RUBIDOUX COMMUNITY SERVICES DISTRICT
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RUBIDOUX COMMUNITY SERVICES DISTRICT
SEWER SYSTEM MANAGEMENT PLAN

SEPTEMBER 2021

Prepared by

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DEVELOPMENT PLAN AND SCHEDULE

Rubidoux Community Services District
Sewer System Management Plan
Development Plan and Schedule

TABLE 1 SEWER SYSTEM MANAGEMENT PLAN COMPLETED TASKS		
Main Task	**Completion Date**	**Responsible Party**
Application for Permit Coverage	November 3, 2006	Rubidoux Community Services District
SSMP Development Plan and Schedule	December 20, 2007	Krieger & Stewart
Section 1 - Goals Section 2 - Organization	December 20, 2007	Krieger & Stewart
Section 3 - Legal Authority Section 4 - O&M Program Section 6 - O/E Response Section 7 - FOG Control	May 1, 2009	Krieger & Stewart
Section 5 - Design/Performance Section 8 - System Eval & CAP Section 9 - Monitor/Measure Section 10 - Program Audits Section 11 - Communication --Final SSMP	August 1, 2009	Krieger & Stewart
Update SSMP	January 2015	Krieger & Stewart
Recertify SSMP	February 2015	Rubidoux Community Services District

TABLE 2 SEWER SYSTEM MANAGEMENT PLAN SCHEDULE OF ANTICIPATED FUTURE TASKS		
Main Task	**Anticipated Completion Date**	**Responsible Party**
Update SSMP (1)	September 2021	Krieger & Stewart
Recertify SSMP (1)	October 2021	Rubidoux Community Services District
Audit SSMP (2)	August 2023	Rubidoux Community Services District
Audit SSMP (2)	March 2025	Rubidoux Community Services District
Update SSMP (1)	August 2025	Krieger & Stewart
Recertify SSMP (1)	April 2025	Rubidoux Community Services District

(1) Required every five calendar years pursuant to Section D(14) of State Water Resources Control Board Order No. 2006-0003-DWQ.

(2) Required every two years pursuant to Section D(13)(x) of State Water Resources Control Board Order No. 2006-0003-DWQ.

ELEMENT 1

GOALS

ELEMENT 1
GOALS

SWRCB Order No. 2006-0003-DWQ, Section D(13)(i)

Goal: The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.

The goals of the Rubidoux Community Services District Sewer System Management Plan (SSMP) are to:

1. Properly manage, operate, and maintain all components of the sanitary sewer system;

2. Provide reliable and uninterrupted wastewater collection service to the District's customers;

3. Cost-effectively minimize infiltration/inflow (I/I), and provide adequate sewer capacity to accommodate design storm flows;

4. Prevent sewer system overflows (SSOs) to the extent possible;

5. Mitigate the impacts of any SSOs that do occur by utilizing safe, practical, and effective methods with the aim of protecting public health and the environment;

6. Provide operations and maintenance (O & M) training for all field crew and personnel who are involved in responding to SSOs; and

7. Meet all applicable regulatory notification and reporting requirements.

8. Protect public health and safety and the environment.

ELEMENT 2

ORGANIZATION

ELEMENT 2
ORGANIZATION

The Organization element of the SSMP identifies District staff responsible for implementing this SSMP, responding to SSO events, and meeting the SSO reporting requirements. This element also includes the designation of the Authorized Representative to meet the SWRCB requirements for completing and certifying spill reports.

2.1 Regulatory Requirements for Organization Element

The requirements for the Organization element of the SSMP are set forth in the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (State Water Resources Control Board Order No. 2006-0003-DWQ) and are summarized below.

The collection system agency's SSMP must identify:

A. The name of the responsible or authorized representative;

B. The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document with a narrative explanation; and

C. The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services [Cal OES]).

2.2 Element 2 Supporting Information

Supporting information for Element 2 is included in **Appendix A** herein. **Appendix A** includes a table of staff names and phone numbers, which will be updated as needed.

2.3 Organization Discussion

A. Organization

This section discusses the organization of District staff, the authorized representative to the SWRCB, and key staff responsible for implementing the SSMP. The organization chart for the management, operation, and maintenance of the District's wastewater collection system is shown in **Figure 2-1** herein. The names and phone numbers of staff filling these positions are included in **Appendix A**.

B. Authorized Representative

The District's authorized representative in all wastewater collection system matters is the Director of Engineering, who is authorized to certify electronic spill reports submitted to the SWRCB.

The Director of Operations is authorized to act in the absence of the Director of Engineering, and is authorized to submit SSO reports to the appropriate government agencies.

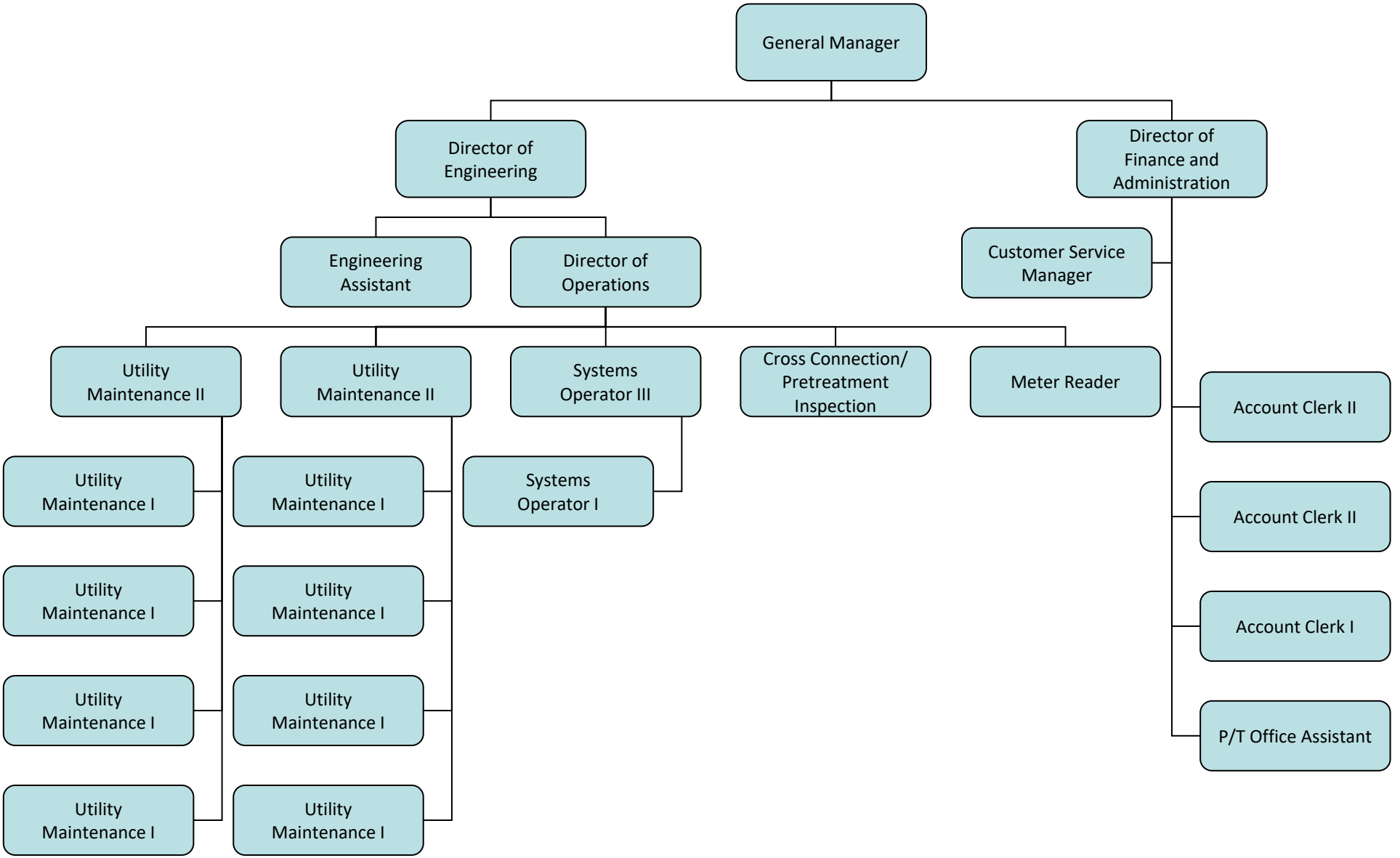
C. Responsibility for SSMP Implementation

The Director of Engineering is responsible for implementing and maintaining all elements of the SSMP.

2.4 SSO Reporting Chain of Communication

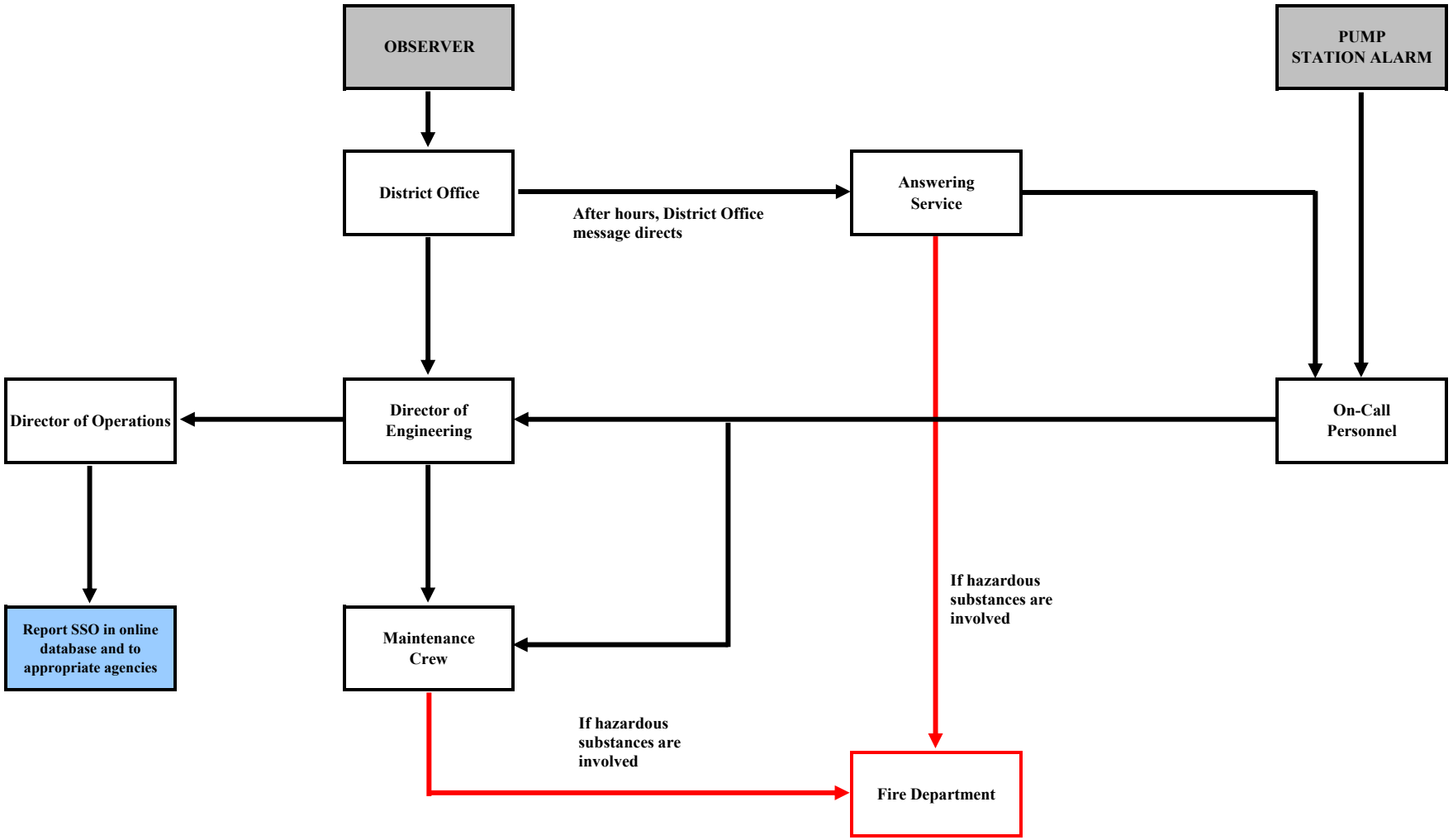
Figure 2-2 herein contains a flowchart depicting the chain of communication for responding to and reporting SSOs, from observation of an SSO to reporting the SSO to the appropriate regulatory agencies. The public is directed to contact Rubidoux Community Services District at 951-684-7580 to report SSOs.

FIGURE 2-1
RUBIDOUX COMMUNITY SERVICES DISTRICT
SEWER SYSTEM MANAGEMENT PLAN
ORGANIZATION CHART



Rev.9/8/2021

FIGURE 2-2
RUBIDOUX COMMUNITY SERVICES DISTRICT
SEWER SYSTEM MANAGEMENT PLAN
SSO REPORTING AND RESPONSE CHAIN OF COMMUNICATION



ELEMENT 3

LEGAL AUTHORITY

ELEMENT 3
LEGAL AUTHORITY

The Legal Authority element of the SSMP identifies the District's legal authority to regulate design and construction of, usage of, and discharges to, its sanitary sewer system.

3.1 Regulatory Requirements for Legal Authority Element

The requirements for the Legal Authority element of the SSMP are set forth in the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (State Water Resources Control Board Order No. 2006-0003-DWQ), summarized below.

Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

A. Prevent illicit discharges into its sanitary sewer system;
B. Require that sewers and connections be properly designed and constructed;
C. Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;
D. Limit the discharge of fats, oils, and grease and other debris that may cause blockages; and
E. Enforce any violation of its sewer ordinances.

3.2 Element 3 Supporting Information

Supporting information for Element 3 is included in **Appendices B, C, and D**. **Appendix B** includes a map of the District's service area. **Appendix C** includes copies of the District's ordinances and resolutions pertaining to its sanitary sewer system and its pretreatment program. **Appendix D** includes copies of the District's agreements with City of Riverside for wastewater treatment. Discussions of the information contained in **Appendices B, C, and D** are included in **Section 3.3** below.

3.3 Legal Authority Discussion

A. Background

The District is regulated by the provisions of several state and federal laws, including: Federal Water Pollution Control Act, commonly known as the Clean Water Act (33 USC Section 1251 *et seq*); California Porter-Cologne Water Quality Act (California Water Code Section 13000 *et seq*); California Health & Safety Code (Sections 25100 to 25250); Resource Conservation and Recovery Act of 1976 (42 USC Section 6901 *et seq*); and California Government Code (Sections 54739 to 54740). These laws grant the District authority to regulate or prohibit, by the adoption of ordinance(s), the discharge of any waste, directly or indirectly, to the District's wastewater system facilities. Said provisions also grant the District authority to establish limits, conditions, and prohibitions on certain discharges to its system; to establish flow rates; to require the development of compliance schedules for the installation of equipment systems and materials by users; and to take all action necessary to enforce its authority.

The District was organized on November 24, 1952 in accordance with the State of California Community Services District Law (Government Code Section 61000 *et seq*), and is responsible for providing certain public services within its service area, including wastewater collection and treatment. A map of the District's service area is included in **Appendix B** herein. The District routinely constructs new facilities, maintains them, and replaces them as needed in order to maintain adequate, safe, and uninterrupted wastewater collection and treatment service for its service area. Related District ordinances and resolutions are listed and described below, and copies are included in **Appendix C** herein.

Wastewater treatment service is provided by City of Riverside pursuant to agreements between the District and the City. Said agreements are listed and described below, and copies are included in **Appendix D** herein.

B. Compliance Documents and Descriptions

The following documents, which have been adopted by the District's Board of Directors (Board), collectively provide the District's legal authority, as required by Order No. 2006-0003-DWQ. Each document listed is followed by a brief description of its provisions.

- **Rubidoux Community Services District Ordinance No. 71**

  Ordinance No. 71 was adopted by the Board in March, 1973 and establishes regulations for the use and construction of public sewerage facilities and establishes rules and regulations for sewer service.

- **Rubidoux Community Services District Ordinance No. 105**

  Ordinance No. 105 was adopted by the Board on June 19, 2003 and sets forth the provisions of the District's pretreatment program, which regulates the discharge of non-domestic wastes into the District's collection system. Ordinance No. 105 also includes enforcement provisions that are implemented in the event of a violation of said pretreatment program provisions.

- **Rubidoux Community Services District Resolution No. 665**

  Resolution No. 665 was approved by the Board on June 5, 1997 adopting the *Rubidoux Community Services District Water and Sanitary Sewer Design and Construction Manual*.

- **Rubidoux Community Services District Resolution No. 2018-841**

  Resolution No. 2018-841 was adopted by the Board on June 7, 2018, superseding Resolution 727 (adopted June 19, 2003), and establishes maximum wastewater concentration limits in accordance with Ordinance No. 105.

- **Rubidoux Community Services District Resolution No. 728**

  Resolution No. 728 was adopted by the Board on June 19, 2003 and sets forth the non-domestic wastewater discharge permit fees, inspection fees, sampling and analysis fees, and noncompliance fees in accordance with Ordinance No. 105.

The requirements of Sections D.13(iii)(a), (c), (d), and (e) of Order No. 2006-0003-DWQ are satisfied by District Ordinance No. 105, which sets forth the District's authority and procedures for: preventing illicit discharges into its sanitary sewer system; ensuring access for District maintenance, inspection, and repair of District facilities; limiting the discharge of fats, oils, grease, and other debris that may cause blockages; and enforcing any violation of its sewer system provisions.

District Resolution No. 2018-841 augments Ordinance No. 105 by establishing maximum wastewater concentration limits of specified constituents. Resolution No. 728 further augments Ordinance No. 105 by setting forth fees for non-domestic discharger permits, inspections, sampling and analysis, and noncompliance.

The requirements of Section D.13(iii)(b) of Order No. 2006-0003-DWQ are satisfied by District Ordinance No. 71, by which the District established regulations for the use and construction of public sewerage facilities within its service area, and by District Resolution No. 665, by which the District adopted a water and sanitary sewer system design and construction manual.

C. Agreements for Wastewater Treatment

All wastewater produced within the District's service area is treated at the Riverside Regional Water Quality Control Plant (RRWQCP), which is operated and maintained by the City of Riverside Public Works Department. The District currently collects and conveys approximately 2.0 MGD of wastewater to the RRWQCP (based on daily average from January through July 2019), where it is treated to tertiary standards before being discharged to the Santa Ana River.

Pursuant to agreements with the City of Riverside (see below), the District is required to maintain certain effluent wastewater quality standards, and provides monthly water quality reports, quarterly pretreatment program reports, and annual wastewater quality reports to the City of Riverside.

The District has entered into the following agreements with the City of Riverside for wastewater treatment:

- **Agreement Between the City of Riverside and Rubidoux Community Services District Regarding Purchase of Additional Wastewater Treatment Capacity and Payment of Wastewater Treatment Plant Upgrade Costs**

  This Agreement was executed by the District and City of Riverside on February 13, 1990 setting forth the terms of the District's purchase of additional wastewater treatment capacity from the City of Riverside, for a total treatment capacity of 3.055 million gallons per day (MGD) for the District's service area. This Agreement supplements previous agreements for wastewater treatment between the District and the City.

- **Memorandum of Understanding in Regard to Implementation and Enforcement of Approved Pretreatment Programs**

  This document was executed by the District, City of Riverside, Jurupa Community Services District, and Western Municipal Water District on September 11, 1985, and sets forth the approved pretreatment programs that each entity shall implement and enforce in order to comply with the waste discharge requirements adopted by the Regional Water Quality Control Board.

- **Agreement for Regional Primary and Secondary Wastewater Treatment Between City of Riverside, Jurupa Community Services District, Rubidoux Community Services District and Western Municipal Water District**

Executed on May 4, 1978 by the District, City of Riverside, Jurupa Community Services District, and Western Municipal Water District, this agreement sets forth provisions for regional primary and secondary wastewater treatment.

- **Agreement for Regional Advanced Wastewater Treatment Between City of Riverside, Jurupa Community Services District, Rubidoux Community Services District and Western Municipal Water District**

  Executed on December 1, 1976 by the District, City of Riverside, Jurupa Community Services District, and Western Municipal Water District, this agreement sets forth provisions for the construction and operation of advanced wastewater treatment facilities.

ELEMENT 4

OPERATION AND MAINTENANCE PROGRAM

ELEMENT 4
OPERATION AND MAINTENANCE PROGRAM

The Operation and Maintenance Program element of the SSMP identifies the District's routine operation and maintenance procedures and rehabilitation and replacement provisions for its sanitary sewer system.

4.1 Regulatory Requirements for Operation and Maintenance Program Element

The requirements for the Operation and Maintenance Program element of the SSMP are set forth in the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (State Water Resources Control Board Order No. 2006-0003-DWQ) and are summarized below.

The Operation and Maintenance Program element of each Enrollee's SSMP shall do the following, as appropriate and applicable to each system:

A. Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;

B. Describe routine preventive operation and maintenance activities by personnel and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance program should have a system to document scheduled and conducted activities, such as work orders;

C. Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time

schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;

D. Provide training on a regular basis for personnel in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and

E. Provide equipment and replacement part inventories, including identification of critical replacement parts.

4.2 Element 4 Supporting Information

Supporting information for Element 4 is included in **Appendices E and F** herein. **Appendix E** includes a map of the District's sewer system. **Appendix F** includes relevant excerpts from the document, *Rubidoux Community Services District Wastewater Facilities Master Plan* (Master Plan), dated November 2015.

4.3 Operation and Maintenance Program Discussion

A. Sewer System Map

The District maintains a map of its sewer system (Sewer System Map), and a copy of said map is included in **Appendix E** herein. The map shows gravity sewers, force mains, manholes, and lift stations, as well as the areas that are prone to blockages due to fats, oils, and grease (termed "FOG hot spots"). The Sewer System Map was most recently updated in 2012.

As necessary, District personnel can obtain pertinent storm drain system information, including current maps, from the Riverside County Flood Control and Water Conservation District.

B. Preventive Operation and Maintenance

The District conducts regular preventive maintenance on its sewer system, which includes services performed by a subcontractor, Houston & Harris PCS, Incorporated (Houston & Harris), in cooperation with the District.

The District provides Houston & Harris with a map of the sewer system, highlighting the problem areas (termed "hot spots"; see Sewer System Map in **Appendix E**) that require frequent cleaning due to the accumulation of fats, oils, and grease (FOG). The hot spots are scheduled with Houston & Harris for routine video inspection and cleaning every six months. At each six month interval, the District also selects one development tract area for cleaning, and Houston & Harris will clean the selected area along with the hot spots, effectively cleaning the entire sewer system approximately once every four years. All maintenance activities performed are documented in the District's computer system.

Lift stations are routinely inspected by District personnel on a daily basis as part of the District's standard operations. Any parts that appear to be wearing down are replaced, or ordered and scheduled for replacement, in order to maintain facilities in good working order and to decrease downtime for maintenance.

Manholes are routinely inspected by the District's field personnel. Any manholes found to contain rising water (also known as "surcharge") triggers further upstream and downstream inspections to determine the cause of the surcharge and the action necessary to remedy the problem and prevent a Sanitary Sewer Overflow (SSO) from occurring.

C. Rehabilitation and Replacement Plan

The District's field personnel work with the sewer system on a day-to-day basis, and are typically the ones to discover system facilities that are in need of unplanned rehabilitation or replacement. When an area of the sewer system is observed as needing rehabilitation or replacement, field personnel report to the Director of Operations, who then notifies the Director of Engineering. The Director of Engineering then typically verifies the situation in the field and determines the preferred course of action prior to reporting to the District Manager, who will schedule the item for Board approval, if necessary. The Director of

Engineering is responsible for completing any associated environmental analyses, reporting, and public notification that may be required prior to carrying out a rehabilitation or replacement action.

As described in **(B)** above, the District contracts with Houston & Harris for routine video inspections and cleaning of its sewer system hot spots at six-month intervals. At each interval, the District also selects and schedules another entire area of their sewer system for video inspection and cleaning at that time, thus effectively video inspecting and cleaning the entire sewer system approximately once every four years. These inspections and cleanings allow the District to identify any deficiencies within the sewer system that may require rehabilitation or replacement.

In addition to the procedures described above, the District's Master Plan includes descriptions of the District's known wastewater system deficiencies and recommended capital improvements, as well as a proposed schedule and estimated costs for completing said planned improvements. The portions of the Master Plan relevant to the recommended capital improvements are *Chapter 3 – Recommended Wastewater System Improvements, Figures B-1 and B-2, and Plates 1 and 2*, and are included herewith in **Appendix F**.

D. Training Program

Personnel training is primarily in the form of hands-on training in the field. Field personnel are typically trained at known hot spots, which tend to become partially blocked on a regular basis. Anytime that a partial or complete blockage occurs within the sewer system, field personnel are provided with additional training or refresher training. Any field personnel that are observed to be inadequately trained are provided with refresher training.

The following training is also included in the District's training program:

- Senior operations personnel periodically attend technical training seminars related to sewer system operations, maintenance, or rehabilitation;
- Field personnel attend confined space operations training as needed;
- Simulated bypass pumping drills are performed periodically;

- Simulated standby generation drills are performed with applicable personnel weekly at lift stations with standby generators;
- Lift station operators are trained to keep records onsite, such as run times and generator run times; and
- Training on the operation and maintenance of newly installed equipment is provided by the manufacturer or supplier.

Each District field truck has been provided with a copy of the *Unified Sanitary Sewer Spill Response Procedure*, dated July 15, 2013, which was prepared by Riverside County Flood Control and Water Conservation District and submitted to the Santa Ana Regional Water Quality Control Board to satisfy requirements of Board Order No. R8-2010-0033. Additionally, for quick reference, each field truck is provided with a copy of the Rubidoux Community Services District SSO Reporting Requirements Flow Chart, dated March 26, 2021, which summarizes the reporting requirements for each of the categories of SSOs and includes phone numbers for relevant agencies that may need to be contacted immediately, depending on the location and conditions of the SSO. Each member of the District's field personnel is familiar with these documents and may reference them in the event of an SSO.

E. Contingency Equipment and Replacement Parts

The District operates six lift stations within its sewer system, as shown on the Sewer System Map in **Appendix E** herein. Backup power generators are present at each of the lift station sites except for the Fleetwood Lift Station. The District has a portable generator that can be used at the Fleetwood Lift Station, if needed. Four of the District's lift stations (Belltown Lift Station, Jurupa Lift Station, Juan Diaz Lift Station, and Regional Lift Station) have bypass pumping capabilities. District personnel includes two lift station operators who routinely check for wear and tear at District lift stations on a daily basis. The District keeps some replacement parts on hand at each lift station, such as pumps, float sensors, and controllers. Other replacement parts and equipment are typically available from suppliers within 24 hours. Parts and equipment that are replaced infrequently are ordered as needed. If a lift station operator identifies a component needing repair or replacement, said operator verbally reports to the Director of Operations, who coordinates purchasing and stocking replacement parts for the lift stations.

ELEMENT 5

DESIGN AND PERFORMANCE PROVISIONS

ELEMENT 5
DESIGN AND PERFORMANCE PROVISIONS

The Design and Performance Provisions element of the SSMP sets forth the District's standards for designing, constructing, rehabilitating, repairing, inspecting, and testing sanitary sewer system facilities within the District's sanitary sewer system.

5.1 Regulatory Requirements for Design and Performance Provisions Element

The requirements for the Design and Performance Provisions element of the SSMP are set forth in the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (State Water Resources Control Board Order No. 2006-0003-DWQ) and are summarized below.

Each Enrollee shall develop and implement design and performance provisions which include the following:

A. Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations, and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and

B. Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances, and for rehabilitation and repair of sewer system facilities.

5.2 Element 5 Supporting Information

Supporting information for Element 5 is included in **Appendices C and G** herein. **Appendix C** includes a copy of District Resolution No. 665, *A Resolution of the Board of Directors of the Rubidoux Community Services District Adopting a Water and Sanitary Sewer System Design and Construction Manual*. **Appendix G** includes a copy of the document titled, *Rubidoux Community Services District Water and Sanitary Sewer Design and Construction Manual* (Design and Construction Manual), last updated in January 2005.

5.3 Design and Performance Provisions Discussion

A. Design and Construction Standards

The District's Design and Construction Manual was prepared in order to standardize the design of, the materials for, and the construction and inspection procedures for water and sewer facilities within the District's service area. The standards contained in the Design and Construction Manual ensure that water and sewer facilities constructed or rehabilitated within the District are complete, operate correctly, and are in compliance with government regulations and good water and wastewater engineering practices.

The Design and Construction Manual includes design criteria for water and sewer system facilities, water and sewer system construction procedures, District-approved manufactured materials, procedures for construction drawing preparation and approval, technical specifications, and standard drawings.

B. Inspection and Testing Procedures

Procedures for constructing water and sewer system facilities are set forth in Section VI of the Design and Construction Manual. These procedures include the District's requirements pertaining to inspection and testing of sewer system facilities. Said procedures are also applied to rehabilitation and repair projects within the District's sewer system.

ELEMENT 6

OVERFLOW EMERGENCY RESPONSE PLAN

ELEMENT 6
OVERFLOW EMERGENCY RESPONSE PLAN

The Overflow Emergency Response Plan element of the SSMP identifies measures implemented by the District to protect public health and the environment in the event of an occurring or impending SSO.

