to cover applicable District charges (labor and materials), additional invoices will be sent to the Developer to make additional deposits. Remaining deposit balances will be refunded or applied toward other developer deposits required for the project.

6. RCWD will review all developer construction drawings, and may revise, modify, or require redesign of any concepts, drawings, or details submitted. All concepts and construction drawings must be approved by the District's Engineering Manager and Chief Engineer.

7. The developer shall provide to the District a corrosivity study, performed by a qualified/licensed corrosion engineer, for all metallic pipelines and appurtenant structures, which identifies specific recommendations for cathodic protection of the metallic pipeline and appurtenant structures. In addition, the developer shall provide the design of necessary cathodic protection system(s), performed by a qualified/licensed corrosion engineer.

8. Procedures for development of potable and recycled water systems are similar for Tract Map developments, Parcel Map developments, and single lot main extension developments. Most procedures and design requirements herein have been outlined for Tract Map developments; however, certain portions apply to all water system development work within RCWD's service area.

9. Procedures for revisions/additions to existing District potable and recycled water facility plans are similar for all types of appurtenances. Such revisions/additions may include the installation or relocation of fire hydrant, air valve/air release, blowoff, meter, fire detector check facilities, etc.

10. When applicable, the developer shall also submit for review all improvement drawings within existing or future public rights-of-way for approval by the City of Temecula, City of Murrieta, or County of Riverside Planning, Engineering, and Fire Departments. Developer shall pay all fees and obtain all permits required by the city/county. In addition, all other requirements of the city/county shall be fulfilled prior to any construction within the public rights-of-way.

11. Pursuant to Resolution No. 2007-10-5, all projects within one mile of existing recycled water mains shall be examined by the District for the mandatory use of recycled water. In addition, existing customers within 500 feet of recycled water facilities and using more than 10 acre-feet of recycled water per year for irrigation purposes may be required to retrofit existing landscape to utilize recycled water. To ascertain whether the mandatory use of recycled water will be required, the project proponent will need to request a “Notice of Determination,” to be completed by the District.
SECTION II

PROCEDURES FOR PRE-DESIGN PLANNING AND CONSTRUCTION DRAWING APPROVAL
SECTION II – PROCEDURES FOR PRE-DESIGN PLANNING AND CONSTRUCTION DRAWING APPROVAL

District staff will review all potable and recycled water construction drawings for water system facilities, pipeline extensions, and modifications to existing facilities. District staff may revise, modify, or require redesign of any concepts, drawings, or details submitted. All concepts and drawings must be approved by District staff. Construction must begin within one year of approval of Water Construction Drawings. If more than one year has elapsed from date of drawing approval, the project shall go through plan check procedure again before starting construction. The steps required to obtain approval of Water Facilities Construction Drawings are as follows:

1. Complete a Project Information Worksheet (Blue Fields Only).
2. Complete Engineering Service Application and submit applicable deposit(s).
3. Submit Water System and Hydraulic Network Analysis (may be required ahead of and prior to design and/or first plan check submittal).
4. Submit pre-design documentation, first plan check, and/or all documentation required, as specified in the following sections for review/comment by District staff.
5. Submit subsequent document requests/plan checks, as needed, for review/comment by District staff.
6. Submit original Construction Drawings (or Engineer’s duplicate originals when more than one agency is approving plans) for approval by District staff.
7. Provide District with original mylar drawings and blackline prints, as required.

A flowchart for initiating pre-design process for new or changed service/facilities is shown in Appendix “A.” A flowchart for new facilities and waterline extensions (after completing the pre-design process in Appendix “A”) is shown in Appendix “B-1.” A flowchart for revisions/additions to previously-approved construction drawings or existing as-built drawings is shown in Appendix “B-2.” A plan check status sheet to be used by District staff is shown in Appendix “C.” Each required step is discussed in detail below.

A. PRE-DESIGN PLANNING AND CONDITIONS

1. Project Information Worksheet

This section identifies the planning procedures for all new developments and new service requests for potable and recycled water facilities.

The project proponent shall complete a “Project Information Worksheet” (Blue Fields Only). Once submitted to the engineering department of the District, it will provide basic service information related to the development project/service request. The remainder of the worksheet will be completed by the District and returned to outline conditions, hydraulic analysis requirements, and site-specific information necessary for planning and design purposes. A pre-design meeting with District staff is highly recommended to review the project and discuss the service requirements. Partially completed worksheets may result in inconclusive conditions from the District that may need to be resolved before the project can continue.
2. **Engineering Service Application/Deposit**

   The Engineering Service Application (available from the District) shall be completed and filed with the engineering services department staff. The plan check deposit shall be submitted with the completed application. A copy of the Engineering Service Application is shown in Appendix "D."

3. **Water System Layout and Hydraulic Network Analysis**

   A hydraulic analysis will be required for all development projects. The level of detail will vary based on the scope of the project and requested service. A single water or fire service connection may only require the analysis of the project-specific demands, flow requirements, and pressure conditions for the purpose of sizing a lateral and water meter, as well as determining pipe materials. Larger development projects consisting of public water system extensions or multiple service connections may require detailed modeling of the hydraulic conditions by the District to determine the estimated hydraulic grade(s) and the proposed points of connection. The Engineer will be responsible for analyzing proposed on-site conditions if the on-site system will be privately-owned and -operated. Analysis of proposed public systems may be performed by the Engineer or the District, at the District's discretion. Applicable fees or deposits will be necessary for District staff to perform and/or review such pre-design analysis for the project.

   Prior to any hydraulic analysis being performed, the developer shall submit to the District the following:

   a. One copy of the County of Riverside, City of Temecula, or City of Murrieta Conditions of Approval and fire flow requirements.
   b. One hard copy and a compact disk containing AutoCAD, Infowater, and/or GIS information of the detailed site layout and proposed water facilities. Said layout plan shall show the proposed node network, pipeline diameters, length, elevation at nodes, valve locations, and fire hydrant locations.

   Details regarding hydraulic network analysis are included in Section III, Design Criteria.

   For projects where the developer’s consultant performs a portion or all of the hydraulic calculations/evaluation, the consultant shall provide:

   a. One copy of the consultant’s hydraulic analysis.
   b. A map of the proposed tract water system with valves.
   c. A compact disk with:
      i. A PDF version of the Conditions of Approval
      ii. A PDF version of the Hydraulic Analysis
      iii. A PDF version of the Fire Flow Letter

   Prior to design efforts proceeding, District staff will review the proposed water system layout, the hydraulic network analysis, and will return one set with any comments to the developer. If the developer proceeds with design work prior to the submittal and acceptance of the pre-design planning documentation, including the hydraulic evaluation, it shall be at their own risk and subject to significant water system design revisions.
B. NEW FACILITIES AND PIPELINE EXTENSIONS

This section will explain the plan check procedures for all new facilities and pipeline extensions for potable and recycled water facilities.

1. Engineering Service Application and Plan Check Deposit

The Engineering Service Application (available from the District) shall be completed and filed with the engineering services department staff. The plan check deposit shall be submitted with the completed application. A copy of the Engineering Service Application is shown in Appendix "D."

2. First Plan Check

Developer shall submit the following:

a. One copy of the (public) water system facilities construction drawings (24” x 36” plan and profile).

b. One copy of the on-site (private) water system with valves (if applicable).

NOTE: The District DOES NOT review or approve plans for on-site potable water systems; however, the District DOES review and approve plans for on-site recycled water (irrigation) systems.

FOR SITES UTILIZING RECYCLED WATER, COPPER PIPE MUST BE INSTALLED ON ALL ON-SITE (PRIVATE) POTABLE WATER SYSTEMS LOCATED IN ALL SOFTSCAPE AREAS, IN CONFORMANCE WITH DISTRICT REQUIREMENTS FOR ON-SITE RECYCLED WATER USE—(REFER TO THE ON-SITE RECYCLED WATER IRRIGATION SYSTEMS MANUAL).

THE DEVELOPER MUST COMPLETE AND OBTAIN APPROVAL OF ON-SITE RECYCLED WATER SYSTEM PLANS BEFORE OR IN PARALLEL WITH THE ON-SITE POTABLE WATER SYSTEM PLANS. Failure to meet this plan approval timing of on-site systems, including failure to coordinate the implementation of copper water pipe, as required by the District, may result in construction delays or costly retrofits if unacceptable pipe material is installed on-site.

On-site water system piping will only be inspected by the District once recycled water system plans have been approved and applicable inspection deposits are made.

c. One copy of the sewer construction drawings, if separate.

d. One copy of the corrosion study and cathodic protection recommendations/design (Steel Pipe Only).

e. A Compact Disk with:
   i. AutoCAD files of survey, design, topography, and CTB file.
   ii. A PDF of Street Improvement Drawings.
   iii. A PDF of Grading Plans.
   iv. A PDF of Tentative Tract/Parcel Map.

Plan check submittals must be complete or they will be rejected. Each submittal shall include a transmittal listing all items submitted and reference the District project number.

Details regarding water pipeline design criteria are included in Section III, Design Criteria. Details regarding preparation of construction drawings and easement documents are included in Section IV, Construction Drawing Preparation.

Potable water, recycled water, and sewer drawings should be combined and shown on the same drawing whenever possible.
The District will provide any/all internal review comments on one set of the water system construction drawings and return them to the Engineer for revisions. The goal of District staff is to complete the first plan check within three weeks of receipt of submittal. Plan review time varies depending on the number of plans in the review process, size of project, complexity of plans, and completeness of drawings.

3. Submit Subsequent Plan Checks

For each subsequent plan check, developer shall submit the following:

a. Previous District plan check set (with comments).
b. One set of revised water facilities construction drawings (24” x 36” plan and profile).
c. One copy of easement documents (plat and legal description), if applicable.
d. Any additional material requested by District staff as part of the previous plan check.
e. If proposed facilities within the project/development cross or are shared among two or more legal lots, the District will require the recordation of a Reciprocal Easement and Maintenance Agreement for the development if existing or proposed CC&Rs are not adequate. This agreement provides for the reciprocal easement rights to each lot for all common facilities and names the responsible party for the maintenance of these common facilities. The following procedures shall be followed to complete this agreement:
   i. The Engineer shall obtain a copy of the District’s standard agreement and submit one draft of the proposed agreement for review with the subsequent plan check.
   ii. The District shall review the proposed agreement and return a redlined drawing.

Subsequent plan check submittals must be complete or they will be rejected. If drawings and easement documents are not satisfactory for District approval, District will make additional comments on one set of the drawings and easement documents and return same to Engineer for revisions. This procedure will be repeated as necessary until drawings and easement documents are satisfactory for approval. If Engineer does not return previous District plan sets, then plan check procedure will start from the beginning, including payment of plan check deposit.

Each cycle of the subsequent plan check should normally be turned around in approximately two weeks.

4. Submit Original Construction Drawings for Approval

After all plan checks are completed and the water construction drawings are acceptable to the District, the original drawings shall be requested by District staff and submitted to the District for signature. Prior to District approval of the water construction drawings, developer shall pay all outstanding plan checking deposits and/or submit:

a. One set of original plans on photo mylar with all corrections made. For plans that are being approved by multiple agencies, two or more sets of photo mylars shall be submitted for signature so each agency will have one signed original. Mylar copies of original signed plans are not acceptable.
b. Previous District plan check set and one copy of revised water construction drawings.
c. A copy of the approved tentative tract/parcel map showing dedications of streets for road and public utilities purposes (projects that do not have dedicated/accepted public right-of-way cannot proceed with construction until an easement or right-of-way has been granted to the District).
d. Executed (signed and notarized) Grant of Easement (if required).
e. Executed (signed and notarized) Reciprocal Easement and Maintenance Agreement (if required).
5. **Final Construction Drawings**

Once all agencies have signed the original water construction drawings, the Engineer shall submit:

a. One original photo mylar of the approved plans.
b. Four blackline copies of the approved plans for inspection.
c. One compact disk containing:
   i. A PDF of the approved plans.
   ii. All CAD/CTB/X-Reference files of the final design as it was approved. If available, eTransmit or Pack-N-Go utilities should be used to gather all files pertinent to the design. Submittal shall contain all files necessary for the production of Record Drawings with identical pen settings and layouts as the original design.

**C. REVISIONS/ADDITIONS TO PREVIOUSLY-APPROVED CONSTRUCTION DRAWINGS OR EXISTING AS-BUILT DRAWINGS**

This section will explain the plan check procedures for revisions/additions to previously-approved construction drawings or existing District facility (as-built) construction drawings.

1. **Obtaining a Copy of the District’s As-Built Construction Drawings**

The District will provide one bond (blackline) or electronic copy of record as-built drawing for the Engineer’s use in making redlined revisions using Computer Aided Drafting or hand drafting.

2. **Engineering Service Application and Plan Check/Deposit**

The Engineering Service Application (available from the District) shall be completed and filed with the engineering services department staff. The plan check deposit shall be submitted with the completed application. A copy of the Engineering Service Application is shown in Appendix “D.”

3. **First Plan Check**

The design engineer shall submit the following (as applicable):

a. One bond copy of the redlined as-built drawings showing the proposed revisions.

   Fire service installations shall require the following additional information on the site/plot plan:
   i. Applicant name(s).
   ii. Mailing address.
   iii. Telephone number.
   iv. Lot/Parcel number.
   v. Tract/Parcel Map.
   vi. Assessor Parcel Number (APN).
   vii. Building number/street.
   viii. Block on both the revised mylar and on the plot plan approval (see Appendix “G”).

b. A copy of Conditions of Approval and Fire Flow Requirement from the City of Temecula, City of Murrieta, or the County of Riverside Fire Department for the subject property (required for all fire hydrant and detector check installations).

c. A compact disk containing:
   i. AutoCAD files of survey, design, topography, and CTB file.
   ii. A PDF of Street Improvement Drawings.
   iii. A PDF of Grading Plans.
   iv. A PDF of Tentative Tract/Parcel Map.
Plan check submittals must be complete or they will be rejected. Each submittal shall include a transmittal letter listing all items submitted and referencing the RCWD project numbers (plan check/inspection job numbers).

The District will provide comments on one set of the submitted redlined drawings and return same to design engineer for corrections. The goal of the District staff is to complete the first plan check within three weeks of receipt of the submittal. Plan review time varies depending on the number of plans in the review process, size of project, complexity of plans, and completeness of drawings.

4. **Subsequent Plan Checks**

For each subsequent plan check, the design engineer shall submit the following:

- a. Previous District plan check and a copy of the previous District transmittal.
- b. One bond copy of the revised redlined as-built drawings.
- c. One copy of easement documents for all District facilities to be constructed on private property, consisting of the following:
  - i.  Legal Description, Exhibit A (refer to Appendix “I”).
  - ii.  Plat of Legal Description, Exhibit B (refer to Appendix “I”).
  - iii.  Completed RCWD Grant of Easement form with required notarized signatures (Grant of Easement form is available at RCWD).
- d. Any additional material required.
- e. If proposed facilities within the project/development cross or are shared among two or more legal lots, the District will require the recordation of a Reciprocal Easement and Maintenance Agreement for the development if existing or proposed CC&Rs are not adequate. This agreement provides for the reciprocal easement rights to each lot for all common facilities and names the responsible party for the maintenance of these common facilities. The following procedures shall be followed to complete this agreement:
  - i.  The Engineer shall submit one draft of the proposed agreement for review with the subsequent plan check.
  - ii.  The District shall review the proposed agreement and return a redlined drawing. This procedure will be repeated, as necessary, until drawings and all required easement documents and agreements are complete. Each cycle of the subsequent plan check would normally be completed in approximately two weeks.

5. **Submit Original Construction Drawings for Approval**

After all plan checks are completed and the water construction drawings are acceptable to the District, the drawings shall be requested by District staff and submitted to the District for signature. Prior to District approval of the water construction drawings, developer shall pay all outstanding plan check deposits and/or submit:

- a. One set of original plans on bond with all corrections made.
- b. Previous District plan check set.
- c. If applicable, a copy of the approved tentative tract/parcel map showing dedications of streets for road purposes and public utilities purposes (projects that do not have approved public right-of-way cannot proceed with construction until an easement or right-of-way has been granted).
- d. Executed (signed and notarized) Grant of Easement (if required).
- e. Executed (signed and notarized) Reciprocal Easement and Maintenance Agreement (if required).
6. **Final Construction Drawings**

Once the District has signed the original water construction drawings, the Engineer shall submit:

a. Four blackline copies of the approved plans for inspection.

b. One compact disk containing:
   i. A PDF of the approved plans.

All CAD/CTB/X-Reference files of the final on-site design and off-site design, if it wasn’t hand-drafted. If available, eTransmit or Pack-N-Go utilities should be used to gather all files pertinent to the design.

D. **PROCEDURE FOR OBTAINING APPROVAL FOR CHANGES TO DESIGN PLANS DURING CONSTRUCTION**

State law requires all changes to design drawings that constitute the practice of Civil Engineering to be made by, or under, the responsible charge of a licensed Civil Engineer. It does not matter if this licensee is the original Civil Engineer or a successor Civil Engineer; whichever Civil Engineer makes the change must meet the responsible charge criteria outlined in 16 California Code of Regulations section 404.1 and must sign and seal any documents produced showing his changes, as required by the Business and Professions Code section 6735 and 16 California Code of Regulations section 411. Field changes made in violation of the law will be reported to the California Department of Consumer Affairs for enforcement, which may result in punitive action.