6.1 Regulatory Requirements for Overflow Emergency Response Plan Element

The requirements for the Overflow Emergency Response Plan element of the SSMP are set forth in the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (State Water Resources Control Board Order No. 2006-0003-DWQ) and are summarized below.

Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

A. Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;

B. A program to ensure an appropriate response to all overflows;

C. Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with Monitoring and Reporting Program No. 2006-0003-DWQ, as amended by Order No. WQ-2013-0058-EXEC (MRP). All SSOs shall be reported in accordance with the MRP, the California Water Code, other State Law, and other applicable Regional Water Board waste discharge requirements or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;

D. Procedures to ensure that appropriate District personnel and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;

E. Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and

F. A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

6.2 Element 6 Supporting Information

Supporting information for Element 6 is included in **Appendices H and I** herein. **Appendix H** includes a copy of the document, *Unified Sanitary Sewer Spill Response Procedure*, dated July 15, 2013, prepared by Riverside County Flood Control and Water Conservation District, and a copy of the flow chart titled, *Rubidoux Community Services District SSO Reporting Requirements Flow Chart*, dated March 26, 2021 (SSO Flow Chart). **Appendix I** includes a copy of a reporting form to assist in compiling the information needed to document and report an SSO.

6.3 Overflow Emergency Response Plan Discussion

In the event of an SSO, the District follows the response procedure summarized in the SSO Flow Chart, a copy of which is included in each field truck and is included in **Appendix H** herein. This response procedure is in compliance with the procedures set forth in the document, *Unified Sanitary Sewer Spill Response Procedure* (2013) and in the Monitoring and Reporting Program No. 2006-0003-DWQ, as amended by Order No. WQ-2013-0058-EXEC (MRP). Upon discovery of an SSO, the District also implements the following measures:

A. <u>Emergency Notification and Response Procedures</u>

In the event that an impending SSO (such as rising water in a manhole, also known as surcharge) or an occurring SSO (such as water overflowing from a manhole) is reported by District personnel, their contractor, or another individual, to the District's main telephone number during normal business hours, District office personnel will immediately page on-call personnel.

In the event that an impending or occurring SSO is reported to the District's main telephone number after hours, then the call will be routed to the District's 24-hour answering service, which is trained to immediately page on-call personnel.

On-call personnel consist of field personnel who are "on-call" on a rotating basis. At any given time, one member of the District's field personnel will be designated "primary", two will be designated as "secondary", and four will be designated as "backup". Field personnel includes 15 individuals, as follows: Utility Maintenance (8), Senior Utility Maintenance (2), Senior System Operator I (1), System Operator II (1), System Operator I (1), Cross Connection/Pretreatment Inspector (1), and Director of Operations (1).and Director of Operations (1). Refer also to **Figure 2-1** in Element 2 of this SSMP and to **Appendix A**. Field personnel are trained to immediately report to the site of the potential SSO upon notification.

B. Emergency Operation and Mitigation Procedures

Pursuant to Section A(1) of the *State Water Resources Control Board Monitoring and Reporting Program No. 2006-0003-DWQ Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, as amended by Order No. WQ 2013-0058-EXEC (the MRP), a sanitary sewer overflow (SSO) is defined as follows:

Sanitary sewer overflow (SSO) - ***Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:***

(i) ***Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;***

(ii) ***Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and***

(iii) ***Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.***

The MRP further defines several categories of SSOs, as described in **Table 6-1** below.

Table 6-1
SSO Categories and Definitions*

SSO Categories	Definitions
Category 1	Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee's sanitary sewer system failure or flow condition that: • Reach surface water and/or reach a drainage channel tributary to a surface water; or • Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
Category 2	Discharges of untreated or partially treated wastewater of **1,000 gallons or greater** resulting from an enrollee's sanitary sewer system failure or flow condition that **do not** reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
Category 3	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.
Private Lateral Sewage Discharge (PLSD)	Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

* Based on Attachment A of the State Water Resources Control Board Order No. WQ 2013-0058-EXEC.

In the event of any SSO, whether or not a drainage channel or surface water has been affected, field personnel will utilize sign boards, signage, lights, or other traffic control methods, as necessary, to route traffic away from the area of the SSO. Field personnel will also verbally advise any persons present in the vicinity about the potential hazard of the SSO and to stay clear of the area of the SSO.

While public safety is being secured as described above, additional field personnel will take necessary action to contain, and mitigate the impacts of, the SSO. If needed, field personnel will install barriers (such as sandbags or hay bales) to any downstream storm drains to prevent discharge or further discharge of untreated or partially treated wastewater into the storm drain system. If needed, District personnel can obtain pertinent storm drain system information, including current maps, via emergency contacts at Riverside County Flood Control and Water Conservation District.

Field personnel will investigate the cause of the SSO by inspecting upstream and downstream areas of the sewer system. Once the cause of the SSO has been determined, field personnel will install temporary bypass facilities in order to bypass the area of the SSO until the cause can be permanently corrected. If bypassing the area is not practicable, then field personnel will proceed to remove the obstruction, such as fats, oils, grease (FOG) or tree roots, or otherwise remedy the cause that resulted in the SSO (such as lift station failure).

Any wastewater that has reached the surface will be chlorinated, removed (i.e. by vacuuming), and disposed of properly (e.g. by discharging into a manhole in an unaffected area of the District's sewer system). Any washdown water will also be removed and disposed of properly.

In the event that the SSO was determined to have resulted from a FOG blockage, the District will perform additional investigations and testing (such as video inspections or dye tests) to determine the cause of the FOG blockage, and will proceed with corrective actions as set forth in **Element 7: Fats, Oils, and Grease (FOG) Control Program**.

As soon as is practical and not more than 24 hours after initial response to the SSO, field personnel will notify the Director of Engineering of the incident. In the event that any wastewater has been discharged to Waters of the United States (e.g. the Santa Ana River), additional water quality monitoring may be performed as required by the Regional Water Quality Control Board and/or at the direction of the Director of Engineering to determine the nature and impact of the discharge.

The District will notify the appropriate agencies and report the SSO as described in **(C)** below.

C. Notification and Reporting to Regulatory Agencies

SSOs will be reported pursuant to the requirements of the MRP, and as set forth below for each category of SSO. SSOs will be reported in the California Integrated Water Quality System Project SSO Online Database (CIWQS), and will include the mandatory information listed in the MRP. All reports submitted to CIWQS will be certified by the Director of Engineering, who has been designated as the District's Legally Responsible Official (LRO), or the LRO's assignee, who is the Director of Operations.

Additionally, this notification and reporting process is summarized in the *Rubidoux Community Services District SSO Reporting Requirements Flow Chart*, which also includes phone numbers for the various agencies that may need to be notified. Said flow chart is included in **Appendix H** herein.

"No Spill" Certification

If no SSOs have occurred within a calendar month, then the District will certify, within 30 days after the end of the calendar month in which there were no SSOs, a "No Spill" certification statement in the CIWQS Online SSO Database, certifying that there were no SSOs for the designated month. Alternatively, the District may elect to certify, within 30 calendar days after the end of each quarter in which there were no SSOs for each month in the quarter being reported, a "No Spill" certification in CIWQS. For quarterly reporting, the quarters are Q1 (January / February / March), Q2 (April / May / June), Q3 (July / August / September), and Q4 (October / November / December).

When there are no SSOs during a calendar month, but the District reported a private lateral sewage discharge (PLSD), then the District will still certify a "No Spill" certification statement for that month in CIWQS, in accordance with Section B(4)(iii) of Order No. WQ 2013-0058-EXEC.

Category 1 SSO

A Category 1 SSO is a discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that:

- Reaches surface water and/or reaches a drainage channel tributary to a surface water; or
- Reaches a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g. infiltration pit, percolation pond).

For any Category 1 SSO, the District will notify the following **as soon as possible**, but no later than two hours after becoming aware of the SSO:

- California Office of Emergency Services (Cal OES), at (800) 852-7550, and obtain a control number.
- Santa Ana Regional Water Quality Control Board at (951) 782-4130
- Riverside County Department of Environmental Health at (951) 782-2968

The District will provide updates to Cal OES regarding substantial changes to the estimated SSO volume or impacts that occur between initial reporting to Cal OES and certification of the report in CIWQS.

Within three (3) business days, the District will submit a draft report of the SSO to CIWQS, and the District's LRO or assignee will certify the report in CIWQS **within fifteen (15) calendar days** after the SSO end date.

For a Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters, the District will prepare and submit an SSO Technical Report to CIWQS **within 45 calendar days** after the SSO end date. The SSO Technical Report will include the information listed

in Section C(5) of Order No. WQ 2013-0058-EXEC and will be certified by the District's LRO or assignee.

Copies of the final SSO reports will also be submitted to the applicable MS4 permittee (i.e. Riverside County Flood Control and Water Conservation District, County of Riverside, and incorporated cities within Riverside County within the Santa Ana River Region).

Category 2 SSO

A Category 2 SSO is a discharge of untreated or partially treated wastewater of 1,000 gallons or greater resulting from a sanitary sewer system failure or flow condition that does not reach surface water, a drainage channel, or a MS4, unless the entire SSO discharged to the storm drain is fully recovered and disposed of properly.

For any Category 2 SSO, the District will submit a draft report of the SSO to CIWQS **within three (3) business days**, and the District's LRO or assignee will certify the report in CIWQS **within fifteen (15) calendar days** after the SSO end date.

In the event that the CIWQS database is not available, the District will fax or email all required information to the Regional Water Quality Control Board, Santa Ana Region, and will enter the information into CIWQS when it becomes available.

Copies of the final SSO report will also be submitted to the applicable MS4 permittee (i.e. Riverside County Flood Control and Water Conservation District, County of Riverside, and incorporated cities within Riverside County within the Santa Ana River Region).

Category 3 SSO

A Category 3 SSO is a discharge of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition that does not meet the criteria of a Category 1 SSO or a Category 2 SSO.

In the event that the CIWQS database is not available, the District will fax or email all required information to the Regional Water Quality Control Board, Santa Ana Region, and will enter the information into CIWQS when it becomes available.

For any Category 3 SSO, the District will report the SSO in CIWQS within 30 days after the calendar month in which the SSO occurred (e.g. all Category 3 SSOs occurring during the month of January must be entered into the database by March 1st). The report shall be certified by the LRO or assignee.

In the event that the CIWQS database is not available, the District will fax or email all required information to the Regional Water Quality Control Board, Santa Ana Region, and will enter the information into CIWQS when it becomes available.

Copies of the final SSO report will also be submitted to the applicable MS4 permittee (i.e. Riverside County Flood Control and Water Conservation District, County of Riverside, and incorporated cities within Riverside County within the Santa Ana River Region).

Private Lateral Sewage Discharge (PLSD)

A PLSD is a discharge of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the District's sanitary sewer system or from other private sewer assets. PLSDs that the District becomes aware may be voluntarily reported to CIWQS.

A PLSD will be reported to CIWQS at the discretion of the Director of Engineering (LRO). If one or more PLSDs are the only spill(s) reported during a particular calendar month, then a "No Spill" certification shall still be certified in CIWQS for that particular month.

D. Overflow Emergency Response Plan Training

The District conducts ongoing awareness training of the MRP, as well as specialized training for various personnel positions, such as lift station operations and maintenance, manhole inspection, valve repair and replacement, jetter and vactor operation, and other related tasks. All personnel training takes place in the field with experienced personnel.

An impending or occurring SSO is used as an opportunity to provide personnel with training or refresher training on SSO emergency response procedures.

Further, all field personnel are made aware of the *Unified Sanitary Sewer Spill Response Procedure* and of this SSMP, and copies of said documents are kept on hand in each District field truck for reference by field personnel.

E. Prevention of SSO Impacts to Waters of the United States

District implementation of the measures set forth in (**A)** through (**D)** above will, in most cases, prevent SSO discharges from entering Waters of the United States. In the event that sewage from an SSO is discharged to Waters of the United States, the District will perform any water quality monitoring necessary to determine the nature and impact of the discharge. Further, the District will cooperate with local, state, and federal regulatory agencies in taking steps to minimize or correct any adverse impact on the environment resulting from the discharge.

ELEMENT 7

FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM

ELEMENT 7
FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM

The Fats, Oils, and Grease (FOG) Control Program element of the SSMP sets forth a program for reducing and preventing FOG waste discharges to the District's sanitary sewer system.

7.1 Regulatory Requirements for FOG Control Program Element

The requirements for the FOG Control Program element of the SSMP are set forth in the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (State Water Resources Control Board Order No. 2006-0003-DWQ) and are summarized below.

A. An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;

B. A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area;

C. The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;

D. Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;

E. Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient personnel to inspect and enforce the FOG ordinance;

F. An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and

G. Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each sewer system section identified in (**F)** above.

7.2 Element 7 Supporting Information

Fats, oils, and grease (FOG) can build up in the District's sanitary sewer system, resulting in full or partial blockages within the sewer system, and is a cause of SSOs within the District's service area. The District has determined that the major FOG contributors within its service area are certain residential neighborhoods and food service establishments (FSEs). The District is also aware of certain "hot spots" within its sewer system that tend to accumulate more FOG buildup and are more susceptible to FOG blockages than others, and these hot spots are depicted on the District's Sewer System Map included in **Appendix E**.

In order to protect the health and welfare of the community and the general public, to maintain compliance with local and regional waste discharge requirements, and to maintain its wastewater collection system in operable condition, the District regulates the types of substances, such as FOG, that may be discharged to its wastewater collection system. Regulations pertaining to FOG are summarized herein and are set forth in the following two ordinances.

- Rubidoux Community Services District Ordinance No. 71 Regulating the Use and Construction of Public Sewerage Facilities and Establishing Rules and Regulations for Sewer Service; March, 1973 (herein, Ordinance 71). This ordinance establishes regulations for the use and construction of public sewerage facilities and establishes rules and regulations for sewer service.

- Rubidoux Community Services District Ordinance No. 105, An Ordinance of the Rubidoux Community Services District, Repealing Ordinance No. 101 in its Entirety and Enacting a New Ordinance Relating to the Discharge of Wastes Into the Sewer System of the Rubidoux Community Services District (herein, Ordinance 105). Ordinance 105 was adopted by the Board on June 19, 2003 and sets forth the provisions of the District's pretreatment program, which regulates the discharge of non-domestic wastes into the District's collection system. Ordinance 105 also includes enforcement provisions that are implemented in the event of a violation of said pretreatment program provisions.

In addition to Ordinance 105, the District's enforcement provisions are set forth in the *Rubidoux Community Services District Pretreatment Program Enforcement Response Plan* (ERP), August 1991, a copy of which is included in **Appendix J** herein.

Supporting information for Element 7 is included in **Appendices C, E, and J** herein. Ordinances 71 and 105 are included in **Appendix C**, the District's Sewer System Map is included in **Appendix E**, and the District's ERP is included in **Appendix J**.

7.3 Provisions of the FOG Control Program

A. Implementation Plan and Schedule for Public Education Program

Certain residential neighborhoods are significant contributors of FOG to the District's sewer system. Many residents within the District's service area are not aware of the impact that FOG has on the sewer system, especially if there are no apparent effects on their homes (e.g. interior plumbing fixtures). With this in mind, the District plans to implement a public education outreach program.

Food Service Establishments (FSEs) are also significant FOG contributors; therefore, in the event of a FOG blockage, the District further educates FSE owners that are located within the area of the blockage by inspecting FSE facilities and discussing FOG problems and recommending solutions pertinent to the specific FSE. District inspectors are also available to clarify the District's FOG requirements and answer any questions that the FSE owner may have pertaining to FOG, FOG prohibitions, or the FOG Control Program.

In order to further reduce and prevent FOG buildup in the District's sewer system, thus reducing or eliminating the occurrence of SSOs resulting from FOG obstructions within the system, the District plans to implement a public education outreach program that educates customers about the effects of FOG on the sanitary sewer system and that promotes the proper disposal of FOG.

The public education outreach program consists of occasionally distributing printed brochures to all customers as a bill insert. Residential, commercial, and industrial customers may receive varying information targeting their specific types of FOG discharges. Educational brochures are distributed to restaurants upon annual inspections.

B. FOG Disposal Plan and Schedule

The District does not own, operate, or endorse any FOG disposal facilities or hauling services; however, upon request, the District provides a list of licensed FOG waste haulers and disposal companies. The District does not allow haulers of FOG waste to discharge any FOG into the District's collection system.

FSEs are responsible for collecting any FOG waste generated at their facilities, for preventing FOG discharge into the District's collection system, and for properly and legally disposing of all FOG waste generated at their facilities.

In the event that a full or partial blockage due to FOG occurs within the District's collection system, District personnel follow the procedure set forth in Element 6: Overflow Emergency Response Plan. When the District clears a FOG blockage from its sewer system, it uses a jetter to physically break up the FOG and flush it down through the pipeline. Once the FOG is broken up into smaller particles within the sewer system, it no longer poses a risk of clogging the system. In the event that the District needs to remove wastewater or waste materials from a pipeline, it utilizes a vactor device to vacuum out the waste for proper disposal at another location (such as another location within its sewer system). To date, the District has not exceeded the maximum allowable limits for FOG in the wastewater it discharges to the Riverside Regional Water Quality Control Plant.

C. Legal Authority

The District owns, operates, and maintains the wastewater collection facilities within its service area. Under the provisions of the California Government Code, the District's Board of Directors may adopt ordinances for the purposes of exercise and effect of any of its powers or for the purposes for which it was formed. See also **Element 3: Legal Authority** for a more detailed discussion of the District's authority over its sanitary sewer system.

Provision 1.6 of Ordinance 71 lists the types of wastes that are prohibited from being discharged to the District's sewer system, and Provision 1.6.06 of said ordinance specifically prohibits discharge of "any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of one hundred (100) mg/l or containing substances

that may solidify or become viscous at temperatures between thirty-two (32) and one-hundred fifty (150) degrees Fahrenheit".

Ordinance 105 sets forth the provisions of the District's pretreatment program, which regulates non-domestic wastewater discharges to the District's sewer system. Provision 3.2(A) of said ordinance lists prohibited waste discharges, including grease, and Provision 3.2(K) prohibits discharge of "any pollutant(s), material or quantity of material which will cause:

1) Damage to any part of the collection system;

2) Abnormal maintenance of the collection system;

3) An increase in the operational costs of the collection system;

4) A nuisance or menace to public health…"

The provisions of this FOG Control Program are consistent with District Ordinances 71 and 105, which are included in **Appendix C**. In the event of a conflict between this SSMP and any District Ordinances, current District ordinances shall prevail.

D. Grease Traps and Interceptors

The District's interceptor requirements are set forth in provisions 2.12, 2.13, and 2.14 of Ordinance 105. Pursuant to provision 2.14, the District maintains a list of approved interceptor manufacturers that is available to the public at the District's main office.

Pursuant to provision 2.16 of Ordinance 105, "No person who owns, operates, or maintains a restaurant (restaurant user) shall discharge wastewater from such restaurant to the District's collection system or POTW without first receiving a written determination [from the District], and complying with such determination, of the District's grease interceptor requirement".

Provision 2.16 additionally states that "Any interceptor or grease trap legally and properly installed at a food processing facility before June 1, 1991 shall be acceptable as an alternative to the interceptor specified above, provided such interceptor or grease trap is effective in removing grease and is so designed and installed that it can be inspected and properly maintained". Currently, a majority of restaurants within the District's service area have been "grandfathered" into compliance with Ordinance 105 pursuant to this provision. The District Manager shall determine whether a newly constructed FSE would be required to install a grease interceptor, and if applicable, the size of the required grease interceptor.

Regardless of the type of interceptor or grease trap installed, FSE owners are solely responsible for preventing FOG from entering the District's collection system. FSE owners are further required to service and maintain the interceptor and/or grease trap installed at their facility, and to properly and legally dispose of the waste. The District's interceptor maintenance requirements are set forth in provision 2.15 of Ordinance 105.

E. Inspection and Enforcement

Pursuant to the District's authority and to the provisions of Ordinance 105, the District has the responsibility of preventing or eliminating discharges to their collection system that may endanger the health or welfare of the community, the environment, or the District's collection system. In order to fulfill this responsibility, the District maintains the authority to inspect all FSEs that discharge to the District's collection system, may examine all pertinent records held by the FSE, and may require water quality sampling of the FSE's effluent discharge. Provisions 2.5 through 2.8 of Ordinance 105 set forth the District's inspection and monitoring procedures.

In the event of noncompliance with the District's discharge requirements, the District shall implement the enforcement provisions set forth in Section IV of Ordinance 105, which includes its *Enforcement Response Plan*, dated August 5, 1991 (ERP), in imposing progressive enforcement actions against noncompliant dischargers.

Additionally, the District performs annual video inspections and cleans sewer system hot spots every six months, and may conduct video inspections and cleaning of other

development tracts within its service area. In the event of an SSO, the District may perform additional inspections, cleaning, and monitoring.

F. Areas of Greater FOG Blockage Susceptibility

The District is aware of several areas within its collection system that are more susceptible to FOG blockages than the rest of the collection system. The greater susceptibility of these areas (termed "hot spots") results from FOG discharged by residents and by restaurants located within the vicinity of said areas. Areas of the District's sewer system designated as FOG hot spots are depicted on the Sewer System Map located in **Appendix E** herein.

G. Source Control Measures for Areas of Greater FOG Blockage Susceptibility

The District has established the following measures for controlling FOG within the areas designated as hot spots on the Sewer System Map in **Appendix E** herein.

1) Regular Inspection

The District's contractor, Houston & Harris, performs video inspection and cleaning of all hot spots at six-month intervals, while collection system areas that are not considered hot spots are inspected when field personnel are in the area, when a problem arises, or approximately once every four years.

2) Cleaning

As stated above, all District hot spots are cleaned by Houston & Harris at six-month intervals. For areas that are not inspected by Houston & Harris at six-month intervals, if it is determined upon inspection that an area contains a buildup of FOG that may lead to a blockage, then the area will be cleaned as soon as practicable.

3) Determine Source

If substantial FOG buildup is noted during any inspection such that cleaning is, or will be, required, then the District will proceed to determine the source of the FOG. Once the source has been determined, an inspection will be scheduled at the source location.

4) Prevent Additional FOG Discharge

The District's inspectors, field personnel, or both, will discuss the cause(s) of the FOG discharge with the source owner(s), and will recommend actions needed in order to prevent discharging additional FOG waste into the District's collection system.

5) Enforcement

If additional FOG buildup in the collection system is found to result from the same source(s), then the District may implement its enforcement procedures as set forth in Section IV of Ordinance 105 and the District's ERP.

ELEMENT 8

SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

ELEMENT 8
SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

The System Evaluation and Capacity Assurance Plan element of the SSMP provides a hydraulic evaluation of the District's sanitary sewer system and determines the actions needed to establish a capital improvement plan (CIP) that will address any identified hydraulic deficiencies.

8.1 Regulatory Requirements for System Evaluation and Capacity Assurance Plan Element

The requirements for the System Evaluation and Capacity Assurance Plan element of the SSMP are set forth in the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (State Water Resources Control Board Order No. 2006-0003-DWQ) and are summarized below.

The System Evaluation and Capacity Assurance Plan element of each Enrollee's SSMP shall do the following:

A. Determine the actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacities of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;

B. Where design criteria do not exist or are deficient, undertake the evaluation identified in (A) above to establish appropriate design criteria;

C. Determine the steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding; and

D. Develop a schedule of completion dates for all portions of the capital improvement program developed in **(A)** through **(C)** above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements described in Section D(14) of Order No. 2006-0003-DWQ.

8.2 Element 8 Supporting Information

Supporting information for Element 8 is included in **Appendices F and G**. **Appendix F** includes copies of Chapter 3 Recommended Wastewater System Improvements, Figures B-1 and B-2, and Plates 1 and 2 excerpted from the document *Rubidoux Community Services District Wastewater Facilities Master Plan* (Master Plan, 2015), which is available for review at the District's office during regular business hours. **Appendix G** includes a copy of the document *Rubidoux Community Services District Water and Sanitary Sewer Design and Construction Manual* (Design and Construction Manual).

8.3 System Evaluation and Capacity Assurance Plan Discussion

A. Evaluation

The District's Master Plan sets forth existing and projected wastewater flows, estimated capacities of wastewater system facilities, and recommended wastewater facilities improvements with estimated project costs and implementation schedules necessary to both correct deficiencies and accommodate ultimate development. Many SSOs within the District's sanitary sewer system have been determined to have resulted from FOG buildup within areas designated as FOG hot spots, while foreign debris has also resulted in SSOs.

B. Design Criteria

The District's sewer system design criteria are set forth in the District's Design and Construction Manual, a copy of which is included in **Appendix G**. The Design and Construction Manual sets forth the details for construction drawing preparation and approval, sewer design criteria, and water and sewer system construction.

Section V: Sewer Design Criteria of the Design and Construction Manual details the necessary design criteria for the various components of the sewer system. The sewer design criteria have been developed to ensure adequate capacity, structural integrity, and overall efficiency of the District's sanitary sewer system.

C. Capacity Enhancement Measures

Chapter 3 of the District's Master Plan, a copy of which is included in **Appendix F** herein, recommends improvements to correct identified hydraulic deficiencies and includes prioritization, schedules, and estimated project costs. Capital improvements within the District are funded by the District's Sewer Capital Improvement Fund.

D. Schedule

Chapter 3 of the District's Master Plan includes a schedule of completion dates for all projects recommended to correct system deficiencies or to accommodate flows from ultimate development. This schedule will be reviewed and updated every five years, consistent with the update requirements of the SSMP.

ELEMENT 9

MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

ELEMENT 9
MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

The Monitoring, Measurement, and Program Modifications element of the SSMP identifies measures implemented by the District for monitoring the implementation, and measuring the effectiveness, of the SSMP.

9.1 Regulatory Requirements for Monitoring, Measurement, and Program Modifications Element

The requirements for the Monitoring, Measurement, and Program Modifications element of the SSMP are set forth in the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (State Water Resources Control Board Order No. 2006-0003-DWQ) and are summarized below.

Each Enrollee shall:

A. Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;

B. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;

C. Assess the success of the preventative maintenance program;

D. Update program elements, as appropriate, based on monitoring or performance evaluations; and

E. Identify and illustrate SSO trends including frequency, location, and volume.

9.2 Element 9 Supporting Information

There is no supporting information for Element 9.

9.3 Monitoring, Measurement, and Program Modifications Discussion

A. Maintain Information Relevant to Establishing and Prioritizing SSMP Activities

The District investigates the cause of each SSO and maintains records of the dates, times, locations, causes, and mitigative actions taken for each SSO occurrence. Additionally, the District's Operation and Maintenance Program (**Element 4** of this SSMP) includes provisions for preventive maintenance and for rehabilitation and replacement of components of the sewer system. The District maintains a sewer system map (**Appendix E**) which shows the gravity sewers, force mains, manholes, and lift stations in the District's sewer system, as well as the areas that are prone to FOG blockages (FOG hot spots).

Annual video inspection and routine sewer cleaning (every six months) are performed by a subcontractor, Houston & Harris, in cooperation with the District. At each six-month interval, all FOG hot spots, as well as additional development areas, are cleaned. FOG hot spots, and additional development areas, are video inspected on an annual basis. The District maintains records of the video inspections and cleanings and estimates that the entire sewer system is effectively inspected and cleaned approximately once every four years, with FOG hot spots routinely cleaned and inspected every six months to assist in the prevention of FOG-related SSOs.

The District also maintains a listing of food service establishments (i.e., restaurants) that have contributed to SSOs in the past. The District continues to monitor these areas in conjunction with its pretreatment program in order to prevent FOG buildup that may lead to an SSO. The District's FOG Control Program is included in **Element 7**.

B. Monitor the Implementation and Effectiveness of the SSMP

The District maintains records of its actions taken as part of implementing the SSMP. The District evaluates the effectiveness of its implementation of the SSMP, as well as the overall effectiveness of the SSMP, by its success in preventing SSOs and its compliance with the SSMP requirements identified in State Water Resources Control Board Order No. 2006-0003-DWQ. Additionally, the District performs evaluations of the effectiveness of

the SSMP every two years during SSMP Program Audits (as set forth in **Element 10** of this SSMP).

C. Assess the Effectiveness of the Preventive Maintenance Program

District field personnel assess the effectiveness of the District's Preventive Maintenance Program (**Element 4**) during their routine inspections of sewer system facilities, including lift stations and manholes. Facilities and parts that appear to be wearing down are replaced or are ordered and scheduled for replacement.

All maintenance activities performed are documented in the District's computer system, and improvements to operations and maintenance procedures are made, as deemed necessary by the District, in order to ensure that sewer system facilities are maintained in good working order with minimal downtime for maintenance, and that SSOs are prevented to the extent possible. The success of the Preventive Maintenance Program is also assessed as part of the SSMP Program Audits (**Element 10**).

D. Updating Program Elements

The District updates program elements as appropriate, based on routine monitoring or as determined during a program audit as set forth in **Element 10**.

E. SSO Trends

The District maintains records of all SSO occurrences within its service area, including date, time, location, volume, cause, and actions taken. SSOs that occur within the District are typically caused by FOG blockages within FOG hot spots, although some SSOs are caused by foreign debris.