The District understands that surface and subsurface field conditions often vary from record research and surveys performed as a part of the design process and strives to resolve changes quickly during the construction process to avoid cost impacts to the project. Once a problem has been identified, the following process shall be followed:

a. All work that cannot be built per plans and specifications must stop immediately.

b. The Engineer of Record (or a successor Civil Engineer) and District shall be notified of the problem.

c. The Engineer of Record (or a successor Civil Engineer) shall prepare design revisions to rectify the problem. The design change shall be identified by a revision cloud and the delta revision number (starting at 1).

d. The Engineer of Record (or a successor Civil Engineer) shall stamp and seal the design change to identify themselves and the Engineer of Responsible Charge using the signature block for construction changes identified in Appendix “G.”

e. One copy of the revised plans or a PDF submitted via email shall be submitted to the District for plan review.

f. The District will provide comments to the design change to the Engineer of Responsible Charge for corrections to be made. The review process will repeat until the District no longer has any comments and approves the revised drawings.

g. The Engineer of Responsible Charge shall make three copies of the drawings containing the approved changes and submit them to the District’s inspectors.
SECTION III
DESIGN CRITERIA
SECTION III - DESIGN CRITERIA

Water systems shall be designed in accordance with the District's Standard Specifications and Standard Drawings for Water and Sanitary Sewer Facilities, latest revision, and the following criteria:

A. HYDRAULIC NETWORK ANALYSIS CRITERIA (POTABLE WATER SYSTEMS)

Each hydraulic network analysis shall be performed by a registered Civil Engineer and be signed and stamped by same. The District reserves the right to determine the criteria for each water system or sub-system based upon conditions that may exist for that particular location, anticipated level of development, planned use, or other criteria. In general, however, the water system shall be sized to handle the highest demand within the general area of the tract and shall conform to the following minimum standards:

1. Pipeline Diameters

   The minimum pipeline diameter for distribution and transmission mains is 8". The District accepts only the following diameters: 4, 6, 8, 12, 16, 20, 24, 30, 36, 42, and 48 inches.

2. Pipeline Friction Factors

   Pipeline friction factors shall be as follows:

<table>
<thead>
<tr>
<th>Pipe Material</th>
<th>Hazen-Williams Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement Mortar Lined</td>
<td>C=120</td>
</tr>
<tr>
<td>Steel Pipe</td>
<td></td>
</tr>
<tr>
<td>Polyvinyl Chloride Pipe</td>
<td>C=130</td>
</tr>
<tr>
<td>Ductile Iron Pipe</td>
<td>C=120</td>
</tr>
</tbody>
</table>

3. Water System Unit Demands

   Average day unit demands shall be as follows:

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Average Day Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Factors</td>
<td></td>
</tr>
<tr>
<td>a. Very Low Density/Low Density (1 DU/AC)</td>
<td>1,500 GPD/DU</td>
</tr>
<tr>
<td>b. Medium Low Density (2-4 DU/AC)</td>
<td>1,000 GPD/DU</td>
</tr>
<tr>
<td>c. Medium Density/Medium High Density/High Density (5-16 DU/AC)</td>
<td>600 GPD/DU</td>
</tr>
<tr>
<td>d. Commercial</td>
<td>2,000 GPD/AC</td>
</tr>
<tr>
<td>e. Business Park/Industrial</td>
<td>2,500 GPD/AC</td>
</tr>
<tr>
<td>f. Vineyard</td>
<td>2 AF/AC/YR</td>
</tr>
<tr>
<td>g. Park/Golf Course</td>
<td>4 AF/AC/YR</td>
</tr>
<tr>
<td>h. Wildlife/Reserve</td>
<td>0 AF/AC/YR</td>
</tr>
<tr>
<td>i. Resort Commercial</td>
<td>4 AF/AC/YR</td>
</tr>
<tr>
<td>j. Open Space</td>
<td>1.5 AF/AC/YR</td>
</tr>
<tr>
<td>k. Agricultural (Avocado, Citrus, Horse Ranch)</td>
<td>3.5 AF/AC/YR</td>
</tr>
</tbody>
</table>
4. **Peaking Factors**

The peaking factors to be used are as follows:

a. **Maximum Day Demand/Demand Analysis**

   For the Santa Rosa Division, Maximum Day Demand shall equal 3.0 times the Average Day Demand for Zones 1440, 1670, and 1990. For all other zones, the Maximum Day Demand shall equal 2.5 times the Average Day Demand.

   For the Rancho Division, Maximum Day Demand shall equal 3.0 times Average Day Demand for Zones 1610 and 1790. For all other zones, the Maximum Day Demand shall equal 2.5 times the Average Day Demand.

b. **Peak Demand**

   For all zones, the Peak Demand shall equal two times the Maximum Day Demand.

   For analysis of “small” projects (multi-family sites, subdivisions with less than 100 lots, etc.), the District reserves the right to assign a higher peak factor to the demand analysis.

5. **Fire Flow**

   The fire flow requirements shall be in accordance with the applicable standards of the Insurance Services Office (ISO) and shall be those required by the Riverside County Fire Department, Murrieta Fire Protection District, City of Temecula Fire Department, or California Division of Forestry for the type of development under consideration.

6. **System Hydraulic Analysis**

   The proposed water system shall be analyzed for the following two conditions*:

   a. Peak Demand Flow.
   b. Maximum Day Demand plus Fire Flow.

* A system analysis will be required for all developments. The level of detail will vary based on the scope of the project and requested service. See Section II, Subsection A-3 for additional details.

For the Peak Demand flow condition, the pressure at each node shall be designed for 60 psi minimum. A minimum pressure of 40 psi may be allowed if static pressure is less than 60 psi. The maximum head loss in the pipeline shall be 3 feet per 1,000 feet.

For the Maximum Day Demand plus fire flow, the pressure at each node shall be a minimum of 20 psi. The velocity in the water system distribution pipelines and service laterals shall be no more than 15 feet per second (fps) during a maximum day demand plus fire flow condition. Fire flow should be taken from the hydrant furthest from the connection(s) to the District's distribution system and/or the highest system elevation, as directed by District. Fire and domestic demands through certified backflow devices shall not exceed the maximum flow rate specified by the manufacturer or exceed the demands for which the device has UL, FM, and USC approvals for.

A hydraulic analysis for determining water meters and lateral sizes shall be in accordance with the criteria identified in Section B, Subsection 13.
7. Recycled Water Systems (Off-Site/District-Owned, -Operated, and -Maintained)

Recycled water systems shall have the same hydraulic analysis criteria as potable water systems except with the following revisions:

a. Peaking Factors

The recycled water system peaking factors are as follows:

- **Maximum Day Demand**
  Maximum Day Demand shall be equal to 3.5 times the Average Day Demand.

- **Peak Demand**
  Peak Demand shall be equal to 2.0 times the Maximum Day Demand.

b. Fire Flow

Recycled water shall not be used for fire protection.

c. System Analysis

The proposed recycled water system shall be analyzed and designed for peak demand flow.

B. WATER CONSTRUCTION DRAWING DESIGN CRITERIA (POTABLE WATER SYSTEMS)

1. Pipeline Location

Unless otherwise approved by the District, all water pipelines shall be located on the south or west side of the street, 7 feet off of curb face or berm, per the Riverside County Road Department standards. Location is not to interfere with other existing utilities.

Pipe joint deflection is not allowed. High deflection couplings may be required for PVC pipe per manufacturer’s recommendation (typically between 0° and 5° for AWWA C-900 PVC pipe and 0° and 4° for AWWA C-905 PVC). Joint deflection angle shall be indicated on all horizontal and vertical curves. Bending of AWWA C-900 PVC pipe may be allowed if minimum radius of pipe conforms to AWWA 605, as summarized below for the applicable pipe diameter, and no stress is exerted on the pipe joints when bending occurs. Bending of AWWA C-905 PVC pipe greater than 12-inches shall not be permitted and deflections shall be made with high deflection couplings or fittings.

<table>
<thead>
<tr>
<th>Allowable Pipe Bending (AWWA C-900 only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe Size (inch)</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>12</td>
</tr>
</tbody>
</table>
Water pipeline installation near sewer pipelines and/or non-potable pipelines shall be in accordance with Title 22, §64572. In general, water pipelines should cross perpendicular to, and one-foot above, sewer and recycled water pipelines. Water pipelines parallel to sewer pipelines shall be located a minimum of 10 feet (measured from outside of both pipes) from the sewer pipeline. When separation criteria cannot be met, Standard Drawing S-23 and Department of Health Services’ Guidance Memo No. 2003-2 may be used only with written approval from the State Water Resources Control Board.

When crossing other utilities, provide a minimum one-foot vertical clearance. Water pipelines parallel to other utilities shall be located a minimum of five feet from the utility, whenever possible. If pipelines cannot maintain the required horizontal and vertical clearances, District staff shall be contacted for further direction.

2. **Source Connections**
   a. Development projects having 20 or more individual water services (or as determined/required by District) shall have two or more source connections to provide system redundancy.
   b. Pursuant to the State of California Water Code section 535 and RCWD’s Rules and Regulations, separate water service(s) will be required for landscape irrigation.
   c. Landscape irrigation is subject to the mandatory use of recycled water, pursuant to Resolution 2007-10-5, which may require the extension of recycled water distribution facilities by developer.

3. **Minimum Pipe Cover**
   The minimum cover over the top of pipe shall be 48 inches from finished road grade, and shall provide adequate depth so that gate valve stems and operating nuts have a 12-inch clearance to finished road grade. When 48 inches of cover cannot be provided, concrete encasement or protective slab construction over the pipeline may be considered by District staff.

4. **Pipe Materials**
   Minimum allowable pipe materials are as follows:
   - Polyvinyl Chloride (PVC) Plastic Pipe C-900, DR-18—4” through 12” diameters
   - Polyvinyl Chloride (PVC) Plastic Pipe C-905, DR-18—16” through 24” diameters
   - *Cement Mortar Lined & Coated (CML&C) Steel Pipe, 12 Gage—4” through 24” diameters
   - *Cement Mortar Lined & Coated (CML&C) Steel Pipe, 10 Gage—30” and larger diameters
   - Ductile Iron Pipe (DIP) — Requires Special Design
     * Reference Division 3 of the Technical Provisions for cases requiring greater steel thickness.

   For inordinate depths (i.e. less than 30 inches, greater than 8 feet, and/or as determined by the District), CML&C steel pipe shall be used and considered a “special” (with a factor of safety of 2.5) for the purpose of determining the minimum cylinder thickness pursuant to the District’s Division 3 Technical Provisions for steel pipe.

   The use of metallic pipe will require that a corrosivity study be performed by a qualified engineer. Results of the corrosivity study may require metallic pipes to utilize special pipe coatings, special installation, and/or design and installation of cathodic protection facilities (in addition to the minimum pipe material requirements).

5. **Pipe Slope**
   All pipelines shall be designed to maintain a slope (0.5% minimum) to accommodate the release of air from the pipe, unless otherwise directed by District staff.
6. **Separation Between Appurtenances and Pipe Joints**

All appurtenances shall be spaced at a **minimum** of 24 inches from other services, pipe joints, fittings, or service saddles. Where multiple service saddles are required at the 24-inch spacing, the taps made in the pipe shall be alternated between 15° and 30° angles above the springline of the pipe to avoid creating a weak plane. **Actual** spacing of pipe joints, fittings, and saddles will be determined based on the fitting dimensions for the selected pipe size and the ability to connect to adjacent piping/fittings considering factors such as the length of restraining rods, access to flange bolts, space requirements of appurtenances on the side of the road, minimum pipe lengths, and trench widths/loads for future repairs, without impacting adjacent piping.

7. **Minimum Pipe Lengths**

The minimum length of pipe used for tie-ins, stub-outs, and between mechanical joint fittings shall be three times the pipe diameter or 48 inches, whichever is longer, unless otherwise approved by the District.

8. **Valves**

Refer to Appendix “V,” Valve Application Table, for appropriate valve types, based upon use and design pressure.

Generally, three valves shall be installed on each tee and four valves shall be installed on each cross, with no separation between the valve and fitting. In-tract valving requirements may be reduced at the direction of the District. Line valves shall be spaced at 1,320-foot maximum intervals or as directed by District staff.

9. **Fire Hydrants**

Fire hydrants shall be in accordance with District standards, constructed at right angles to the water pipeline.

Fire hydrants shall be located per the requirements of the Riverside County Fire Department, as stated in the Tract Conditions of Approval, but no greater than 1,000-foot intervals.

10. **Air Valves**

Air valves shall be combination air vacuum and air release valves, in accordance with the District standards, constructed at right angles to the water pipeline.

Air valves shall be located at all high points of pipeline and down-slope of valves. Minimum size of air valves shall be 1” and shall be sized as follows:

<table>
<thead>
<tr>
<th>Air Valve Size</th>
<th>Pipeline Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot;</td>
<td>8&quot; &amp; 12&quot;</td>
</tr>
<tr>
<td>2&quot;</td>
<td>16&quot;, 20&quot;, &amp; 24&quot;</td>
</tr>
<tr>
<td>4&quot;</td>
<td>30&quot;</td>
</tr>
<tr>
<td>Consult with District staff</td>
<td>&gt; 30&quot;</td>
</tr>
</tbody>
</table>

(Reference AWWA M-51)

11. **Blowoffs**

Blowoffs shall be in accordance with District Standards, located at right angles to the water pipeline. Where possible, fire hydrants shall be used in place of blowoffs. Blowoffs shall be located at all
low points of the pipeline, at all dead-ends or terminal points, and up-slope of valves. Minimum size of blowoffs shall be 6”. Consult with District staff regarding required size.

12. **Backflow Prevention Devices**

In accordance with the District’s Cross Connection Control Program (Ordinance Number 2009-10-1), an approved backflow prevention device shall be selected and constructed immediately downstream of the potable water meter on all multi-family, commercial/retail, industrial, agriculture, and irrigation services. A backflow prevention device is not required on recycled water irrigation services except where fertilizer and/or chemical injection systems are used. For sites with multiple service connections, which include a recycled service connection for irrigation, a reduced pressure detector assembly is required for the site’s fire services, and a reduced pressure principle backflow prevention assembly is required for the site’s potable water services. All devices shall be FM, UL, and USC approved at the designed flow rate. In addition, an approved backflow prevention device is required on potable water services to properties with on-site wells, storage tanks, and/or booster pumps.

13. **Water Services and Meters**

Meter size/type will be determined by the District, based upon project-specific continuous and/or intermittent flows. General parameters for meter type determination are as follows:

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Service Type</th>
<th>Meter Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>One/Two Family Home- Domestic + Fire Sprinkler</td>
<td>Potable</td>
<td>Disc/Multi-Jet</td>
</tr>
<tr>
<td>Multi-Family (Apartment/Condo)- Domestic</td>
<td>Potable</td>
<td>Compound</td>
</tr>
<tr>
<td>Multi-Family (Apartment/Condo)- Fire Service</td>
<td>Potable</td>
<td>Partially-metered DCDA or RPDA</td>
</tr>
<tr>
<td>Commercial/Retail- Domestic</td>
<td>Potable</td>
<td>Disc/Multi-Jet; Compound</td>
</tr>
<tr>
<td>Commercial/Retail- Fire Service</td>
<td>Potable</td>
<td>Partially-metered DCDA or RPDA</td>
</tr>
<tr>
<td>Industrial- Domestic</td>
<td>Potable</td>
<td>Disc/Multi-Jet; Compound</td>
</tr>
<tr>
<td>Industrial- Process</td>
<td>Potable or Recycled</td>
<td>Compound; Turbine</td>
</tr>
<tr>
<td>Industrial- Fire Service</td>
<td>Potable</td>
<td>Partially-metered DCDA or RPDA</td>
</tr>
<tr>
<td>Irrigation</td>
<td>Potable or Recycled</td>
<td>Disc/Multi-Jet; Turbine</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Potable or Recycled</td>
<td>Disc/Multi-Jet; Turbine</td>
</tr>
</tbody>
</table>

- One/two family homes without any accessory dwelling units (i.e. granny flats) shall have a minimum 1-inch lateral with a ¾-inch meter; however, one/two family homes with interior (residential) fire sprinklers may require a 1-inch meter depending upon flow/pressure requirements and jurisdictional agency requirements.

- Other Domestic Demands: lateral and/or meter sizes shall be determined by calculating the anticipated demands for the project from the proposed fixture units and the associated demand loads using Table A-2 and Chart A-2 in the Uniform Plumbing Code (latest version). For projects with more than 3,000 fixture units, Hunter’s Curve shall be used for estimating demand loads. The appropriate meter size shall be selected using the “Maximum Intermittent Capacity” column of the above-mentioned table.

- Landscape Irrigation Demands: lateral and/or meter sizes shall be calculated by the irrigation demands associated with the zone(s) that produce the highest flow rate. For meters with combined domestic and landscape demands, each component shall be added together and size shall be determined based on the “Maximum Intermittent Capacity” column.
• All residential (other than one/two family homes) and commercial projects requiring new water service with 5,000 square feet (or more) of landscaped area shall have a separate meter for irrigation, in conformance with California State Water Code section 535. The size of dedicated landscape meters, or projects containing process water, shall be selected from the “Maximum Continuous Capacity” column.

• Developments with private on-site water systems shall have dedicated services/piping for domestic demands (fully-metered) and separate services/piping for fire demands (partially-metered) to avoid oversizing meters to meet fire flow conditions (meters that are excessively large result in inaccurate meter reads, excessive capacity fees, and high monthly standby fees). The only exception shall be for projects that can demonstrate fire demands will be approximately the same as continuous or intermittent domestic demands for the project (this is a rare situation and requires special District consideration).