ELEMENT 10

SSMP PROGRAM AUDITS

ELEMENT 10
SSMP PROGRAM AUDITS

The SSMP Program Audits element of the SSMP identifies the District's procedures for conducting periodic internal audits of its SSMP.

10.1 Regulatory Requirements for SSMP Program Audits Element

The requirements for the SSMP Program Audits element of the SSMP are set forth in the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (State Water Resources Control Board Order No. 2006-0003-DWQ) and are summarized below.

As part of the SSMP, each Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in subsection D(13) of State Water Resources Control Board Order No. 2006-0003-DWQ, including identification of any deficiencies in the SSMP and steps to correct them.

10.2 Element 10 Supporting Information

There is no supporting information for Element 10.

10.3 SSMP Program Audits Discussion

The District will conduct an internal audit of its SSMP every two years. The audit will include, but may not be limited to, the following:

- An evaluation of the overall effectiveness of the SSMP, including reference to any specific SSMP elements that may need revision;
- Additional discussion of individual SSMP elements that may need revision, if any;
- A description of any significant changes to the SSMP;

- A description of any significant changes to the supporting information contained in the SSMP appendices;
- A description of any improvements or additions to the District's sewer system within the past two years; and
- Deficiencies of the SSMP, if any, and strategies proposed to correct said deficiencies.

A report summarizing the audit will be kept on file at the District.

ELEMENT 11

COMMUNICATION PROGRAM

ELEMENT 11
COMMUNICATION PROGRAM

The Communication Program element of the SSMP sets forth the District's communication strategies pertaining to the SSMP.

11.1 Regulatory Requirements for Communication Program Element

The requirements for the Communication Program element of the SSMP are set forth in the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies (State Water Resources Control Board Order No. 2006-0003-DWQ) and are summarized below.

The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public opportunity to provide input to the Enrollee as the program is developed and implemented. The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

11.2 Element 11 Supporting Information

There is no supporting information for Element 11.

11.3 Communication Program Discussion

The District's sanitary sewer system is tributary to wastewater treatment facilities that are owned and operated by City of Riverside. The District provides water supply quality data to City of Riverside on a monthly basis. Additional communications between the District and City of Riverside are made on an as-needed basis.

The District communicates with interested parties on the implementation of this SSMP, a copy of which is available for review at the District's office and on the District's website at www.rcsd.org.

The District made the first draft of its SSMP available to the public and invited comments at its Board of Directors meeting at 7:30 p.m. on August 6, 2009, thereby allowing for public input. Each individual element of the SSMP was implemented and certified by the District in accordance with

the schedule set forth in the Rubidoux Community Services District Sewer System Management Plan Development Plan and Schedule (refer to **Page i** herein).

The District made its 2015 SSMP available to the public and invited comments at its Board of Directors meeting at 4:00 p.m. on March 19, 2015, thereby allowing for public input. The 2015 SSMP was adopted by the Board of Directors on April 2, 2015.

The District made this 2020 update to its SSMP available to the public on its website on ___[date]__. The District invited comments on this SSMP at its Board of Directors meeting held _[date]____, and adopted said SSMP at said meeting.

Additionally, the SSMP, as well as the District's contact information and regular Board of Directors meeting schedule, is available on the District's website, www.rcsd.org. The District posts the agenda for its meetings on its website in advance of each meeting, at www.rcsd.org/board-of-directors.

APPENDIX A

ORGANIZATION ELEMENT SUPPORTING DOCUMENTS

Appendix A Organization Element Supporting Documents Names and Phone Numbers of District Staff				
Position	**Name**	**Office**	**Work Cell**	**Home Cell**
General Manager	Jeff Sims	(951) 512-1253		(951) 809-3308
Director of Engineering	Ted Beckwith	(951) 512-1255		(951) 314-2424
Director of Finance and Administration	Brian Laddusaw	(951) 512-1254		
Engineering Assistant	Yvonne Reyes	(951) 512-1256		
Director of Operations	Miguel Valdez	(951) 512-1262	(951) 235-6601	(951) 833-8429
Customer Service Manager	Brian Jennings	(951) 512-1257		
Utility Maintenance II	Paul Moreno		(951) 255-2384	(909) 267-8032
	Michael Gonzales		(951) 218-7196	(909) 723-2388
Systems Operator III	Lee Bugbee	(951) 512-1263	(951) 203-9932	(951)315-2091
Systems Operator II				
Systems Operator I	Eddie Martinez		(951) 323-8355	(951) 243-4813
Cross Connection/ Pretreatment Inspector	Benny Manrique	(951) 512-1264	(951) 217-1333	(951) 306-6408
Utility Maintenance I	Fausto Canal			(951) 867-1886
	Kenny Lockwood			(909) 528-4864
	Jose Lopez			(951) 214-0697
	Jeff Thieme			(951) 271-2084
	Jim Ulloa			(951) 525-0056
	Marcos Salas			(951) 367-5066
	Silvano Aguilera			(909) 771-6772
	Hunter Fike			(949) 683-8328
Account Clerk II	Johanna Garcia	(951) 512-1258		
	Martha Perez	(951) 512-1259		
Account Clerk I	Maribel Madrigal	(951) 512-1260		
Part Time Office Assistant	Claudia Rodriguez	(951) 512-1261		
Meter Reader	Rosanna Matheson	(951) 512-1265		

MAIN OFFICE (951) 684-7580

Office hours are Monday through Friday, 8:00 AM - 5:00 PM
Outside office hours, press 2 to leave a message with on-call personnel.

APPENDIX B

DISTRICT SERVICE AREA

IMAGE: Copyright Google Earth Pro 2015

LEGEND

RCSD SERVICE AREA BOUNDARY

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

KRIEGER & STEWART
Engineering Consultants
3602 University Avenue • Riverside, CA 92501
www.kriegerandstewart.com • 951 • 684 • 6900

RUBIDOUX COMMUNITY SERVICES DISTRICT

SEWER SYSTEM MANAGEMENT PLAN

DISTRICT SERVICE AREA

APPENDIX B

SCALE: 1"=2000' DATE: 01/27/15 DRAWN BY: MRN CHECKED BY: VEM W.O.: 587-42.2

587-42p2appB.dwg

APPENDIX C

RUBIDOUX COMMUNITY SERVICES DISTRICT
ORDINANCE NOS. 71 AND 105
AND
RESOLUTIONS 665, 728, AND 2018-841

RUBIDOUX COMMUNITY SERVICES DISTRICT
ORDINANCE NO. 71
REGULATING THE USE AND CONSTRUCTION OF PUBLIC SEWERAGE FACILITIES AND ESTABLISHING RULES AND REGULATIONS FOR SEWER SERVICE

March, 1973

TABLE OF CONTENTS

RUBIDOUX COMMUNITY SERVICES DISTRICT
ORDINANCE NO. ____

PART I

REGULATING THE USE AND CONSTRUCTION
OF
PUBLIC SEWERAGE FACILITIES

The Board of Directors of the Rubidoux Community Services District, do ordain as follows:

SECTION 1.0

GENERAL PROVISIONS

1.1 - ORDINANCE IN FORCE - This Ordinance shall be in full force and effect within the boundaries of the District from and after its passage and approval, as provided by law. Where pre-existing ordinances are in conflict with this Ordinance, the provisions of this Ordinance will apply.

1.2 - AUTHORITY - Under the provisions of the Government Code, State of California and other legal provisions, the Board of Directors may adopt ordinances for the purpose of exercise and effect of any of its powers or for the purposes for which it was formed.

1.3 - GENERAL POLICY - The general policy of the District is to acquire, maintain, and operate adequate sewerage systems within the District to serve the residents of the District and to insure the future development of the District.

1.4 - SCOPE - This is an ordinance regulating the construction and use of public sewerage facilities, the installation and connection of lateral sewers, and the discharge of wastes into the public sewer systems, and providing penalties for violation thereof, and establishing rules and regulations for sewer service within the District boundaries, County of Riverside, State of California.

1.4.01 - WORDS AND PHRASES - For the purpose of this Ordinance, all words used herein in the present tense shall include the

future; all words in the plural number shall include the singular number; and all words in the singular number shall include the plural number.

1.4.02 - RULING FINAL - All rulings of the District and/or General Manager shall be final, unless appealed in writing to the Board within five (5) days. When appealed, the Board's ruling shall be final.

1.5 - DEFINITIONS - Unless otherwise indicated the meaning of terms used in this Ordinance shall be as follows:

1.5.1 - APPLICANT - Applicant shall mean the person making application hereunder and shall be the owner of the premises involved or his authorized agent.

1.5.02 - BOARD - Board shall mean the Board of Directors of the Rubidoux Community Services District.

1.5.03 - CONTRACTOR - Contractor shall mean an individual, firm, corporation, partnership or association duly licensed by the State of California to perform the type of work to be done under a permit, contract or agreement.

1.5.04 - COST - Cost shall mean the cost of labor, material, transportation, supervision, engineering and all other necessary overhead expense.

1.5.05 - COUNTY - County shall mean the County of Riverside, State of California.

1.5.06 - DEVELOPER - Developer means any person who improves or develops property, within the District, to the extent that sewer service is needed or required.

1.5.07 - DISTRICT - District shall mean the Community Services District under which this Ordinance is titled.

1.5.08 - DISTRICT ENGINEER - District Engineer shall mean the Engineer appointed by the Board and acting for the District.

1.5.09 - DWELLING OR LIVING UNIT - Dwelling or living unit shall mean any residence, apartment, mobile home, habitation or other structure designed to be occupied by a person or family and requiring sewage disposal service.

1.5.10 - EFFLUENT - Wastewater or other liquid, partially or completely treated, flowing out of the treatment plant.

1.5.11 - FIXTURE UNIT EQUIVALENTS - The unit equivalent of plumbing fixtures shall be as indicated in Chapter 4, Table 4-1, of the Uniform Plumbing Code, et seq.

1.5.12 - GARBAGE - Garbage shall mean solid wastes from the preparation, cooking and dispensing of food and from the handling, storage and sale of produce.

1.5.13 - GENERAL MANAGER - General Manager shall mean the person performing the functions of Secretary-General Manager of the District.

1.5.14 - INSPECTOR - Inspector shall mean the person who shall perform the work of inspecting sewerage facilities under the jurisdiction or control of the District.

1.5.15 - ORDINANCE - Means this Ordinance of the District entitled, "Regulating the Use and Construction of Public Sewerage Facilities and Establishing Rules and Regulations for Sewer Service," as adopted by the Board of Directors of the Rubidoux Community Services District.

1.5.16 - OWNER - Owner shall mean the person holding the legal title to the property or the person in lawful possession of the property or any person exercising lawful dominion or control over the property.

1.5.17 - PERMIT - Permit shall mean any written authorization required pursuant to this Ordinance or any other regulation of the Board.

1.5.18 - PERSON - Person means a natural person, his heirs, executors, administrators or assigns and shall also include a firm, corporation, municipal or quasi-municipal corporation or governmental agency. Singular includes plural; male includes female.

1.5.19 - PUBLIC SEWER - Public sewer shall mean a sewer lying within a public right-of-way, easement, or area specified in a special permit or agreement, that is controlled by or under the jurisdiction of the District.

1.5.20 - SEWAGE TREATMENT PLANT - Sewage treatment plant shall mean any arrangement of devices and structures used for treating sewage.

1.5.21 - SEWER - Sewer shall mean a pipe or conduit for carrying sewage.

1.5.22 - SEWERAGE WORKS FACILITIES - Sewerage works shall mean all facilities for collecting, pumping, treating and disposing of sewage.

1.5.23 - SEWER LATERAL - Sewer lateral shall mean that portion of a sewer lying within a public right-of-way or easement connecting a building sewer to the main sewer.

1.5.24 - SUSPENDED SOLIDS - Suspended solids shall mean solids that either float on the surface of, or are in suspension in water, sewage or other liquids and which are removable by laboratory filtering.

1.5.25 - UNIFORM PLUMBING CODE - Uniform Plumbing Code shall be that Code as published by the International Association of Plumbing and Mechanical Officials and the latest edition published and adopted by the County of Riverside as its plumbing code.

1.5.26 - UNIFORM PLUMBING CODE DEFINITIONS - Uniform plumbing code definitions are hereby incorporated as part of the definitions of this Ordinance except as specifically modified herein.

1.5.28 - USER - User shall mean the person or persons using sewerage facilities of the District.

1.5.29 - WATERCOURSE - Watercourse shall mean a channel in which a flow of water occures, either continuously or intermittently.

1.6 - USE OF PUBLIC SEWERS

1.6.01 - USE OF PUBLIC SEWERS - Use of public sewers shall be as specified in General Regulations of the Uniform Plumbing Code, the provisions of this Ordinance and Rules and Regulations adopted pursuant to this Ordinance.

1.6.02 - OCCUPANCY PROHIBITED - No building, industrial facility or other structure, including mobile structure, shall be occupied until all Rules and Regulations of the District are complied with.

1.6.03 - SEWER REQUIRED - The owner of all houses, buildings or properties used for human occupancy, employment, recreation or other purposes situated within the District and abutting on any street in which there is or shall have been located a public sewer of District, is hereby required at his expense to connect said building directly with the sewers of the District in accordance with the provisions of this Ordinance within thirty (30) days after date of official notice by District to do so provided that said public sewer is within one hundred (100) feet of the nearest property line.

1.7 - USE OF PRIVATE SEWAGE DISPOSAL SYSTEMS

1.7.01 - NO PUBLIC SEWER - Where a public sewer is not available under the provisions of Section 1.6.03 above, the building sewer shall be connected to a private sewage disposal system complying with the provisions of the Uniform Plumbing Code, administered by Riverside County Department of Building and Safety.

1.8 - BUILDING SEWER AND CONNECTIONS TO PUBLIC SEWERAGE FACILITIES

1.8.01 - PERMIT REQUIRED - No person shall make a connection to any public sewer without first obtaining a written permit from the District and paying all required fees and connection charges. The permit application shall be supplemented by any plans, specifications, or other information considered pertinent in the judgment of the General Manager.

1.8.02 - USE OF PUBLIC SEWER - The public sewer shall not be used until the building sewer has been inspected and approved by the Department of Building and Safety of Riverside County.

1.8.03 - RULES AND REGULATIONS - The District may adopt rules and regulations with respect to making connections to public sewer system including, but not limited to, permit, connection and inspection fees, procedures for installation of services, notices, testing and other regulations.

1.8.04 - LOCAL REGULATIONS - The connection of the building sewer into the public sewer or sewer lateral shall conform to the requirements of the District, shall be under District jurisdiction, and shall be installed by a licensed and insured contractor.

1.8.05 - SEPARATE SEWERS - Reference is made to the Uniform Plumbing Code - Independent Systems.

1.8.06 - OLD BUILDING SEWERS - Old building sewers may be used in connection with new buildings only when they are found, on examination and test by the District, to meet all requirements of this Ordinance.

1.8.07 - BUILDING SEWER TOO LOW - Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such building drain shall be lifted by an approved means at owner's expense and discharged to the building sewers.

1.8.08 - ILLEGAL CONNECTIONS - No person shall make connection of roof downspouts, exterior foundation drains, areaway drains, or other sources of surface runoff or groundwater to a building sewer or building drain which in turn is connected directly or indirectly to a public sewer.

1.9 - PUBLIC SEWER CONSTRUCTION

1.9.01 - APPROVAL REQUIRED - No person shall construct or extend any public sewer without first obtaining written approval from the District and paying all fees, connection charges and furnish bonds as required. This provision does not apply to contractors constructing sewers and appurtenances under contracts entered into with the District. Design and construction of public sewer systems shall be in accordance with the District Standards.

1.9.02 - LIABILITY - The District and its officers, agents and employees shall not be answerable for any liability or injury or death to any person or damage to any property arising during or growing out of the performance of any work or construction by any applicant, contractor or owner. The applicant shall save District and its officers, agents and employees harmless from any liability imposed by law upon District or its officers, agents or employees, including all costs, expenses, fees and interest incurred in defending same, or in seeking to enforce this provision. Applicant shall be solely liable for any defects in the performance of his work or any failure which may develop therein.

1.9.03 - SUBDIVISIONS - The developer or his engineer shall contact the District to determine whether or not sewer service is feasible. He will furnish tentative tract maps showing lot sizes, street layout and elevations based upon USGS datum, points of connection to the District's sewers and water mains, possible pump stations and flow data based upon the design criteria of the District. The District Engineer will review the tract map and determine whether sewer service is feasible and whether any oversizing will be required to facilitate extension of the District's system. In addition the developer shall be subject to all subdivision policies adopted by the County of Riverside.

1.9.04 - MAIN EXTENSIONS OTHER THAN SUBDIVISIONS - Main extensions to serve one or more parcels of land may be made by the owner or owners of said land. The owner or his Engineer shall follow the same procedure for main extensions as outlined for subdivisions in Section 1.9.03 above. In lieu of this procedure,

the owner or owners may request the District to make the necessary investigation, prepare plans and have the work constructed. The owner shall advance all necessary funds for the investigation, plan preparation and construction prior to the District commencing any of the work described above.

1.9.05 - MAIN SERVI(CHARGE - When persons owning land to which sewer mains are adjacent in streets or rights-of-way (which mains have been installed by the District or an applicant for service) make application for sewer service to lot, parcel, tract or subdivision, they shall reimburse the District or applicant for their proportionate share of the cost of said main. Their proportionate share of said cost shall be a cost per front foot for benefited land, as set forth in the application and so determined by the District.

1.9.06 - PAYMENT OF COST OF OVERSIZED MAINS - In the event the District elects to install sewers of greater size than, in the opinion of the District, shall be adequate to supply any new subdivision with sewer service, the owner of the proposed subdivision shall not be required to pay more than the cost of mains which, in the opinion of the District, are adequate to supply such subdivision with sewer service. The District will pay for the additional cost of materials for oversize, but no other adjustment of the cost of installation shall be made.

1.9.07 - REFUNDS - When sewer extensions are made and paid for by an applicant and said main extension shall be of benefit to another person in the future, said applicant may enter into a refund agreement with the District. Said refund agreement shall provide for a refund payment from main service charges collected by the District for service connection to a main, paid for by new applicant. Said refund shall be computed on the basis of actual cost to the person making the original main extension per front foot benefited for which the main service charge is collected. All refund agreements shall become null and void ten years from the date first written.

1.9.08 - PLANS AND SPECIFICATIONS - The developer, his engineer or other person proposing the construction of public sewers within the District will prepare plans and specifications for construction of said facilities in accordance with the District's "Design Criteria and Technical Specifications." Plans and specifications along with tract map indicating easements shall be submitted to the District Engineer for approval. This submittal will not relieve the developer or other persons constructing public sewerage facilities from compliance with other requirements of State and local agencies.

1.9.09 - PLAN CHECKING - The District Engineer shall review the sewer plans for compliance with its requirements and shall approve such plans after the following conditions have been met:

1. The required plan checking fee has been paid by applicant.

2. The District Engineer has certified the plans as complying with District Rules and Regulations and as being in conformance with master sewerage plans for the area.

1.9.10 - BONDING OF IMPROVEMENTS - A Faithful Performance Bond, when required, shall be furnished by the Owner to the District. The bond shall be for not less than one hundred (100) percent of the construction estimate as approved by the Engineer. The bond shall guarantee the completion of construction of those sewerage facilities proposed. The bond shall be accompanied by an agreement between the owner and the District. The bond and agreement shall bear the same date.

1. When Bond Required - A performance bond will be required when any one (1) of the following conditions exist:

   a. The Owner or developer has requested a letter to be sent to the State Real Estate Commission for issuance of final Real Estate report.

   b. Future improvements to the sewerage system will be dependent on portions of the system for which the construction permit application has been made.

2. Form Bond and Agreement - The bond and agreement forms shall be as approved by the District.

1.9.11 - CONSTRUCTION - Developer or other person shall construct facilities in accordance with the approved plans and specifications and construction methods as set forth by the District Rules and Regulations. A five-day advanced notice to start construction is required along with approval for construction plans and specifications. Construction of public sewers or sewer laterals as defined by this Ordinance shall be performed by a person or contractor duly licensed by the State of California.

1.9.12 - INSPECTIONS - All public sewer construction work shall be inspected by a representative of the District or Inspector

acting for the District to insure compliance with all requirements of the District. No construction shall be covered at any point until it has been inspected. No work shall commence until the required inspection fee has been paid.

1.9.13 - SERVICE REFUSED - The District may refuse service for non-compliance with its Ordinance, Rules and Regulations, or Service Agreement.

1.9.14 - ACCEPTANCE OF FACILITIES - Before the District will accept sewer and appurtenances in its maintained system, the developer or his Engineer or agency shall furnish:

1. Recorded Notice of Completion in evidence that the work has been completed and paid for in accordance with approved plans and specifications.

2. One set of reproducible as-built plans, plus one set of prints, showing exact locations, depths and descriptions of all facilities.

3. Original recorded easement documents for sewer lines not in public property or not within a tract boundary.

4. Original recorded Quitclaim Deed transferring title of facilities to the District.

5. Letter from District Engineer certifying that facilities were installed according to plans and specifications.

6. Supply operating and maintenance manuals for all mechanical equipment.

1.9.15 - EASEMENTS - Where it is necessary to cross private property to achieve construction or to provide access for future sewers serving adjacent or upstream tributary land, the following procedure shall be used in the preparation, review and processing of the easements and easement documents.

1. Developer, or owner, shall prepare easement documents with description for all sewer facilities that do not lie within public roads, are outside of recorded tracts and/or are on private property. The easements shall be delineated in the plans and the recording data shall be shown on the as-built plans. All district easements shall be of not less than ten feet (10') in width.

2. The District Engineer shall review easement documents with descriptions as part of plan review. The developer shall have them executed, notarized and submit completed documents to the District for recording.

1.10 - USE OF PUBLIC SEWER SYSTEM

1.10.01 - USE OF SYSTEMS - The Board may adopt rules and regulations on permissible discharges to the sewer system; providing for the control of prohibited wastes; grease, oil and sand interceptors; maintenance of flow equalizing systems; swimming pool discharges; and tests. The determination of a permissible discharge may require an acceptable analysis or tests from the discharges as evidence that the discharged wastes will not adversely affect the sewer system and/or treatment facilities.

1.11 - PERMITS AND FEES

1.11.01 - PERMIT REQUIRED - No person shall uncover, make any connection with or opening into, use, alter, or disturb any public sewer or perform any work on any public sewer and lateral sewer without first obtaining a written permit from District.

1.11.02 - PERMIT PROCEDURE - The Board shall, by rules and regulations, adopt procedures for application and approval of permits regulating the use and construction of the sewer facilities. Permits shall specifically state the obligations and liability for costs of the permittee.

1.11.03 - STREET EXCAVATION PERMIT - A permit must be secured from the County, or any other agency having jurisdiction thereover, by the owners or contractors intending to excavate in a public street for the purpose of installing sewers or making lateral connections.

1.11.04 - CONNECTION PERMITS - The connection permits will not be issued until the County Road Department Excavation Permit and/or State Highway Encroachment Permit, as required, is issued. The connection permit will not be issued until the required set of prints has been submitted and all fees paid.

1.11.05 - FEE REQUIREMENTS - The Board shall adopt, by Resolution, fees for the issuance of permits and for special services, including but not limited to, inspection, construction, plan checking, preparing special studies, and may further require fees for annexations, connections and use of sewerage facilities.

1.12 - VIOLATIONS, ENFORCEMENTS AND POLICING

1.12.01 - VIOLATION UNLAWFUL - Following the effective date of this Ordinance, it shall be unlawful for any person to connect to, construct or install or provide, maintain or use any other means of sewage disposal from any building in the area served with sewers by said District except by connection to a public sewer in the manner as in this Ordinance provided, except as herein otherwise provided.

1.12.02 - PROTECTION FROM DAMAGE - No person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment which is a part of District sewerage facilities. Any person violating this provision shall be subject to the penalties provided by law.

1.12.03 - INVESTIGATION POWERS - The officers, inspectors, manager, and any duly authorized employees of District shall carry evidence establishing his position as an authorized representative of District and upon exhibiting the proper credentials and identification, shall be permitted to enter in and upon any and all buildings, industrial facilities and properties for the purpose of inspection, re-inspection, observation, measurement, sampling, testing or otherwise performing such duties as may be necessary in the enforcement of the provisions of this Ordinance and Rules and Regulations of the District.

1.12.04 - VIOLATION - Any person found to be violating any provision of this or any other Ordinance, Rule or Regulation of the District shall be served by the District or authorized representative with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. Said time limit shall be not less than two, nor more than seven working days. The offender shall, within the period of time stated in such notice, permanently cease all violations. All persons shall be held strictly responsible for any and all acts of agents or employees done under the provisions of this or any other Ordinance, Rule or Regulation of the District. Upon being notified by the District or authorized representative of any violation of this Ordinance, the person having charge of said work shall immediately correct the same.

1.12.05 - PUBLIC NUISANCE - Continued habitation of any building mobile structure, or continued operation of any industrial facility in violation of the provisions of this or any other ordinance, rule or regulation of the District is hereby declared to

be a public nuisance. District may cause proceedings to be brought for the abatement of the occupancy of the building or industrial facility during the period of such violation.

1.12.06 - DISCONNECTION - As an alternative method of enforcing the provisions of this or any other ordinance, rule or regulation of the District, the District shall have the power to disconnect the user from the sewerage facilities of the District. Upon disconnection, the District shall estimate the cost of disconnection from and reconnection to the system and such user shall deposit the cost as estimated of disconnection before such user is reconnected to the system. The District shall refund any part of the deposit remaining after payment of all costs of disconnection and reconnections. The District shall give seven (7) days written notice to the occupant or user of the premises or property that said system will be disconnected, unless the Riverside County Health Department determines that an emergency situation exists that endangers the health of people within the area, in which case written notice of the disconnection need not be given. Where these is a disconnection, a "Notice of Disconnection" shall be posted on the property.

1.12.07 - ABATEMENT - During the period of such disconnection, habitation of such premises by human beings shall constitute a public nuisance, whereupon the District shall cause proceedings to be brought for the abatement of the occupancy of said premises by human beings during the period of such disconnection. In such event, and as a condition of reconnection, there is to be paid to the District a reasonable attorney's fee and costs of suit arising in said action.

1.12.08 - MEANS OF ENFORCEMENT ONLY - District hereby declares that the foregoing procedures are established as a means of enforcement of the terms and conditions of its Ordinances, Rules and Regulations, and not as a penalty.

1.12.09 - LIABILITY FOR VIOLATION - Any person violating any of the provisions of Ordinances, Rules and Regulations of the District, shall become liable to the District for any expense, loss, or damage occasioned by the District by reason of such violation.

1.12.10 - RELIEF ON APPLICATION - When any person, by reason of special circumstances, is of the opinion that any provision of this Ordinance, Rules or Regulations of the District is unjust or inequitable as applied to his premises, he may make written application to the Board stating the special circumstances, citing the provision complained of, and requesting suspension or modification of that provision as applied to his premises.

If such application is approved, the Board may, by resolution, suspend or modify the provision complained of, as applied to such premises, to be effective as of the date of the application and continuing during the period of the special circumstances.

1.12.11 - RELIEF ON OWN MOTION - The Board may, on its own motion, find that a reason of special circumstances of any provision of its Ordinances, Rules or Regulations, should be suspended or modified as applied to a particular premise and may, by resolution, order such suspension or modification for such premises during the period of such special circumstances or any part thereof.

1.12.12 - VIOLATIONS AND USE OF CITATION

1. General penalty for violations. Any person violating any of the provisions of this Ordinance shall be guilty of a misdemeanor. Any person convicted for a violation of any of the provisions of this Ordinance, unless otherwise specifically provided in this Ordinance, shall be punishable by a fine of not more than five hundred dollars ($500) or by imprisonment in the County Jail for a period of not more than six (6) months or by both such fine and imprisonment.

2. Continuing violations. Each person shall be guilty of a separate offense for each and every day during any portion of which any violation of any provision of this Ordinance is committed, continued, or permitted by such person and shall be punishable accordingly.

3. Acts including Causing, Aiding and Abetting. Whenever in this Ordinance, any act or omission is made unlawful, it shall include causing, permitting, aiding or abetting such act or omission.

4. Use of citation.

   a. If any person is arrested for a violation of any provision of this Ordinance, violation of which is punishable as a misdemeanor, and such person is not immediately taken before a magistrate, as more fully set forth in the Penal Code of California, the arresting officer shall prepare, in duplicate, a written notice to appear in Court, containing the

name and address of such person, the offense charged, and the time and place where and when such person shall appear in Court.

b. The time specified in the notice to appear, must be at least five days after such arrest.

c. The place specified in the notice to appear, shall be the court of a magistrate before whom the person would be taken if the requirement of taking an arrested person before a magistrate were complied with, or shall be an officer authorized by such court to receive a deposit of bail.

d. The officer shall deliver one copy of the notice to appear, to the arrested person, and the arrested person in order to secure release must give his written promise to appear in court by signing the duplicate notice which shall be retained by the officer. Thereupon the arresting officer shall forthwith release the person arrested from custody.

e. The officer shall, as soon as practicable, file the duplicate notice with the magistrate specified therein. Thereupon the magistrate shall fix the amount of bail which in his judgement, in accordance with the provisions of Section 1275 of the Penal Code, will be reasonable and sufficient for the appearance of the defendant and shall endorse upon the notice a statement signed by him in the form set forth in Section 815a of the Penal Code. The defendant may, prior to the date upon which he promised to appear in court, deposit with the magistrate the amount of bail thus set. Thereafter, at the time when the case is called for arraignment before the magistrate, if the defendant shall not appear, either in person or by counsel, the magistrate may declare the bail forfeited, and may in this discretion order that no further proceeding shall be had in such case.

Upon making of such order that no further proceedings be had, all sums deposited as bail shall forthwith be paid into the County Treasury for distribution pursuant to Section 1463 of the Penal Code.

f. No warrant shall issue on such charge for the arrest of a person who has given such written promise to appear in court, unless and until he has violated such promise or has failed to deposit bail, to appear for arraignment, trial or judgment, or to comply with the terms and provisions of the judgment, as required by law.

g. When a person signs a written promise to appear at the time and place specified in the written promise to appear and has not posted bail as provided in Section 853.6 of the Penal Code, the magistrate shall issue and have delivered for execution a warrant for his arrest, within twenty days after his failure to appear as promised, or if such person promises to appear before an officer authorized to accept bail other than the magistrate and fails to do so on or before the date which he promised to appear, then, within twenty days after the delivery of such written promise to appear by the officer to the magistrate having jurisdiction over the offense.

h. Nothing herein contained shall be deemed or construed to require any arresting officer to issue a citation instead of taking the person arrested before a magistrate as otherwise provided by law.

SECTION 2.0

CRITERIA FOR DESIGN OF SEWERS, SEWAGE LIFT STATIONS, AND APPURTENANCES

The necessary criteria for design of sewers, sewage lift stations and appurtenances, shall be adopted by resolution of the Board of Directors as necessity dictates and a copy of the subject resolutions as adopted shall be on file in the office of the District and available for public inspections.

SECTION 3.0

TECHNICAL SPECIFICATIONS

The technical specifications describing material and workmanship required in the construction of sanitary sewers and appurtenances shall be as recommended by the District Engineer and approved by the Board of Directors. Copies of technical specifications shall be on file in the District office and available for public inspection.

SECTION 4.0

STANDARD FORMS AND DOCUMENTS

Necessary forms and documents to facilitate the business and activity of the District shall be adopted by the District as necessity dictates. Copies of the forms and documents as adopted shall be on file in the office of the District and shall be available for public inspection.

RUBIDOUX COMMUNITY SERVICES DISTRICT
ORDINANCE NO. ___

PART II

ESTABLISHING RULES AND REGULATIONS
FOR
SEWER SERVICE

SECTION 1.0

GENERAL USE REGULATIONS

1.1 - GENERAL - The construction of building sewers and connection to the public sewer system shall be governed by the Uniform Plumbing Code except as herein modified.

1.2 - INSTALLATION COSTS - All costs and expenses incident to the installation and connection of the building sewer shall be borne by the owner. The owner shall indemnify the District occasioned by the installation of the building sewer.

1.3 - NOTIFICATION OF DISTRICT - The applicant for the building sewer permit shall notify the District when the building sewer is ready for inspection and connection to the public sewer. The connection shall be made under the supervision of the District General Manager or his representative in accordance with Section 1.8.02 of Part I of this Ordinance.

1.4 - EXCAVATIONS - All excavations for building sewer installations shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the District.

1.5 - TESTING - Connections to the District's lateral sewers or wyes shall be tested and inspected in the presence of the District's General Manager or his representative. The labor and materials for testing shall be furnished by the person constructing the sewer. All lines showing excessive leakage shall be repaired or replaced at the expense of the person doing the work and shall be done at the direction and to the satisfaction of the General Manager.

1.6 - TYPES OF WASTE PROHIBITED - No person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewer.

1.6.01 - FLAMMABLE, TOXIC OR EXPLOSIVE SUBSTANCES - Any gasoline, benzene, naptha, fuel oil, or other flammable, toxic or explosive liquid, solid and/or gas.

1.6.02 - TOXIC OR POISONOUS SUBSTANCES - Any waters containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with any other wastes, to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the sewage treatment plant, including but not limited to cyanides in excess of two (2) mg/l as CN in the wastes as discharged to the public sewer.

1.6.03 - pH RANGE AND CORROSIVE PROPERTIES - Any waters or wastes having a pH lower than 5.5 or higher than 9.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works.

1.6.04 - SOLID OR VISCOUS SUBSTANCES - Solid or viscous substances in quantities, or of such size, capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewerage works such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails, and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.

1.6.05 - HIGH TEMPERATURES LIMIT - Any liquid or vapor having a temperature higher than one hundred fifty (150) °F (65°C) at the building sewer.

1.6.06 - FATS, WAXES, GREASE OR OILS - Any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of one hundred (100) mg/l or containing substances that may solidify or become viscous at temperatures between thirty-two (32) and one hundred fifty (150) °F (0 and 65).

1.6.07 - HEAVY METALS OR EXCESSIVE CHLORINE DEMAND - Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances, or wastes exerting an excessive chlorine requirement, to such degree that any such material received in the composite sewage at the sewage treatment works exceeds the limits established for such materials.

1.6.08 - COLOR - Any waters or wastes containing color in sufficient quantity which may cause the District a problem in meeting the limits established by the Federal, State and other public agency of jurisdiction for discharge to the receiving stream.

1.6.09 - PHENOLS OR ODOR- OR TASTE-PRODUCING SUBSTANCES - Any waters or wastes containing phenols or other taste or odor-producing substances in such concentrations exceeding limits that may be established by the District as necessary after treatment of the composite sewage, to meet the requirements of the Federal, State, or other public agencies of jurisdiction for such discharge to the receiving waters.

1.6.10 - SUSPENDED OR DISSOLVED SOLIDS - Materials that exert or cause unusual concentrations of inert suspended solids (such as, but not limited to: Fullers earth, lime slurries, and lime residues) or of dissolved solids (such as, but not limited to, sodium-chloride and sodium-sulfate).

1.6.11 - RADIOACTIVE WASTES - Any radioactive wastes or isotopes of such half-life or concentration as may exceed the limits set by Federal or State regulations.

1.6.12 - UNTREATABLE WASTES - Waters or wastes containing substances that are not amenable to treatment or reduction by the sewage treatment processes employed, or are amenable to treatment only to such a degree that the sewage treatment plant effluent cannot meet the requirements of agencies having jurisdiction over discharge to the receiving waters.

1.6.13 - PUMPINGS FROM SEPTIC TANKS, CESSPOOLS, LEACH PITS, HOLDING TANKS AND CHEMICAL TOILETS - Pumpings from chemical toilets, septic tanks, holding tanks, and cesspools or leach pits, unless terms and conditions of the District are accepted and written permission granted.

1.6.14 - SURFACE RUNOFF OR GROUNDWATER - Surface runoff or groundwater as indicated in Section 1.8.08 of Part I of this Ordinance.

1.6.15 - ODORIFEROUS SUBSTANCES - Any compound that will produce noxious odor in the sewers or sewage treatment plant.

1.6.16 - DAMAGING OR HEALTH MENACING SUBSTANCES - Any material or quantity of material that will cause significant damage to any part of the sewerage system or will cause abnormal maintenance or operation costs of any part of the sewerage system or become a nuisance or menace to public health.

1.6.17 - INDUSTRIAL WASTEWATER - Any person desiring to discharge industrial wastewater into a public sewer of the District will be required on request of the District to submit a letter to the General Manager presenting information as to the kind and amount of industrial wastewater produced and discharged by the industrial operations producing the wastewater. No industrial wastewater shall be permitted into the sewer system that will cause the District effluent discharge from the sewage treatment facilities to exceed the concentration limits set by the Regional Water Quality Control Board having jurisdiction in accordance with their latest order of discharge requirements.

No industrial wastewater shall be discharged to the public sewer system that exceeds the following chemical, physical and/or bacteriological requirements, including but not limited to:

a. Methylene Blue Active Substance concentration of 1.0 mg/l.

b. Dissolved sulfide concentration of 0.1 mg/l.

c. Five day Biochemical Oxygen Demand of 700 mg/l.

d. Total dissolved solids of 500 mg/l plus the yearly average dissolved solids concentration in the supply water.

e. Sodium-ion of 100 mg/l plus yearly average sodium-ion concentration in the supply water.

f. Chloride-ion of 100 mg/l plus yearly average of the chloride-ion concentration in the supply water.

1.7 - CONTROL OF PROHIBITED WASTES - If any waters or wastes are discharged, or are proposed to be discharged to the public sewers, that contain the substances or possess the characteristics enumerated in Section 1.6, Part I of this Ordinance and which, in the judgment of the General Manager or District Representative, may have a deleterious effect upon the sewerage works, processes, equipment or receiving waters, or that otherwise create a hazard to life or constitute a public nuisance, the District may:

1.7.01 - Invoke Section 1.12 of Part I of this Ordinance;

1.7.02 - Require pretreatment to an acceptable condition for discharge to the public sewers;

1.7.03 - Require control over the quantities and rates of discharge; and/or,

1.7.04 - Require payment to cover the added cost of handling and treating the wastes not covered by existing taxes or sewer charges.

1.7.05 - If the pretreatment or equalization of waste flows is required, the design and installation of the plants and equipment shall be subject to the review and approval of the District and subject to the requirements of all applicable codes, ordinances, laws and regulations.

1.8 - MAINTENANCE OF FLOW EQUALIZING SYSTEM - Where preliminary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.

1.9 - TESTS AND MEASUREMENTS - All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in this Ordinance shall be determined in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association.

1.10 - SWIMMING POOLS - It shall be unlawful for any person to discharge the contents of a swimming pool into a sanitary sewer except in the manner specified herein. The rate of out-flow shall not exceed one hundred (100) gallons per minute. Each swimming pool discharging into a sanitary sewer shall be equipped with a fixed air-gap, approved by the Riverside County Department of Building and Safety, to preclude any possibility of a backflow of sewage into the swimming pool or piping system.

1.11 - PUMPINGS FROM CHEMICAL TOILETS, SEPTIC TANKS, HOLDING TANKS, AND CESSPOOLS OR LEACH PITS - The discharge of these waters to the sewerage works of the District shall only be permitted as hereinafter provided.

1.11.01 - A permit must be obtained from the District and the applicable fees paid as specified in Section 5 of Part II of this Ordinance.

1.11.02 - Pumpings shall be discharged into the sewerage works to provide maximum dilution and at a location specified by the District General Manager. The discharge shall be under the continuous supervision of a District employee.

1.11.03 - The discharge to the sewerage works shall not exceed a flow rate of 50 gallons per minute.

1.11.04 - The total septic tank and cesspool pumpings discharged to the sewerage works of the District shall not exceed 3,000 gallons in any twenty-four (24) hour period.

1.11.05 - Preference shall be given to acceptance of waste generated within District boundaries and those from outside the District will be accepted only when capacity to accept wastes has not been exceeded.

1.12 - SPECIAL RESTRICTIONS - SALINE WASTES - It shall be unlawful for any person or persons to install, replace, enlarge, use or maintain a facility which discharges to the District's sewerage works saline wastes which will cause the District's wastewater treatment effluent to exceed the current limits set by the Regional Water Quality Control Board. Such apparatus includes but is not liminted to certain zeolite and resinous ion-exchange softeners or demineralizers and other like devices. The above restriction is subject to the following conditions:

a. Use of self-regenerating water conditioning units shall not be permitted within the District after the adoption of this Ordinance except for those presently installed and in use and which meet the criteria set forth below. Old self-regenerating units may be repaired; however, they may not be replaced by a similar new unit.

b. Use of existing self-regenerating water conditioning units may be continued provided the equipment does not contain in excess of four (4) cubic feet of exchange media.

c. No water conditioning equipment installed, replaced, enlarged, used or maintained (including establishments for regeneration of water softening apparatus) may discharge its regeneration wastes to the sewer if (1) the equipment utilizes in its regeneration process more than 0.375 lbs. of salt per kilograin of hardness to be removed, or (2) the equipment contains in excess of cubic feet of minerals or (3) the equipment is rated to remove more than 240 kilograins of hardness per day at salt dosage of 0.25 lbs. of salt per kilograin of hardness. Multiple units installed to supply water to the same points of use shall be considered as a single apparatus for the purposes of this section.

d. Water conditioning equipment which condition replaceable resin containers which are regenerated offsite may be used within the District.

e. No equipment so restricted nor any establishment for regeneration of water softener apparatus shall discharge any of the sodium and chloride to the sewer which results from such operations, except as provided for in Section 1.12.10 "Relief on Application" of Part I of this Ordinance.

Within ninety (90) days after adoption of this Ordinance any person desiring to install, enlarge, replace, maintain or use any water treating apparatus controlled by the restrictions in this Section shall submit to the General Manager a letter describing the existing or intended installation or alteration and describing the arrangements which will serve to prevent the improper discharge of the waste. Within ninety (90) days the General Manager shall reply, stating whether or not the disposal arrangements are adequate to insure against the addition of mineral salts to the sewage. No person shall install, replace, enlarge, maintain or use a water treating apparatus of a kind restricted in this Section after one hundred eighty (180) days following adoption of this Ordinance unless he has a letter from the General Manager approving as satisfactory the proposed arrangements for disposal of wastewater, except that the General Manager shall grant such reasonable extension of time in excess of one hundred and eighty (180) day period as may be necessary for plant alterations, changes in process or design, acquisition, manufacture, installation and testing of the apparatus or other facilities which additional time the General Manager agrees is required to effect compliance. Such appartus may be operated only so long as the method of wastewater disposal is as approved by the General Manager. Thereafter alteration in the method of disposal may be made only after communication to the General Manager and receipt of a letter of approval as in the first instance.

f. A person installing or operating water-treating apparatus of the kind restricted in this Section shall make such apparatus accessible to the General Manager for inspection, and shall make such reports as the General Manager may reasonably request.

SECTION 2.0

APPLICATION FOR CONNECTION TO SEWER SYSTEM

2.1 - APPLICATION FOR CONNECTION TO SEWER SYSTEM - A property owner or his agent shall make application for connection to the sewer system. Applicant shall give a description of the character of the work proposed to be done, the location, ownership, occupancy, use of the premises to be served, and the name and address of the person who shall make the connection. The District may require plans, specifications, drawings and such other information as may be deemed necessary to insure compliance with District's rules and regulations.

If the District determines that the plans, specifications, drawings, descriptions, or information furnished by the Applicant are in compliance with the District's Ordinance, he shall issue the permit applied for upon payment of the required fees pursuant to Section 5 of Part II of this Ordinance.

2.2 - COMPLIANCE WITH PERMIT - After approval of the application, evidenced by the issuance of a permit, no change shall be made in the location of the sewer, the grade, materials, or other details from those described in the permit or as shown on the plans and specifications for which the permit is issued except with written permission from the District's authorized representatives.

2.3 - AGREEMENT - The applicant's signature on an application for any permit shall constitute an agreement to comply with all of the provisions, terms, and requirements of this Ordinance and other rules and regulations of the District, and with the plans and specifications he has filed with the application, if any, together with such corrections or modifications as may be made or permitted by the District. Such agreement shall be binding upon the applicant and may be altered only by the District upon the written request for the alteration from the applicant.

2.4 - ALL WORK TO BE INSPECTED - All sewer systems constructed must be inspected by the District or by an inspector acting for the District to insure compliance with all requirements of the District. Twenty-four (24) hour notice shall be given for inspection prior to required inspection.

2.5 - SIZE AND LOCATION - The District reserves the right to determine the size of sewer laterals and their location with respect to the boundaries of the premises to be served. The laying of owner's building sewer point of connection shall not be done until the location of the sewer lateral has been determined and/or approved by the District.

2.6 - RESIDENTIAL, COMMERICAL, AND INDUSTRIAL SEWER SERVICE CONNECTION - It shall be unlawful to maintain a connection except in conformity with the Uniform Plumbing Code and when property provided with sewer connection is divided, each sewer connection shall be considered as belonging to the lot or parcel of land which it directly enters.

2.7 - CONDEMNED WORK - When any work has been inspected and the work condemned and no certification of satisfactory completion given, a written notice to that effect shall be given instructing the owner of the premises, or the agent of such owner, to repair the sewer or other work authorized by the permit in accordance with this Ordinance.

2.8 - LIABILITY OF COSTS - Both the owner and the person making the connection shall be liable to the District for all fees, costs, and expenses incident to the installation and connection of any sewer or other work for which a permit shall be issued. The owner shall indemnify the District from any loss or damage that may directly or indirectly be occasioned by the work.

2.9 - SEWERS OUTSIDE DISTRICT - Permission shall not be granted to connect any lot or parcel of land outside District to any public sewer in or under the jurisdiction of the District unless an agreement therefor is obtained. The applicant shall first enter into an agreement in writing whereby he shall bind himself, his heirs, successors, and assigns to abide by all District rules and regulations in regard to the manner in which such sewer shall be used, the manner of connecting therewith, and the plumbing and drainage in connection therewith and also shall agree to pay all fees required for securing the permit and a monthly or annual sewer service fee in the amount set by the District for the privilege of using such sewer.

SECTION 3.0

NOTICES

3.1 - NOTICES TO OWNER OR USERS - Notice from the District to an owner or user will normally be given in writing and either delivered or mailed to him at his last known address. Where conditions warrant, and in emergencies, the District may resort to notification either by telephone or messenger.

3.2 - NOTICES FROM OWNER OR USER - Notice from the owner or user to the District may be given by him or his authorized representative in writing at the following places or persons:

3.2.01 - Operating office of the District,

3.2.02 - General Manager for the District.

SECTION 4.0

DISCONTINUANCE OF SERVICE

4.1 - SERVICE REFUSED OR DISCONTINUED - Service may be refused or discontinued to any premise for the following reasons:

4.1.01 - Where apparatus or appliances are in use that might endanger or disturb the service to other users;

4.1.02 - For non-compliance with this Ordinance or any resolution, ordinance or regulation of the District relating to the sewer service;

4.1.03 - To protect the District facilities.

4.2 - IMPOSITION OF LAW - In addition to discontinuation of sewer service, violation of District regulations or ordinances shall be a misdemeanor punishable by law.

SECTION 5.0

SCHEDULE OF FEES

5.1 - CONNECTION TO SEWER SYSTEM

5.1.01 - PERMIT AND INSPECTION FEE - For each connection of a building sewer to the public sewer system, there shall be a combined permit and inspection fee of Twenty-five dollars ($25).

5.2 - MAIN SEWER CONNECTION CHARGE - A main sewer connection charge shall be collected at the time of connection to sewer system, in addition to fees herein before set forth. The main sewer connection charge shall constitute a buying-in charge for areas annexed to the District after formation of the original District and/or as a charge for major improvements to the sewerage system.

5.2.01 - MAIN SEWER CONNECTION CHARGE SCHEDULE - The main sewer connection charge as set forth hereafter shall apply to land within the District.

For the calender year 1973 the main sewer connection charge for a single family living unit shall be One Hundred Fifty Dollars ($150).

The main sewer connection charge for other residential, commerical and industrial establishments shall be One Hundred Fifty Dollars ($150) plus Seven Dollars and Fifty Cents ($7.50) for each fixture unit* in excess of twenty.

5.2.02 - Main sewer connection charges shall be reviewed each year and adjusted to conform to existing financial conditions of the District.

5.3 - PLAN CHECKING

5.3.01 - PLAN CHECKING REQUIRED - Plans for sewerage facilities to be designed and constructed by any person or firm other than District, where said facilities are to be conveyed to the District, shall submit the plans and specifications and all other documents required to the District for plan checking with the required plan checking fee as herein specified. The application for plan checking shall be made on the standard form furnished by the District.

*Fixture unit shall be as defined in Chapter 1 of the Uniform Plumbing Code.

5.3.02 - PLAN CH .KING FEE SCHEDULE -

a. Main Line Sewer, including manholes, cleanouts, tees and laterals.

Quantity	Checking Fee
1,000' or less	$70 minimum
1,001' - 3,000'	$70/$.06/foot over 1,000 feet
3,001' - 8,000'	$190/$.04/foot over 3,000 feet
8,001' and up	$390/$.02/foot over 8,000 feet

b. Package Sewage Lift Stations — $200 each

c. Sewage Treatment Plants and Special Designed Lift Stations — 1.0% of Construction Cost

d. Rechecking - Rechecking of plans after plans have been approved, on behalf of District, due to design or quantity changes or modifications in specifications shall be performed on a cost basis. Rechecking fee shall be paid prior to approval of changes.

5.4 - INSPECTION

5.4.01 - INSPECTION REQUIRED - Prior to the commencement of construction of sewerage facilities for which plans have been approved, the owner or his agent shall make an application for construction permit to the District. The fees required for inspection shall accompany said application. The application for construction permit shall be made on the standard form furnished by the District.

5.4.02 - INSPECTION FEE SCHEDULE -

a. Main Line Sewer, including manholes, cleanouts, tees and laterals.

Quantity	Inspection Fee
1' to 200'	$100 minimum
201' - 1,000'	$100 plus $.40/foot over 200 feet
Over 1,000'	$420 plus $.27/foot over 1,000 feet

b. Sewage Lift Stations & Sewage Treatment Plant — 3.5% of Construction Cost

c. Re-inspection - Where extensive re-inspection is required due to test failures, damage, litigation or other causes beyond normal construction, the cost of re-inspection shall be paid by owner at the actual cost incurred.

d. Saturday, Sunday, Holiday and Overtime Inspection - Inspection for work on a Saturday, Sunday and holiday will be provided if inspectors are available and one week advance notification is given. All costs for Saturday, Sunday, holiday and overtime inspection above straight time salary cost shall be paid by permittee in addition to above inspection fees.

e. Administrative Fee - In addition to the plan checking and inspection fees provided above, each applicant shall pay an administrative fee of $15.

5.5 - FEE FOR DISCHARGE OF PUMPINGS FROM CHEMICAL TOILETS, SEPTIC TANKS, HOLDINGS TANKS, AND CESSPOOLS OR LEACH PITS TO SEWERAGE WORKS - Prior to discharging pumpings to the District's sewerage works, the discharger shall make an application and pay the application fees as set forth in the following fee schedule:

5.5.01 - FEE SCHEDULE -

Inside District Boundaries:

a. WHEN SEWER CONNECTION IS AVAILABLE - No fee shall be required. Prior to issuance of permit to discharge pump wastes, the owners shall secure a permit for connection to sewer system as set forth in Section 5.1 of this Part of the Ordinance and shall further pay any main sewer connection fee applicable to the property as set forth in Section 5.2 of this Part of this Ordinance. The owner of the property shall further agree to make said connection for which permit is issued, within thirty (30) days. In lieu of securing permits as provided for in Section 5.1 and 5.2 of this Part of this Ordinance, the owner may pay the fee for discharge of pumpings as set forth for "Outside District Boundaries."

b. WHEN SEWER CONNECTION IS NOT AVAILABLE - The fee shall be five dollars ($5.00) per load, not to exceed 1,500 gallons.

Outside District Boundaries:

a. The fee for discharge of septic tank and cesspool pumpings to the sewerage facilities of the District shall be $25 per load, not to exceed 1,500 gallons, and subject to the provisions of Section 1.11.05 of this Part of this Ordinance.

SECTION 6.0

CRITERIA FOR DESIGN TECHNICAL SPECIFICATIONS AND STANDARD DRAWINGS

6.1 - ADOPTION - Criteria for design, technical specifications and standard drawings for the construction of sewerage facilities shall be as recommended by the District Engineer and approved by the Board of Directors of the District. All documents shall be on file in the office of the District.

SECTION 7.0

VALIDITY

This Ordinance and the various parts, sections and clauses thereof are hereby declared to be severable. If any part, sentence, paragraph, section or clause is adjudged unconstitutional or invalid, the remainder of this Ordinance shall not be affected thereby. The Board of Directors of the Rubidoux Community Services District, State of California, hereby declares that it would have passed this Ordinance and each part thereof regardless of the fact that one or more parts thereof be declared unconstitutional or invalid.

RUBIDOUX COMMUNITY SERVICES DISTRICT
ORDINANCE NO. 105

AN ORDINANCE OF THE RUBIDOUX COMMUNITY SERVICES DISTRICT, REPEALING ORDINANCE NO. 101 IN ITS ENTIRETY AND ENACTING A NEW ORDINANCE RELATING TO THE DISCHARGE OF WASTES INTO THE SEWER SYSTEM OF THE RUBIDOUX COMMUNITY SERVICES DISTRICT

The Board of Directors of the Rubidoux Community Services District does ordain as follows:

Section 1: Ordinance No. 101 of the Rubidoux Community Services District is hereby repealed in its entirety.

Section 2: Ordinance No. 105 is hereby enacted to read in words and figures as follows:

ORDINANCE NO. 105

DISCHARGE OF WASTES INTO THE PUBLIC SEWER SYSTEM.

4.10 Annual Public Notice of Significant Noncompliance

4.11 Noncompliance Monitoring Program

4.12 Notice of Discharge Prohibition

4.13 Civil Penalties

4.14 Criminal Penalties

4.15 Probationary Periods

4.16 Remedies Nonexclusive

4.17 Legal Action

4.18 Judicial Collection

4.19 Judicial Review

4.20 Damage to Facilities or Interruption of Normal Operations

4.21 Appeals

4.22 Alternative Enforcement Procedures

4.23 Invalidity

4.24 Interpretation - Intent

4.25 Conflict

Section 3: Adoption

I. PREAMBLE, DEFINITIONS, AND ABBREVIATIONS

1.1 PURPOSE AND POLICY

The collection system of Rubidoux Community Services District, hereinafter called the "District", conveys untreated sewage to the Regional Wastewater Treatment Facilities of the City of Riverside, hereinafter called the "City". Treated effluent from the wastewater treatment facilities is discharged into the Santa Ana River. The chemical nature of this effluent affects the quality of water flowing in the river as well as the quality of underground waters in the Santa Ana River Basin.

The California Regional Water Quality Control Board, Santa Ana Region, hereinafter called the "Regional Board", has established discharge limitations for the chemical content of sewage effluent discharged by the City. These limitations are set forth from time to time in duly enacted resolutions and orders of the Regional Board.

The United States Environmental Protection Agency has established regulations and requirements controlling the quality of water which may be discharged by industrial users into Publicly Owned Treatment Works (POTWs). Said regulations and requirements are codified in Part 403 of Chapter I, Subchapter N of Title 40 of the Code of Federal Regulations (CFR) and amendments thereto. Said regulations and requirements are for the following purposes:

(A) To prevent the introduction of pollutants into a Publicly-Owned Treatment Works (POTW) which will interfere with the operation of the POTW, including interference with its use or disposal of municipal biosolids;

(B) To prevent the introduction of pollutants into a POTW which will pass through the treatment works, inadequately treated, to the receiving waters or otherwise be incompatible with such works;

(C) To improve opportunities to recycle and reclaim municipal and industrial wastewaters and biosolids;

(D) To enable POTWs to comply with National Pollutant Discharge Elimination System (NPDES) permit conditions, biosolids use and disposal requirements, and any other federal or state laws to which the POTW is subjected; and

(E) To protect and preserve the health and safety of the public and personnel of the POTW.

In accordance with a Memorandum of Understanding adopted on September 11, 1985 (MOU) between the City, the District, and other parties contracting with the City for sewage treatment, the District has agreed to perform all the following:

(A) Be responsible for the performance of all pretreatment requirements contained in 40 CFR Part 403 and be subject to enforcement actions, penalties, fines, and other remedies by the U.S. Environmental Protection Agency (EPA), or other appropriate parties, as provided in the Clean Water Act, as amended (33 USC 1351 et seq.) (hereafter "Act").

(B) Implement and enforce its Approved Pretreatment Program.

(C) Enforce the requirements promulgated under Sections 307(b), 307(c), 307(d), and 402 (b) of the Act.

(D) Cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.

(E) Perform the pretreatment functions as required in 40 CFR Part 403 including, but no limited to:

1) Implement the necessary legal authorities as provided in 40 CFR 403.8 (f) (1);

2) Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;

3) Implement the programmatic functions as provided in 40 CFR 403.8 (f) (2); and

4) Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8 (f) (3).

This ordinance shall provide for the regulation of wastewater discharges in accordance with 40 CFR 403 and the MOU, and shall apply to all users of District's collection system. This ordinance authorizes:

(A) The issuance of industrial user permits;

(B) Monitoring, compliance, and enforcement activities;

(C) Administrative review procedures;

(D) Industrial waste plan check review services;

(E) User reporting requirements:

(F) The establishment of fees; and

(G) The equitable distribution of costs resulting from the program established herein.

1.2 DEFINITIONS. Unless the context specifically indicates otherwise, the meaning of the terms used in the ordinance shall be as follows:

(1) **"Act" or "the Act"** means the Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 USC 1251, et. seq. This Act has been incorporated by reference into California Law in the Water Code, Chapter 5.5.

(2) **Approved Analytical Methods** means the sampling referred to in 40 CFR Part 403, Appendix E, and the sample analysis techniques prescribed in 40 CFR Part 136 and amendments thereto. Where 40 CFR Part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the E.P.A. determines that Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analysis shall be performed using validated analytical methods, approved by the District, or any other applicable sampling and analytical procedures, including procedures suggested by the District or other parties as approved by the E.P.A.