<table>
<thead>
<tr>
<th>Lateral Size</th>
<th>Meter Size/Type</th>
<th>Maximum Continuous Capacity (GPM)</th>
<th>Maximum Intermittent Capacity (GPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1”</td>
<td>¾” Disc/Multi-Jet</td>
<td>25</td>
<td>35</td>
</tr>
<tr>
<td>1”</td>
<td>1” Disc/Multi-Jet</td>
<td>50</td>
<td>70</td>
</tr>
<tr>
<td>2”</td>
<td>1 ½” Disc/Multi Jet</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>2”</td>
<td>2” Disc/Multi Jet</td>
<td>100</td>
<td>160</td>
</tr>
<tr>
<td>2”</td>
<td>2” Turbine</td>
<td>200</td>
<td>310</td>
</tr>
<tr>
<td>2”</td>
<td>2” Compound</td>
<td>160</td>
<td>200</td>
</tr>
<tr>
<td>4”</td>
<td>3” Compound</td>
<td>400</td>
<td>500</td>
</tr>
<tr>
<td>4”</td>
<td>3” Turbine</td>
<td>450</td>
<td>550</td>
</tr>
<tr>
<td>4”</td>
<td>4” Turbine</td>
<td>1,000</td>
<td>1,250</td>
</tr>
<tr>
<td>4”</td>
<td>4” Compound</td>
<td>800</td>
<td>1,000</td>
</tr>
<tr>
<td>6”</td>
<td>6” Turbine</td>
<td>2,000</td>
<td>2,500</td>
</tr>
<tr>
<td>6”</td>
<td>6” Compound</td>
<td>1,600</td>
<td>2,000</td>
</tr>
<tr>
<td>8”</td>
<td>8” Turbine</td>
<td>3,500</td>
<td>4,500</td>
</tr>
<tr>
<td>8”</td>
<td>8” Compound</td>
<td>2,700</td>
<td>3,400</td>
</tr>
</tbody>
</table>

1. “Continuous Flow” refers to the flow that results from irrigation or domestic use that lasts for long durations (usually five to fifteen minutes or more) and occurs frequently or daily. It is the upper limit of continuous flow through a water meter that will impact the accuracy of or damage the internal workings of a water meter.

2. “Intermittent Flow” refers to the flow that results from numerous fixture units or fire flows and incorporates a probability that all fixtures will not be in use at the same time and that the flow is of short duration, usually a few minutes. Intermittent flow is typically infrequent, often occurring once a year or less. It is the upper limit of intermittent flow through a water meter that will impact the accuracy of or damage the internal workings of a water meter.

All water services that have a static pressure of 150 psi or greater shall have a pressure regulator installed prior to the meter, which will require the installation of a larger meter box.

Water services and meters shall be constructed in accordance with District standards, constructed at right angles to the water main. No service laterals shall be installed between end-of-line appurtenances (fire hydrants, blowoffs, or air valves) and pipeline terminus point.

14. Minimum Design Pressure

Minimum design pressure shall be the maximum static pressure times 125%, with the total rounded up to the nearest 25 psi, or as directed by District.

Minimum design pressure shall not be less than 150 psi.

11/01/17
PVC pipe shall be:

- DR-18 for pressures up to 150 psi
- DR-14 for pressures up to 200 psi

Steel pipe shall be used for pressures greater than 200 psi. Cylinder thickness shall be determined based on the District's specifications for steel pipe located in Division 3 of the Technical Provisions.

*Special consideration to deviate from this provision may be granted at the District's discretion, if supported by site-specific calculations.*

15. **Thrust Restraint**

Thrust restraint shall be through the use of restrained joints for PVC and ductile iron pipe, and welded joints for steel pipe. Restrained lengths shall be calculated, as shown in AWWA M-23. Thrust blocks are no longer accepted by the District for thrust restraint, except for rare circumstances and with District approval.

16. **Control Valves, Pressure Relief Valves, and Other Special Valves**

Control valves, pressure relief valves, and other special valves shall be designed and located as directed by District staff.

17. **Easement Criteria**

Pipelines not located within public right-of-way must be located in easements granted to the District on the District's Grant of Easement form. Easements shall be a minimum of 30 feet in width unless otherwise approved by the District. Easements for other utilities may overlap District easement only if proper separations are maintained. Details for grant of easement documents are included in Section IV, Construction Drawing Preparation.

C. **WATER CONSTRUCTION DRAWING DESIGN CRITERIA (RECYCLED WATER SYSTEMS)**

Recycled water construction drawing design criteria shall be the same as potable water systems, except with the following revisions:

1. **Pipeline Location**

Unless otherwise approved by the District, all recycled water pipelines shall be located on the north or east side of the street, seven feet off curb face or berm, and shall have required horizontal and vertical separation, in accordance with Title 22, §64572.

2. **Minimum Pipe Cover**

The minimum cover over the recycled water pipeline shall be 48 inches from finished road grade. If a recycled water pipeline has a horizontal separation of less than 10 feet from a potable water pipeline, its vertical profile (depth) must be one-foot below the potable water pipeline.

3. **Pipe Materials/Pipe Identification**

PVC pipe shall be magenta (purple) in color. CML&C steel or ductile iron pipe shall be placed in a magenta (purple)-colored plastic sleeve.

4. **Fire Hydrants/Blowoffs**

Fire hydrants will not be allowed. Underground blowoffs shall be installed at all low points, at all dead-ends or terminal points, up-slope of valves, and no further than 1,000 feet separation. Recycled water blowoffs shall be per RCWD’s Standard Drawing RW-4.
SECTION IV

CONSTRUCTION DRAWING PREPARATION
SECTION IV - CONSTRUCTION DRAWING PREPARATION

A. GENERAL

Engineer shall prepare water system improvement drawings that are clear, concise, and meet District standards.

Drawings shall be drawn in ink on D-size mylar sheets (24” x 36”) with Rancho California Water District approval block.

The drawings shall be professional quality drawings especially prepared as WATER DRAWINGS, RECYCLED WATER DRAWINGS, WATER AND RECYCLED WATER DRAWINGS, or WATER, RECYCLED WATER, AND SEWER DRAWINGS. Work shall be of standard engineering practice and shall be legible and present the proposed construction without confusion.

Water, recycled water, and sewer design may be shown on the same drawings, if the drawings are clear and concise. The District shall be the sole judge as to when separate drawings are necessary.

B. SURVEY STANDARDS

The District requires all surveys for design work to be tied to the California Coordinate System of 1983 (CCS83), which is based on the North American Datum of 1983 (NAD83) and consistent with the California Public Resources Code section 8817. The North American Vertical Datum of 1988 (NAVD88) shall be used for all mapping, planning, design, and construction, as defined by the National Geodetic Survey (NGS).

Local control points may be used as a basis of bearing; however, they must have published values, meet the criteria in the Public Resources Code (sections 8801-8819), and be tied to CCS83 and NAVD88. Continuously Operating Reference Stations (CORS) and California Virtual Reference Station Network (CalVRS) both have local RTN and RTK stations with coverage within the District’s boundary for the purpose of grid-ties of control points. The 2007.00 epoch is preferred and encouraged; however, the 2010.00 epoch may also be used.

For all maps, plans, or other documents using CCS83, a note shall be placed on the document to show the basis of the coordinates used including: the CCS zone, the physical reference network, datum tag, and epoch used to establish the coordinates.

The District requires the northing and easting to be called-out at all pipeline points of connection, angle points, tees, and crosses. For large projects, a horizontal control plan is recommended.

C. UTILITY COORDINATION AND VERIFICATION

The Engineer of Record is responsible for the coordination and verification of all existing and proposed utilities, as well as future street and road improvements. The District will require a “certification of streets to final grade” agreement to be signed, prior to construction approval, in order to have the Engineer and Project owner culpable for paying for all relocations caused by inadequately researching known projects that conflict with or cause the relocation of the facilities designed by the Engineer.
D. COVER SHEET

The cover sheet shall show as a minimum:

1. General Notes (Appendix "E")
2. Legend (Appendix "F")
3. Estimate of Quantities (Appendix "F")
4. Approval for Construction Box (Appendix "G")
5. Water System Certification (Appendix "G")
6. Index of Drawings
7. Vicinity Map
   a. Scale
   b. North Arrow
   c. Street Names
   d. Title and Location of Project
8. Index Map
   a. Scale
   b. North Arrow
   c. Tract Layout with Street Names and Lot Numbers
   d. Proposed Water Pipelines Identified by Size and Type
   e. Symbols for all Appurtenances
      i. Fire Hydrants
      ii. Air Valves
      iii. Blowoffs
      iv. Tees, Crosses
      v. Valves
      vi. Water Services
   f. Sheet Numbers Corresponding to Plan and Profile Sheets

The use of a second sheet to include all information is permissible.

E. PLAN AND PROFILE SHEETS

The plan/profile sheets shall be drawn at a horizontal scale of 1"=40' and a vertical scale of 1"=4', and as a minimum, the drawings shall show the following:

PLAN PORTION

1. Title Block

Title block shall show Tract Number, pressure zone, and scale of drawings. District approval blocks shall be incorporated into the title block.
2. North Arrow

North Arrow shall point up or to the left, if possible, to conform with Item 11.

3. Right-of-Way

Existing and proposed right-of-way shall be identified with dimensions for same shown.

4. Curb Separation

Existing and/or proposed curb separation shall be identified with dimensions for same shown.

5. Easements

Existing or proposed easements shall be identified with dimensions for same shown.

6. Street Names

All street names shall be shown.

7. Lot Lines

All lot lines and parcel lines shall be shown. All lots shall be numbered or labeled. All adjacent tracts shall be identified.

8. Utilities

All existing and proposed utilities shall be shown. Utilities to be shown shall include, but not be limited to, water (existing water pipelines shall be identified by District Plan Number), sewer, gas, power, telephone, storm drain, irrigation, traffic, and cable television. Each utility shall be identified with a symbol, and the size of the utility shall be shown.

9. Utilities Crossing Water Pipelines

All existing and proposed utilities (water, sewer, recycled water and storm drain) crossing proposed water pipelines shall be shown on the plan view. The stationing of the crossing shall be placed on the plan.

10. Existing and Proposed Improvements

All existing surface improvements shall be shown including, but not limited to, curb and gutter, edge of pavement, power poles, driveways, sidewalks, and fences.

11. Match Lines

Match lines for each end of the street shall be shown as follows:

Sta 15+00.00 Match Line
See Sheet 5

12. Stationing

Stationing along the centerline of the improvement shall be shown. Unless otherwise specified, station shall increase from left to right. Stationing shall be identified with tick marks at 100' intervals.
13. Proposed Pipeline

Proposed pipeline shall be indicated with a heavy line. Dimensions from street centerline to centerline of pipeline shall be shown. Pipeline shall be identified as:

- CML&C (__ Gauge Minimum) Pipeline
  OR

- C900 (use C905 for 16" PVC) Class ___ PVC Pipeline

14. Appurtenances

All appurtenances including tees, crosses, elbows, and blind flanges or plugs shall be identified by station and size, as follows:

Sta 12+25.00  12" x 12" x 8" Tee

All pipeline appurtenances including air valves, blowoffs, fire hydrants, and valves shall be identified by station, size, and RCWD Standard Number, as follows:

Sta 12+25.00  2" Air Valve per RCWD Std. Dwg. No. ____

All meter services shall be indicated on the drawings. The stationing of services is not required on the drawings; however, after construction of proposed facilities, the engineer shall provide the District with an "as-built" stationing table of the meter services on the record drawings.

All connections to existing water system shall be identified by station and size. A station equation and District plan number shall be used to reference existing water pipelines. Detail for connection shall be used where required.

PROFILE PORTION

Only profiles for water and/or recycled water, and sewer shall be shown. All other utility profiles shall not be shown unless conflicting or where crossing over or under (i.e. storm drain).

1. Stationing

Stations shall be shown along bottom of profile at 100-foot intervals. Profile stationing shall line up with plan stationing.

2. Elevations

Elevations shall be shown on both ends of the profile sheet.

3. Existing and Proposed Ground Surface

Existing ground surface or pavement over the proposed pipeline shall be identified as follows:

"Existing Top of Pavement (or ground surface) over Centerline of Pipeline"

Proposed ground surface or pavement over the proposed pipeline shall be identified as follows:

"Proposed Top of Pavement (or ground surface) over Centerline of Pipeline"
4. **Match Lines**

Match lines for each end of sheet shall be shown as follows:

- Sta 15+00.00 Match Line
- See Sheet 5

5. **Flow Line**

Flow line of proposed pipeline shall be identified as follows:

- PE ___ " CML&C (___ ga minimum) Pipeline
- OR
- PE ___ " C900 (use C905 for 16" PVC) Class ___ PVC Pipeline.

6. **Stationing and Flow Line Elevation**

Pipeline stationing and flow line elevations shall be shown for each grade break, as follows:

- Sta 14+00.00 GB
  - 1192.35

Pipeline stationing and flow line elevations shall be shown for each tee, cross, elbow, BC, EC, hot tap, and end of pipeline, as follows:

- Sta 12+25.00, 12"x12"x8" Tee
  - 1190.00

Pipeline stationing and flow line elevations shall be shown for all air valves, blowoffs, and fire hydrants, as follows:

- Sta 12+25.00, 6" Fire Hydrant
  - 1190.00

Pipeline stationing and flow line elevation shall be shown for each utility crossing.

7. **Pipeline Lengths and Pipeline Slopes**

Pipeline lengths and pipeline slopes shall be shown between all grade breaks, as follows:

- S = 0.005
- 135.00 LF ___ " PVC
  - ___ " CML & C

8. **Utilities Crossing Water Pipelines**

All existing and proposed utilities (water, sewer, recycled water, and storm drain) crossing proposed water pipelines shall be shown on the profile. The stationing of the crossing shall be shown including the invert elevations of both utilities. Minimum separation is one foot.

9. **Minimum Design Pressure**

Minimum design pressure shall be shown at the top of each sheet, as follows:

- Minimum Design Pressure = 175 psi
10. **Welded Joint Limits**

Length of welded joints for welded steel pipe shall be identified as "fully-welded joints," with station limits shown.

11. **Restrained Joint Limits**

Length of restrained joints for PVC pipe shall be identified as “restrained joints,” with station limits shown.

12. **Minimum Cover**

48-inch minimum cover shall be shown between top of pipe and existing or proposed ground surface.

13. **Maximum Cover**

The maximum cover shall be 8 feet between the top of pipe and existing or proposed ground surface.

14. **Pipe Deflection**

No deflection at pipe joints on PVC pipe is allowed. All deflection angles between 0°-5° must be made with high deflection couplings. Angles greater than 5° must be made with fabricated fittings. Fabricated steel pipe deflections must be in accordance with AWWA C-208.

A checklist for the preparation of water construction drawings is shown in Appendix "H."

**F. GRANT OF EASEMENTS**

The Grant of Easement shall be on District form and shall consist of three parts: Grant of Easement form, legal description, and plat.

The legal description shall be designated as Exhibit "A" and, if appropriate, shall have the assessor's parcel number 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 shall be signed and stamped by a licensed Civil Engineer or Land Surveyor. The plat shall be prepared in CAD with metes and bounds tied to the California Coordinate System of 1983. CAD files shall be submitted to the District prior to recordation.

A copy of the Grant of Easement form is shown in Appendix "I," however, PDF and MS Word versions are available from the District that can be completed electronically.

The owner shall sign the easement document as it is held in title; this signature shall be notarized. The signed and notarized easement document shall be submitted to the District for acceptance and recordation.
SECTION V

PROCEDURES
WATER SYSTEM FACILITY CONSTRUCTION
SECTION V – PROCEDURES-WATER SYSTEM FACILITY CONSTRUCTION

Water systems shall be constructed in accordance with the District’s Standard Specifications and Standard Drawings for Water and Sanitary Sewer Facilities, latest revision, and the following criteria:

All potable water and recycled water facility projects will be constructed by developer and inspected by District inspectors. Work performed without the knowledge or the observation of a District inspector will not be accepted. The steps required to obtain approval of construction of water facilities are as follows:


2. Complete Engineering Service Application and Submit Inspection Deposit.

3. Attend Preconstruction Meeting, Provide Submittals.


6. Pressure Test and Disinfect Water System Facilities.

7. Provide Continuity Test (Steel Pipe Only).

8. Pay any Outstanding Inspection Fees.

9. Connect to Existing Water System.

10. Submit Application for Unmetered Construction Water.

11. Remove Unmetered Connections.

12. Complete Drop-in Meter Application and Pay Capacity and Meter Fees.

13. Drop-in Meters Installed by District.

14. Provide Unconditional Waiver and Release on Final Payment and Record Drawings.

15. Final Release Filed by District.

A flowchart for water system facility construction is shown as Appendix "K." Each required step is discussed in detail below:

1. Submit Developer’s Inspection Package

Developer shall submit to District staff the following:

a. Contractor information sheet (Appendix "M").

b. Two copies of Encroachment Permits.

c. One copy of recorded tract/parcel map showing dedication of streets for road and public utility purposes (not required if executed Grant of Easement provided earlier).

d. System Facilities Construction Agreement (Appendix "N").

e. Agency Agreement. developer shall grant said Agency Agreement to the District on form provided by District (Appendix “U” – developer to submit legible copy of Grant Deed).
f. Copy of the Contract between developer and contractor verifying cost of water system facility construction.
g. Certification of streets to final grade (Appendix "O").
h. Certificates of Insurance for contractor (insurance Accord form acceptable).
i. Construction Surety – Surety in the amount determined by the District shall be provided for all work for public improvements. Acceptable forms of surety are cash deposits, Certificates of Deposit, Segregated Construction Accounts, Letters of Credit, and Faithful Performance Bonds (Appendix "Q"). Developer shall contact the District for acceptable formats for the selected mechanism of surety. Joint performance bonds provided to the city/county are satisfactory if the facilities to be turned over to the District are included. Surety is only required for those facilities that are to be owned by the District. On-site, private improvements do not require surety.

Thereafter, developer shall schedule a pre-construction meeting with District staff. A one-week notice is required prior to said pre-construction meeting.

2. Submit Engineering Service Application and Inspection Deposit

The Engineering Service Application (available from the District) shall be completed and filed with the District staff. A copy of the Engineering Service Application is shown in Appendix "D." The inspection deposit and four copies of approved water construction drawings shall be submitted with the completed application.

3. Attend Pre-Construction Meeting, Submit Materials List

Pre-construction meeting shall be held at the District office and shall be attended by developer's representative, developer's contractor, and construction superintendent, as well as by District staff.

Submit materials list and/or catalog pages of applicable water facility materials.

After District reviews and approves all material submittals, District staff will issue a Notice to Proceed.

4. Notify District Regarding Construction Start

Contractor shall notify District, in writing, a minimum of one week prior to construction start. Prior to construction, contractor shall submit three copies of the construction cut sheets for District’s use during construction. Water pipeline shall be staked at 50-foot intervals and at all water services, fire hydrants, tees, crosses, elbows, valves, air valves, blowoffs, and grade breaks.

5. Construct Water System Facilities

The water system facilities shall be constructed by developer's contractor and inspected by District inspectors. After completion of construction, developer's contractor shall complete all items on District's inspection list prior to testing and disinfecting water facilities.

6. Pressure Test and Disinfect Water System Facility

After water facilities are completed to the satisfaction of District inspector, including all items on inspector's construction deficiencies list, and after contractor furnishes evidence that compaction of trenches has been completed to the satisfaction of the County of Riverside Transportation Department, City of Temecula, or City of Murrieta, contractor shall test and disinfect the water facility, in accordance with District standards.
After system has been tested and disinfected, District will take samples for bacteriological tests. Acceptable bacteriological test results must be obtained before District will allow connections to existing water system.

7. **Provide Continuity Test (Welded Steel Pipe Only)**

After water facilities are tested and disinfected, contractor shall perform a continuity test on all pipeline and corrosion control equipment. Contractor shall provide written results of said test to District. District shall approve said tests before District will allow connections to existing water system.

8. **Pay Any Outstanding Inspection Fees**

Before District will allow connections to existing water system, any outstanding inspection fees must be paid in full.

9. **Connect to Existing Water System**

After all fees have been paid and system is disinfected, contractor may connect water facilities to existing water facility system. Contractor shall provide the District with three weeks written notification requesting a system shutdown to make tie-ins to the existing District facilities. Thereafter, District will release new water system facilities for fire protection and construction water.

10. **Submit Application for Unmetered Construction Water**

Developer shall submit application for unmetered construction water with the appropriate fee to District staff (Appendix "T").

After approval of same, developer shall install unmetered connections, in accordance with District standards.

11. **Remove Unmetered Connections**

After contractor is completed with construction, he shall remove unmetered connections and prepare for drop-in meters, as follows:

   a. Construction water shall be discontinued completely and jumpers removed.
   b. Angle meter stops shall be set to proper elevation and location; meter boxes shall be set to proper elevation and location.
   c. Sidewalks and driveways shall be placed and forms stripped on areas in vicinity of meter boxes.
   d. Lots shall be fine-graded.

12. **Complete Drop-in Meter Application and Pay Fees**

   a. The Drop-in Meter Application shall be completed and filed with District staff. All related meter installation and connection fees shall be submitted with the completed application. Approximately 30 days are required after receipt of the application and fees before meter will be set.
   b. District inspector will inspect those lots requiring meters. Any deficient items will be listed on a punch list and copies will be given to developer to correct. When all items have been resolved and accepted by inspector, said lots will be released to customer service for meter installations. There is a two-week lead time from when lots are released for drop-in meters and when actual drop-in meters are installed.
13. **Meter Installation**

After receipt of meter fees and signing of meter applications, the District will install drop-in meters.

14. **Provide Unconditional Waiver and Release on Final Payment and Record Drawings**

   a. Provide Unconditional Waiver and Release on Final Payment for water pipeline construction (Appendix "R").
   
   b. Provide water system record drawings ("As-Builts").

15. **Final Release Filed by District**

After receipt and approval of items in Section 14, District will file a Final Release with the appropriate agencies.
FLOWCHART FOR INITIATING PLANNING PROCESS FOR NEW OR CHANGED SERVICE/FACILITIES

Contact Engineering Services (engineeringservices@ranchowater.com) for New Development Package

Developer Submits to Engineering Services:

1) Application & deposit (see current rate in the Customer Guide - Rates & Charges, current version) for pre-design project planning, meetings, and/or modeling by District staff
2) Completed Project Information Worksheet to District (**Blue fields only**)
3) Conditions of Approval
4) CAD file of site plan and proposed topography (CCS 83 and NGVD 88)
5) Development Project Status Sheet

District Staff reviews Project Information Worksheet

(Approximately 1 week)

Developer schedules a pre-design project planning meeting (optional, but highly recommended)

District Staff returns Project Information Worksheet with project specific information and conditions applicable to the planning and design of the project

Developer’s Engineer prepares Hydraulic Analysis for new pipelines, onsite facilities, fire services, meter sizing, etc. See Section III(A)

District Staff performs modeling, planning studies, alignment evaluations, boundary conditions, etc. to establish necessary information for developer’s hydraulic analysis at proposed point(s) of connection¹ [Developer provides copy of project Conditions of Approval, CAD files of proposed project, & topography] (Approximately 1-2 weeks)

Developer Submits to Engineering Services:

1. Hydraulic Network Analysis
2. Copy of District’s Modeling Results at the Point of Connection
3. Water Fixture Unit Data Table (Non-residential)
4. Compact Disk with PDF version of Hydraulic Analysis

District Staff reviews & comments

(Approx. 1 week)

All Comments Addressed

Developer’s Engineer addresses comments

Developer’s Engineer prepares Construction Drawings

(See Appendix B-1 or B-2)

¹ – District no longer allows fire flow tests to establish the boundary condition used in a development’s Hydraulic Analysis.

APPENDIX “A”
FLOWCHART FOR CONSTRUCTION DRAWING APPROVAL
New Facilities and Waterline Extensions

Developer’s Engineer completes
Pre-Design Process (Appendix A)

Developer Submits:
Engineering Application and Plan Check Deposit

Developer Submits to Engineering Services:

1. 1 Copy of Completed Plan Review Checklist (Appendix H)
2. 1 Copy of Water Drawings
3. 1 Copy of Private Onsite Water System with Valves (if applicable)
4. Corrosion Site Survey (Steel Pipe Only)
5. Development Status Sheet (Appendix C)
6. Compact Disk with:
   a. CAD files of survey, design, topography, and CTB file
   b. PDF of Sewer Drawings
   c. PDF of Street Drawings
   d. PDF of Grading Plan
   e. PDF of Grid Tie Sheet Showing Conformance to District Survey Standards

District Staff
Reviews submittal
(Approx. 3 weeks)

Developer Submits to Engineering Services:

1. Previous District Plan Check Set
2. 1 Copy of Revised Water Drawings
3. 1 Copy of Easement Documents
4. PDF of Tentative Tract/Parcel Map
5. Development Status Sheet (Apdx. C)
6. Additional Information as Requested

District Staff
Reviews submittal
(Approx. 2 weeks for each review)

Original Water Construction Drawings signed by District after all remaining plan check fees have been paid (Approximately 1 week)

District Staff Signs Original Water Construction Drawings:
1. Health Department (where applicable)
2. Fire Department
3. Road Commissioner (where applicable)
4. EMWD (where applicable)
5. City of Temecula/City of Murrieta/County of Riverside (where applicable)

Developer Submits to Engineering Services:

1. Original Water Construction Drawings1 (after all corrections have been made)
2. Previous District Plan Check Set with one copy of revised water drawings
3. Copy of Tentative Tract/Parcel Map and/or Executed Grant of Easement and Reciprocal Easement and Maintenance Agreement
4. All CAD/CTB/XREF files of the final design

Developer Provides District with original photo mylar1, 4 blackline copies, and CD with PDF of signed drawings from all agencies (proceed with construction approval - see Appendix K)

1 – For projects with multiple approving agencies, duplicate mylars must be submitted for signature so that each agency has one original. Mylar copies of original signed drawings are not acceptable.
Developer’s Engineer obtains copy of District’s existing record drawings from Engineering Services.

Developer Submits to Engineering Services:
1. 1 Copy of Redlined Water Drawings (CAD or hand-drafted)
2. Development Status Sheet (Appendix C)
3. Plan Review Checklist (Appendix J)
4. Compact Disk with:
   a. CAD files of survey, design, topography, & CTB file
   b. PDF of Sewer Drawings
   c. PDF of Street Drawings
   d. PDF of Grading Plan
   e. PDF of Grid Tie Sheet

District Staff reviews submittal (Approximately 3 weeks)

Developer Submits to Engineering Services:
Subsequent Plan Checks:
1. Previous District Plan Check Set
2. Development Status Sheet (Appendix C)
3. 1 Copy of Revised Water Drawings
4. Easement Documents (including CAD files)
5. PDF of Tentative Tract/Parcel Map
6. Additional Information as Requested
7. Reciprocal Easement and Maintenance Agreement (if applicable)

District Staff signs Original Water Construction Drawings after all remaining plan check fees have been paid (Approximately 1 week)

Developer has Original Water Construction Drawings Signed:
1. Health Department (where applicable)
2. Fire Department
3. Road Commissioner (where applicable)
4. EMWD (where applicable)
5. City of Temecula/City of Murrieta/County of Riverside (where applicable)

Developer provides District with 4 Blackline Copies (proceed with construction approval - see Appendix K)
# RANCHO CALIFORNIA WATER DISTRICT
## WATER SYSTEM FACILITY REQUIREMENTS
### DEVELOPMENT PROJECT STATUS SHEET

**RCWD JOB NO. _______**

**TRACT/PARCEL MAP NO. _______**

**NAME OF PROJECT:** ______________________________________________________________________________________

**DEVELOPER:** ___________________________________________________________________________________________

**APN OF PROJECT:** ________________________________________________________________________________________

**ENGINEER:** _______________________ **EMAIL:** _____________________ **PHONE:** ____________________________

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<thead>
<tr>
<th>ITEM</th>
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<tbody>
<tr>
<td>PRIOR TO STARTING PLAN PREPARATION AND SUBMITTAL (see Appendix A)</td>
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<tr>
<td>1. Engineering Service Application and Deposit Received</td>
<td>______</td>
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<td>2. Project Information Worksheet Completed</td>
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<td>3. One Copy of Conditions of Approval</td>
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<tr>
<td>4. CAD Version of Site Plan and Proposed Topography</td>
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<tr>
<td>5. This Development Project Status Sheet</td>
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RCWD models boundary condition(s) at proposed point(s) of connection and returns the results to the design engineer to produce analysis in Step 6 below.

<table>
<thead>
<tr>
<th>Analysis 1</th>
<th>Analysis 2</th>
<th>Analysis 3</th>
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<td>Date</td>
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<td>Date</td>
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6. One Copy of Hydraulic Analysis for Proposed Facilities Provided for Review by RCWD Using Boundary Conditions Modeled by RCWD (Multiple Review Cycles Required)

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<tr>
<th>ITEM</th>
<th>DATE</th>
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<tr>
<td>FIRST PLAN CHECK (see Appendix B)</td>
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<td>8. Engineering Service Application (Updated for Plan Review Phase) and Deposit Received</td>
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Hydraulic Analysis for Proposed Facilities Approved by RCWD

**APPENDIX "C"**
<table>
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<th>ITEM</th>
<th>DATE</th>
<th>INITIAL*</th>
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<tbody>
<tr>
<td>9. One Copy of Plan Review Checklist Completed by Design Engineer Certifying They Have Addressed Requirement on Plans (see Appendix H or Appendix J)</td>
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<tr>
<td>10. One Copy of Water Construction Drawings</td>
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<tr>
<td>11. PDF Copy of Sewer Construction Drawings (Unless Part of Water Drawings)</td>
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<td>12. PDF Copy of Street Construction Drawings</td>
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<tr>
<td>13. PDF Copy of Grading Plan</td>
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<tr>
<td>14. CAD Files of Design Drawings (Applicable to all Projects Produced in CAD)</td>
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<tr>
<td>15. PDF Copy of Grid Tie Sheet Showing Conformance to RCWD Survey Standards</td>
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<tr>
<td>16. Corrosion Site Survey (Steel Pipe Only)</td>
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<td>17. This Development Project Status Sheet</td>
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**SUBSEQUENT PLAN CHECKS (see Appendix B)**

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<tr>
<th>Plan Check 2</th>
<th>Plan Check 3</th>
<th>Plan Check 4</th>
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<tr>
<th>ITEM</th>
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<tbody>
<tr>
<td>18. One Copy of Easement Documents and CAD File</td>
<td></td>
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<tr>
<td>19. Previous District Plan Check Set and Signed Transmittal</td>
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<tr>
<td>20. One Copy of Revised Water Construction Drawings</td>
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<tr>
<td>21. Copy of Recorded Tentative Tract/Parcel Map AND/OR Executed Grant of Easement</td>
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<tr>
<td>22. This Development Project Status Sheet</td>
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<tr>
<td>23. Copies of Additional Information as Requested</td>
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</table>

**FINAL PLAN SUBMITTAL FOR DESIGN APPROVAL (see Appendix B)**

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<th>ITEM</th>
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<tr>
<td>24. Received Original Construction Drawings Signed by Engineer</td>
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**APPENDIX "C"**

6/1/16
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<th>ITEM</th>
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<tbody>
<tr>
<td>25. Previous District Plan Check Set</td>
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<tr>
<td>26. CAD Files of Final Design (including all XREFS, CTBs, and Dependent Files)</td>
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<tr>
<td>27. All Remaining Plan Check Fees Paid</td>
<td></td>
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<tr>
<td>28. This Development Project Status Sheet</td>
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<th>ITEM</th>
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<tbody>
<tr>
<td>29. One Set of Photo Mylars of Original Drawings (waterline extensions only)</td>
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<tr>
<td>30. Four Sets of the Signed Construction Drawings</td>
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<tr>
<td>31. Engineering Service Application and Inspection Deposit</td>
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<tr>
<td>32. Submit the following:</td>
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<tr>
<td>a. Contractor Information Sheet</td>
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<td>b. Materials List</td>
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<tr>
<td>c. Two Copies of Encroachment Permits</td>
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<tr>
<td>d. One Copy of Right-of-Way Map (Tract/Parcel Map or Easement)</td>
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<tr>
<td>e. System Facilities Construction Agreement</td>
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<tr>
<td>f. Water System Construction Contract</td>
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<tr>
<td>g. Certification of Streets to Final Grade</td>
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<tr>
<td>h. Certificate of Insurance</td>
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<tr>
<td>i. Faithful Performance Surety</td>
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<tr>
<td>33. This Development Project Status Sheet</td>
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* Design Engineer is to date and initial each item submitted to RCWD certifying that the item has been completed. Review by RCWD will not begin until all required items have been provided. Incomplete submittals may result in delays between 2 to 4 weeks.
Rancho Water

ENGINEERING SERVICE APPLICATIONS

DEPOSIT BASIS

- Main Line Extension Est.
- Assessment Dist. Req.
- Detector Check Insp.
- 3/4 Inch Detector Check
- 1 Inch Detector Check

PLAN CHECK

- 1st 1,000 Feet
- Total LF
- Additional LF

INSPECTION

- 1st 1,000 Feet
- Total LF
- Additional LF

OTHER: Description

TOTAL DEPOSIT REQUIRED

FEE BASIS

- Sewer Connection Fee
- Will Serve Letters
- Topo Map Copy
- Duplicate Topo / Mylar
- Temp Remote Meter Est.
- Witness a Fire Flow Test
- As Built per Page

OTHER: Description

TOTAL FEES REQUESTED

CHECK ENCLOSED FOR

REMAINING BALANCE DUE

The undersigned customer agrees that deposits for engineering services listed above are based on estimates. In the event that the actual costs should exceed the original estimate, additional payments will be required.

Signature
Date

APPENDIX "D"
1. GENERAL

A. CONTRACTOR SHALL FURNISH AND INSTALL ALL FACILITIES IN ACCORDANCE WITH RANCHO CALIFORNIA WATER DISTRICT'S (RCWD/DISTRICT) STANDARD SPECIFICATIONS AND STANDARD DRAWINGS FOR WATER AND SANITARY SEWER FACILITIES (LATEST REVISION). THE SPECIFICATIONS AND STANDARD DRAWINGS ARE AVAILABLE FROM THE DISTRICT’S WEBSITE AT WWW.RANCHOWATER.COM. CONTRACTOR SHALL BE IN POSSESSION OF DISTRICT’S SPECIFICATIONS AND STANDARD DRAWINGS ON THE JOB SITE AT ALL TIMES.

B. ALL PERMITS REQUIRED BY LAW SHALL BE ACQUIRED BY THE DEVELOPER/APPLICANT OR THEIR CONTRACTOR.

C. ALL CONSTRUCTION SHALL CONFORM TO CURRENT CAL OSHA SAFETY REQUIREMENTS.

D. APPROVAL BY RCWD IMPLIES NO PERMISSION OTHER THAN THAT WITHIN THE DISTRICT’S JURISDICTION. REQUIREMENTS OF RCWD SHALL TAKE PREADENCE OVER REQUIREMENTS OF OTHER AGENCIES ONLY WHEN RCWD REQUIREMENTS ARE MORE STRINGENT.

E. CONTRACTOR SHALL NOTIFY RCWD'S CONSTRUCTION CONTRACTS MANAGER A MINIMUM OF ONE WEEK PRIOR TO STARTING CONSTRUCTION. A PRECONSTRUCTION MEETING WILL NOT BE SCHEDULED UNTIL ALL ITEMS IN THE DEVELOPER’S INSPECTION PACKAGE HAVE BEEN SUBMITTED TO AND APPROVED BY RCWD. A MINIMUM OF ONE WEEK IS REQUIRED FOR REVIEW AND APPROVAL.

F. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE RCWD CONSTRUCTION CONTRACTS MANAGER REQUESTING A SYSTEM SHUTDOWN FOR CONNECTIONS TO EXISTING SYSTEM. SAID NOTIFICATION SHALL BE MADE A MINIMUM OF THREE WEEKS PRIOR TO SAID SHUTDOWN.

G. CONTRACTOR SHALL DESIGNATE A QUALIFIED SUPERINTENDENT WITH FULL AUTHORITY TO ACT ON BEHALF OF THE CONTRACTOR. SAID SUPERINTENDENT SHALL BE ON THE JOB SITE AT ALL TIMES.

H. CONTRACTOR SHALL PERFORM ALL WORK UNDER RIVERSIDE COUNTY ROAD DEPARTMENT, CITY OF TEMECULA, OR CITY OF MURRIETA JURISDICTION IN ACCORDANCE WITH ALL REQUIREMENTS OF SAID DEPARTMENT OR CITY INCLUDING TRAFFIC CONTROL, PAVEMENT REMOVAL, TEMPORARY PAVEMENT PLACEMENT, PERMANENT PAVEMENT PLACEMENT (INCLUDING BASE MATERIAL) AND TEMPORARY AND PERMANENT TRAFFIC STRIPING.