(3) **Authorized Representative** means:

(a) A responsible corporate officer, if the user is a corporation, of the level of president, secretary, treasurer, or vice president in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or the manager of one or more manufacturing or production processes, or operation, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(b) A general partner or proprietor if the user is a partnership or sole proprietorship respectively;

(c) If the user is a federal, state, or local government facility: a director, highest appointed official, employee designated to oversee the operation and performance of the activities of the government facility, or his or her designee.

(d) A duly Authorized Representative of the individual designated in Paragraph (a), (b) or (c) if such representative is responsible for the overall operation of the facility from which the discharge originates and such authorization is confirmed in writing to the Manager by the individual described in Paragraph (a) or (b) or(c) of this definition.

(4) **Biochemical Oxygen Demand (BOD)** means the quantity of oxygen, expressed in mg/l, required to biologically oxidize the organic material in a waste or wastewater sample measured under standard laboratory methods of five (5) days at twenty (20) degrees Centigrade.

(5) **Board of Directors** means the Board of Directors of Rubidoux Community Services District.

(6) **Bypass** means the intentional diversion of wastestreams from any point of a user's pretreatment facility.

(7) **Categorical Standards** means the Federal Categorical Pretreatment Standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged or introduced into the POTW by existing or new Industrial Users in specific industrial categories established as separate regulations under the appropriate subpart of 40 CFR Chapter 1, Subchapter N, Parts 405-471, as it exists and as it may be amended.

(8) **Categorical User** means all industrial users subject to National Categorical Pretreatment Standards promulgated by the EPA in accordance with Sections 307 (b) and (c) of the Clean Water Act (33 U.S.C. Sec. 1317 et seq.) and amendments thereto, and as listed by the EPA under the appropriate subpart of 40 CFR Chapter 1, Subchapter N, and amendments thereto.

(9) **The City** means the City of Riverside.

(10) **Chemical Oxygen Demand (COD)** means the quantity of dissolved oxygen, expressed in mg/l, required to chemically oxidize the contents of a waste sample or wastewater sample, under specific conditions of an oxidizing agent temperature, and time. COD results are not necessarily related to BOD results.

(11) **Class I User** means those industrial users with an annual average wastewater discharges of 25,000 gallons or more per day; a Significant Industrial User; and a Categorical User which has a federally regulated process wastestream discharge.

(12) **Class II User** means an industrial user with an annual average wastewater discharge between 10,000 and 24,999 gallons per day.

(13) **Class III User** means an industrial user with an annual average wastewater discharges between one and 9,999 gallons per day where the industrial discharge has a reasonable potential for adversely affecting the POTW's operation or violating any pretreatment standard, prohibition, or requirement of this Chapter.

(14) **Class IV User** means any person that stores hazardous substances on its site, irrespective of whether such person discharges industrial process wastewater to the District's collection system.

(15) **Class V User** means an industrial user that has a temporary need to discharge wastewater to the District's collection system. The temporary period shall not exceed 180 days.

(16) **Collection System** means all pipes, sewers and conveyance facilities of Rubidoux Community Services District; including, but not limited to, the public sewer, pipelines, manholes, sewers, sewer laterals, lift stations, and sewage pumps. For the purpose of this Ordinance, "Collection System" shall also include any facilities that convey wastewater from persons outside the District who are Users of the District's collection system, whether by contract or not.

(17) **Combined Wastestream Formula** means the formula, as outlined in the General Pretreatment Regulations of the Clean Water Act, 40 CFR 403.6(e), for determining wastewater discharge limitations for Categorical Industrial Users and Significant Industrial Users whose effluent is a mixture of regulated, unregulated, and dilution wastewater as defined in the formula.

(18) **Compliance Time Schedule** means a formal time schedule for achieving compliance enforceable under this Chapter containing increments of progress, i.e. milestones, in the form of dates. These milestones shall be for the commencement and/or completion of major events leading to the construction and operation of additional pretreatment facilities or the implementation of policies, procedures or operational management techniques required for the user to comply with all applicable federal, state, or local environmental regulations which may directly or indirectly affect the quality of the user's wastewater effluent.

(19) **Composite Sample** means a sample which is collected from a wastewater discharge over a time period of twenty-four (24) hours. A composite sample may be collected using automatic continuous or discrete sampling equipment, or by manually collecting a minimum of four grab samples. Where specified by the Manager, composite samples shall be collected in a manner which is proportional to the flow rate of the discharge.

(20) **Confined Space** pursuant to the California Code of Regulations, Title 8, Section 5157, subsection b, and amendments thereto, means a space that:

(a) Is large enough and so confined that a person can bodily enter and perform assigned work.

(b) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and

(c) Is not designed for continuous occupancy by a person.

(21) **Conventional Pollutants** shall be defined as BOD, COD, total suspended solids, pH, fecal coliform, oil and grease, total nitrogen and such additional pollutants as are now or may be in the future specified and controlled in the District's NPDES permit for its POTW where said POTW has been designed and used to reduce or remove such pollutants.

(22) **Cooling Water** means all water used solely for the purpose of cooling a manufacturing process, equipment, or product.

(23) **County** means the County of Riverside or the Board of Supervisors of the County of Riverside.

(24) **Dilution** means the increase in use of process water or any other means to dilute a wastestream as a partial or complete substitute for adequate treatment to achieve discharge requirements.

(25) **Discharger** means any person who causes or contributes a discharge of wastewater into the POTW.

(26) **District** means Rubidoux Community Services District, its Board of Directors, or its duly authorized representative.

(27) **District Counsel** means the attorney for the District or an authorized representative, deputy, or agent appointed by the District Counsel.

(28) **Domestic Septic Wastes** means all domestic wastes contained in septic tanks, cesspools, seepage pits, holding tanks and private disposal systems.

(29) **Domestic Wastewater** means water bearing wastes from private residences and other premises resulting from the use of water for personal washing, sanitary purposes or the discharge of human excrement and related matter. Domestic wastewater when analyzed by standard methods usually contains no more than two hundred (200) mg/l of total suspended solids (TSS), two hundred (200) mg/l of BOD and four hundred twenty (420) mg/l of COD.

(30) **Effluent** means the liquid outflow from treatment facilities, the POTW, or the nondomestic wastewater discharged by an Industrial User to the POTW.

(31) **Emergency** means facts or circumstances that the District reasonably determines create an imminent threat of harm to public health or safety, the environment or the POTW.

(32) **Electrical Conductivity (EC)** means the ability of an aqueous solution to carry an electrical current, expressed in terms of micromhos per centimeter (μmhos/cm) at 25°C, and analyzed in accordance with Approved Analytical Methods.

(33) **Environmental Protection Agency (E.P.A.)** means the United States Environmental Protection Agency, its Administrator, or its authorized representative.

(34) **Exchange Type Water Conditioning Device** means a water conditioning device that is removed for regeneration from the premises at which it is normally operated to a commercial regeneration facility.

(35) **Federal Categorical Pretreatment Standard** means the National Pretreatment Standards, established by the E.P.A., specifying quantities or concentrations of pollutants or pollutant properties which may be discharged or introduced into the District's collection system or POTW by existing or new industrial users in specific industrial categories established as separate regulations under the appropriate subpart of 40 CFR Chapter I, Subchapter N and amendments thereto, as it exists and as it may be amended.

(36) **Good Faith** means the user's honest intention to remedy noncompliance together with actions that support the intention without the use of enforcement actions by the District. Examples of these intentions are improved housekeeping practices or the installation of pretreatment equipment to reduce or eliminate pollutants.

(37) **Grab Sample** means an individual sample collected from a wastewater discharge over a period of time not exceeding 15 minutes.

(38) **Gravity Separation Interceptor** means an approved detention chamber designed to remove floatable and settleable material from industrial wastewater prior to discharge into the District's collection system.

(39) **Hazardous Substance** means any substance capable of creating imminent endangerment to health or the environment including, but not limited to, any substance designated under 40 CFR Section 310.11(d) and amendments thereto, or any hazardous chemical substance subject to regulation under the Toxic Substances Control Act, 15 USCA, Section 2601, et seq. and amendments thereto. In general, substances which are toxic, explosive, corrosive, flammable or irritants, or which generate pressure through heat or decomposition, e.g., heavy metals, pesticides, strong acids or bases, distillate fuels, oxidants, etc.

(40) **Heating Water** means all water used solely for the heating of a manufacturing process, equipment, or product.

(41) **Industrial User** means any person or entity, public or private, industrial, commercial, governmental, or institutional which discharges or causes to be discharged, industrial wastewater and waterborne waste into the District's collection system or POTW.

(42) **Industrial User Permit** means the regulatory procedure established and enforced by the Public Works Manager to control the discharge of wastewater into the District's collection system or POTW.

(43) **Industrial Wastewater** means Nondomestic Wastewater.

(44) **Infectious Waste** means all wastes which normally cause, or significantly contribute to the cause of, increased morbidity or mortality of human beings.

(45) **Interference** means any discharge from a user which, alone or in conjunction with discharges from other sources, inhibits or disrupts the District's collection system, POTW, treatment processes or operations, or sludge processes, use or disposal; and which is a cause of a violation of any requirement of the MOU, the City's NPDES permit, Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA)), state regulations contained in any State Sludge Management Plan prepared pursuant to Subtitle D of the SWDA, the Clean Air Act, the Toxic Substances Control Act, or the Marine Protection Research and Sanctuaries Act and any amendments to these Acts or regulations.

(46) **Ion Exchange Water Softener** means a water conditioning apparatus that is designed to remove hardness or other impurities from a user's incoming potable water supply.

(47) **Liquid Waste Hauler** means any person engaged in the truck hauling of liquid wastes from septic tanks, seepage pits, cesspools, holding tanks or any other private disposal system for domestic wastewater.

(48) **Local Limits** means specific prohibitions or pollutant limitations or pollutant parameters which are developed by the POTW and adopted by the District in accordance with 40 CFR 403.5(c) and amendments thereto.

(49) **Lower Explosive Limit (LEL)** means the minimum concentration of combustible gas or vapor in the air that will ignite if an ignition source is present.

(50) **Manager** means the Secretary-Manager of Rubidoux Community Services District or his authorized representative, agent in deputy.

(51) **Mass Emission Rate** means the pounds per day discharged to the District's collection system of a particular pollutant or combination of pollutants, as contained in an Industrial User Permit.

(52) **May** is permissive

(53) **mg/l** means milligrams per liter

(54) **Monitoring/Production Information Order (MPIO)** means an Administrative Order requiring an industrial user to determine the mass emission or concentration of pollutants or other conditions specified in the user's permit in its industrial wastewater discharge for all days within a 14 consecutive day period and submit production data for that period.

(55) **Monthly Average** means the average of daily measurements over a calendar month as calculated by adding all the daily measurements taken during the calendar month and dividing that sum by the sum of the number of daily measurements taken in the month.

(56) **National Pollutant Discharge Elimination System (NPDES) Permit** means the permit issued pursuant to Section 402 of the Act (33 USC 1342) for the POTW.

(57) **National Pretreatment Standard** means any regulation developed under the authority of Section 307(b) of the Act and 40 CFR 403.5.

(58) **New Source** means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed pretreatment standards under Section 307(c) of the Federal Clean Water Act and amendments thereto which will be applicable to such source if such Standards are thereafter promulgated in accordance with that Section, provided that:

(a) The building, structure, facility or installation is constructed at a site at which no other source is located; or

(b) The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or

(c) The production or wastewater generating processes of the building, structure, facility or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing Plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source may be considered.

(59) **NPDES Permit** means the then effective National Pollutant Discharge Elimination System Permit issued from time to time by the Regional Board establishing the Waste Discharge and Producer/User Reclamation Requirements for the Riverside Regional Water Quality Control Plant.

(60) **Non-Categorical Significant Industrial User (NCSIU)** means a Significant Industrial User who is not subject to promulgated categorical standards.

(61) **Non-Contact Cooling or Heating Water** means any water which is used solely for cooling or heating, and which has no direct contact with any raw material, intermediate or final product.

(62) **Non-Domestic Wastewater** means all wastewater except domestic wastewater an unpolluted water as defined herein. Nondomestic wastewater shall include, but not be limited to, wastewater resulting from industrial, commercial, producing, manufacturing, processing, institutional, governmental, and agricultural operations, and brine wastewater resulting from the regeneration of water conditioning devices. All liquid wastewater hauled by truck, rail, or another means shall also be considered as nondomestic wastewater, regardless of the original source of the wastes. Hauled domestic wastewater is included in the category of nondomestic wastewater.

(63) **Non-Residential User** means any commercial, institutional, industrial, or governmental entity, public or private, or its agents, public or private, that discharges or causes to be discharged any waste material to the POTW.

(64) **Oil and Grease** means any of the following in part or in combination:

(a) Petroleum derived products, e.g., oils, fuels, lubricants, solvents, cutting oils;

(b) Vegetable derived products, e.g., oils, shortenings, water soluble cutting oils; or

(c) Animal derived products, e.g., fats, greases, oils, lard.

(65) **Pass Through** means any discharge which exits the POTW into Waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, causes a violation of any requirement of the MOU or the City's NPDES permit, including an increase in the magnitude or duration of a violation.

(66) **Person** means any individual, firm, company, association, society, general or limited partnership, limited liability company, trust, corporation, governmental agency or group, and includes the plural as well as the singular.

(67) **pH** means the logarithm (base 10) of the reciprocal of the concentration of hydrogen ions, as analyzed in accordance with Approved Analytical Methods.

(68) **Pollutant** means conventional pollutants, domestic wastewater, hazardous substances, infectious waste, slug discharges, dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, medical waste, heat, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.

(69) **Pollutant Exceedance Fee** means a fee in addition to the sewer service charge, which is charged on those users whose wastewater discharge pollutants exceed permitted pollutant levels for COD, total suspended solids, total nitrogen and oil and grease.

(70) **Pollution** means the man-made or man-induced adverse alteration of the chemical, physical, biological, or radiological integrity of water.

(71) **POTW Treatment Plant** means the portion of the POTW designed to provide treatment to wastewater.

(72) **Pretreatment** means the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of the pollutant properties in wastewater to a less harmful state, prior to or in lieu of discharging or otherwise introducing such pollutants into a collection system. The reduction or alteration may be obtained by physical, chemical or biological processes, process changes or by any other means, except, as prohibited by 40 CFR 403.6 (d), the use of dilution.

(73) **Pretreatment Requirement** means any substantive or procedural requirement related to pretreatment, other than a National Pretreatment Standard imposed on an Industrial User.

(74) **Pretreatment Standard** means any regulation containing pollutant discharge limits or prohibitions promulgated by EPA or the City, applicable to Industrial Users, including promulgated Categorical Standards, National Pretreatment Standards, and Prohibited Waste Discharges contained in Section 3.2 herein and specific local discharge limitations adopted by the District by resolution.

(75) **Pretreatment Waste** means all waste, liquid or solid, removed from a waste stream or discharge by physical, chemical, or biological means.

(76) **Publicly Owned Treatment Works (POTW)** means any devices, equipment, pipes, and systems used in the transmission, storage, treatment, recycling and reclamation of municipal sewage, sludge, or industrial wastewater. This definition includes the Regional Wastewater Treatment Facilities owned and operated by the City, any wastewater treatment facilities owned and operated by the District, and any other publicly owned and operated devices or systems used in the storage, treatment, recycling, and reclamation of municipal sewage. It also includes the collection system which conveys wastewater to the wastewater treatment facilities.

(77) **Public Sewer** means any sewer located in or maintained by the District. The term as used here does not include storm drains or channels for conveyance of natural surface waters

(78) **Qualified Professional** means any person who by virtue of education, training, or experience is qualified to evaluate and assess pollutant discharges and violations of the Chapter.

(79) **RCRA** means the **R**esource **C**onservation and **R**ecovery **A**ct and its Regulations as contained in 40 CFR Par 260-266 and 270 and amendments thereto.

(80) **Regional Board** means the California Regional Water Quality Control Board, Santa Ana Region.

(81) **Restaurant** means all retail establishments selling prepared foods and drinks for consumption on or off the premises; and lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption. Retail establishments, lunch counters, and drinking places selling prepared food and drink as a subordinate service incidental to their primary operations and institutional facilities (e.g. schools, jails, prisons, and juvenile halls), which serve food on the premises shall also be considered restaurants.

(82) **Self-monitoring** means wastewater samples taken by a user or the user's contracted laboratory, consultant, engineer, or similar entity.

(83) **Service Lateral Line** means collection pipe extending from premises where the wastewater is generated up to and including the connection to the District's or a Community Services District's collection system..

(84) **Shall** is mandatory

(85) **Significant Industrial User (SIU)** means all industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and amendments thereto; or any user that has one or more of the following:

(a) Industrial wastewater discharge at an average rate of at least 25,000 gallons per day (gpd) to the District's POTW (excluding sanitary waste, unpolluted water, and boiler blowdown wastewater);

(b) A process wastestream which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW;

(c) Waste which contains any toxic pollutant(s) listed by the Environmental Protection Agency; or

(d) Is designated by the Manager on the basis that the user has a reasonable potential for adversely affecting the District's POTW or for violating any pretreatment standard or requirement.

(86) **Significant Noncompliance (SNC)** means any compliance violation that meets one or more of the following criteria:

(a) Chronic violations of wastewater discharge limits, which are defined as those in which sixty-six percent or more of all of the measurements for each pollutant taken during a consecutive six month period exceed (by any magnitude) the daily maximum limit or the average limit for the same pollutant;

(b) Technical review criteria (TRC) violations, which are defined as those in which thirty-three percent or more of all of the measurements for each pollutant taken during a consecutive six month period equal or exceed the product of the daily maximum limit or the average limit multiplied by the applicable TRC (TRC=1.4 for BOD, TSS, fats, oil and grease, and 1.2 for all other pollutants except pH);

(c) Any other violation of a pretreatment effluent limit (daily maximum or longer term average) that the District determines has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of POTW personnel or the general public);

(d) Any discharge of a pollutant that has caused imminent endangerment to human health or welfare or to the environment or has resulted in the District's exercise of its emergency authority to halt or prevent such a discharge;

(e) Failure to meet, within ninety (90) days after the scheduled date, a compliance schedule milestone contained in a Administrative Order, for starting construction, completing construction, or attaining final compliance;

(f) Failure to provide, within thirty (30) days of the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules;

(g) Failure to pay, within thirty (30) days, all applicable industrial user application, permit, and enforcement penalty fees;

(h) Failure to accurately report non-compliance; or

(i) Any other violations or group of violations which the District believes will adversely affect the operation and implementation of the District's pretreatment program.

(87) **Single Pass Non-Contact Cooling or Heating Water** means non-contact Cooling or Heating water which is used only once and is then discarded.

(88) **Slug Discharge, or Slug Loading** means any wastewater, material or waste with such a high volume or pollutant concentration which will cause damage to, interference with, or pass through in the District's collection system, POTW, or sludge processes, use, or disposal.

(89) **Slug Discharge Control Plan** means a plan submitted to the City by a user pursuant to Section 3.29(H) herein, which specifies to the Manager's satisfaction the potential pollutants used and/or stored at the user facility; potential pathways of entry of said potential pollutants into the POTW; and facilities and procedures for preventing or controlling the occurrence of Slug Loading.

(90) **Solvent Management Plan (Toxic Organic Management Plan)** means a plan submitted to the District by an Industrial User pursuant to Section 3.29(G) herein, which specifies to the Manager's satisfaction the solvents and other toxic organic compounds used and stored; the methods of delivery, storage, and disposal used; and procedures for assuring that solvents and other toxic organics do not routinely spill or leak into the POTW or ground.

(91) **Specific Compliance Plan** means a plan submitted to the City by an Industrial user pursuant to Section 3.29(I) herein, which specifies to the Manager's satisfaction the cause of noncompliance, the corrective actions which will be taken to prevent recurrence of said noncompliance, and if required by the Manager`, a proposed Compliance Time Schedule.

(92) **Standard Industrial Classification (SIC)** means a classification pursuant to the Standard Industrial Classification Manual issued by the Executive Office of the President, Office of Management and Budget, 1987, or latest edition thereof.

(93) **Standard Methods** means "Standard Methods for the Examination of Water and Wastewater", latest edition, prepared and published by the American Public Health Association, American Water Works Association, and Water Environment Federation which specifies accepted procedures used to assess the quality of water and wastewater.

(94) **State** means State of California.

(95) **State Water Board** means the State of California Water Resources Control Board.

(96) **Storm Drain** means a system of open channels, lined and unlined channels, surface channels, impound basins, ground water recharge basins, storm water holding ponds, underground pipes, curb and gutter, cross gutters, storm water pump and lift stations, parking lots, paved areas, streets, and natural water courses used to collect and direct storm precipitation and surface runoff to a receiving body of water or underground aquifer recharge basin.

(97) **Storm Water** means any flow of water resulting from natural precipitation.

(98) **Surcharge** means an assessment, in addition to the service charge, which may be levied on those Users whose wastes are greater in strength than surcharge threshold concentration values established by the Manager.

(99) **Temporary User** means any user who is granted temporary permission by the Manager to discharge unpolluted water or wastewater to the sewer system and controlled by a Class V Industrial User Permit. Such temporary permission shall not be granted to Industrial Users subject to promulgated Categorical Standards.

(100) **Total Dissolved Solids (TDS)** means the quantity of nonvolatile substances remaining after filtration through a standard filter and drying to constant weight at 180°C, expressed in terms of milligrams per liter (mg/l) and analyzed in accordance with Approved Analytical Methods. TDS is synonymous with Total Filterable Residue (TFR).

(101) **Total Suspended Solids** means the total amount of residue retained by laboratory filtration and dried at 103-105°C.

(102) **Total Toxic Organics, (TTO)** means the sum of all quantifiable values greater than 0.001 mg/l of the regulated toxic organic compounds which are found in the user's industrial wastewater discharge, and analyzed in accordance with Approved Analytical Methods.

(103) **Unpolluted Water** means noncontact cooling and heating water, single pass cooling and heating water, air conditioning condensate, ice melt, condensate, landscape irrigation, crop irrigation, rain water, uncontaminated ground water or surface water, and water not containing any substances limited or prohibited by effluent standards in effect or water whose discharge will not cause any violation of receiving water quality standards.

(104) **Upset** means an exceptional incident which causes temporary and unintentional non-compliance with the discharge limitations or prohibitions applicable to a user or the POTW and which is beyond the reasonable control of a user or the POTW.

(105) **User** means any person or entity, public or private, residential, industrial, commercial, governmental, or institutional who contributes, causes, or permits the contribution or discharge of wastewater or waterborne waste into the collection system of the District.

(106) **Waste** means any discarded solid, semi-solid, liquid, or gaseous material.

(107) **Wastewater** means the liquid and water-carried domestic wastes or non-domestic wastes from dwellings, commercial building, industrial facilities, and institution, together with any groundwater, surface water, and storm water that may present, whether treated or untreated, which is contributed into or permitted to enter the POTW.

(108) **Wastewater Treatment Facilities** means the structures, equipment, and processes maintained by the City or the District which accept untreated sewage form the District's collection system and are required to treat and dispose of domestic and nondomestic wastewater.

(109) **Water Conditioning Device** means any device or apparatus used to soften or otherwise condition water, including zeolite or resinous anion or cation exchange softeners, demineralizers, and any other like device.

(110) **Waters of the State** means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the State or any portion thereof.

(111) **Water Supply** means the District's water supply serving the area tributary to the District's collection system.

1.3 ABBREVIATIONS. The following abbreviations shall have the designated meanings:

AO	Administrative Order
BOD	Biochemical Oxygen Demand (5 day)
BMR	Baseline Monitoring Report
CDO	Cease and Desist Order
CFR	Code of Federal Regulations
CIU	Categorical Industrial User
CO	Compliance Order
COD	Chemical Oxygen Demand
CTS	Compliance Time Schedule
EC	Electrical Conductivity
EPA	Environmental Protection Agency
gpd	Gallons Per Day
IU	Industrial User
l	Liter
LB	Pound
LEL	Lower Explosive Limit
MBAS	Methylene Blue Activated Substances
mg	Milligrams
mg/l	Milligrams per Liter
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NSIU	Non Significant Industrial User
POTW	Publicly Owned Treatment Works
RCRA	Resource Conservation and Recovery Act
RCSD	Rubidoux Community Services District
SIC	Standard Industrial Classification
SIU	Significant Industrial User
SNC	Significant Noncompliance
SWDA	Solid Waste Disposal Act, 42 USC 6901, et.seq.
TDS	Total Dissolved Solids
TRC	Technical Review Criteria (TRC) Violations
TSCA	Toxic Substances Control Act
TSS	Total Suspended Solids
TTO	Total Toxic Organics
µg	Micrograms
µg/l	Micrograms per Liter
µmhos/cm	Micromhos per Centimeter
UPC	Uniform Plumbing Code
USC	United States Code

II. GENERAL PROVISIONS

2.1 ADMINISTRATION.

(A) **INTERPRETIVE RULES, ADOPTION OF.** The Manager may adopt interpretive rules consistent with the provisions of the Ordinance for the administration of the wastewater system. Interpretive rules by the Manager pertain to, but shall not be limited to, discharge limitations, pretreatment requirements, standards for wastewater lines and services and implementation of standards promulgated pursuant to the Federal Water Pollution Control Act as amended by the Clean Water Act and further amendments thereto.

(B) **REGULATORY ACTIONS; GENERAL POWERS OF THE MANAGER.** Except as otherwise provided herein, the Manager shall administer, implement and enforce the provisions of this Ordinance. Any powers granted or duties imposed upon the Manager may be delegated by the Manager to persons acting in the beneficial interest or employ of the District, but shall remain the responsibility of the Manager. In addition to the authority to prevent or eliminate discharges through enforcement of discharge limitations and prohibitions, the Manager shall have the following authorities:

(1) **Endangerment to the health or welfare of the community.** The Manager, after informal notice to the affected user, may immediately and effectively halt or prevent any discharge of pollutants into any natural waterway or surface drainage within the District or any area under jurisdiction of the District, or the wastewater collection system of the District or any wastewater system tributary thereto, by any means available, including physical disconnection from the wastewater collection system, whenever the discharge reasonably appears to present an imminent endangerment to the health or welfare of the community.

(2) **Endangerment to the environment or the POTW.** The Manager, after written order to the user, may halt or prevent any discharge of pollutants into any natural waterway or surface drainage within the District or any area under jurisdiction of the District, or the wastewater collection system of the District or any wastewater system tributary thereto, by any means available, including physical disconnection from the wastewater system, whenever such discharge presents or may present an imminent and substantial endangerment to the environment or threatens to damage or interfere with the operation of the POTW; and

(3) The discharges referred to in subdivisions 1 and 2 above may be halted or prevented without regard to the compliance of the user with other provisions of this Ordinance.

(C) **REGULATORY ACTIONS; SPECIFIC POWERS OF THE MANAGER.** If wastewater containing any pollutant described in this Ordinance is discharged or proposed to be discharged into any natural waterway or surface drainage within the District or any area under the jurisdiction of the District, or the wastewater collection system of the District or the wastewater system tributary thereto, the Manager may take any action necessary to:

(1) Prohibit the discharge of such wastewater;

(2) Require the person discharging to demonstrate that in-plant modifications will reduce or eliminate the pollutant or substance so that the discharge will not violate this Ordinance;

(3) Require treatment, including storage facilities or flow equalization necessary to reduce or eliminate the pollutants or substance so that the discharge will not violate this Ordinance;

(4) Require the person making, causing or allowing the discharge to pay any required industrial user permit fees, inspection fees and any additional cost or expense incurred by the District for handling, treating, or disposing of excess pollutant loads imposed on its POTW, including any fines, penalties or legal expenses including attorney fees payable by the District associated with alleged or actual violations of the City's NPDES permit, or the District's contract with the City, or the MOU, attributed to the person's discharge;

(5) Obtain timely and factual reports from the person responsible for such discharge; and

(6) Take such other or further remedial action as may be deemed to be desirable or necessary to achieve the purposes of the Ordinance.

2.2 **AUTHORIZATION FOR NEW OR INCREASED POLLUTANT DISCHARGE.** It shall be unlawful to commence, increase, or substantially change any discharge of nondomestic wastewater to the POTW except as authorized by the Manager in accordance with the provisions of this Ordinance.

2.3 **NOTICE.** Unless otherwise provided herein, any notice or order required or permitted to be given by the Manager under the Ordinance shall be in writing and served in person or by first class, registered, or certified mail. Notice shall be deemed to have been given at the time of deposit, postage prepaid, in a facility regularly serviced by the United States Postal Service.

2.4 **CONFIDENTIALITY**. Any information submitted by the user to the District pursuant to this Ordinance may be claimed as confidential by the user. Any such claim must be asserted at the time of submission by placing words **"Confidential Business Information"** on each page containing such information. If no claim is made at the time of submission, the District may make the information available to the public without further notice. All sample data obtained by either the user or the District shall not be considered confidential. All production related information used to calculate mass based discharge limitations or required for the development of an industrial user permit shall not be considered confidential information. Confidential information may be made available, upon request, to governmental agencies for enforcement or judicial purposes related to the Ordinance, District's NPDES Permit or the pretreatment program, and as required by state or federal law.

2.5 **INSPECTION AND SAMPLING.**

(A) The Manager shall inspect the facilities of any user to ascertain whether all requirements of this Ordinance are being met. Persons on the premises shall allow the Manager ready access at all reasonable times to all parts of the premises for the purpose of inspection, sampling, and examination of records.

(B) The user shall ensure that there is always a person on site, during normal business hours, knowledgeable of the user's processes and activities to accompany the Manager during the inspection.

(C) The user shall provide immediate access when an emergency exists, regardless of the hour of the day.

(D) All pretreatment equipment shall be immediately accessible at all times for the purpose of inspection. At no time shall any material, debris, obstacles or obstructions be placed in such a manner that will prevent immediate access to the pretreatment equipment.

(E) No person shall interfere with, delay, resist, or refuse entrance to the Manager when attempting to inspect any facility involved directly or indirectly with a discharge of wastewater to the District's collection system, POTW or storm drain.

(F) Where a user has security measures in force which would require proper identification and clearance before entry into the premises, the user shall make all necessary arrangements with the user's security personnel so that, upon presentation of suitable identification, personnel from the District will be permitted to enter, without delay, for the purpose of performing their specific responsibilities.

(G) The user shall make available for copying by the Manager, all records required to be kept under the provisions of the Ordinance.

(H) The Manager shall inspect the facilities of each Significant Industrial User a minimum of once each year, and shall sample the discharge of each Significant Industrial User a minimum of once each year.

2.6 **INSPECTION WARRANTS.** If the Manager has been refused access to a building, structure, or property, or any part thereof, and is able to demonstrate cause to believe that there may be a violation of this Ordinance, or that there is a need to inspect or sample the user's facilities as part of a routine inspection and sampling program of the District designed to verify compliance with this Ordinance or any permit or order issued hereunder, or to protect the overall public health, safety and welfare of the community, then the Manager may seek issuance of an inspection warrant duly issued pursuant to the procedure set forth in Title 13 (commencing with Section 1822.50) of Part 3 of the Code of Civil Procedure and amendments thereto. However, in the event of an emergency affecting the public health or safety, an inspection may be performed without consent or the issuance of a warrant.

2.7 **MONITORING.**

(A) At the direction of the Manager, any user discharging industrial wastewater directly or indirectly into the District's collection system, may be required to install sampling station(s) or measuring device(s) to measure the quality and quantity of wastewater discharged. These measuring devices may include but are not limited to: flow meters and recorders, pH meters and recorders electrical conductivity meters and recorders, and process water meters.

(B) The sampling station and/or measuring device shall be provided by the user in compliance with this Ordinance and all applicable building, plumbing, and construction codes. District may require that the measuring devices have a security closure that can be locked with a District lock during sampling and monitoring. Construction shall be completed within a reasonable time frame as required in written notification from the Manager.

(C) The Manager shall have the right to install temporarily upon the user's property such devices as are necessary to conduct wastewater sampling, compliance monitoring or metering operations.

(D) No user shall interfere with, delay, resist, or refuse entrance to authorized District personnel attempting to install wastewater monitoring equipment on the user's property. Any permanent or temporary obstruction of easy access to the sampling, station(s) or measuring devices shall be immediately removed by the user or property owner at the written or verbal request of the Manager and shall not be replaced.

(E) The sampling station or measuring devices shall be maintained by the user for continuous sampling or metering. The measuring devices shall be calibrated as often as necessary to ensure accurate measurements according to manufacturer's specifications. All maintenance and calibration work shall be performed at the user's expense.

(F) All users that are required to self-monitor shall have all samples collected and analyzed according to 40 CFR 403.12(b)(5) and amendments thereto.

(G) All users that are required to self-monitor shall submit all records of sampling that include the following information and documents:

(1) The date, exact place, method, and time of sampling and the names of the person or persons taking the samples;

(2) The dates the analyses were performed;

(3) Who performed the analyses;

(4) The analytical techniques/methods used;

(5) The results of such analyses;

(6) A copy of the laboratory sample analysis sheet; and

(7) The user's complete monitoring report form.

(H) All users that are required to install and maintain measuring devices shall immediately report the failure of such devices. The immediate notification shall be accomplished by a telephone call, telefax transmission, personal visit, or a hand delivered notification, to the District's Office. User shall submit to the Manager, within five calendar days after discovery of such a device failure, a written report documenting the cause of the failure and the corrective actions taken.

(I) Any wastewater samples taken from a user's approved or designated sampling location shall be considered representative of the wastewater discharged to the POTW. For users that have interceptors and no approved or designated sampling location, the last chamber of the interceptor shall be the designated sampling location.

(J) All users that are required to self-monitor shall report pollutant violations in any required wastewater sample toe the Manager within 24 hours of becoming aware of the violation. The reporting may be accomplished by a telephone call, telefax transmission, or a personal visit to the District's Office. The violation reporting shall contain the date and time of the wastewater sample, the discharge flow for the sample, a possible explanation for the violation(s), and the date scheduled for the required resample. Failure to report pollutant violations as stated shall constitute a violation of this Ordinance and may subject user to enforcement actions.

(K) All users required in their industrial user permit to take daily 24 hour readings of their wastewater effluent flow shall notify Manager of exceedance of its permitted flow within 24 hours of discovering the exceedance. The user shall make such notification, to the District's Office. The flow exceedance notice shall have the total flow, date of the violation, the reason for the flow exceedance, and the name of the person reporting the flow exceedance. It is unlawful to fail to report such flow exceedance and may subject the user to enforcement actions.

(L) All users that have pollutant violations shall resample their wastewater discharge for the pollution in violation. This resampling is required and is separate and independent of any wastewater sampling required by the District. All resamples shall be obtained and analyzed according to 40 CFR 403.12(b)(5) and amendments thereto. A laboratory certified by the State of California, Department of Health Services, as being competent to perform the pollutant analyses requested, shall perform all laboratory analyses. User shall submit the laboratory results from the resamples and all required forms to the Manager no later than 30 days after the user discovers or becomes aware of the violation. Failure to submit the laboratory results within the 30 day requirement shall result in Significant Noncompliance (SNC) for the user and the issuance of a Notice of Violation to the user.

(M) All users whose wastewater discharge is monitored by the District, shall be responsible for all resampling requirements contained in subsection L of this section when a pollutant violation is detected. The District shall notify the user of the resampling requirements by a telephone call, telefax transmission, or personal visit within 72 hours of confirming a pollutant violation.

(N) All users that desire to conduct their own wastewater sampling shall submit a written plan describing the equipment used, equipment cleaning methodology, employee training, sample preservation methods, and chain of custody procedures. The user's wastewater sampling plan shall be approved by the Manager prior to the implementation of the plan. Any sample taken by a user without an approved plan or from an unapproved laboratory shall not be valid and may subject the user to enforcement actions.

(O) All permitted users that take more than one grab sample in a 24 hour period to demonstrate compliance with oil and grease shall comply with the following conditions:

(1) No single oil and grease grab sample shall exceed the user's permitted limit for oil and grease by more than forty (40) percent; and

(2) The average result from a minimum of four oil and grease grab samples taken in a 24 hour period shall not exceed the user's permitted limit for oil and grease.

2.8 RECORD KEEPING. All users shall keep records of waste hauling, reclamations, wastewater pretreatment, monitoring device charts and calibration reports, effluent flow, and sample analysis data, on the site of the wastewater generation. All these records are subject to inspection by Manager and shall be copied as needed. All records must be kept on the site of wastewater generation for a minimum period of three (3) years. The records retention period may be extended beyond three (3) years at the request of the Manager.

All records that pertain to matters that are subject of special orders or any other enforcement or litigation activities brought by the District shall be retained and preserved by the permittee until all enforcement or litigation activities have concluded and all periods of limitation with respect to any and all appeals have expired.

2.9 FLOW MEASUREMENT. Any industrial user who discharges 25,000 gallons per day or more of industrial wastewater, or as required by the Manager, shall install a continuous monitoring flow meter capable of measuring all the industrial user's industrial wastewater discharged to the District's collection system. The user shall maintain an effluent flow log sheet and record the effluent flow on a daily basis. The flow measurement device shall conform to standards issued by the Manager. The user shall report to the Manager the type and size of the flow meter. The flow meter shall be equipped with a non-resetting flow totalizer. All flow meters shall be calibrated as often as necessary to ensure the accuracy of actual flow discharged within plus or minus five percent. All flow meter installations shall have posted in a conspicuous place the flow meter's size, type, totalizer units, and flow multipliers.

2.10 INFECTIOUS WASTE DISPOSAL.

(A) No user that generates liquid infectious waste not associated with those found in domestic wastewater shall discharge such waste to the District's collection system without first obtaining written permission from the Manager. Such a user shall submit a written request to the Manager that shall include:

(1) The source and volume of the infectious waste;

(2) The procedures and equipment used for waste disinfection; and

(3) Employee training procedures for the legal disposal of infectious waste.

(B) If the Manager believes that the waste would not be completely disinfected, the Manager shall issue a written denial to the user and state the reasons for the denial. This denial shall be issued within thirty (30) days from receipt of the written request.

(C) If the Manager believes that complete disinfection of the waste can be achieved prior to discharge of the waste to the collection system, then conditional approval may be granted for the disposal of the waste. A letter of approval shall be sent to the user within thirty (30) days of receipt of the written request.

(D) If the user is granted permission for disposal, the user:

(1) Shall completely disinfect the liquid waste prior to discharge to the District's System as outlined in the approval letter.

(2) Shall not dispose of solid infectious waste to the District's collection system, including hypodermic needles, syringes, instruments, utensils or other paper and plastic items of a disposable nature, or recognizable portions of the human or animal anatomy; and

(3) Shall be subject to periodic inspections to verify that all disinfection methods, procedures, and practices are being performed.

WATER SOFTENING RESTRICTIONS.

(A) No user shall install, replace, enlarge, or use any apparatus for softening all or any part of the water supply to an premises when such apparatus is an ion-exchange softener or demineralizer of the type that is regenerated on the site of the use with the regeneration wastes being discharged to the ground, storm drain or the District's collection system or POTW unless the apparatus is in compliance with the following conditions:

(1) The apparatus is a self-generating water softener;

(3) The brine solutions generated during the backwash cycles of the water softener shall be segregated from the fresh water rinses for disposal to a legal brine disposal site;

(4) The industrial user shall maintain the electrical conductivity controlled discharge valve in proper operating conditions at all times. The industrial user shall notify the Manager immediately in the event of a valve failure and immediately cease the discharge of all wastewater associated with the backwashing of the regenerating water softener.

(B) Pursuant to California Health and Safety Code Sections 116775-116795 and amendments thereto, no residential water softening or conditioning appliance shall be installed except in either of the following circumstances:

(1) The regeneration of the appliance is performed at a nonresidential facility separate from the location of the residence where such appliance is used; or

(2) The regeneration of the appliance discharges to the waste disposal system of the residence where such appliance is used and the following conditions are satisfied:

(a) The appliance activates regeneration by demand control;

(b) An appliance installed on or after January 1, 2000 shall be certified by a third party rating organization using industry standards to have a salt efficiency rating of no less than 3350 grains of hardness removed per pound of salt used in generation. An appliance installed on or after January 1, 2002 shall be certified by a third party rating organization using industry standards to have a salt efficiency rating of no less than 4000 grains of hardness removed per pound of salt used in generation.

(c) The installation of the appliance is accompanied by the simultaneous installation of the following softened or conditioned water conservation devices on all fixtures using softened or conditioned water, unless such devices are already in place or are prohibited by local and state plumbing and building standards or unless such devices will adversely restrict the normal operation of such fixtures:

(i) Faucet flow restrictors

(ii) Shower head restrictors

(iii) Toilet reservoir dams

(iv) A piping system installed so that untreated (unsoftened or unconditioned) supply water is carried to hose bibs and sill cocks which serve water to the outside of the house, except that bypass valves may be installed on homes with slab foundations constructed prior to the date of installation; or condominiums constructed prior to the date of installation; or otherwise where a piping system is physically inhibited.

(C) The certification required under subsection B of this Section shall be provided by the new user of the appliance and shall be completed by a contractor having a valid Class C-55 water conditioning contractor's license or Class C-36 plumbing contractor's license and filed with the City's Building Division. The certification form shall contain all of the following information:

(1) Name and address of homeowner;

(2) Manufacturer of the water softening or conditioning appliance, model number of the appliance, pounds of salt used per regeneration, and salt efficiency rating at the time of certification.

(3) Manufacturer of the water-saving devices installed, model number, and number installed; and

(4) Name, address, and the specialty contractor's license number of the C-55 and C-36 licensee making the certification.

(D) Any person installing or operating a water conditioning apparatus of any kind shall make such apparatus accessible to the Manager for inspection at reasonable times.

(E) Notwithstanding subdivision 2 of subsection B of this Section, the District may limit the availability, or prohibit the installation, of residential water softening or conditioning appliances that discharge to the POTW if Manager makes all of the following findings:

(1) The POTW is not in compliance with the discharge or water reclamation requirements in its NPDES permit;

(2) Limiting the availability, or prohibiting the installation, of the appliances is the only available means of achieving compliance with waste discharge requirements issued by the Regional Board; and

(3) All nonresidential sources are limited to the volumes and concentrations of saline discharges to the POTW to the extent technologically and economically feasible.

(F) Notwithstanding subdivision 2 of subsection B of this Section, the District may limit the availability, or prohibit the installation, of residential water softening or conditioning appliances that discharge to the POTW if Manager makes all of the following findings:

(1) The POTW is not in compliance with the discharge or water reclamation requirements, or a master reclamation permit, issued by the California Regional Water Quality Control Board pursuant to Article 4 (commencing with Section 13520) of Chapter 7, Division 7 of the Water Code;

(2) Limiting the availability, or prohibiting the installation, of the appliances is the only available means of achieving compliance with the water reclamation requirements or the master reclamation permit issued by the Regional Board; and

(3) All nonresidential sources are limited to the volumes and concentrations of saline discharges to the POTW to the extent technologically and economically feasible.

(G) Subsections E and F of this Section are prospective in nature and do not require the removal of residential water softening or conditioning appliances that are installed before the effective date of the subsections E and F.

This Section shall not apply to an apparatus of the type which is regenerated off-site by a water conditioning company.

A person installing or operating a legal water conditioning apparatus of any kind shall make such apparatus accessible to the Manager for inspection at all times. The person shall submit reports relative to the operation of such apparatus to the Manager as the Manager may require.

2.12 GRAVITY SEPARATION INTERCEPTOR. No user that operates or maintains a facility for the servicing or repair of roadway machinery, industrial transportation equipment, motor vehicles, public or private transportation vehicles, and any other facility as required by the Manager, which facility discharges non-domestic wastewater to the District's collection system, shall discharge wastewater to District's collection system without a gravity separation interceptor that complies with all of the requirements of Sections 2.12 through 2.15. Domestic wastewater shall not be allowed to pass through the interceptor. The Manager shall determine the interceptor's operational fluid capacity. The interceptor shall have a minimum operational fluid capacity of not less than 100 gallons and shall be designed to retain any material that will float or any material that will settle. The interceptor shall be watertight, structurally sound, durable and shall have a minimum of two chambers with a separate ring and cover for each chamber and any additional covers to ensure adequate cleaning capabilities.

2.13 INTERCEPTOR REQUIREMENTS. All users required to install a gravity separation interceptor shall comply with the following conditions:

(A) All interceptor chambers shall be immediately accessible at all times for the purpose of inspection, sampling, cleaning, and maintenance. The user shall provide a separate ring and cover for each separate interceptor chamber and any additional covers to ensure adequate cleaning capabilities. All rings shall be affixed to the interceptor to ensure a gas and watertight seal. At no time shall any material, debris, obstacles, or other obstructions be placed which will prevent immediate access to the interceptor.

(B) Any interceptor legally and properly installed before the effective date of this Ordinance shall be acceptable as an alternative to the interceptor requirements of the Ordinance. The interceptor shall be effective in removing floatable and settleable material and shall be immediately accessible for inspection, sampling, cleaning, and maintenance.

(C) All drains and openings connected to an approved gravity separation interceptor shall be equipped with screens or devices which will exclude from the wastewater discharge all material and particles with a cubic dimension greater than 3/8 of an inch.

(D) All gravity separation interceptors shall be equipped with an influent tee extending no more than 6 inches below the operating fluid level of the interceptor. The interceptor shall also have tees extending to within 12 inches of the bottom at the exit side of each chamber in the interceptor, including the final chamber. In a case where a manufacturer's engineered interceptor design is contrary to this requirement, the Manager shall review the design and either approve or deny an exemption to this requirement.

(E) All interceptors shall be equipped with a sample box or sample wye as determined by the director.

(F) No User shall install or use any elbows or tees in any interceptor sample box.

(G) No user shall install any interceptor, sample box, or sample wye in a confined space or a permit-required confined space.

(H) If the Manager finds, either by engineering knowledge or by observation, that an interceptor is incapable of adequately retaining floatable and settleable material in the wastewater flow, is structurally inadequate, or is undersized for the facility, the Manager shall reject such interceptor and declare that the interceptor does not meet the requirements of this Section. The user shall thereupon be required to install, at the user's expense, an interceptor which is acceptable to the Manager.

2.14 APPROVED INTERCEPTOR MANUFACTURERS. The Manager shall maintain a list of approved interceptor manufacturers available to the public at the District's main office. Installation of an interceptor from a manufacturer shown in this list shall not subject the District to any liability for the adequacy of the interceptor under actual conditions of use. The user and property owner shall not be relieved of the responsibility for keeping floatable and settleable material out of the District's collection system.

2.15 INTERCEPTOR MAINTENANCE.

(A) Any person who owns or operates a gravity separation interceptor shall properly maintain the interceptor at all times. The interceptor shall be cleaned as often as necessary to ensure that sediment and floating materials do not accumulate to impair the efficiency of the interceptor and odors do not accumulate which would cause a public nuisance. An interceptor is not considered to be properly maintained, if for any reason the interceptor is not in good working condition or if the operational fluid capacity has been reduced by more than twenty-five (25) percent by the accumulation of floating material, sediment, oils or greases.

(B) The use of chemicals or other materials for the emulsification, suspension, or dissolution of oil and grease is prohibited.

(C) The use of microbiological agents to metabolize oil and grease shall be reviewed for approval on a case-by-case basis. The user shall submit a written request to the Manager for the use of any microbiological agent prior to the use of that agent. The use of microbiological agents shall not be a substitute for adequate interceptor maintenance.

(D) The user may be required to perform a study to document the effectiveness of any proposed microbiological agent's ability to metabolize oil and grease under the conditions of the intended use. These studies shall be performed at each unique site where the microbiological agent is proposed for use. The study shall include effluent wastewater sampling by both the user and the District. The user shall be responsible for all costs associated with the study, including all District

sampling and analysis costs. The elements of the study shall be submitted to the Manager for review and approval prior to any element of the proposed study being implemented.

(E) When an interceptor is cleaned, the removed sediment, liquid, and floating material shall be lawfully disposed of other than to the District's collection system, POTW, or storm drain and shall not be reintroduced into the interceptor or discharged into another interceptor at another location not designed and permitted to accept such waste.

(F) If the interceptor is not maintained adequately under the conditions of use, then the interceptor shall be resized and the user shall install one that is effective in accomplishing the intended purpose.

(G) The owner and lessee, sub-lessee, proprietor, operator, or superintendent of any facility, required to install an interceptor, are individually and severally liable for any failure to properly maintain such interceptor.

2.16 RESTAURANTS.

(A) No person who owns, operates, or maintains a restaurant (restaurant user) shall discharge wastewater from such restaurant to the District's collection system or POTW without first receiving a written determination for Manager, and complying with such determination, of the District's grease interceptor requirement. Such restaurant users shall complete and submit a District Discharge Survey Form to the Manager for review of grease interceptor requirements. Within ten business days of receipt of the Wastewater Discharge Survey Form, Manager shall notify such restaurant user of Manager's determination whether installation of a grease interceptor is required prior to such restaurant user's discharge into the District's collection system or POTW. It is unlawful for any restaurant user notified by the Manager of the District's requirement of a grease interceptor to discharge restaurant wastewater into District's collection system or POTW without use of such grease interceptor in accordance with this Ordinance.

(B) The Manager shall calculate the size of the grease interceptor to be used by a restaurant, in accordance with the Uniform Plumbing Code, Appendix H, as adopted by the District, provided that any restaurant determined to require a grease interceptor of more than 100 gallons and less than 750 gallons shall install a minimum 750 gallon grease interceptor. Manager's determination shall be based upon the type of restaurant, the condition of the collection system serving the restaurant, and the possible adverse affects caused by the restaurant's wastewater discharge.

(C) Any restaurant user required to install a grease interceptor shall direct all wastewater and waste from floor drains, floor sinks, sinks, waste container wash racks, dishwashers, and garbage grinders through an approved minimum size 750 gallon gravity separation interceptor which complies with Section 2.13 of this Chapter. Such restaurant user shall keep all domestic wastewater from restrooms, showers, drinking fountains, and condensate (i.e., ice melt, air conditioning condensate) separate from the restaurant wastewater until the restaurant wastewater has passed through all necessary grease interceptors, pretreatment equipment, devices, or monitoring stations.

(D) Any restaurant user required to install a grease interceptor shall maintain such interceptor in accordance with Section 2.15.

(E) The size of restaurant gravity separation interceptors shall be determined as described in the latest edition of the Uniform Plumbing Code, Appendix H.

(F) Any interceptor or grease trap legally and properly installed at a food processing facility before June 1, 1991, shall be acceptable as an alternative to the interceptor specified above, provided such interceptor or grease trap is effective in removing grease and is so designed and installed that it can be inspected and properly maintained.

2.17 PROHIBITED RESTAURANT SURFACE DISCHARGES.

(A) No restaurant user shall at any time discharge any wastewater to the street, storm drain, service dock areas, parking areas, or ground. Wastewater generated by restaurants must be disposed of to a sanitary sewer through an approved gravity separation interceptor or sample station connected to a sanitary sewer or hauled off-site and disposed at a legal disposal site.

(B) If a restaurant has a blocked sewer lateral or failed sewage pumping device which causes the discharge of wastewater to the storm drain, service dock areas, or ground, the restaurant user shall immediately cease all wastewater generating activities that result in wastewater being discharged to the storm drain, service dock areas, or ground. Failure to comply with this requirement shall be considered a violation of this Ordinance and shall subject the restaurant user to enforcement actions.

2.18 CONDITIONAL WAIVERS. Notwithstanding subsection B of Section 2.16, at the discretion of the Manager, the Manager may conditionally waive the grease interceptor requirement for any restaurant user determined by the Manager not to have adverse effects on the District's collection system or POTW. Manager may revoke such conditional waiver for any of the following reasons;

(A) Changes in type of food prepared or served;

(B) Falsification of information submitted in the District's wastewater discharge survey form;

(C) Changes in operating hours;

(D) Changes in maximum seating capacity;

(E) Changes in maximum meals served per peak hour;

(F) Changes in equipment used;

(G) Changes in the nature of the wastewater discharged as determined by random and scheduled wastewater sampling and analyses; or

(H) Sanitary sewer overflows (SSO's) caused by the restaurant user's wastewater discharge.

2.19 LIQUID WASTE HAULER. All liquid waste haulers shall abide by the following requirements and conditions:

(A) Disposal of the contents of septic tank, seepage pit, cesspool, or any other trucked wastes to the District's collection system is prohibited.

(B) Liquid waste haulers are prohibited from discharging industrial waste into the District's collection system.

(C) All liquid waste haulers operating within the boundaries of the District shall provide, upon request, documentation as to the origin of the wastes hauled and their designated disposal sites. Failure to provide verifiable documentation shall constitute a violation of this Ordinance.

2.20 USE OF AND DAMAGE TO DISTRICT EQUIPMENT OR FACILITY.

(A) No person shall enter, break, damage, destroy, uncover, deface, or tamper with any temporary or permanent structure, equipment, or appurtenance which is part of the District's collection system without written prior approval by the Manager.

(B) Any person who discharges or causes the discharge of any wastewater or pollutant which causes detrimental effects on the District's collection system, POTW, sludge, or storm drain, or any other damages, including the imposition of fines by state, federal or other regulatory agencies against the District, shall be liable to the District for all damages and costs incurred including administrative expenses, and fines imposed on District by any state, federal or other regulatory agencies. District shall calculate its administrative expenses as ninety (90) percent of the cost of repairs and personnel time expended by District to remedy such damages and costs. All charges shall be payable to the District within thirty (30) days of invoicing by the District.

2.21 SURFACE DISCHARGE PROHIBITIONS.

(A) No person or user shall discharge or cause to be discharged onto the ground, into any permeable sump, pit, or well, into any storm drain, or to any surface, pipe, parking lot, street, gutter, or waterway leading to a storm drain, whether currently carrying water or not, any pollutant, wastewater, solid or fluid material which will:

(1) Impair the useful function of the storm drain;

(2) Cause undue storm drain maintenance expense to the District or other public agency;

(3) Cause a public nuisance or public hazard;

(4) Cause detrimental pollution of natural surface or subsurface waters; or

(5) Violate any regulation, order, or requirement of the Regional Board, including all NPDES Non-Point Source (Storm Water) Permit Requirements.

(B) Any person or user who discharges or causes a discharge in violation of Subsection A of this Section, shall be liable to the District for all damages and fines incurred by the District including administrative expenses, and fines imposed on the District by any state, federal or other regulatory agencies.. The District shall calculate its administrative expenses as ninety 90 percent of the District's repairs and personnel time expended by the District to remedy such damages and costs.. All charges shall be payable to the District within thirty (30) days of invoicing by the District.

(C) Any person or user who has violated subsection A of this Section shall submit a written report of the incident within 5 business days to the Manager. The written report shall include a description of the circumstances causing the discharge, the quantity and qualities of the pollutant discharged, the methods of cleanup and disposal, and the corrective measures taken to prevent a reoccurrence.

2.22 POINT OF DISCHARGE LIMITATION. No person or user, shall discharge any wastewater directly into a District manhole or other opening in the District's collection system other than through an approved building sewer connection, unless written permission for the discharge has been granted by the Manager. This prohibition shall not apply to authorized District personnel involved with the maintenance, cleaning, repair, or inspection of the District's collection system.

2.23 TIME LIMITS. Any time limit provided in any written notice or any provision of this Ordinance may be extended only by a written directive of the Manager and upon a showing of good cause from the user.

III INDUSTRIAL WASTE

3.1 SEPARATION OF DOMESTIC AND INDUSTRIAL WASTES. Any user who discharges industrial wastewater to the District's collection system shall keep domestic wastewater separate from all industrial wastewater until the industrial wastewater has passed through all required pretreatment equipment or devices, or the user's industrial wastewater sample point(s). For existing Categorical Industrial Users and Significant Industrial Users that cannot separate the domestic wastes from the industrial wastes prior to a permitted sampling point, the combined wastestream formula shall be applied to determine applicable discharge limitations.

3.2 PROHIBITED WASTE DISCHARGES. Except as hereinafter provided, no person or user shall discharge or cause to be discharged into the POTW, the collection system of the District or any opening, sump, tank, clarifier, piping, or waste treatment system which drains or flows into the POTW or the collection system of the District any of the following:

(A) Any earth, sand, rocks, ashes, cinders, spent lime, stone, stone cutting dust, gravel, plaster, concrete, glass, metal filings, or metal or plastic objects, garbage, grease, viscera, paunch manure, bones, hair, hides, or fleshings, whole blood, feathers, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, wood, plastic, tar, asphalt residues, residues from refining or processing fuel or lubrication oil and similar substances, or solid, semi-solid, or viscous material in quantities or volume which will obstruct the flow of sewage in the collection system or any object which will cause clogging of a sewer or sewage lift pump, or interferes with the normal operation of the POTW.

(B) Any compound which will produce noxious odors in the sewer or wastewater treatment facilities.

(C) Any recognizable portions of human or animal anatomy.

(D) Any solids, liquids, gases, devices, or explosives which by their very nature or quantity are or may be, sufficient either alone or by interaction with other substances or sewage to cause fire or explosion hazards, exceed 10% of the (LEL) at the point of discharge or in the collection system, or in any other way create imminent danger to the City's or District's wastewater personnel or POTW, the environment or public health.

(E) Any wastewater or material with a closed cup flash point of less than 140 degrees Fahrenheit or 60 degrees Celsius using the test methods specified in 40 CFR 261.21 and amendments thereto.

(F) Any overflow from a septic tank, facility wastewater holding tank, cesspool or seepage pit, or any liquid or sludge pumped from a cesspool, septic tank, facility wastewater holding tank or seepage pit, except as may be permitted by the Manager and approved by the City.

(G) Any discharge from any wastewater holding tanks of recreational vehicles, trailers, buses, and other vehicles, except as may be permitted by the Manager and approved by the City.

(H) Any stormwater, groundwater, street drainage, subsurface drainage, yard drainage, or runoff from any field, roof, yard, driveway, or street. The Manager, in consultation with the City, may approve, on a temporary basis, the discharge of such water only when no reasonable alternative method of discharge is available.

(I) Any substance or heat in amounts that will inhibit biological activity in the POTW resulting in interference or that will cause the temperature of the sewage in any public sewer to be higher than 140 degrees Fahrenheit. In no case shall any substance or heat be discharged to the sewer which will raise the POTW influent higher than 104 degrees Fahrenheit (40 degrees Celsius).

(J) Any radioactive waste in excess of federal, state, or county regulations.