I. APPROVAL OF THESE PLANS IS VALID FOR ONE YEAR FROM THE DATE THEY WERE SIGNED BY RCWD.

2. PIPELINE AND APPURtenances

A. ALL VALVES, PIPING, AND APPURtenances SHALL BE DESIGNED TO MEET OR EXCEED THE SPECIFIED MINIMUM DESIGN PRESSURE SHOWN ON THE PLANPROFILE SHEETS. IN ADDITION, ALL VALVES, PIPING, AND APPURtenances SHALL BE TESTED AT A PRESSURE OF 10% OVER SAID MINIMUM DESIGN PRESSURE. VALVES SHALL BE CAPABLE OF WITHSTANDING SAID TEST PRESSURE IN A CLOSED POSITION.
B. ALL MATERIALS, TESTING, AND INSPECTION SHALL BE IN CONFORMITY WITH THE REQUIREMENTS OF RANCHO CALIFORNIA WATER DISTRICT, RIVERSIDE COUNTY, CITY OF TEMECULA, CITY OF MURRIETA, AND/OR THE AMERICAN WATER WORKS ASSOCIATION STANDARDS. FAILURE TO MEET ANY REQUIREMENTS OF THE ABOVE REFERENCED ENTITIES WILL BE CAUSE FOR REJECTION.

C. PIPE SHALL BE __ " _____, (PROVIDE PIPE DIAMETER: FOR PVC PIPE, PROVIDE AWWA C900 OR AWWA C905 AND DIMENSION RATIO [DR]; FOR CML & C STEEL PIPE, PROVIDE MINIMUM GA FOR STEEL CYLINDER).

D. VALVES 12" AND SMALLER SHALL BE RESILIENT SEATED GATE VALVES UNLESS OTHERWISE SPECIFIED. VALVES 16" AND LARGER SHALL BE BUTTERFLY VALVES UNLESS OTHERWISE SPECIFIED. VALVES SHALL BE INSTALLED IN ACCORDANCE WITH RCWD STANDARD DRAWING NOS. RW-30 AND RW-31.

E. AIR VACUUM AND AIR RELEASE ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH RCWD STANDARD DRAWING NO. ______ (RW-9, RW-10, OR RW-11).


ALL COMMERCIAL, INDUSTRIAL, MULTI-FAMILY, LARGE-LOT, OR LANDSCAPE IRRIGATION METERS SHALL BE INSTALLED WITH A DISTRICT APPROVED BACKFLOW DEVICE (RW-18 OR RW-19).


I. THRUST RESTRAINT SHALL BE PROVIDED BY WELDED JOINTS OR MECHANICAL JOINT RESTRAINTS. IF CONCRETE THRUST BLOCKS ARE ALLOWED BY RCWD, THRUST BLOCKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH RCWD STANDARD DRAWING NO. RW-26 WITH ALL BEARING AREA SIZES CALLED OUT ON THE PLANS.

3. UTILITIES

A. AT LEAST 48 HOURS BEFORE COMMENCING ANY EXCAVATION, CONTRACTOR SHALL REQUEST UNDERGROUND SERVICE ALERT (1-800-422-4133) AND NON-MEMBER COMPANIES, OR UTILITIES TO MARK OR OTHERWISE INDICATE THE LOCATION(S) OF THEIR SUBSURFACE FACILITIES INCLUDING, BUT NOT LIMITED TO, STRUCTURES INCLUDING VAULTS, MAIN CONDUCTORS OR CONDUITS, AND SERVICE CONNECTIONS.

B. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL EXPOSE EXISTING WATERLINES AT PROPOSED CONNECTIONS AND CROSSINGS AND VERIFY ELEVATIONS, LOCATIONS, AND SIZE OF EXISTING FACILITIES.
C. CONTRACTOR SHALL NOT INTERRUPT OR DISTURB ANY UTILITY FACILITY WITHOUT AUTHORITY FROM THE UTILITY COMPANY. WHERE PROTECTION IS REQUIRED TO ENSURE INTEGRITY OF UTILITY FACILITIES (INCLUDING DISTRICT OWNED UTILITIES), CONTRACTOR SHALL FURNISH AND PLACE ALL NECESSARY PROTECTION.

4. CONSTRUCTION DRAWINGS

A. MINIMUM PIPE COVER SHALL BE 48" FROM FINISHED GROUND SURFACE.

B. WATER SYSTEM PROFILE ELEVATIONS ARE TO FLOW LINE OF PIPE.

C. STATIONING FOR PIPELINE AS SHOWN ON PLAN PORTION OF DRAWINGS IS PERPENDICULAR TO CENTERLINE OF RIGHT-OF-WAY.

D. STANDARD UTILITY LOCATIONS SHALL BE PER RIVERSIDE COUNTY STANDARD NO. 817 AND TITLE 22, §64572. FOR PROJECTS THAT CANNOT MEET SEPARATION REQUIREMENTS BETWEEN POTABLE AND NON-POTABLE PIPELINES, RCWD STANDARD DRAWING S-23 AND DEPARTMENT OF HEALTH SERVICES’ GUIDANCE MEMO NO. 2003-2 MAY BE USED ONLY WITH WRITTEN APPROVAL FROM THE STATE WATER RESOURCES CONTROL BOARD.

E. THE COORDINATES SHOWN ON THESE PLANS ARE IN THE NORTH AMERICAN DATUM 1983, STATE PLANE, CALIFORNIA ZONE 6 COORDINATE SYSTEM.

F. PURSUANT TO 16 CALIFORNIA CODE OF REGULATIONS 404.1, NO FIELD CHANGES TO THE CONSTRUCTION DRAWINGS ARE PERMITTED WITHOUT THE RESPONSIBLE CHARGE OF A REGISTERED CIVIL ENGINEER THROUGH THE PROCESS IDENTIFIED IN SECTION II.D. OF RCWD'S WATER SYSTEM FACILITY REQUIREMENTS AND DESIGN GUIDELINES (LATEST VERSION). RCWD INSPECTION AND ENGINEERING STAFF HAVE NO AUTHORITY TO APPROVE FIELD CHANGES WITHOUT THE PRIOR STAMPED AND SEALED REVISIONS APPROVED BY THE ENGINEER OF RECORD OR A SUCCESSOR ENGINEER. ALL WORK DONE IN VIOLATION OF APPROVED PLANS SHALL BE EXCAVATED AND REMOVED AT THE CONTRACTOR’S SOLE EXPENSE.

5. CONSTRUCTION TOLERANCES

PIPELINES SHALL BE CONSTRUCTED SO THAT ACTUAL FLOW LINE ELEVATIONS ARE WITHIN 0.1 FOOT OF DESIGN FLOW LINE ELEVATIONS. PIPELINES, WHEN INSTALLED, SHALL HAVE CONTINUOUS UPGRADE OR DOWNGRADE, CORRESPONDING WITH DESIGN SLOPE, WITHOUT ANY HIGH SPOTS. PIPELINES SHALL BE CONSTRUCTED SO THAT ACTUAL PIPELINE CENTERLINES ARE WITHIN 0.1 FOOT OF DESIGN PIPELINE CENTERLINES.

PIPELINE CONSTRUCTION SHALL CONFORM WITH CONSTRUCTION DRAWINGS IN ACCORDANCE WITH THE ABOVE SPECIFIED TOLERANCES. CONTRACTOR SHALL ASSIST DISTRICT AS REQUIRED TO CONFIRM COMPLIANCE WITH CONSTRUCTION TOLERANCES. CONTRACTOR SHALL MAKE OR ASSIST IN MAKING ALL NECESSARY MEASUREMENTS AS DETERMINED BY DISTRICT.

6. INSPECTION DEPOSIT

THREE WEEKS PRIOR TO CONSTRUCTION, DEVELOPER/APPLICANT SHALL MAKE A DEPOSIT FOR INSPECTION. INSPECTION DEPOSITS ARE BASED UPON ESTIMATES. SHOULD ACTUAL COSTS BE GREATER, THE BALANCE SHALL BE PAID TO THE DISTRICT BY THE APPLICANT. SHOULD ACTUAL COSTS BE LESS, THE BALANCE SHALL BE REFUNDED TO THE APPLICANT. FEES/DEPOSITS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
7. ENGINEERING FIRM

PRIOR TO SIGNING OF WATER CONSTRUCTION DRAWINGS BY RCWD, ALL QUESTIONS CONCERNING THIS PROJECT SHALL BE DIRECTED TO:

____________________
(NAME)

____________________
(TITLE)

____________________
(FIRM)
### LEGEND AND ESTIMATE OF QUANTITIES

1. The Legend and Estimate of Quantities shall be included on the same sheet as the Index Map, in the following format:

<table>
<thead>
<tr>
<th>MARK</th>
<th>QTY</th>
<th>UNIT</th>
<th>LEGEND</th>
<th>DESCRIPTION</th>
<th>STD. DWG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>L.F.</td>
<td>INSTALL</td>
<td>_____” C900 (or C905) class _____ PVC pipeline</td>
<td>RW-22</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>L.F.</td>
<td>INSTALL</td>
<td>__<em><strong>” CML&amp;C (</strong></em> Gauge Minimum) pipeline</td>
<td>RW-25</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>EA</td>
<td>INSTALL</td>
<td>_____” Resilient Wedge Valve (F X GT, F X F)</td>
<td>RW-30, RW-31</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>EA</td>
<td>INSTALL</td>
<td>_____” Plug Valve</td>
<td>RW-30A, RW-31</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>EA</td>
<td>INSTALL</td>
<td>_____” Flanged Butterfly Valve (F X F)</td>
<td>RW-30, RW-31</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>EA</td>
<td>CONSTRUCT</td>
<td>6” Residential Fire Hydrant Assembly</td>
<td>RW-7 OR RW-8</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>EA</td>
<td>CONSTRUCT</td>
<td>6” “Super” Fire Hydrant Assembly</td>
<td>RW-5 OR RW-6</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>EA</td>
<td>CONSTRUCT</td>
<td>_____” Air and Vacuum Release Assembly</td>
<td>RW-9, RW-10, OR RW-11</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>EA</td>
<td>CONSTRUCT</td>
<td>_____” Copper Water Service Assembly</td>
<td>RW-13 OR RW-14</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>EA</td>
<td>INSTALL</td>
<td>_____” Ductile Iron Tee</td>
<td>-------</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>EA</td>
<td>CONSTRUCT</td>
<td>_____” CML &amp; C Steel Tee</td>
<td>RW-29</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>EA</td>
<td>INSTALL</td>
<td>Underground Blow-Off</td>
<td>RW-4</td>
</tr>
<tr>
<td>MARK</td>
<td>QTY</td>
<td>UNIT</td>
<td>LEGEND</td>
<td>DESCRIPTION</td>
<td>STD. DWG.</td>
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<tr>
<td>14</td>
<td>14</td>
<td>EA</td>
<td>INSTALL Cathodic Test Station</td>
<td>RW-40A, RW-41</td>
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<tr>
<td>15</td>
<td>15</td>
<td>EA</td>
<td>INSTALL ____” Ductile Iron Cross</td>
<td>-----</td>
<td></td>
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<tr>
<td>16</td>
<td>16</td>
<td>EA</td>
<td>CONSTRUCT ____” CML &amp; C Steel Cross</td>
<td>RW-29</td>
<td></td>
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<tr>
<td>17</td>
<td>17</td>
<td>EA</td>
<td>INSTALL ____” Ductile Iron End Caps (size as noted on plans)</td>
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<tr>
<td>18</td>
<td>18</td>
<td>EA</td>
<td>INSTALL ____” Blind Flange (size as noted on plans)</td>
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<tr>
<td>19</td>
<td>19</td>
<td>EA</td>
<td>INSTALL Hot-Tapping Sleeve (size as noted on plans)</td>
<td>RW-29</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>EA</td>
<td>CONSTRUCT Tapping Flange Outlet (size as noted on plans)</td>
<td>RW-29</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>21</td>
<td>EA</td>
<td>INSTALL Ductile Iron Reducer (size as noted on plans)</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>22</td>
<td>EA</td>
<td>CONSTRUCT CML &amp; C Steel Reducer (size as noted on plans)</td>
<td>RW-29</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>23</td>
<td>EA</td>
<td>CONSTRUCT Concrete Thrust Block</td>
<td>RW-26</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>24</td>
<td>EA</td>
<td>INSTALL ____” Ductile Iron Elbow</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>25</td>
<td>EA</td>
<td>CONSTRUCT ____” CML &amp; C Steel Elbow</td>
<td>RW-29</td>
<td></td>
</tr>
</tbody>
</table>

2. A separate entry is required for each size and type of all materials necessary for this project, including, but not limited to, size and type of pipe, valves, water services, tees, crosses, elbows, and end plugs.
### SIGNATURE BLOCKS
#### FACILITIES AND WATERLINE EXTENSIONS

#### TITLE SHEET SIGNATURE BLOCK

<table>
<thead>
<tr>
<th>Rancho California Water District</th>
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<tbody>
<tr>
<td>APPROVED FOR CONSTRUCTION:</td>
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<tr>
<td>Chief Engineer Date</td>
<td>Engineering Manager Date</td>
</tr>
<tr>
<td>Engineering Date</td>
<td>Contracts &amp; Inspection Date</td>
</tr>
<tr>
<td>Operations &amp; Maintenance Date</td>
<td></td>
</tr>
</tbody>
</table>

#### WATER SYSTEM CERTIFICATION

I certify that the design of the WATER SYSTEM in ___________ is in accordance with the WATER SYSTEM MASTER PLAN of Rancho California Water District and that the water service, storage and distribution system will be adequate to supply water to said project. This certification does not constitute a guarantee that it will supply water to said project at any specific quantities, flows, or pressures for fire protection or any other purpose.

<table>
<thead>
<tr>
<th>Chief Engineer Date</th>
</tr>
</thead>
</table>

#### SIGNATURE BLOCK

(All Sheets except first)

<table>
<thead>
<tr>
<th>Rancho California Water District</th>
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<td>APPROVED FOR CONSTRUCTION:</td>
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<tr>
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<tr>
<td>Engineering Manager Date</td>
<td></td>
</tr>
<tr>
<td>Approvals:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Date</td>
<td>Contracts &amp; Inspection Date</td>
</tr>
<tr>
<td>Operations &amp; Maintenance Date</td>
<td></td>
</tr>
</tbody>
</table>

4/1/14

APPENDIX “G”
SIGNATURE BLOCK – REVISIONS/ADDITIONS TO EXISTING WATER SYSTEM CONSTRUCTION DRAWINGS

RCWD Project No: ______________________

Location and installation of ______________________
only. (Type of Appurtenance)

For △ Revisions Only

RCE
Sign/Stamp

________________________
Signature

________________________
Date

SIGNATURE BLOCK – CONSTRUCTION CHANGES TO WATER SYSTEM CONSTRUCTION DRAWINGS ALREADY APPROVED BY THE DISTRICT

THE REVISIONS ON THIS DRAWING ARE APPROVED BY THE ENGINEER OF RECORD NAMED BELOW FOR CONSTRUCTION PENDING RCWD SIGNED APPROVAL. ALL OTHER REQUIREMENTS OF THE ORIGINAL PLANS AND SPECIFICATIONS REMAIN IN FORCE.

________________________
(ENGINEER OF RECORD NAME) DATE

RCE
Sign/Stamp

THE REVISIONS SHOWN ON THIS DRAWING ARE APPROVED FOR CONSTRUCTION BY RCWD.

________________________
(RCWD PROJECT MANAGER NAME) DATE
EXAMPLE OF INDEX MAP
WITH CALL OUTS AND SYMBOLS LEGIBLE
EXAMPLE PLAN VIEW

PLAN: CALAFIA COURT
### RANCHO CALIFORNIA WATER DISTRICT
### WATER CONSTRUCTION DRAWINGS CHECKLIST

**PROJECT** ___________________  **PLAN CHECK #** ____________  **RCWD W.O.** ____________

**LEGEND**
- ✓ = Complete
- × = Not Complete
- O = Complete, but needs revision
- N/A = Not applicable
- ? = Not Known, Design Engineer to Verify

### OVERALL

<table>
<thead>
<tr>
<th>SUBMITTAL PACKAGE</th>
<th>STATUS</th>
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</thead>
<tbody>
<tr>
<td>All Items Required in Appendix B-1 Were Submitted</td>
<td></td>
</tr>
<tr>
<td>All Items Required in RCWD Transmittal Letter Were Submitted</td>
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</tbody>
</table>

### COVER SHEET

#### VICINITY MAP

<table>
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<tbody>
<tr>
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</tr>
<tr>
<td>North Arrow (shown and is in correct direction)</td>
<td></td>
</tr>
<tr>
<td>Street Names (label immediate cross streets &amp; major arterials)</td>
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</tr>
<tr>
<td>Title And Location Of Project (including project boundary)</td>
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#### INDEX MAP

<table>
<thead>
<tr>
<th>Scale</th>
<th>STATUS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>North Arrow (shown and is in correct direction)</td>
<td></td>
</tr>
<tr>
<td>Proposed Water/Sewer/Recycled Water Line</td>
<td></td>
</tr>
<tr>
<td>Appurtenances – Called-out with specified sizes</td>
<td></td>
</tr>
<tr>
<td>Manhole</td>
<td></td>
</tr>
<tr>
<td>Fire Hydrants (Potable Water Only)</td>
<td></td>
</tr>
<tr>
<td>Water Services</td>
<td></td>
</tr>
<tr>
<td>Valves</td>
<td></td>
</tr>
<tr>
<td>Air Valves</td>
<td></td>
</tr>
<tr>
<td>Blow-Offs (Recycled Water Only)</td>
<td></td>
</tr>
<tr>
<td>Pipeline</td>
<td></td>
</tr>
<tr>
<td>Plan Layout/Sheet Index (only if more than 1 Plan/Profile Sheet)</td>
<td></td>
</tr>
</tbody>
</table>

### NOTES

- RCWD Signature Block (correct version for Cover Sheet)
- Water System Certification
- Survey, Grid Tie, and Benchmark Data (must be NAD83, NAVD88)
- General Water Notes – (current with design variables completed)
- Empty Block for Record Drawing Number (sideways/lower right)
- RCWD Job Number (lower right corner under Title Block)
- Quantities – Itemized by facility type (i.e. Water, Recycled, Sewer, etc.)
- Legend (design uses correct symbols. Can be combined with quantities)
- Abbreviations/Acronyms
### RANCHO CALIFORNIA WATER DISTRICT

**WATER CONSTRUCTION DRAWINGS CHECKLIST**

**PROFILE**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type, Size, and Station:</strong></td>
<td></td>
</tr>
<tr>
<td>a. Tees, Crosses, Elbows, Blind Flanges, Plugs, Air Valves, Blow-offs, and Fire Hydrants</td>
<td></td>
</tr>
<tr>
<td>b. Connections to Existing Facilities</td>
<td></td>
</tr>
<tr>
<td>c. Valves (Main-Line)</td>
<td></td>
</tr>
<tr>
<td><strong>Stations at Bottom of Profile</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Elevations at Side of Profile</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Existing Ground Surface</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Proposed Finished Ground Surface or Pavement</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Match Lines (Station &amp; Sheet Number match the referenced sheet)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Flow Line of Waterline Identified</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Stationing and Flow Line Elevations for:</strong></td>
<td></td>
</tr>
<tr>
<td>a. Tees, Crosses, and Elbows</td>
<td></td>
</tr>
<tr>
<td>b. Grade Breaks</td>
<td></td>
</tr>
<tr>
<td>c. Hot Taps</td>
<td></td>
</tr>
<tr>
<td>d. ECs and BCs</td>
<td></td>
</tr>
<tr>
<td>e. Blow-Offs</td>
<td></td>
</tr>
<tr>
<td>f. Air Valves</td>
<td></td>
</tr>
<tr>
<td>g. End of Pipe</td>
<td></td>
</tr>
<tr>
<td>h. Fire Hydrants</td>
<td></td>
</tr>
<tr>
<td><strong>Pipeline Materials and Thickness</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Pipeline Slopes</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Slope Protection/Erosion Control for Finished Surface and Cutoff Walls for Slopes over 20%</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Pipeline Lengths</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Minimum Design Pressure is Listed and is Correct</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Welded/Restrained Joint Limits for Thrust Restraint on Vertical Bends (no Thrust/Anchor Blocks allowed)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>48” Minimum Cover</strong></td>
<td></td>
</tr>
<tr>
<td><strong>All Other Utilities/Crossing Utilities are Shown in Profile</strong></td>
<td></td>
</tr>
<tr>
<td><strong>No Deflection At Pipe Joints without Fitting or High Deflection Couplings (PVC only)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Separation from Sewer/Storm Drain/Recycled Water per Public Health Requirements (or Special Pipe is designed)</strong></td>
<td></td>
</tr>
</tbody>
</table>
## RANCHO CALIFORNIA WATER DISTRICT
### WATER CONSTRUCTION DRAWINGS CHECKLIST

#### PLAN

<table>
<thead>
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<th>STATUS</th>
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<tbody>
<tr>
<td>RCWD Signature Block (correct version for second through last sheets)</td>
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</tr>
<tr>
<td>Title Block With Static Pressure Zone</td>
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</tr>
<tr>
<td>Scale (Hor. – 1” = 20’ or 1”=40’) (Vert. – 1” = 4’)</td>
<td></td>
</tr>
<tr>
<td>North Arrow (shown and is in correct direction)</td>
<td></td>
</tr>
<tr>
<td>Location And Width Of Right-Of-Way</td>
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</tr>
<tr>
<td>Location And Width Of Curb Separation</td>
<td></td>
</tr>
<tr>
<td>Location And Width Of Easements</td>
<td></td>
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<tr>
<td>All Water Facilities Are Located In Existing Or Proposed Easements or Right Of Way. Public Utility Easements Not Allowed.</td>
<td></td>
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<tr>
<td>Appurtenances Are Perpendicular To The Main And Located Per RW-1 (excluding cul-de-sacs)</td>
<td></td>
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<tr>
<td>Right-Of-Way/Easement Is Sufficient To Fit All Appurtenances Per RW-1</td>
<td></td>
</tr>
<tr>
<td>Street Names</td>
<td></td>
</tr>
<tr>
<td>Proposed Lot (Parcel) Lines &amp; Numbers, All Adjacent Tracts Identified</td>
<td></td>
</tr>
<tr>
<td>Assessor’s Parcel Numbers (for parcels that have already subdivided).</td>
<td></td>
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<tr>
<td>All Existing/Future Utilities Are Shown</td>
<td></td>
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<tr>
<td>All Existing/Proposed Surface Improvements Are Shown</td>
<td></td>
</tr>
<tr>
<td>Match Lines (Station &amp; Sheet Number)</td>
<td></td>
</tr>
<tr>
<td>Existing Record Drawing Number Referenced</td>
<td></td>
</tr>
<tr>
<td>Pipeline Alignment Per Riverside County Standard No. 817</td>
<td></td>
</tr>
<tr>
<td>Separation from Sewer/Storm Drain/Recycled Water per Public Heath Requirements (or Special Pipe is designed)</td>
<td></td>
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<tr>
<td>Northings And Eastings Are Called Out At All Elbows, Points Of Connections, And Dead Ends (NAD83 Coordinates only)</td>
<td></td>
</tr>
<tr>
<td>Mechanical Details For All Pipe Connections &amp; Service Laterals With Above Grade Meters and/or Backflow Preventers (4” And Larger) (Must Identify Flanges, Restrained Mechanical Joints, Valves, Joint Restraint, Utilities, Right Of Way Limits, Edge Of Pavement, Site Constraints, etc.). Must Be To Scale</td>
<td></td>
</tr>
<tr>
<td>Profile/Cross Sections Of All Appurtenances over 4-inches in Diameter When Crossing Other Utilities</td>
<td></td>
</tr>
<tr>
<td>Centerline Offset To Proposed Pipeline And Other Utilities</td>
<td></td>
</tr>
<tr>
<td>Centerline Stationing (100’ Tick Marks With Station)</td>
<td></td>
</tr>
<tr>
<td>Data Tables - Street Centerline (Direction, Distance, Radius, Delta, etc.)</td>
<td></td>
</tr>
<tr>
<td>Data Tables - Pipeline (Direction, Distance, Radius, Delta, Pipe Size, Material Types, etc.)</td>
<td></td>
</tr>
<tr>
<td>Meets Pipeline Minimum Radius of Curvature (PVC only)</td>
<td></td>
</tr>
<tr>
<td>No Deflection at Pipe Joints without Fittings or High Deflection Couplings (PVC only)</td>
<td></td>
</tr>
<tr>
<td>Pipeline Minimum Pipe Length and Appurtenance Minimum Spacing Requirements</td>
<td></td>
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<tr>
<td>Station and call out (Sizes and Locations):</td>
<td></td>
</tr>
<tr>
<td>a. Tees, Crosses, and Elbows</td>
<td></td>
</tr>
<tr>
<td>b. Hot Taps</td>
<td></td>
</tr>
<tr>
<td>c. EC’s and BC’s</td>
<td></td>
</tr>
<tr>
<td>d. Blow-Offs</td>
<td></td>
</tr>
<tr>
<td>e. Air Valves</td>
<td></td>
</tr>
<tr>
<td>f. Valves</td>
<td></td>
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<tr>
<td>g. End of Pipe</td>
<td></td>
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<tr>
<td>h. Fire Hydrants</td>
<td></td>
</tr>
</tbody>
</table>
### PLAN (Continued)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blow offs (Recycled Water Only) And Fire Hydrants (Potable Water Only) Are Located At All Low Points, Directly Upslope From Valves, And At All Dead End Water Mains. Blow Offs/Hydrants Added Where New Valves Are Installed On Existing Pipelines at Points of Connection</td>
<td></td>
</tr>
<tr>
<td>Air Release Valves are located at all high points and directly downslope from valves. Air Valves Added Where New Valves Are Installed On Existing Pipelines at Points of Connection</td>
<td></td>
</tr>
<tr>
<td>Driveways Are Shown (Meters And Appurtenances Aren’t Located In Existing Or Proposed Driveway)</td>
<td></td>
</tr>
<tr>
<td>Traffic Rated Meter Box Lids For Areas With Rolled Or 0” Curbs</td>
<td></td>
</tr>
<tr>
<td>Backflow Devices are shown and sized to maintain UL, FM, and USC approvals at the required flow rate</td>
<td></td>
</tr>
</tbody>
</table>
Recording Requested by
RANCHO CALIFORNIA WATER DISTRICT

After Recordation Return to:

Rancho California Water District
42135 Winchester Road
Post Office Box 9017
Temecula, CA 92589-9017

Pursuant to Government Code section 27383, no fees shall be charged by the recorder for services rendered to the State, to any municipality, county of the State, or other political subdivision thereof. Also see 54 Ops. Att. Gen 28, 11-3-71 Rancho California Water District is a California Water District organized and existing pursuant to the California Water Code section 34000 et.seq.

ASSESSOR PARCEL NO(s). ________________________ PROJECT NO. ________________________

GRANT OF EASEMENT AND RIGHT OF WAY FOR UTILITY PIPELINES AND APPURTE NANCES

_______________________, on behalf of itself and its successors and assigns, hereinafter designated Grantor, owner of the hereinafter described lands, for a valuable consideration, does hereby GRANT to RANCHO CALIFORNIA WATER DISTRICT, a public corporation, its successors and assigns, herein designated Grantee, a perpetual non-exclusive easement and right-of-way upon, through, under, over, and across the hereinafter described real property for the ingress and egress, installation, construction, operation, maintenance, repair, replacement, and reconstruction of water, sewer, and/or recycled water pipeline or pipelines, and all fixtures or appurtenances incidental thereto, and placement of tools, implements, and materials thereon as necessary to exercise the rights conveyed hereunder, together with a right-of-way for ingress and egress from adjacent roadways over a reasonable path to such real property and the perpetual right to remove buildings, structures, trees, bushes, soil, undergrowth, flowers, and any other obstruction the Grantee deems are interfering with the use of said easement and right-of-way by Grantee, its successors, or assigns.

To have and to hold said easement and right-of-way unto itself and unto its successors and assigns forever, together with the right to convey said easement, or any portion of said easement, to other public agencies or private utilities.

The real property referred to herein and made subject to said easement and right-of-way by this grant is situated in ________________________, in the County of Riverside, State of California, and is more particularly described within Exhibit “A” Legal Description and Exhibit “B” Plat Map, attached hereto and incorporated herein.

The Grantor reserves the right, at his own risk, to use the surface of the above-described real property in a manner that will not interfere with or be detrimental to the use of said easement and right-of-way by Grantee, its successors, and assigns, provided, however, that the Grantor shall not increase or decrease or permit to be increased or decreased the ground elevations of said easement existing at the time this document is executed except for grade changes required for construction of the Grantee’s utility pipelines, appurtenances, and/or facilities, as shown on plans approved by the Grantee. The Grantor shall not plant any trees, construct or permit to be constructed any building, structure, concrete slab, concrete pavement, block wall, fence, improvement, or other encroachment upon said easement without the previous written consent of Grantee in the form of an encroachment permit or plans approved by the Grantee; provided, however, Grantor shall
have the right to install asphalt pavement over the easement area, along with any striping and/or directional signs required for vehicular travel. Grantee may remove from the easement any tree, building, structure, concrete slab, concrete pavement, improvement, or other encroachment not consented to in writing by Grantee, and the cost of such removal shall be the sole responsibility of Grantor who shall reimburse Grantee for such costs.

Grantor waives any right under California Civil Code section 845, and any other right, to compel Grantee to repair, grade, surface, or otherwise improve or maintain said easement as a roadway or private right-of-way. Notwithstanding California Civil Code section 845, Grantor hereby covenants and agrees for itself, its heirs, successors, and assigns, that the Grantor will be responsible for maintaining the easement to the satisfaction of the Grantee and at Grantor’s sole expense including, but not limited to, weeding in the easement, maintaining permitted surface improvements, roadways, and utility markers.

Upon completion of maintenance and/or repair of Grantee’s pipeline or appurtenant facilities involving excavations of the easement surface, Grantee agrees to restore the easement area, limited only to backfill, compaction, and patching the area(s) of non-decorative impervious pavement and curbing (if applicable) excavated by the Grantee as part of the maintenance and/or repair activity, and consented by Grantee by encroachment permit or plans approved by the Grantee. Grantor agrees to restore all other areas excavated/disturbed by the Grantee including, but not limited to, pervious paving, decorative paving/curbing, landscaping, and irrigation.

IN WITNESS WHEREOF, this instrument has been executed this ______ day of ____________, _______.

Day       Month       Year

GRANTOR(S):

By: _____________________________________________
    (Signature)

_____________________________________________
    (Printed Name)

By: _____________________________________________
    (Signature)

_____________________________________________
    (Printed Name)

(Note: attach California All-Purpose Acknowledgment)
CERTIFICATE OF ACCEPTANCE UNDER SECTION 27281 OF THE
CALIFORNIA GOVERNMENT CODE

This is to certify that the interest in real property conveyed by the deed or grant dated ______________, _____
from ___________________________________________________________________________________
to Rancho California Water District, a public agency and subdivision in the State of California, is hereby
accepted by order of the undersigned officer on behalf of the Board of Directors pursuant to the authority
conferred by Resolution No. 2004-5-2 of the Board of Directors adopted on May 13, 2004 and the grantee
consents to recordation thereof by its duly authorized officer.

RANCHO CALIFORNIA WATER DISTRICT

By: __________________________________________

Jeffrey D. Armstrong, General Manager

Dated: ________________________________
<table>
<thead>
<tr>
<th>Applicant Name(s)</th>
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<tbody>
<tr>
<td>Mailing Address</td>
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<td></td>
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<tr>
<td>Telephone No.</td>
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<tr>
<td>Tract/Parcel Map No.</td>
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<td>Lot/Parcel No.</td>
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<tr>
<td>Assessor Parcel No. (APN)</td>
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<tr>
<td>Service Address</td>
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<td></td>
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<tr>
<td>Existing Utilities</td>
<td></td>
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<tr>
<td>Property Boundaries</td>
<td></td>
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<tr>
<td>Right-of-Way</td>
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<tr>
<td>Easement Boundaries</td>
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<tr>
<td>Existing Improvements:</td>
<td></td>
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<tr>
<td>Curb</td>
<td></td>
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<tr>
<td>Planters</td>
<td></td>
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<tr>
<td>Pavement</td>
<td></td>
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<tr>
<td>Proposed Pipeline</td>
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<tr>
<td>Proposed Appurtenance</td>
<td></td>
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<tr>
<td>with Stationing (Revision/Addition)</td>
<td></td>
</tr>
<tr>
<td>R.C.E. Certification</td>
<td></td>
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<tr>
<td>RCWD Project No.</td>
<td></td>
</tr>
</tbody>
</table>
FLOWCHART FOR CONSTRUCTION OF WATER FACILITIES

SUBMIT:
1. Engineering Service Application
2. Inspection Deposit
3. 4 Copies of Approved Water Construction Drawings (from Engineering Services)

SUBMIT:
1. Contractor Information Sheet
2. Materials List
3. 2 Copies of Encroachment Permits
4. 1 Copy of Recorded Tract/Parcel Map
5. System Facilities Construction Agreement
6. Water System Construction Contract
7. Certification of Streets to Final Grade
8. Certificate of Insurance
9. Faithful Performance Bond

DISTRICT APPROVAL:
1. Contractor
2. Materials List

DISTRICT ISSUE:
1. Notice of Proceed

SCHEDULE Pre-Construction Meetings

ATTEND Pre-Construction Meetings

NOTIFY District in Writing Regarding Construction Start

SUBMIT Construction Cut Sheets

CONSTRUCT Water System Facilities With District Inspection

COMPLETE All Items on District Inspection List

PRESSURE Test and Disinfect Water System Facility

CONTINUITY TEST Corrosion Control Equipment (Steel Pipe Only)

OBTAIN Acceptable Bacteriological Test Results

PAY Any Remaining Inspection Fees

CONNECT To Existing Water System (3 Week Notice Required)

RELEASE System for Fire Protection and Construction Water

SUBMIT Application for Unmetered Construction Water

INSTALL Unmetered Construction Connection

REMOVE Unmetered Construction Connection

INSTALL Drop-In Meters

COMPLETE All Items on Punch List

SUBMIT Drop-In Meter Application and Fees

NOTICE of Completion Filed by District

12/1/15

APPENDIX “K”
CONTRACTOR INFORMATION SHEET

Firm Name and Address: ________________________________

______________________________

Contractor's License No.: ________________________________

License Class: ________________________________

License Expiration Date: ________________________________

Telephone No.: ________________________________

Emergency Telephone No.: ________________________________

Contractor's Project Manager:

Name: ________________________________

Telephone No.: ________________________________

Emergency Telephone No.: ________________________________

Contractor's Superintendent:

Name: ________________________________

Telephone No.: ________________________________

Emergency Telephone No.: ________________________________

Contractor's Signature: __________________ Date: __________

Received: Rancho California Water District:

By: __________________ Date: __________
Contractor shall furnish three references for similar projects completed within the past three (3) years.

<table>
<thead>
<tr>
<th>Contract Amount</th>
<th>Type of Work</th>
<th>Date Completed</th>
<th>Owner (Name &amp; Address)</th>
<th>Person in Charge of Project</th>
<th>Phone Number of Person in Charge</th>
</tr>
</thead>
<tbody>
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6/1/09

APPENDIX “M”
THIS AGREEMENT is made on this ___ day of __________, 20__, by and between RANCHO CALIFORNIA WATER DISTRICT OF RIVERSIDE COUNTY, a public agency of the State of California, hereinafter designated as the “District” and ____________________________________________ located at __________________________. Ph. No. ________________, represented by ___________________________ hereinafter designated as the “Developer.”