(K) Any pollutant(s), material or quantity of material which will cause:

1) Damage to any part of the collection system;

2) Abnormal maintenance of the collection system;

3) An increase in the operational costs of the collection system;

4) A nuisance or menace to public health;

5) Interference or pass through in the POTW, its treatment processes, operations, sludge processes, use or disposal. This applies to each user introducing pollutants into the POTW whether or not the user is subject to other National Pretreatment Standards or any national, state, or local pretreatment requirements; or

6) A violation of the NPDES permit; or

7) A violation of the MOU.

(L) Any quantities of herbicides, algaecides, or pesticides in excess of the District's local limits or national categorical standards.

(M) Any petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in excess of the District's limits or national pretreatment standards.

(N) Any material or quantity of material(s) which will cause abnormal sulfide generation.

(O) Any water or wastewater used to artificially raise the industrial user's discharge rate or added for the purpose of diluting wastes that would otherwise exceed applicable permitted discharge limitations.

(P) Any wastewater having a corrosive property capable of causing damage to the District's collection system, POTW, equipment, or structures or harm to District or City personnel. However, in no case shall wastewater be discharged to the District's collection system or POTW with a pH below 5.0, or greater than 11.5, or which will change the influent pH of the POTW treatment plant to above 8.0 or below 6.5.

(Q) Any substance that will cause discoloration of the POTW effluent.

(R) Any unpolluted water, including stormwater, subsurface water, single pass cooling water, and single pass heating water. The Manager may approve, in consultation with the City, on a temporary basis, the discharge of such water only when no reasonable alternative method of discharge is available. The user shall pay all applicable user charges and fees.

(S) Any substance which may cause the POTW effluent or any other product such as residues, sludges, or scums to be unsuitable for reclamation or reuse or which will interfere with any of the reclamation processes. This includes any material which will cause the sludge at the POTW to violate applicable sludge use or disposal regulations developed under the Federal Clean Water Act, 33 USCA, Section 1251 et seq., or any regulations affecting sludge user or disposal developed pursuant to the Solid Waste Disposal Act, 42 USCA, Section 6901, et seq.; Clean Air Act, 42 USCA, Section 7401, et seq.; Toxic Substance Control Act, 15 USCA, Section 2601, et seq., or any other applicable state regulations, and amendments to these Acts or regulations.

(T) Any pollutant, including oxygen demanding pollutants (BOD, COD, etc.) released in a discharge at a flow rate and/or pollutant concentration that will cause interference with the POTW.

(U) Pollutants that result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.

(V) Any hazardous substance which violates the objectives of the General Pretreatment Regulations (40 CFR 403), this Ordinance, or any statute, rule, regulation or chapter of any public agency having jurisdiction over said discharge, and amendments thereto.

(W) Any material in excess of the quantities established by resolution.

(X) Any discharge from a material processing tank or vessel. These shall include, but not be limited to, all wash tanks, chemical conversion tanks, acid and alkali tanks, lubricating tanks, condensate water from dry cleaning equipment, fruit and vegetable wash and treatment tanks, and any other tank or vessel containing a material which would not meet the pollutant discharge limitations as established by resolution.

(Y) Any radiator fluid or coolant, cutting oil, water soluble cutting oil, or water-based solvent.

(Z) Any photo processing waste from developing or fixing solutions that are not in compliance with local limits or group industrial user permits.

3.3 SWIMMING POOL DISCHARGE REQUIREMENTS.

(A) Discharges from swimming pools, wading pools, spas, whirlpools, and therapeutic pools shall be admitted to the District's collection system on a case-by-case basis. Each user or person who desires to drain a swimming pool, wading pool, spa, whirlpool, or therapeutic pool to the District's collection system shall first obtain permission from the District prior to discharging of any of these waters. Permission shall be granted by the Manager if the discharge will not cause a hydraulic overload condition in the area's sewer lines. If the user has no connection to the District's collection system available, these waters may be surface discharged providing the following conditions are met:

1) The chlorine residual in the water shall be less than 0.1 mg/l.

2) The discharge of the water shall in no way create a public nuisance.

3) The discharge of the water shall in no way damage, destroy, erode, or impair surrounding property.

4) The discharge of the water shall in no way violate any regulation of the Regional Board.

5) The user has obtained permission from the Manager for the discharge.

(B) Under no circumstances shall wastewater generated by the acid cleaning or chlorine washing of swimming pools, wading pools, whirlpools, and therapeutic pools be discharged to the storm drain. Such wastewaters must be pH neutralized between 5.0 and 11.5 and discharged to the collection system. In the event a sewer connection is not available, such wastewaters must be neutralized and disposed at a legal disposal site. The owner of the swimming pool, wading pool, spa, whirlpool, or therapeutic pool will be required to provide proof of disposal upon District's request.

3.4 **LIMITATION ON WASTEWATER STRENGTH**. No person shall discharge industrial wastewater to the District's collection system unless the wastewater conforms to all of the limitations and requirements of this Ordinance. Discharge limitations shall be revised and adopted by resolution as necessary to ensure compliance with the MOU. For Categorical Industrial Users, the District may exercise one or more of the following options:

(A) Where a categorical pretreatment standard is expressed in terms of either the mass or the concentration of a pollutant wastewater, the Manager may impose equivalent concentration or mass limits in accordance with 40 CFR 403.6(c) and amendments thereto;

(B) When wastewater subject to a categorical pretreatment standard is mixed with wastewater not regulated by the same standard, the Manager shall impose an alternate limit using the combined wastestream formula; and

(C) A variance from a categorical pretreatment standard may be issued if the user can prove, pursuant to the procedural and substantive provisions in 40 CFR 403.13 and amendments thereto, that factors relating to its discharge are fundamentally different from the factors considered by the E.P.A. when developing the categorical pretreatment standard.

3.5 **LOCAL LIMITS**. The Manager shall adopt and implement local limits from time to time as are necessary based on the Local Limits developed by the City. These limitations are necessary to assure compliance with the NPDES permit, including the prohibition against pass through of any pollutants that cause a violation of the permit or cause interference with the POTW. The pollutant limitations may be allocated among industrial user classes or individual users as uniform concentration limits, or as the ratio of the total mass per user, or as a selected industry reduction, or by such other method considering factors such as persistence of the pollutant, equity, treatment feasibility, economic feasibility, and economies of scale, pollution prevention and waste minimization measures, anticipated growth and enforcement feasibility. Customer specific allocations at current POTW loadings may be created for public health facilities providing a life saving service or procedure so long as the pollutant discharged will not contribute to pass through, interference or other violation of the NPDES permit.. Specific pollutant limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond.

3.6 **DE MINIMUS CATEGORIZATION.** Any user whose industrial wastewater discharge is less than 100 gallons per day and is not regulated by a federal categorical pretreatment standard may be classified in the Manager's discretion as de minimus and shall not be subject to permitting standards or local limits provided that such industrial wastewater discharge is not a hazardous substance, does not contribute to interference or pass through violations at the POTW or violations of the NPDES permit, and does not cause detrimental effects or damage to the District's collection system or POTW, or cause a threat of harm to the District personnel, the public, or the environment. Categorization as a de minimus user shall terminate upon written notice to such user of Manager's determination that such user no longer satisfies the criteria of this Section.

3.7 **PRETREATMENT OF INDUSTRIAL WASTEWATERS**. All users shall:

(A) Provide wastewater pretreatment, as required, to comply with this Ordinance;

(B) Achieve compliance with all applicable federal categorical pretreatment standards, as contained in 40 CFR Chapter I, Subchapter N and amendments thereto, as it exists and as it may be amended, and local limits, whichever are more stringent, within the time limitations as specified by the federal pretreatment regulations;

(C) Pretreat wastewater to a level acceptable to the Manager and provide, operate, and maintain all necessary equipment, systems, and devices at the user's expense;

(D) Provide detailed plans to the Manager and the City for review and approval showing the pretreatment equipment, systems, devices, and operating procedures **BEFORE** the beginning of any construction or installation of any equipment. The review of such plans and operating procedures shall not relieve the user from the responsibility of pretreating wastewater to produce an effluent acceptable to the Manager under the provisions of this Ordinance;

(E) No user shall install pretreatment equipment, systems or devices in a confined space or a permit-required confined space;

(F) Whenever deemed necessary, the Manager may require users to restrict their wastewater discharge, relocate and/or consolidate points of discharge, separate domestice waste streams from industrial waste streams, and other such conditions as may be necessary to protect the POTW and determine the user's compliance with the requirements of this Chapter; and

(G) Notify the Manager of any pretreatment equipment failure within 24 hours of discovering the failure. The notification shall be made by a telephone call, telefax, transmission, personal visit or hand delivered notification, to the District's Industrial Waste Office.

3.8 UNAUTHORIZED MONITORING AND PRETREATMENT EQUIPMENT MODIFICATIONS. No user shall knowingly falsify, tamper with, or render inaccurate any monitoring device or any pretreatment equipment or device. Such falsification, tampering, or inaccuracy shall be considered a violation of this Chapter and shall subject the user to enforcement actions.

3.9 PRETREATMENT EQUIPMENT BYPASS.

(A) No user shall bypass any pretreatment equipment or device unless the bypass: (i) is necessary to prevent loss of life, personal injury or severe property damage, is not necessitated by some fault of the user, and is the only feasible alternative; or (ii) does not cause local limit violations and is necessary to perform essential maintenance ensuring adequate operation of the pretreatment equipment or device.

(B) All users shall comply with the following bypass notification requirements:

1) Anticipated bypass: The user shall notify the Manager immediately upon learning that any pretreatment equipment or device has been bypassed. The user shall submit a written report to the Manager within 5 working days after the bypass. The report shall include:

(a) A description of the bypass, the cause of the bypass, and the duration of the bypass;

(b) If the bypass was corrected; and

(c) Actions taken or proposed to reduce or prevent a re-occurrence of the bypass.

3.10 PROHIBITED DISCHARGE OF RECOVERED PRETREATMENT WASTE. No person shall discharge waste recovered from pretreatment equipment, systems, or devices into any sewer or storm drain opening or any drains or other openings leading to any sewer or storm drain or to the ground without authorization and permits from a regulatory agency having jurisdiction over the discharge of the waste. All recovered pretreatment waste shall be disposed of in accordance with all applicable federal, state, county, and local laws and regulations.

3.11 DILUTION PROHIBITED AS A SUBSTITUTE FOR TREATMENT. No industrial user shall increase the use of water, or in any other manner attempt, to dilute a wastewater discharge as a partial or complete substitute for adequate treatment to achieve compliance with this Ordinance and the industrial

user's permit, or to establish an artificially high flow rate for permitted mass emission rates or permitted flow amounts.

3.12 STORMWATER DIVERSION.

(A) All users having outdoor areas which allow wastewater and stormwater to enter a common opening connected to the District's collection system, shall install and maintain, at the user's expense, a stormwater diversion valve in the common opening.

(B) The stormwater diversion valve design and use shall be reviewed and approved by the Manager and the City prior to installation.

(C) The valve shall allow wastewater to enter the District's collection system during dry weather and prevent stormwater from entering the District's collection system during periods of inclement weather.

(D) Unless permitted to do so in accordance with subsection F of this Section, no user shall allow wastewater and stormwater to mix.

(E) During periods of inclement weather, the user shall immediately suspend all outdoor wastewater generating activities and divert all stormwater to a storm drain.

(F) If the discharge of stormwater would create a pollution threat to surface or subsurface waters, the user may make application to the Manager requesting that the stormwater be discharged to the District's collection system. Approval of a stormwater discharge to the District's collection system shall be based on:

1) Hydraulic capacity of the District's collection system.

2) Hydraulic capacity of the POTW.

3) Total volume of stormwater to be discharged in a 24-hour period.

4) A demonstrated need to discharge stormwater to the District's collection system to prevent surface and subsurface water contamination.

5) Approval from the City.

6) A good faith effort made by the user to prevent the pollution of stormwater by industrial waste and waste generated by the user.

3.13 INDUSTRIAL USER MODIFICATIONS. All permitted industrial users shall report proposed changes in their operations in writing to the Manager for approval 30 days prior to initiation of the changes. The reporting shall be done in writing from the authorized representative of the permitted industrial user. For the purposes of this section "changes" shall include any of the following:

(A) A sustained twenty (20) percent increase or decrease in the industrial wastewater flow discharged or in production capacity.

(B) Additions, deletions, or changes to waste-generating processes or equipment.

(C) Experimentation with new processes and/or equipment that will affect the quantity or quality of the wastewater discharged.

3.14 SPILL CONTAINMENT SYSTEMS. Spill containment systems, as may be required, shall conform to requirements established by the Manager. These requirements may include but are not limited to the following:

(A) No person shall operate a spill containment system that allows incompatible substances to mix, thereby creating a hazardous or toxic substance in the event of a failure of one or more containers.

(B) Spill containment systems shall consist of a system of dikes, walls, barriers, berms, or other devices designed to contain spillage of the liquid contents of containers.

(C) Spill containment systems shall be constructed of materials which are impermeable and non-reactive to the liquids being contained.

(D) Spill containment systems shall conform to local regulations and policies as to percent containment, container type, size, outdoor covering, and the length of time spilled material may remain in the spill containment system.

(E) At no time shall a user use a spill containment system for the storage of waste other than from a spill.

3.15 FACILITY WASTE MANAGEMENT PLAN. All permitted industrial users shall be required to develop and maintain a Facility Waste Management Plan (FWMP). The FWMP shall consist of the following applicable documents:

(A) **SOLVENT MANAGEMENT PLAN (SMP)** is required of all categorical industrial user which are permitted to submit a SMP in lieu of required pollutant monitoring.

(B) **SLUG DISCHARGE CONTROL PLAN (SDCP)** is required of all industrial users which have batch discharge provisions, stored chemicals or materials, or the potential for a slug discharge which, if discharged to the District's collection or storm drain system, would violate any of the prohibited discharge requirements of this Ordinance.

(C) **PRETREATMENT SYSTEMS OPERATIONS AND MAINTENANCE MANUAL** shall be submitted by all industrial users that operate and maintain pretreatment equipment for the removal of pollutants from wastewater.

(D) **HAZARDOUS MATERIALS AND HAZARDOUS WASTE MANAGEMENT PLAN** is required of all industrial users that use or possess a hazardous substance or generate hazardous waste. The Fire Department-required Business Emergency Plan may be substituted for this management plan.

(E) **WASTE MINIMIZATION/POLLUTION PREVENTION PLAN (WM/PPP)** is required of any industrial user:

1) For whom the Manager has determined such WM/PPP is necessary to achieve a water quality objective.

2) Determined by the California State Water Quality Control Board ("state board") to be a chronic violator, and the state board, regional board or District determines that pollution prevention (as defined in Water Code Section 13263.3(b)) could assist.

3) That significantly contributes, or has the potential to significantly contribute, to the creation of a toxic hot spot as defined in Water Code Section 13391.5.

(F) A WM/PPP REQUIRED OF AN INDUSTRIAL USER SHALL INCLUDE ALL OF THE FOLLOWING:

1) An analysis of one or more of the pollutants, as directed by the state board, regional board, or the District, that the user discharges to the District's POTW, a description of the sources of the pollutants, and a comprehensive review of the processes used by the user's that result in the generation and discharge of the pollutants.

2) An analysis of the potential for pollution prevention to reduce the generation of the pollutants, including the application of innovative and alternative technologies and any adverse environmental impacts resulting from the use of those methods.

3) A detailed description of the tasks and time schedules required to investigate and implement various elements of pollution prevention techniques.

4) A statement of the user's pollution prevention goals and strategies, including priorities for short-term and long-term action.

5) A description of the user's existing pollution prevention methods.

6) A statement that the user's existing and planned pollution prevention strategies do not constitute cross media pollution transfers unless clear environmental benefits of such an approach are identified to the satisfaction of District and information that supports that statement.

7) Proof of compliance with the Hazardous Waste Source Reduction and Management Review Act of 1989 (article 11.9 (commencing with Section 25244.12) of Chapter 6.5 of Division 20 of the Health and Safety Code) if the user is also subject to that act.

8) An analysis, to the extent feasible, of the relative costs and benefits of the possible pollution prevention activities.

9) A specification of, and rationale for, the technically feasible and economically practicable pollution prevention measures selected by the user for implementation.

(G) The WMPPP shall list ways the industrial user plans to conserve water, investigate and implement product or material substitution, maintain inventory controls, and provide employee education to minimize the amount of waste generated and hazardous materials used. Any person who fails to complete a pollution prevention plan required by the District, submits a plan that does not comply with this Section, or fails to implement a plan required by the District, shall be liable to the District for any civil penalty assessed administratively by the District or by a court in accordance with this Chapter.

(H) The District shall not include a WM/PPP in any local limits or permit issued by the District.

3.16 FEDERAL CATEGORICAL PRETREATMENT STANDARDS. It is unlawful for any user subject to federal categorical pretreatment standards to discharge wastewater to the District's collection system or POTW in violation of the applicable federal categorical pretreatment standards or any limitation contained in this Chapter or user's permit. The National Categorical Pretreatment Standards found in 40 CFR Chapter I, Subchapter N, and amendments thereto are hereby incorporated into this Chapter by reference. Where duplication of the same pollutant limitations exists, the limitation that is more stringent shall prevail. Compliance with National Categorical Pretreatment Standards for existing sources subject to such standards or for existing sources which hereafter become subject to such standards shall be achieved within three (3) years following promulgation of the standards unless a shorter compliance time is specified in the standards or by the Manager. New sources shall install, have in operating condition and "start-up" all

pollution control equipment required to meet applicable pretreatment standards before beginning any discharge. New sources must meet all applicable pretreatment standards within the shortest feasible time, not to exceed ninety (90) days.

3.17 **COMMERCIAL/INDUSTRIAL TENANT OCCUPANCY NOTIFICATION.** Pursuant to 40 CFR 403.8(f)(2)(i), and amendments thereto, all owners of multiple tenant commercial/industrial developments within the District shall submit, upon request, a current list of tenants. This list shall provide the name, address, unit space designation and type of business activity for each tenant space in the development.

3.18 **NOTICE OF POTENTIAL PROBLEMS TO POTW.** All users shall immediately notify the Manager and the City of all wastewater discharges that could cause a problem at the POTW or in the collection system, including any slug loadings of any material. Wastewater discharges that may cause a problem at the POTW include, but are not limited to, acids, alkalis, oils, greases, high strength organic waste, salt, hazardous substances, colored wastes, and batch discharges. All users shall provide the Manager and the City, within five (5) business days from the incident, a written report detailing the cause of the discharge and the corrective actions taken to prevent a recurrence.

3.19 **WRITTEN RESPONSES.** All users required to provide a written response to any correspondence, order, or notice from the Manager shall do so in accordance with the date specified in the correspondence, order, or notice. Failure to provide the written response by the date requested shall constitute a violation of this Ordinance and may subject the user to enforcement actions.

3.20 **FALSIFYING INFORMATION.** Any user who knowingly makes any false statement, representation, or certification in any record, correspondence, or other document submitted or required to be maintained under this Chapter, including monitoring reports and records, or reports of compliance or noncompliance shall be in violation of this Chapter and may subject the user to enforcement actions.

3.21 **WASTEWATER DISCHARGE AUTHORIZATION CERTIFICATE.** Any non-residential user desiring to discharge wastewater to the POTW, that does not qualify for an Industrial User Permit, Group Permit, or De Minimus Category and whose wastewater shall not have an adverse affect on the POTW, may be required to obtain a Wastewater Discharge Authorization Certificate (WDAC) from the Manager. WDACs shall not be issued to categorical industrial users. WDACS are issued for indefinite time periods, subject to periodic review and reconsideration by the Manager.

3.22 **INDUSTRIAL USER GROUP PERMITS.** Certain classes of industrial users, as determined by the Manager, may be eligible to participate in an Industrial User Group Permit. Permittees within this designation shall share a common business identification as defined by the Federal NAICS code book. Industrial users permitted by this group permit shall abide by general permit conditions specific for that particular group being permitted. These permit conditions shall be established by the Manager.

3.23 **INDUSTRIAL USER PERMITS.**

(A) It is unlawful for any Class I, II, IV or V industrial user to connect or discharge to the District's collection system or the POTW without a valid industrial user permit. It is unlawful for any Class III industrial user to connect or discharge to the District's collection system or the POTW without a valid industrial user permit, WDAC, or industrial user group permit, as determined by the Manager based upon the industrial user's effect on the POTW. The District issuance of any such permit or WDAC shall not vest any right in a user to continue connection or discharge to the District's collection system or POTW beyond any right expressly stated in such permit or WDAC.

(B) Plans and building permits for Class I, II, IV, or V industrial user permits and those users designated by the Manager shall not be approved by the Manager for any sewer connection which will convey industrial wastewater to the District's collection system or POTW unless the user has first obtained an industrial user permit or the user has received written permission from the

Manager after agreeing in writing not to discharge industrial wastewater until an industrial user permit has been obtained.

(C) The Manager shall deny or condition new or increased contributions of pollutants, or changes in the nature of pollutants, to the POTW by industrial users where such contributions do not meet applicable pretreatment standards and requirements or where such contributions would cause the District to violate its NPDES permit.

(D) Users required to obtain an industrial user permit shall complete and file with the Manager a permit application form provided by the Manager and shall pay all applicable fees within thirty (30) days of invoicing by the District. The application form may require applicant's submission of any or all of the following:

1) Name, address, and location (if different from the site address);

2) NAICS number according to the Federal North American Industry Classification System, Office of Management and Budget, 1997, as amended;

3) Number and type of employees, hours of plant operations, and proposed or actual hours of pretreatment system operation;

4) A description of operations including the nature, average rate of production, and NAICS code of the operation(s) carried out by the Industrial User. This description shall include a schematic process diagram which indicates points of discharge to thePOTW;

5) Site plans, floor plans, mechanical and plumbing plans with details to show all sewers, sewer connections, pretreatment equipment, systems and devices, production areas and all areas of wastewater generation, and points of discharge to the District's collection system;

6) A written statement from the property owner or landlord, if different from the industrial user, agreeing to the industrial user's activities, manufacturing processes, and chemical and material storage;

7) A list of all environmental control permits held;

8) E.P.A. hazardous waste generator's number;

9) Wastewater samples analyzed for specific pollutants specified by the Manager. The samples shall be analyzed by a State certified laboratory in accordance with Approved Analytical Methods as defined herein and sampling procedures in accordance with 40 CFR Part 136, and to CFR 403.12(6)(5) and amendments thereto, and the time, date, and place of sampling and methods of analysis;

10) Measurement of pollutants. The user shall identify the National Categorical Pretreatment Standard applicable to each regulated process. The user shall submit the results of sample analyses identifying the nature and concentration (or mass where required) of regulated pollutants in the discharge from each regulated process. Both daily maximum and average concentration (or mass) shall be reported. All analyses shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto;

11) Time and duration of wastewater discharges;

12) Average and maximum daily wastewater flow rates from each waste stream, including any daily, monthly, and seasonal variations;

13) A time schedule for compliance with any Ordinance Provisions or Categorical Standards for which immediate compliance is not possible;

14) A statement consenting to entry on to the user's premises by District staff to assess compliance by inspection, records examination, sampling, and monitoring;

15) Certification statement, as set forth in 40 CFR Part 403.6(a)(2)(ii) and amendments thereto, executed by an authorized representative of the Industrial User and prepared by a qualified professional, indicating whether or not pretreatment standards (national categorical and local) are being met on a consistent basis. If not, the industrial user shall state if additional operation and maintenance or additional pretreatment equipment is necessary to achieve compliance with pretreatment standards and requirements;

16) Any other information as may be necessary for the Manager to evaluate the permit application; and

17) Flow measurement information showing the measured average daily and maximum daily flow in gallons per day to the District's collection system from regulated process waste streams and other waste streams as necessary to allow use of the combined waste stream formula.

(E) Within 45 days after receiving the completed application and all required supporting information, the Manager shall evaluate the application and information furnished by the applicant and either issue an industrial user permit subject to the terms and conditions provided in this Chapter, suspend the issuance of the permit or disapprove the application pursuant to subsection F of this Section. The Manager shall issue the permit, if the Manager believes that sufficient and accurate information has been provided by the applicant in the permit application and the Manager finds that all of the following conditions are met:

1) Sufficient information has been provided by the applicant in the permit application;

2) The proposed discharge of the applicant is in compliance with the prohibitions and limitations of this Ordinance;

3) The proposed operation and discharge of the applicant shall not interfere with the normal and efficient operation of the POTW; and

4) The proposed discharge operation or business activity of the applicant would not result in a violation by the District of the MOU or by the City of the terms and conditions of its NPDES permit or cause a pass through of any toxic materials to the environment or the City's POTW sludge.

5) The applicant has paid all applicable industrial user permit fees.

(F) If the Manager determines that the proposed discharge will not be acceptable, the Manager shall disapprove the application and shall notify the applicant in writing, specifying the reason(s) for denial and the applicable appeals process under Section 4.21 APPEALS.

(G) The Manager may suspend the permit application process if the user's business will not be operational and no wastewater is planned for discharge at the conclusion of the application review process. The user must notify the Manager at least 14 calendar days prior to the commencement of the business activities and wastewater discharge.

(H) Industrial user permits shall be subject to all provisions of this Ordinance and all other applicable regulations, charges, and fees established by the Manager. Permits may contain or require all of the following:

1) A statement of permit duration.

2) A statement of permit non-transferability.

3) The unit charge or schedule of user charges and fees for the wastewater discharged to the POTW as established by ordinance or resolution.

4) Schedule of penalties for noncompliance as established by resolution.

5) Limitations on the average monthly and maximum daily wastewater pollutants and mass emission rates for pollutants.

6) Limitations on the average monthly and maximum daily wastewater flow rates.

7) Requirements for the submittal of a Facility Waste Management Plan.

8) Requirements for the submittal of daily, monthly, annual, and long term production rates.

9) Requirements for reporting changes and/or modifications to equipment and/or processes that affect the quantity or quality of the wastewater discharged.

10) Requirements for installation and maintenance of inspection, monitoring, and sampling facilities.

11) Requirements for installation and maintenance of spill containment facilities.

12) Requirements for the installation and maintenance of pretreatment and/or pollution control facilities.

13) Specifications for self-monitoring programs which may include: pollutants to be monitored, sampling location(s); frequency of sampling; sample type(s); pollutant violation notification and resampling requirements; number, types, and standards for tests; and reporting schedules.

14) Requirements for reporting flow exceedances and pollutant violations.

15) Submission of a modified compliance schedule, where compliance with pretreatment standards cannot be met on a consistent basis. The modified compliance schedule shall provide the shortest possible time for the industrial user to provide additional pretreatment and/or operations and maintenance to achieve compliance. The schedule shall contain increments of progress (called milestones) in the form of dates, not to exceed nine (9) months, for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the industrial user to achieve compliance with applicable categorical pretreatment standards.

16) Requirements for submission of technical or discharge reports.

17) Requirements for maintaining and retaining all records relating to the wastewater monitoring, sample analyses, production, waste disposal, recycling, and waste minimization as specified by the Manager.

18) Requirements for notification of slug or accidental discharges and significant changes in volume or characteristics of the pollutants discharged.

19) Statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements and this Ordinance and amendments thereto.

20) Other conditions as deemed appropriate by the Manager to ensure compliance with this Ordinance and amendments thereto.

3.24 PERMIT DURATION. Industrial User Permits shall be issued for a specified time period, not to exceed three (3) years, and shall be stated to expire on a specific date.

3.25 DUTY TO COMPLY. All users that have been issued an industrial user permit, group permit, WDAC, or de minimis categorization have a duty to comply with all conditions and limitations in these control documents ("control documents"). Any user failing to comply with the requirements of such user's control documents shall be subject to administrative, civil or criminal enforcement actions in accordance with this Chapter.

3.26 PERMIT RENEWAL. All users shall submit a completed application for industrial user permit renewal, required monitoring information or production reports, and any other information required for permit renewal a minimum of ninety (90) days prior to the expiration of the existing industrial user permit. All users shall pay all applicable permit fees no later than (30) calendar days after invoicing by the District. No industrial user permit shall be renewed if the industrial user has not paid all applicable fees, submitted required monitoring information or production reports, or submitted any other required permit information. Users which have submitted a completed permit application prior to the expiration of their current permit shall be considered in compliance with this Section. In the event the Manager cannot issue the permit on the expiration date, the completed application will serve as an extension of the expired permit for up to thirty (30) working days until the actual permit can be issued. Users which do not have a valid industrial user permit shall be considered in violation of this Ordinance and amendments thereto and subject the user to enforcement action. Any discharge of industrial wastewater to the District's collection system or POTW with an expired industrial user permit shall be a violation of this Ordinance and amendments thereto and subject the user to enforcement action.

3.27 PERMIT MODIFICATIONS.

(A) The terms and conditions of the industrial user permit may be subject to modification by the Manager during the term of the permit as limitations or requirements are modified or added or due to other just cause including, but not limited to:

1) To incorporate any new or revised federal, state or local pretreatment standards or requirements.

2) To address significant alterations or modifications to the user's operation.

3) A change in the POTW that requires either a temporary or permanent reduction or elimination of the permitted discharge.

4) The permitted wastewater discharge poses a threat to the POTW, District personnel, residents or receiving waters.

5) Violation of any term or condition of the industrial user permit.

6) Misrepresentations or failure to fully disclose all relevant facts in the industrial user permit application or any required reporting.

7) To correct typographical or other errors in the industrial user permit.