WHEREAS, Developer is planning/constructing a development of ________________ lot(s) located within the development referenced within records of the County of Riverside, State of California, as: ____________________________________________________________________ and is further identified on the map attached to and made a part of this Agreement (“Development”), as more particularly described in Exhibit “A;” and

WHEREAS, the Development will require a water/sewer distribution system to provide domestic water/sewer service (“Service”) to the Development referenced above (“System Facilities”) as more particularly described in Exhibit “B;” and

WHEREAS, the Developer intends to construct the System Facilities (under District Job Number: ______ in accordance with the terms and conditions set forth herein); and

WHEREAS, Developer is desirous of having the District provide Service to the Development and is willing to convey the System Facilities to the District after the construction thereof, contingent upon the District’s acceptance of such conveyance on the terms and conditions set forth herein.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. District agrees to provide Service to the Development in compliance with its applicable rules, regulations, ordinances, and orders when, and if, Developer has complied with the terms and conditions contained herein, and any additional terms and conditions required for the provision of Service as set forth in the District’s rules, regulations, ordinances, and orders.

2. Developer has engineered/designed and undertaken all environmental review required for the System Facilities necessary for the Development in accordance with the following terms and conditions:
   A. Developer has caused System Facilities to be designed at its expense by a qualified Engineer licensed by the State of California as a Civil Engineer.

APPENDIX “N”
B. The System Facilities for the Development were designed in full compliance with all applicable rules, regulations, ordinances, and orders including the District’s Water and/or Sewer System Facility Requirements and Design Guidelines (Latest Version).

C. The Developer’s design plans, drawings, and/or incidental design documentation were reviewed by District personnel for conformance with applicable guidelines referenced in paragraph “B,” above. Upon District approval, the design plans/drawings became construction drawings for the System Facilities (“Drawings”).

D. The Developer’s responsibility for the entire cost of the System Facilities shall include all costs of design, District labor, equipment, and materials associated with the review and completion of Developer’s design work, and any other associated costs including, but not limited to: (1) design documentation review, (2) Drawings review and approval, (3) cost to conduct or procure special studies or analysis, and (4) costs relating to environmental review.

E. Developer has provided the District with a copy of any and all documents prepared in compliance with the laws of the State of California and the United States including, but not limited to, the California Environmental Quality Act (“CEQA”), California Public Resources Code section 21000 et seq., (“Environmental Laws”) and previously utilized to obtain approvals for the Developer’s Development. Sufficiency of environmental review for the System Facilities shall be determined by the District, in its sole discretion. In the event that the District or Developer determines that additional environmental review is necessary for the System Facilities, all fees and costs to prepare this additional environmental review shall be borne solely by the Developer. Notwithstanding the foregoing, Developer shall be responsible for complying with all Environmental Laws and shall indemnify and save harmless the District from any and all claims or actions arising from Developer’s failure to comply with any Environmental Laws.

F. Developer has provided (if requested by the District) the District with a copy of all conditions of approval for the Developer’s Development as determined and stated by all other regulatory agencies from which the Developer has applied for or obtained approval for construction of any part of aspect of the Developer’s Development.

3. Developer agrees to construct the System Facilities necessary for the Development in accordance with the following terms and conditions:

A. Developer will cause System Facilities to be constructed as shown on the District approved Drawings, at its sole cost and expense, by a qualified California licensed contractor (“Developer’s Contractor”). Developer’s Contractor shall be currently licensed by the State of California with either a specialty contractor, “C-34,” pipeline license or a General Engineering Contractor, “A” license. Developer’s Contractor shall be
experienced in the construction of domestic water/sewer systems, as the case may be, and shall have been reviewed by the District and approved by the District as a qualified contractor before the contract between Developer and Developer’s Contractor is signed and construction begins. Developer shall obtain all necessary approvals and permits, and shall execute or obtain any necessary easements, using the District’s form Grant of Easement, for the System Facilities.

B. The System Facilities will be constructed and installed in full compliance with all applicable laws and regulations, and pursuant to the rules, regulations, ordinances, and orders of the District including, but not limited to, District’s Standard Specifications and Standard Drawings for Water and Sanitary Sewer Facilities (Latest Version).

C. Drawings for the System Facilities shall be approved by District prior to the presentation thereof to contractors for bidding purposes and the System Facilities shall be constructed and installed in full compliance with said approved Drawings and District standard specifications referenced in paragraph “B” above (“Specifications”).

D. The entire cost of the construction of the System Facilities shall be paid by the Developer. Such construction shall be inspected by District personnel for conformance with the Specifications and approved Drawings. The inspection by the District of the construction for conformance with the Specifications and approved Drawings shall not be deemed to confer liability on the District or otherwise place the responsibility for properly constructing and inspecting the System Facilities upon the District. The Developer shall permit the District’s inspector to enter the construction site at any reasonable time. The Developer shall reimburse District for all labor, equipment, and materials associated with the inspection, approval, and completion of the System Facilities. Such costs may include, but are not limited to: (1) site inspection, (2) costs to conduct or procure special studies or analysis, (3) material and equipment submittal review, and (4) costs relating to environmental review.

E. The District is not responsible and does not own the System Facilities until they are inspected and approved by the District, all fees and charges associated with the construction of the System Facilities and/or other fees and charges owed by Developer to the District are paid in full, the Unconditional Lien Waiver and Release and the Transfer of Title for System Facilities are executed and accepted by the District. Until such time, Developer is responsible for the System Facilities and is liable for all damage to said facilities. The Developer shall indemnify District, its governing board, officers, and employees for any and all claims of any kind relating to the construction of the System Facilities incurred prior to the District’s acceptance of said facilities.

F. All existing District facilities shall be protected in place. Any damaged District facilities shall be replaced or repaired by Developer at the Developer's sole cost and expense, and to the satisfaction of District.
G. Following the District’s inspection of the System Facilities, the District shall inform Developer of work necessary to complete the System Facilities or remedy any deficiencies in order for the District to approve and accept said facilities. Developer shall promptly and at no cost to District perform the work according to the District’s instructions. Developer shall guarantee the System Facilities for a period of one (1) year following the date of acceptance of the System Facilities by the District, and shall promptly and at no cost to District perform work necessary to remedy any deficiency in the work according to the District’s instructions. Should Developer fail to promptly perform any work required under this subsection, Developer shall, on demand, pay all costs incurred by the District as necessary to complete construction or remedy any deficiency, including the applicable hourly rate for an inspector for such time as may be required, as determined by the District, to inspect the construction of the facilities. Said rate shall be that which is applicable at the time of actual inspection. The inspector shall work under the supervision of the District, and shall provide inspection until the System Facilities are accepted and approved as stated herein. The Performance Bond required pursuant to this Agreement shall be effective during the one-year guarantee period.

4. Construction shall not begin until District issues the “Notice to Proceed.” Prior to District issuing “Notice to Proceed,” Developer shall submit the following:

A. Copy of contract between Developer and Contractor verifying cost of System Facility construction.

B. Certification of streets to final grade.

C. Encroachment permit.

D. Certificates of insurance for Developer's Contractor and all subcontractors. The Developer shall require, by written contract, its Contractor to carry general liability, automotive liability, and Workers’ Compensation insurance, which shall list the District, its governing board, officers, and employees as additional insureds, in such form and amounts as noted in Articles 37 through 40 of the General Provisions of the District's Standard Specifications and Standard Drawings for Water and Sanitary Sewer Facilities (Latest Version). Additional insured endorsements for the Contractor’s policy of Commercial General Liability insurance naming the District, its governing board, officers, and employees shall be in the form of ISO CG 20 38 and 20 37, or endorsements acceptable to the District providing the exact same coverage. Notwithstanding the required limits of insurance set forth herein, all available insurance proceeds in excess of the specified minimum limits of coverage shall be available to the parties required to be named as additional insureds hereunder.


i. Subject to the satisfaction of the District’s General Counsel, Developer shall provide or shall cause the Developer’s Contractor to provide, security for the faithful performance of the System Facilities and the warranty period, in form of a cash deposit, a performance bond, an irrevocable and unconditional letter of credit, an agreement for certificate of deposit, or a segregated construction account, only on forms acceptable to the District and listing the District as obligee, if applicable. The security for faithful performance of the System Facilities shall be in an amount equal to 100% of the District’s estimated construction cost of
the System Facilities shown in Exhibit B and shall be held during the construction period and the one-year warranty period. However, the security may be reduced to 25% for the one-year warranty period upon the written request of the Developer and concurrence of the District. Payments or releases of part of the security for faithful performance may be authorized by the District Engineer to be made by the financial institution or the District to Developer after Developer's Engineer has submitted a list of completed improvements or related work to the District Engineer and the District Engineer has inspected and approved in writing such payment or release for such improvements or related work. The one-year warranty period will begin upon the date of the acceptance of the System Facilities by the District.

ii. If a performance bond is submitted as security, the performance bond must be provided on District form (per Appendix Q, herein) by an admitted surety insurer, as defined in Code of Civil Procedure Section 995.120, authorized to do business in the State of California and satisfactory to the District. Bonds executed in favor of the city or county for the work which meet the requirements of this Section shall be acceptable in satisfaction thereof only if all such bonds expressly list the District as a co-obligee thereunder. If a performance bond is provided by the Developer’s contractor, Developer shall provide the District a copy of its written contract with its contractor to perform the work secured thereby.

iii. If the developer is a public agency of the State of California, and has secured a performance bond from its contractor, a copy of such bond must be provided to the District. When the value of the System Facilities is greater than $25,000, the District shall be expressly listed as co-obligee thereunder, or be provided a separate form of performance security pursuant to Section 4.E.i, herein.

iv. The Developer shall be considered in default of their obligations and a claim shall be filed against the surety due to project inactivity that, in the sole discretion of the District, jeopardizes life, health, safety, the environment, property, or any federal, state, or local laws.

F. Developer is aware of the requirements of California Labor Code Sections 1720 et seq. and 1770 et seq., which require the payment of prevailing wage rates and the performance of other requirements on certain “public works” projects. If the requirements of this Agreement are performed as part of an applicable “public works” project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws, if applicable. Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. It shall be mandatory upon the Developer and Developer’s Contractor and all subcontractors to comply with all California Labor Code provisions, which include, but are not limited to, prevailing wages, employment of apprentices, hours of labor, and debarment of contractors and subcontractors.
5. The District will provide construction water and fire protection (subject to all conditions of service under current District Rules and Regulations for Water Service) to the Development after the Contractor has completed all items on the District Inspector's Construction Deficiency List, evidence has been submitted indicating city/county acceptance of compaction, acceptable hydrostatic and bacteriological test results have been obtained, and any remaining inspection fees are paid in full.

6. The District will provide drop-in meters to the development and file a Notice of Acceptance after the following has been submitted:

   A. Drop-in Meter Application and all related meter installation and connection fees.

   B. Unconditional Lien Waiver and Release for waterline or sewer construction, as applicable.

   C. A Transfer of Title for System Facilities form (Exhibit “C”) (“Title Transfer Form”) executed by Developer vesting title of said System Facilities to the District. The Title Transfer Form must be on District form and vests title only after the District files the Notice of Completion.

   D. In the event water rights are appurtenant to the development, Developer shall also grant/assign said water rights to the District on District form, if applicable. Thus, an Agency Agreement will be required for each parcel if there is not a current Agency Agreement recorded against the property. The Agency Agreement gives the District the right of management of the groundwater resource to the District, for the benefit of all District customers.

7. At District's option, the terms and conditions of this Agreement will become null and void and District will have no further obligations hereunder in the event the construction of the System Facilities covered herein has not commenced within 12 months of the date of this Agreement. In the event construction has not been accepted by District within 24 months of the date of this Agreement, this Agreement and any other related System Facility requirements must then be revised to include any new conditions and to cover all increased costs, including any new fees and charges which may be in effect at that time. No further work will be permitted until all provisions of this paragraph have been fulfilled.

8. Developer agrees to hold the District free and harmless from any expense or liability resulting from the construction or installation of the System Facilities, and further agrees that Developer will indemnify the District, its governing board, officers, and employees free and harmless from and against any and all liabilities for death, injury, loss, or damage to persons or property which may arise before, after, or during construction of the System Facilities as a result of any work performed by Developer or on its behalf.

i. Venue. In the event of any legal or equitable proceeding to enforce or interpret the terms or conditions of this Agreement, the Parties agree that venue shall lie only in the federal or state courts in the County of Riverside, State of California.

ii. Modification. Once executed, this Agreement may not be altered in whole or in part except by a written modification approved by the Board of Directors of the District and executed by all the Parties to this Agreement.

iii. Attorney's Fees. In the event any action or proceeding is initiated to challenge, invalidate, enforce, or interpret any of the terms of this Agreement, the prevailing Party shall be entitled to all reasonable attorney's fees and costs in addition to any other relief granted by law. This provision shall apply to the entire Agreement.

iv. Entire Agreement. This Agreement, together with any Exhibits attached hereto or incorporated herein by reference, contains all representations and the entire understanding between the Parties with respect to the subject matter of this Agreement. Any prior correspondence, memoranda, or agreements, whether or not such correspondence, memoranda, or agreements are in conflict with this Agreement, are intended to be replaced in total by this Agreement and its Exhibits. Developer warrants and represents that no District representative has made any oral representations or oral agreements not contained in this Agreement.

v. Assignment. Developer shall not be entitled to assign or transfer all or any portion of its rights or obligations contained in this Agreement without obtaining the prior written consent of the District, which consent shall not be unreasonably withheld. Any purported assignment without the District's prior written consent shall be void.

vi. Time is of the Essence. Developer warrants that it understands and agrees that time is of the essence in the performance of the obligations set forth in this Agreement.

vii. Binding Effect. This Agreement shall inure to the benefit of and be binding upon the Parties and their respective purchasers, successors, heirs, and assigns.

viii. Unenforceable Provisions. The terms, conditions, and covenants of this Agreement shall be construed whenever possible to be consistent with all applicable laws and regulations. To the extent that any provision of this Agreement, as so interpreted, is held to violate any applicable law or regulation, the remaining provisions nevertheless shall remain enforceable to the extent that they effectuate the original intent of the Parties.
ix. Representation of Capacity to Contract. Each of the signatories to this Agreement represents and warrants that he/she has the authority to execute this Agreement on behalf of the Party represented by that individual.

x. No Waiver. The failure of either Party to enforce any term, covenant, or condition of this Agreement on the date it is to be performed shall not be construed as a waiver of that Party's right to enforce this, or any other term, covenant, or condition of this Agreement at any later date or as a waiver of any term, covenant, or condition of this Agreement. In the event that either party shall fail to perform its part of this Agreement, and suit shall be commenced, or an attorney employed to enforce the provisions thereof, the party who fails to perform its part of the Agreement agrees to pay any and all costs involved therein, and to pay a reasonable attorney’s fee.

10. Whenever in this Agreement notice is required to be given, the same shall be given by certified mail, postage prepaid, addressed to the respective parties at the following addresses:

To Rancho California Water District:

Rancho California Water District
General Manager
P.O. Box 9017
Temecula, California 92589-9017

To Developer:

______________________________
______________________________
______________________________
______________________________

RANCHO CALIFORNIA WATER DISTRICT

By: ____________________________
    General Manager

Date: __________________________

DEVELOPER

Company: ________________________

By: ____________________________

Name: __________________________

Title: __________________________

Date: __________________________
EXHIBIT “B”

DESCRIPTION OF SYSTEM FACILITIES

(TO BE COMPLETED BY RCWD PRIOR TO EXECUTING THE AGREEMENT. PLEASE CONTACT RCWD’S ENGINEERING SERVICES DEPARTMENT TO OBTAIN A COPY OF EXHIBIT B)
EXHIBIT “C”

TRANSFER OF TITLE FOR SYSTEM FACILITIES

FOR VALUABLE CONSIDERATION other than payment of money, ____________________________("Developer") hereby grants, transfers, and conveys to Rancho California Water District (District) all right, title, and interest in the System Facilities, as depicted in Exhibit “B” for the Development referenced in Exhibit “A.” Developer agrees to indemnify the District for any and all claims, liens, causes of action, or any type of liability arising from or in any way related to the construction of said System Facilities.

Said System Facilities are shown in detail on the construction drawings (Sheets ___ through ___) for said Development. This transfer of title is in accordance with Section 6 of the subject System Facilities Construction Agreement between Rancho California Water District and Developer, dated concurrently herewith and is effective upon Developer providing the Unconditional Lien Waiver and Release and upon filing of the Notice of Completion by the District for the aforementioned System Facilities.

Developer, on behalf of his heirs, executors, and administrators, covenants and agrees to warrant and defend this transfer of property, goods, and chattels against all and every persons claiming the same.

Executed this ________ day of ______________, ____.

GRANTOR(S):

By: ________________________________
   (Signature)

   ________________________________
   (Printed Name)

By: ________________________________
   (Signature)

   ________________________________
   (Printed Name)

(Note: attach California All-Purpose Acknowledgment)
TO: Rancho California Water District

FROM: ________________________________

(address)

SUBJECT: Certification of Streets to Final Grade

Tract Map No. _____________________, or
Parcel Map No. ______________________

1. There has been executed a "SYSTEM FACILITIES CONSTRUCTION AGREEMENT" for the system facilities described above; said Agreement being between:

   a. The Rancho California Water District, hereinafter designated as the "District";

   b. __________________________________________, hereinafter designated as the "Developer"

All terms and conditions of said Agreement are hereby incorporated by reference.

2. Pursuant to Section 3 of said Agreement, the Developer certifies that all streets requiring system facilities are to the required Final Grade and ready for installation of system facilities; wherein the Final Grade shall be defined as the finished grade of the street base or sub-base required by the Riverside County Road Department, the City of Temecula, City of Murrieta, or the District.

3. Developer agrees that if there is a change required in the final grade of the street which occurs during or after the construction of the system facilities, and requires the relocation of any system facilities, the Developer will make full payment for all costs necessary to relocate said system facilities.

Developer: ______________________________________________________________

Address: ________________________________________________________________

City/State/Zip: ___________________________________________________________

Telephone: ______________________________________________________________

Authorized Agent (sign): ________________________________________________

Name (type): __________________________________________________________________

Title: ______________________________________________________________________
# Certificate of Liability Insurance

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not affirmatively or negatively amend, extend or alter the coverage afforded by the policies below. This certificate of insurance does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder.

**Important:** If the certificate holder is an additional insured, the policy(ies) must be endorsed. If subrogation is waived, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

## Producer

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<tr>
<td>Name:</td>
<td></td>
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<tr>
<td>Phone:</td>
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<tr>
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<td>Fax: (Area No.):</td>
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<tr>
<td>E-mail address:</td>
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## Insured

| Insurer A: |  |
| Insurer B: |  |
| Insurer C: |  |
| Insurer D: |  |
| Insurer E: |  |

## Coverages / Certificate Number: / Revision Number:

This is to certify that the policies of insurance listed below have been issued to the insured named above for the policy period indicated. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies. Limits shown may have been reduced by paid claims.

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<th>Addl. Subs.</th>
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## Workers Compensation and Employers' Liability

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## Description of Operations / Locations / Vehicles

(Attach ACORD 101, Additional Remarks Schedule, if more space is required)

## Certificate Holder

### Cancellation

Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Authorized Representative

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ACORD 25 (2010/05) The ACORD name and logo are registered marks of ACORD

APPENDIX “P”
IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contact between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.
KNOW ALL PERSONS BY THESE PRESENTS: That WHEREAS, the Rancho California Water District (“District”), has entered into a System Facilities Construction Agreement (“Agreement”) (All terms and conditions of said Agreement are hereby incorporated by reference) with _________________ (hereinafter referred to as the “Developer/Principal”), for construction of:

______________________________

(hereinafter referred to as the “Project”); and

WHEREAS, the Developer/Principal is required by said Agreement to perform the terms thereof and to furnish a bond for the faithful performance of said Agreement.

NOW, THEREFORE, we, _________________, the undersigned Developer/Principal and _______________________________________________ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto the District in the sum of _________________ DOLLARS, ($_____________), said sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the bonded Developer/Principal, its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Agreement and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning and shall faithfully fulfill the one-year guarantee of all materials and workmanship; shall indemnify and save harmless the District, its officers and agents, and provide District with an Unconditional Lien Waiver and Release and a Transfer of Title for System Facilities and has paid all fees and charges as stipulated in said Agreement, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees including reasonable attorney’s fees, incurred by District in enforcing such obligation.

As a condition precedent to the satisfactory completion of the work (including submission of the Unconditional Lien Waiver and Release, submission of the Transfer of Title for System Facilities, payment of all fees and charges, and repair of any damage of
existing District facilities), unless otherwise provided for in the Agreement, the above obligation shall hold good for a period of one (1) year after the acceptance of the work by District, during which time if Developer/Principal shall fail to make full, complete, and satisfactory repair and replacements and totally protect the District from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Developer/Principal remains.

Whenever Developer/Principal shall be, and is declared by the District to be, in default under the contract, the District having performed the District’s obligations thereunder, the Surety shall promptly remedy the default, or shall promptly, at the District’s option:

(1) Take over and complete the Agreement in accordance with its terms and conditions; or

(2) Obtain a bid or bids for completing the Agreement in accordance with its terms and conditions and upon determination by Surety of the lowest responsive and responsible bidder, arrange for an Agreement between such bidder, the Surety and the District, and make available as work progresses sufficient funds to pay the costs of completion less the balance of the Agreement price, including other costs and damages for which Surety may be liable hereunder. The term “balance of the Agreement price” as used in this paragraph shall mean the total amount payable to Developer/Principal by the District under the Agreement and any modification thereto, less the amount previously properly paid by the District to the Developer/Principal.

Surety expressly agrees that the District may reject any Developer or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Developer/Principal.

Surety shall not utilize Developer/Principal in completing the Agreement nor shall Surety accept a bid from Developer/Principal for completion of the work if the District, when declaring the Developer/Principal in default, notifies Surety of the District’s objection to Developer/Principal’s further participation in the completion of the work.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or to the work to be performed thereunder or the contract documents accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Agreement or to the Project.

Nothing herein shall limit the District’s rights or Surety’s obligations under the Contract, law or in equity, including, but not limited to, California Code of Civil Procedure section 337.15.
IN WITNESS WHEREOF, we have hereunto set our hands and seals this _______ day of
________________, 200_.

________________________________________
Name: _________________________________
Title: _________________________________
Signature: _____________________________

________________________________________
Name: _________________________________
Title: _________________________________
Signature: _____________________________
Address: ______________________________

________________________________________

UNCONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Identifying Information

Name of Claimant: __________________________________________________________

Name of Customer: __________________________________________________________

Job Location: ______________________________________________________________

Owner: _________________________________________________________________

Unconditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for all labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. The claimant has been paid in full.

Exceptions

This document does not affect the following:

Disputed claims for extras in the amount of: $____________________________________

Signature

Claimant’s Signature: _______________________________________________________

Claimant’s Title: __________________________________________________________________

Date of Signature: __________________________________________________________________

2/1/17
APPENDIX “R”
UNMETERED CONSTRUCTION WATER PROCEDURE

Temporary connections for pressurizing homes are necessary by developers during the drywall installation phase; therefore, the service category of unmetered construction water is available. This service is available for a maximum of six (6) months only.

The service is available for construction only. This service is not to be used for landscaping or any domestic/commercial use. Unauthorized use is subject to the conditions, as established in Penal Code Section 498 (attached), and immediate discontinuance of water service.

A $____ monthly charge covers unmetered water use, the standby charge, and periodic inspection by the Meter and Contracts Department personnel.

Prior to connection by the builder, the Construction Contracts Manager will verify the following:

1. In-tract water system has been successfully tested and sterilized;

2. Service laterals have been installed with an extra length extending a minimum of two feet above ultimate grade; and

3. A stake with minimum dimensions of four feet (2 x 4) will be installed to mark the location of the service lateral and provide for temporary mounting of the extended service lateral, with double check valves for the protection of the existing system.

At such time as the developer has completed all utility installations and established final grade to the satisfaction of Rancho California Water District, the temporary connection will be removed, the delivery of water discontinued completely, and the service will be completed in accordance with the District standard specifications.

After services have been accepted and approved by the Construction Contracts Manager, installation time is approximately one to two weeks.

I/we hereby acknowledge my/our understanding of the aforementioned conditions and intention of unmetered construction water use.

_____________________________________ ______________________________
Service Applicant Signature Date

_____________________________________ ______________________________
Service Applicant Signature Date
AGENCY AGREEMENT NO. ______

THIS AGREEMENT, made this __________________ day of __________________________, 20_____, by and between______________________________________________________, (hereinafter referred to as “Landowner”), and RANCHO CALIFORNIA WATER DISTRICT, a public corporation organized and existing under Division 13 of the Water Code of the State of California (hereinafter referred to as the “District”), for the property described as follows:__________________________________________________________ (legal description attached).

WITNESSETH:

WHEREAS, the District has power and authority to act as agent for the extraction, diversion, storage and distribution of water owned by other parties; and

WHEREAS, Landowner is the owner of certain land within the District described in Exhibit “A” attached hereto and made a part hereof; and

WHEREAS, said land owned by Landowner is a portion of land found by the United States District Court, United States of America vs. Fallbrook Public Utility District, et al., in the United States District Court, Southern District of California, Southern Division, Case No. 1247, affirmed in part by the United States Court of Appeals for the Ninth Circuit, Case No. 18931, to be land riparian to certain rivers and streams, including the Santa Margarita River and its tributaries, and also which may be land overlaying percolating waters under a court decree entered December 26, 1940 in the case Rancho Santa Margarita vs. Vail, 11 Cal.2d 501 (1939), and reinstated by the United States Court of Appeals for the Ninth Circuit in said Case No. 18931; and

WHEREAS, Landowner, without transferring any water right and privilege pertaining to said land, does desire to empower the District to act as its agent and the agent of its successors and assigns to extract, store, and divert the water to which it is entitled (hereinafter referred to as “local water”) and to supply the same to its land and all other land having, under the laws of the State of California or pursuant to any judgement or contract, a legal right to have said water applied thereon.

NOW, THEREFORE, in consideration of the mutual promises and agreements herein contained, the parties hereto agree as follows:

Section 1. Landowner hereby designates the District its exclusive agent and the exclusive agent of its assigns and successors in interest for the extraction, diversion, storage, blending and distribution of all local water upon or under the lands of Landowner referred to in the recitals hereof for the purpose of putting said local water to beneficial use to the fullest extent of which it is capable for the lands and inhabitants of Landowner and all other lands within the watershed of the Santa Margarita River, and its tributaries on which said local water now and hereafter may be legally applied. It is the intention of Landowner by this Agreement to maintain a binding and permanent arrangement whereby said local water shall be properly maintained and be perpetually delivered and distributed to all of said lands entitled thereto and the subdivisions thereof for the use of Landowner, its assigns and its successors in interest and other owners of such lands.

Section 2. Landowner hereby grants to the District the right to blend local water with imported supplemental water, to distribute imported water to Landowner in lieu of or in addition to the distribution of local water and to store imported water under the lands of Landowner.

Section 3. Landowner agrees that all local water to be used by Landowner within the District shall be obtained from the District or its assigns and successors in interest. Landowner shall not divert or extract within or outside the boundaries of the District local water for Landowner’s own use within the District nor shall Landowner supply local water for use within the District by others. Landowner further agrees not to divert or extract within the District local water for use by Landowner or others outside the District. Landowner reserves to itself, its assigns and its successors in interest all water rights and privileges presently owned and which may be hereinafter acquired pertaining to said land and nothing in this Agreement shall be construed as appropriating or dedicating said water rights or any water to public use.

Section 4. This agency shall be effective and irrevocable in perpetuity and the same shall be deemed an agency coupled with an interest, provided, however, this Agreement shall terminate and be of no further force or effect upon a determination by any court of competent jurisdiction in an appropriate action that the method of extraction and distribution of said local water herein provided is not a proper method of exercising the riparian and other water rights of Landowner.

Section 5. The District agrees to divert, extract, store, and distribute local water for the benefit of Landowner. The District agrees to acquire by lease, purchase, gift, or otherwise all wells and water distribution facilities useful and necessary to extract, store and distribute said local water to the lands and inhabitants.
entitled thereto in accordance with this Agreement. Nothing contained herein shall prohibit the District from exercising any of its powers granted by the California Water District Law nor shall the District be prohibited from acquiring supplemental water for distribution to all lands within the District.

Section 6. This Agreement shall not be assignable by the District without the written consent of Landowner; provided, however, the District may contract with any municipal, public, or private corporation for the management and operation of any water facilities owned by or leased by the District.

Section 7. The District shall have full control of the allocation of all costs of acquisition and construction of District facilities using any method or a combination of methods, as set forth in the California Water District Law, or raising funds to defray said costs. The District may adopt such rules and regulations for the distribution of local water as it deems necessary. The District may allocate the distribution of the available local water in any manner authorized in the California Water District Law or the rules and regulations of the District adopted pursuant to said law. Rates and charges for the distribution of local water may be made and shall be payable by Landowner, its assigns and the successors in interest as determined by the Board of Directors of the District from time to time; provided, however, said rates and charges shall not be so set to discriminate between water users in substantially the same classification.

Section 8. Neither the District nor the Landowner warrants the quantity or quality of the local water to be extracted and distributed by the District.

Section 9. The District and Landowner intend that the provisions of the Agency Agreement shall constitute covenants that run with the land and shall inure to the benefit of and be binding upon the assigns and successors in interest of the District and Landowner. The District and Landowner therefore agree as follows:

(a) The District is the owner of land and water distribution facilities within its boundaries which will be benefitted by the Agency Agreement. The District land benefits from the Agency Agreement because wells located on the District land have a more assured reliable water supply. The District land particularly benefitted by the terms of this Agency Agreement is described in Exhibit "B" of that certain Agency Agreement recorded in the Office of the County Recorder of Riverside as Document No. 398782 by the District on October 22, 1992, which is incorporated herein by reference. Landowner's land benefits from the rights set forth in Sections 1 and 5 above to connect to the District's water system. The covenants of the Agency Agreement also benefit all other landowners within the boundaries of the District who have similarly covenanted with the District, by securing a reliable region-wide water source, and its attendant increased property values. The boundaries of the District are described in Exhibit "C" of that certain Agency Agreement recorded in the Office of the County Recorder of Riverside as Document No. 398782 by the District on October 22, 1992, which is incorporated herein by reference.

Landowner is the owner of land which is affected by the covenants of this Agency Agreement and is described in Exhibit "A". (b) The covenants of this Agency Agreement shall be binding upon the successive owners of the land described in Exhibit "A" or any interest therein or a portion thereof for the benefit of the District land and facilities and other landowners who have similarly covenanted with the District. (c) The parties agree that the acts required by this Agency Agreement relate to the use, repair, maintenance and improvement of the land described in Exhibit "A". (d) The parties agree that the Agency Agreement shall be recorded at the County Recorder's Office of Riverside County. It is further agreed that this Agency Agreement shall not be effective until it is recorded at the office of the Riverside County Recorder, and consent for recordation is hereby given.

Section 10. In the event Landowner shall convey, transfer or in any manner alienate title to all or any portion of the real property of Landowner located within the District, the successors in interest in the fee simple estate or any lessor estate of said real property shall execute an Agency Agreement in the identical form hereof as a condition precedent to said transfer; provided, however, non-compliance with said condition shall in no wise be construed to annul or terminate the agency created hereby and all rights and duties hereunder shall be binding on the assigns and successors in interest of the real property of Landowner located within the District.

Section 11. If any one or more of the terms, provisions, covenants or conditions of this Agency Agreement shall to any extent be declared invalid, unenforceable, void or voidable for any reason whatsoever by a court of competent jurisdiction, the finding or order or decree of which becomes final, none of the remaining terms, provisions, covenants and conditions of this Agency Agreement shall be affected thereby and each provision of the Agency Agreement shall be valid and enforceable to the fullest extent permitted by law.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

______________________________________________
("Landowner")

(CORPORATE SEAL)

ATTEST:

Secretary:______________________________________

RANCHO CALIFORNIA WATER DISTRICT

By:____________________________________________

General Manager District

APPENDIX “U”
# VALVE APPLICATION TABLE

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<th>Normal Pressure</th>
<th>High Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>150 - 250</td>
<td>275 - 350</td>
</tr>
<tr>
<td>Main Line (8&quot;, 12&quot;)</td>
<td>A</td>
<td>B, C, D</td>
</tr>
<tr>
<td>Main Line (16&quot; and Larger)</td>
<td>B, C</td>
<td>B, C, D</td>
</tr>
<tr>
<td>Lateral (4&quot;)</td>
<td>A, B</td>
<td>B, C, D</td>
</tr>
<tr>
<td>Lateral (6&quot;)</td>
<td>A, B</td>
<td>B, C, D</td>
</tr>
<tr>
<td>Lateral (8&quot;, 12&quot;)</td>
<td>A, B</td>
<td>B, C, D</td>
</tr>
</tbody>
</table>

## LEGEND

A - RS Gate/Wedge Valve (Pressure Class as applicable)
B - Butterfly Valve (Pressure Class as applicable)
C - Metal Seated Disc Valve (Pressure Class as applicable)
D - Eccentric Non-Lubricated Plug Valve (Pressure Class as applicable)

## NOTES

1. 'Lateral' is defined as branch piping for pipeline appurtenant facilities, such as fire hydrants, blow-offs, water services, air vacuum/release assemblies, etc.
2. Variances in working pressures ratings exist between valve manufacturers. Working pressure of selected valve must meet specified design pressure.
Rancho California Water District

**Guidance Memo Determination of Public vs. Private Water Systems**

The purpose of this memorandum is to provide guidance for delineating the boundaries of public and private water distribution systems for developer-led improvement projects. The Rancho California Water District (RCWD/District) maintains a set of *Water and Sewer System Facilities Requirements and Design Guidelines* that provide standards and procedures for obtaining water service; however, in specific cases, a determination is required to define the boundaries of the system that will be owned, operated, and maintained by the District. This typically involves the following development types:

- Mixed use developments (residential, commercial, agricultural, industrial, etc.)
- Multi-unit developments (i.e. apartments, condominiums, hotels, etc.)
- Gated residential developments
- Developments located on private roads, outside public right-of-way (ROW), and/or limited access ways

The typical issues associated with providing public (District) ownership of the water distribution system for the above-referenced development types is accessibility for operation, maintenance, and repair. The District reserves the right to make a public versus private determination on a case-by-case basis for these and any other development types, but provides the following matrix as general guidance for the more common determining factors for delineating ownership of the water distribution system.

<table>
<thead>
<tr>
<th>Public System (District-owned)</th>
<th>Private System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detached units</td>
<td>Attached units</td>
</tr>
<tr>
<td>Privately-owned unit(s)</td>
<td>Rental units</td>
</tr>
<tr>
<td>Traditional lots and street patterns</td>
<td>Cluster lots with alleyways</td>
</tr>
<tr>
<td>Non-gated</td>
<td>Private access gates</td>
</tr>
<tr>
<td>Street width ≥ 24 feet (curb to curb)</td>
<td>Street width &lt; 24 feet</td>
</tr>
<tr>
<td>Easement/ROW width ≥ 44 feet</td>
<td>Easement/ROW width &lt; 44 feet</td>
</tr>
<tr>
<td>Standard horizontal and vertical utility locations and clearances</td>
<td>Proximity of water/sewer facilities to other utilities or structures causing O&amp;M concerns</td>
</tr>
<tr>
<td>Located in paved streets with slopes &lt;12% degrees</td>
<td>Located in unpaved streets (any slope) or paved streets with slope ≥12% degrees, respectively</td>
</tr>
</tbody>
</table>

The above is general guidance for planning purposes and should not be considered a comprehensive list of those factors that will be evaluated in determining the limits of ownership of the public water system. RCWD recommends all developments meet with District engineering staff early in the planning phases of their respective developments for specific determination of conditions of service.