(B) The user shall be informed of any proposed permit changes at least thirty (30) days prior to the effective date of the changes. Any modifications in the permit shall include a reasonable time schedule for compliance.

(C) Promulgation of Categorical Standards. Within 3 months of the promulgation of a Categorical Standard, permits for users subject to such standards shall be revised to require compliance within the time frame prescribed by such standard. Where an affected User has not previously submitted an application for a permit as required by Section 3.23, the User shall apply within 180 days after the promulgation of the applicable Categorical Standard. In addition, Users with existing permits shall submit to the Manager, within 180 days after the promulgation of an applicable Categorical Standard, a time schedule for compliance with the Categorical Standard.

(D) Changes in Operation. The terms and conditions of the permit may be subject to modification by the Manager during the term of a permit if limitations or requirements, as referenced in Sections 3.4 and 3.5 are modified or other just cause exists. The User shall be informed of any proposed changes in his permit at least 30 days prior to the effective date of change. Any changes or new conditions in a permit shall include a reasonable time schedule for compliance.

3.28 PERMIT TRANSFER. Industrial user permits are issued to a specific user for a specific operation for a specified time. Any permit reassignment, transfer, or sale to a new owner, new user, different premises, or different use is prohibited and is a violation of this Ordinance and amendments thereto.

3.29 REPORTING REQUIREMENTS FOR PERMITTEES. All reports and plans submitted to the District by Industrial Users pursuant to this Section and to Sections 3.7, 3.12, and 3.15 (except analytical reports submitted directly to the District by certified analytical laboratories at the request of Industrial Users) shall be signed and dated by an Authorized Representative of the Industrial User. The signature shall accompany the following certification statement:

> *"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

All Industrial Users are required to submit the following types of reports:

(A) Reports of Potential Problems, including Slug Loading. If, for any reason, pollutants are discharged at a flow rate or concentration which might cause pass through or interference with the POTW or which might result in a violation of NPDES Permit requirements or requirements of this Ordinance, or a hazard to District and/or City personnel and/or the Public, the User shall verbally notify the Manager and POTW staff immediately. The verbal report shall be followed by a written report submitted to the Manager and the City within five days. The User shall also collect a representative sample of the discharge and submit the results of the analysis to the District within 30 days after the incident.

(B) Notification of Hazardous Waste Discharge. All Industrial Users shall notify the District, City, the EPA Regional Waste Management Division Director, and State hazardous waste authorities in writing of any discharge into the POTW of a substance, which, if otherwise disposed of, would be classified a hazardous waste pursuant to 40 CFR Part 261 and amendments thereto. Such notification must include the name of the hazardous waste as set forth in 40 CFR Part 261 and amendments thereto, the EPA hazardous waste number, and the type of discharge (continuous,

batch, or other). If the Industrial User discharges more than 100 kilograms of such waste per calendar month to the POTW, the notification shall also contain the following information to the extent such information is known and readily available to the Industrial User: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the wastestream discharged during that calendar month, and an estimation of the mass of constituents in the wastestream expected to be discharged during the following 12 months.

The above required notifications must take place no later than 180 days after the discharge of the hazardous waste.

Any notification under this section need be submitted only once for each hazardous waste discharged. However, notification of changed discharges must be submitted in accordance with 40 CFR 403.12(j) and amendments thereto.

The hazardous waste discharge notification requirements specified herein do not apply to pollutants already reported under the self-monitoring requirements of parts b. and d. of this Section. Industrial Users are also exempt from the above requirements during a calendar month in which they discharge no more than 15 kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e) and amendments thereto.

Discharges of more than 15 kilograms of non-acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e) and amendments thereto, require a one-time notification. Additional notification is not required for subsequent months during which the Industrial User discharges additional quantities of the same non-acute hazardous waste.

In the case of new Federal regulations under Section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the Industrial User shall notify the District, the City, the EPA Regional Waste Management Division Director, and State hazardous waste authorities of the discharge of such substance within 90 days of the effective date of such regulations.

In the case of any notification made under these requirements, the Industrial User shall certify that it has a program in place to reduce the volume or toxicity of hazardous wastes generated to the degree it has determined to be economically practical.

Industrial Users may also be required to submit one or more of the following types of reports:

(C) Self monitoring Reports. Permittees may be required to submit periodic self-monitoring reports containing a description of the nature, concentration, and flow of pollutants required to be reported by the District, ant the time, date, and place of sampling methods of analysis. Sampling for self-monitoring reports shall be performed during the period covered by the report. All required analyses shall be performed by a State Certified Laboratory using Approved Analytical Methods as defined herein. Significant Industrial Users shall be required to submit self-monitoring reports at least once every six months.

(D) Surcharge Reports. Periodic measurements of flow, suspended solids, and BOD for surcharge determination and other appropriate waste characteristics shall be made by those Permittees specifically designated by the Manager.

(E) Compliance Schedule Progress Reports, if required, shall be submitted every thirty (30) days during the time the compliance schedule is in force, including a final compliance report at the conclusion of the compliance schedule. The industrial user shall state whether or not compliance was achieved for the increment of progress to be met on such a date. If progress cannot be

achieved, the industrial user shall state the reasons for the delay and the steps to be taken to return to the dates originally established in the compliance schedule.

(F) Categorical Standards Compliance Reports. Categorical Industrial Users shall submit Initial Baseline Monitoring Reports (BMRs) and periodic compliance reports, and, if necessary, schedule compliance reports, and final compliance reports as defined herein. All Categorical Standards Compliance Reports must by signed by an authorized representative of the Industrial User.

1) Initial Baseline Monitoring Reports (BMRs)

Baseline Monitoring Reports shall be submitted to facilitate evaluation of initial compliance status with respect to categorical standards, and any modifications or conditions necessary to achieve full compliance with categorical standards.

Baseline Monitoring Reports shall include all information listed in Section 3.23(D), and shall include a statement, reviewed by an authorized representative of the Industrial Users, and certified as to accuracy by a qualified professional, indicating whether Pretreatment Standards are being met on a consistent basis, and, if not, whether additional operation and maintenance and/or additional pretreatment is required for the Industrial User to meet the Pretreatment Standards and Requirements. New sources shall submit a Baseline Monitoring Report at least 90 days prior to commencement of discharge.

If immediate compliance with the Categorical Standard is not possible and additional pretreatment or operation and maintenance is necessary, the report must specify the shortest time necessary to achieve compliance. The completion date must not be later than that specified in the applicable Categorical Standards. New sources must achieve compliance with all applicable Pretreatment Standards within 90 days of commencing discharge.

2) Schedule Compliance Reports

Schedule compliance reports, shall be submitted, if necessary, to demonstrate compliance with conditions of a time schedule requiring full compliance with categorical standards by a specific date.

Schedule compliance reports shall contain dates for pretreatment equipment design completion, building permit submittal date, construction commencement date, construction updates, construction completion date, employee training completion date, and date of achieving final compliance. Samples shall be collected and analyzed to demonstrate compliance. The samples shall be taken in accordance with 40 CFR 136 and 40 CFR 403.12(b)(5) and amendments thereto. Schedule compliance reports shall be submitted at the completion of all major events necessary to achieve full compliance with Categorical Standards, but not less frequently than 30 days. Schedule compliance reports must be submitted within 14 days of a milestone date. In no case shall any event in the compliance schedule exceed nine months.

3) Final Compliance Reports

Final compliance reports shall be submitted, if necessary, to demonstrate that full compliance with categorical standards has been achieved.

Final compliance reports shall include all information contained in a Baseline Monitoring Report. Final compliance reports shall be submitted within 90 days following the date for final compliance with Categorical Standards. Final compliance reports from new sources must be submitted within 30 days after the facility commences discharge.

4) Periodic Compliance Reports

Periodic compliance reports shall be submitted to demonstrate continued compliance with categorical standards.

Periodic compliance reports shall include all information specified in Section 3.12(F) (1), (3), and (5). Reports shall also include any additional monitoring data obtained by the User. Periodic compliance reports shall be submitted every six months, in June and December of each year, unless required to be submitted more frequently by the Manager.

(G) Solvent Management Plans. All Industrial Users subject to effective Categorical Standards include a Total Toxic Organic (TTO) limitation shall be required to file a Solvent Management Plan. The Manager may also require other Industrial Users to submit Solvent Management Plans where, in his judgment, said plan is necessary to assure proper containment and disposal of solvents.

(H) Slug Discharge Control Plans. All Industrial Users so required by the Manager shall file a Slug Discharge Control Plan. The plan shall contain at least the following elements:

1) Description of discharge practices, including nonroutine batch discharges;

2) Description of stored chemicals;

3) Procedures for prompt verbal notification of the District and City of slug discharges, including any discharge that would violate a specific prohibition under Section 3.2 or 40 CFR 403.5(b) and amendments thereto, and procedures for follow-up written notification of the same agencies within 24 hours;

4) If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response; and

5) If necessary, follow-up practices to limit the damage suffered by the treatment plant or the environment.

(I) Specific Compliance Plans. All Industrial Users so required by the Manager shall file a Specific Compliance Plan. The plan shall indicate the cause of noncompliance, the corrective actions which will be taken to prevent recurrence of said noncompliance, and if required by the Director, a proposed Compliance Time Schedule indicating the dates those corrective actions will be completed.

(J) Any other reports required by California State Law; including such reports as are required by Chapter 6.95 of the California Health and Safety Code.

3.30 CHARGES AND FEES The District is authorized to recover costs from users for the implementation of the District's pretreatment program in the form of fees and charges. These fees and charges relate exclusively to matters covered by this Ordinance and are separate from all other fees and charges imposed

by the District. The amount of these fees and charges and method of implementation shall be established the District. The District may adopt charges and fees to recover the costs for:

(A) Developing, implementing, and operating the District's pretreatment program and this Ordinance and amendments thereto;

(B) Monitoring, sampling, inspection, surveillance procedures and laboratory costs;

(C) Reviewing plans and construction inspections;

(D) Industrial user permit application review;

(E) Industrial user permit, industrial user group permit, and wastewater discharge authorization certificate issuance;

(F) Noncompliance and enforcement actions for violation of this Ordinance and amendments thereto;

(G) Temporary user permit issuance;

(H) Exceedance of conventional pollutant limitations set forth in the industrial user permit and other applicable pollutant limitations. Such pollutant exceedance fees shall be based on the POTW costs of operations, maintenance and treatment for the pounds of COD, Total Suspended Solids, Oil and Grease and Total Nitrogen;

(I) Non-residential user's sewer service fees shall be assessed upon the following conditions:

1) All non-residential users that discharge any volume of wastewater to the District's collection system or POTW that has amounts of COD, TSS or oil and grease greater than or equal to the average amounts of COD, TSS and oil and grease normally found in 25,000 gallons of domestic sewage shall be designated "industrial users" and shall pay monthly service fees based on the industrial user sewer rates established periodically by resolution. The industrial user sewer rates shall be based upon total volume of wastewater discharged and the District's costs for providing services and treatment for the pounds of COD, Total Suspended Solids, and oil and grease discharged.

2) All non-residential users that discharge any volume of wastewater to the District's collection system or POTW, that has amounts of COD, TSS and oil and grease less than the average amounts of COD, TSS and oil and grease normally found in 25000 gallons of domestic sewage, shall be designated "commercial users". These commercial users shall pay monthly sewer service fees based upon the commercial sewer use rates established periodically by resolution. The commercial sewer use rates shall be based on the costs for providing services and treatment for the amounts of COD, TSS and gallons of wastewater discharged.

3.31 ASSESSMENT OF PERMIT FEES AND CHARGES. Permit fees for multi-year permits shall be payable in advance for the entire term of the permit, as invoiced by the District's finance department. If a permit is terminated prior to 30 calendar days after the date of issuance, then the Manager shall refund 50 percent of the original permit fee to the user, less any fees, charges or penalties owing to the District provided that no refund shall be made to a permit holder that is in violation of this Chapter or permit at any time prior to such termination. No permit application fee shall be refundable at any time.

3.32 PAYMENT OF FEES AND LATE FEES. Unless otherwise specified, all fees, charges, and penalties imposed pursuant to this Ordinance are due and payable within thirty (30) calendar days after the date of the notice or invoice from the District. Users who fail to pay any required fee, charge or penalty by the due

date, shall pay fifty (50) percent surcharge in addition to the original fee, charge or penalty. The District shall give notice to a user of any permit termination associated with the unpaid amounts and such permit will be automatically revoked on the 30th day after the date of such notice if the amount due is not paid in full. Manager shall refer the unpaid amount to the District's Finance Department for collection.

3.33 **INDUSTRIAL USER SURVEY.** The Manager shall prepare and maintain a current list of Industrial Users subject to the requirements of this Ordinance. Each Industrial User listed shall be identified by class. Class I Industrial Users shall be further identified by a citation of the applicable, promulgated Categorical Standards. At least once every two years, the Director shall conduct a survey of facilities located within the POTW service area to identify any facilities which should be added to the list of Industrial Users.

IV. ENFORCEMENT

4.1 **ENFORCEMENT RESPONSE PLAN (ERP).** The District shall use an Enforcement Response Plan (ERP), as required by 40 CFR 403.8(f)(5) and amendments thereto and adopted by resolution of the Manager to guide the District in imposing progressive enforcement actions against users and persons in noncompliance with this Ordinance..

4.2 **ADMINISTRATIVE VIOLATIONS**. There is hereby established a class of violations to be known as Administrative Violations which are further subdivided into minor and major administrative violations as follows:

(A) **Minor Administrative Violations** include, but are not limited to, the following:

1) Submission of incomplete reports or questionnaires;

2) Failure to submit reports by the scheduled due date;

3) Failure to respond to questionnaires;

4) Missing a compliance date without proper prior notification to the District;

5) Failure to conduct sampling when requested;

6) Failure to notify the Manager of a violation of a permit condition within 24 hours after the discovery of the violation; or

7) Failure to pay all required fees, penalties, and charges within thirty (30) calendar days from the due date.

(B) **Major Administrative Violations** include, but are not limited to, the following:

1) Failure to notify the Manager of a Slug Discharge immediately after discovery of said discharge;

2) Failure to respond, by a given date, to letters requiring responses or to administrative orders;

3) Missing a compliance date by more than thirty (30) days;

4) Falsification of documents or attempting to mislead District officials in any manner whatsoever;

5) Failure to cooperate with District officials exercising their authority under this Ordinance, including monitoring and inspection activities;

6) A pattern of minor administrative violations;

7) Failure to provide the District with access to user's premises for the purpose of inspection, monitoring, or sampling;

8) Failure to produce records as required;

9) Failure to accurately report noncompliance;

10) Failure to submit required reports (self-monitoring, 180-day baseline monitoring report, 90-day compliance report, Compliance Schedule progress reports) or submitting such reports more than thirty (30) calendar days late;

11) Failure to pay charges pursuant to Section 3.32 of this Chapter, permit application fees, permit renewal fees, and Civil Penalties within sixty (60) calendar days after the due date; or

12) Failure to pay all other required fees, penalties, and charges within sixty (60) calendar days from the due date; or

(C) Upon notice of appropriate mitigating circumstances and consistent with applicable federal and state laws, the Manager has sole discretion to treat a major administrative violation as a minor administrative violation, or a pattern of minor administrative violations with aggravating circumstances as individual major administrative violations.

4.3 VIOLATIONS OF DISCHARGE LIMITATIONS.

(A) There is hereby established a class of violations to be known as discharge violations which are further subdivided into minor and major discharge violations as follows:

1) **Minor discharge violations** are those that, either alone or in combination with similar user discharge violations, pose, as determined by the Manager, no significant threat to the public health, safety or welfare, the environment, the POTW, the beneficial use of the sludge or to any District employee or contractor.

2) **Major discharge violations** include, but are not limited to, the following:

a) Significant noncompliance;

b) Discharge violations which, either alone or in combination with similar discharges pose, as determined by the Manager, a significant threat to the public health, welfare or safety, the environment, the safe and efficient operation of the POTW, the beneficial use of the sludge or to any District employee or contractor, or cause or contribute to additional treatment costs incurred by the District or a violation of the NPDES permit, or cause of contribute to pass through, Interference, or other known damages;

c) Discharging regulated pollutants to the District's POTW without a current discharge permit;

d) A pattern of minor discharge violations;

e) Failure to correct a minor discharge violation within a specific time period as directed by the Manager;

f) Tampering with or purposely rendering inaccurate any monitoring device, method, or record required to be maintained pursuant to this Ordinance; or

g) Wastewater discharge without a valid industrial user permit after notification.

(B) Upon notice of appropriate mitigation circumstances, the Manager has sole discretion to treat a major discharge violation as a minor discharge violation. The Manager also has sole discretion to treat a pattern of minor discharge violations with aggravating circumstances as individual major discharge violations.

4.4 UNCLASSIFIED VIOLATIONS. For any violation by any user or person that is not classified herein, or for the violation of any rule or regulation promulgated hereunder, the Manager shall have the discretion to treat such violation as a minor or major violation and to exercise enforcement authority accordingly. In exercising this enforcement authority, the Manager shall consider the magnitude of the violation, its duration, and its effect on receiving waters, the POTW, the POTW's sludge, the health and safety of District employees, contractors, users, and the general public. The Manager shall also evaluate the user's or person's compliance history, good faith, and any other factors the Manager deems relevant.

4.5 SEPARATE VIOLATIONS. Any user or person found to be in violation of this Ordinance shall be charged with a separate violation for each day the same violation exists. Each wastewater discharge pollutant violation shall be considered an individual violation for each pollutant in violation.

4.6 NOTIFICATION OF VIOLATION. Whenever the Manager finds that any User has violated any applicable pretreatment standard or requirements contained in this Ordinance or a Wastewater Discharge Permit, the Manager may serve upon such User a written notice stating the nature of the violation and penalties for continued noncompliance. Within a prescribed period specified in the notice, the User shall submit to the District a specific compliance plan pursuant to Section 3.23(H) herein.

4.7 ADMINISTRATIVE ORDERS. The Manager may require compliance with this Chapter and any permit or order issued under this Chapter by issuing Administrative Orders that are enforceable in a court of law or by directly seeking court action. The Manager may use Administrative Orders, either individually, sequentially, concurrently, or in any order for one or more violations as appropriate for the circumstances. Administrative Orders include:

(A) **STOP WORK ORDERS.** The Manager may serve a written Stop Work Order on any person engaged in doing or causing to be done new construction, tenant improvements, alterations, or additions relative to the District's pretreatment program if:

1) District permits have not been obtained;

2) Work has begun without prior written approval by the Manager; or

3) Violations of this Ordinance are found at the site of the new construction, tenant improvements, alterations, and additions. Any person served a Stop Work Order pursuant to this section shall immediately stop such work until written authorization for such work is issued by the Manager.

(B) **CORRECTIVE NOTICE.** A correction notice shall be given to a user to require correction of minor violations noted during an inspection of the user's facility by the Manager.

1) EXTENSIONS. Compliance time extensions may be granted to a user who fails to correct minor violation required by a correction notice, upon a showing of good cause by such user.

2) For purposes of this Section "good cause" means an unforseeable and unavoidable event or series of events, over which user had no control, that prevented or significantly impaired the user's ability to comply with the correction notice.

(C) **WRITTEN WARNING**. The Manager shall issue a written warning to notify a user of a minor violation and any violation that has not been corrected as required by a correction notice. The written warning shall state the provision(s) violated and the facts alleged to constitute the violation, and may include any proposed corrective actions or monitoring to be required.

(D) **MONITORING/PRODUCTION INFORMATION ORDER (MPIO)** shall be issued to a user when two consecutive violations for the same pollutant are detected in District samples, users samples, or both. The MPIO shall be used to determine if discharge compliance has been achieved or if a detected violation is consistent. The MPIO shall require the user to sample the user's wastewater discharge for the pollutants in violation and record the daily effluent wastewater flow for all days within a fourteen consecutive day period that industrial wastewater is discharged to the POTW. Production information shall be required of all categorical users which have production based discharge limits.

(E) **NOTICE OF VIOLATION (NOV)** shall be issued to a user for a violation of a written warning, stop work orders, industrial user permit, of this Ordinance, or an MPIO that has resulted in significant noncompliance. A user to whom an NOV is issued shall pay an NOV fee as established by resolution. When the Manager is made aware of the user's violation(s), the Manager may serve the user personally or by certified mail with a written Notice of Violation (NOV). The NOV shall state the provision(s) violated and the facts alleged to constitute the violation, and may include any proposed corrective actions or monitoring to be required. The NOV shall require the user to respond in writing to the Manager, within ten (10) calendar days from the date of service of the NOV, with a written explanation of or response to the violation(s) and a plan for the satisfactory correction or prevention thereof, including specific required actions. Submission of this plan in no way relieves the user of liability for any violations occurring before or after receipt of the NOV.

(F) **VIOLATION MEETING.** A violation meeting shall be required of all users who have failed to achieve compliance after the issuance of an NOV or at the conclusion of an MPIO that has resulted in significant noncompliance. This meeting shall be for the District to draft a consent order or compliance order or for the user to propose solutions, request time extensions, draft a compliance schedule, or file an appeal. Any user for whom a violation meeting is scheduled shall pay District a violation meeting fee in an amount as established by resolution.

(G) **CONSENT ORDER.** The Manager may, at any time after finding a violation of this Ordinance, enter into an agreement with the violating user that shall be known as a Consent Order. Such agreement may be in the form of compliance schedule with milestones, or other specific actions to be taken by the user to correct or prevent the noncompliance within a specified time period, payment of damages, consent order fees, penalties, or other remedies. The Consent Order is developed between the user and the District. A consent order has the same force and effect as any other administrative order issued pursuant to this Ordinance. Any user subject of a consent order shall pay District a consent order fee as established by resolution.

(H) **COMPLIANCE ORDER.**

1) A Compliance Order shall be issued to a user that has violated or continues to violate this Ordinance, the user's industrial user permit, or order issued thereunder. The Manager may issue a Compliance Order to the user responsible for the violation(s), which shall specify the provisions violated and the facts constituting the violation(s), and shall direct that adequate treatment facilities, devices, or other related appurtenances be installed and properly operated by a specified time period. Compliance Orders may also contain such

other requirements as the Manager deems reasonably necessary and appropriate to assure timely compliance with this Ordinance and to address the noncompliance. Such compliance order may require the installation of pretreatment technology, additional self-monitoring, management practices, adherence to a compliance schedule with milestones, submission of action plans, appearance by the user at a specific time and place for a compliance meeting, or other measures necessary to achieve and maintain compliance. The Compliance Order is developed by the Manager without comment from the user. A user subject of a compliance order shall pay a compliance order fee as established by resolution.

2) If no public hearing on the alleged violation(s) has been previously conducted, the alleged violating user may either submit a written explanation or other response to the compliance order or request that the Manager conduct either an informal meeting or a hearing. Such submission or request shall be in writing and filed with the Manager no later than ten (10) calendar days after service of the compliance order. The submission or request shall not stay the compliance order.

(I) **CIVIL PENALTY ORDER.** A civil penalty order shall be issued to a user by the Manager or District Counsel to assess penalties authorized by Sections 4.13 and 4.20 of this Ordinance and any other costs incurred by the District in the investigation, monitoring, legal assistance, enforcement, cleanup, or repair caused by the user's violation. The Civil Penalty Order may be included with any other Administrative Order.

(J) **CEASE AND DESIST ORDER.** A cease and desist order shall be issued by the Manager to any user or persons whose violations(s) of this Ordinance, Industrial User Permits, or any Order issued under this Ordinance, poses a threat to the District's collection system, storm drain, POTW, personnel, or the public. A cease and desist order may also be issued by the Manager to a user who continues to discharge industrial wastewater to the District's POTW without a valid industrial user permit. The Manager may issue a cease and desist order immediately upon discovering any such violations and direct a user or person in noncompliance to take such appropriate remedial or preventive action as Manager deems are needed to eliminate a continuing or threatened violation, including halting operations and terminating the discharge. Such cease and desist order shall include the provision violated and the facts constituting the violation. A user subject of a cease and desist order shall pay District a cease and desist order fee as established by resolution.

(K) **SHOW CAUSE HEARING.** A hearing requiring a user to show cause why a proposed enforcement action should not be taken by District shall be conducted prior to District's imposition of such enforcement action against a user failing to achieve compliance with this Ordinance or user's industrial user permit, after issuance and conclusion of a consent order, compliance order, or cease and desist order. The show cause hearing shall be conducted pursuant to such written procedures as established by the Manager from time to time, maintained for public review in the office of the Manager, and provided to a user at the time of notice of such hearing. Such procedures shall provide user with notice and an opportunity to be heard, and may include the following procedures:

1) A Show Cause Order, issued by the Manager shall order the violating user to appear at a Show Cause Hearing to show cause to the Manager why a proposed enforcement action should not be taken.

2) The Show Cause Hearing shall be public.

3) A notice of the show cause hearing and the show cause order shall be served on the user specifying the time and place for the public hearing; the proposed enforcement action and the reasons for such action, including any alleged violation and the facts constituting

the violation, and a request that the user show cause why the proposed enforcement action should not be taken.

4) The Manager shall permit the alleged violating user to respond to the notice and order, to present evidence and argument on all relevant issues, and to conduct cross-examination of any witnesses necessary for the full disclosure of the facts.

5) The Manager may request the attendance and testimony of witnesses and the production of evidence relevant to any matter, and may seek from the appropriate court the issuance of subpoena to compel the presence of prospective witnesses.

6) The testimony taken shall be under oath and recorded, with a transcript, prepared and provided to any person upon payment of the usual charges for such transcript.

7) The notice of the hearing and the order to show cause shall be served upon user personally or by registered or certified mail (return receipt requested) at least fifteen (15) days prior to the hearing; except that the Manager may set an earlier date for the hearing if the user requests the earlier date. Such notice may be served on any authorized representative of the user.

8) Upon review of the evidence, the Manager shall make written findings of fact and decision in the nature of an order, which shall be served upon user.

9) District may immediately impose an enforcement action after the hearing whether or not a duly notified user appears as noticed.

4.8 INDUSTRIAL USER PERMIT REVOCATION. The Manager may revoke any industrial user permit if the user is in violation of any provision of this Ordinance or the industrial user permit. These violations include but are not limited to: falsification by user of information required by this Ordinance; user's denial to the District of the right of entry when conditioned in the industrial user permit; user's failure to re-apply for an industrial user permit or request a required permit modification; user's failure to pay required permit fees or charges; or user's discharging in violation of this Ordinance. Validity of the industrial user permit shall be conditioned upon industrial user's compliance with the provisions of this Ordinance. The Manager may revoke the industrial user permit upon a minimum notice of fifteen (15) calendar days when the Manager finds that user violated any provision of this Ordinance or industrial user permit within the fifteen (15) days prior to the intended permit revocation, the Manager shall make a hearing available to the industrial user. All costs for industrial user permit revocation and reissuance will be paid by the user.

4.9 TERMINATION OF SERVICE. The Manager may immediately order a user to cease discharge of wastewater to District's collection system and POTW, and may suspend wastewater disposal and treatment service for such user in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons or to the environment, or causes interference to the POTW or District's collection system, or causes the District to violate any condition of its NPDES permit, or if the user has failed to obtain a valid industrial user permit. If the user fails to comply voluntarily with the suspension order, the Manager shall take such steps as deemed necessary, including immediate severance of the sewer service lateral connection, to prevent or minimize damage to the POTW or collection system, or endangerment to any person or the environment. All costs for terminating service shall be paid by the user. All costs for reestablishing service shall be paid by the user.

4.10 ANNUAL PUBLIC NOTICE OF SIGNIFICANT NONCOMPLIANCE. In March of each year, the District shall publish in the newspaper with the largest daily circulation in the District a list of all Industrial Users which have been in Significant Noncompliance with applicable pretreatment standards or requirements during the previous twelve months.

4.11 NONCOMPLIANCE MONITORING PROGRAM.

(A) If sampling by District or User indicates that the User is discharging constituents in violation of the mass emission or concentration limits established by District resolution or contained in User's permit, then the User shall collect a follow-up sample (as directed by the Manager). The User shall submit the completed sample analysis to the District within thirty (30) days of notification by the District.

(B) If the follow-up sample indicates noncompliance with permit requirements, the User may be required by the District to immediately initiate a noncompliance monitoring program requiring additional sampling and reporting by the User in accordance with a schedule issued by the Manager. During the program the User may be subject to noncompliance fees established by the District resolution. Fees may be required for each sample analysis indicating violation or violations of limits specified in User's permit or established by District's resolution. User's may also be subject to a fee for each sample analysis not submitted by the User to the District in accordance with the schedule specified in the program.

(C) The noncompliance monitoring program may be terminated by the District upon the User's demonstration of a return to compliance. To demonstrate a return to compliance, the User must either terminate discharge or provide analyses showing consistent compliance over a period of not less than thirty (30) days or as specified in the program.

(D) The payment of noncompliance fees by Users shall not bar the District from undertaking any other enforcement procedures specified herein.

4.12 NOTICE OF DISCHARGE PROHIBITION. The Manager may serve a written Notice of Discharge Prohibition on any person(s) engaged in any activity or activities which, while not resulting in a discharge of nondomestic wastewater to the POTW at the time, may, in the Manager's judgment, result in a discharge of nondomestic wastewater at some time in the future. A Notice of Discharge Prohibition shall include at least the following:

1) A list of general discharge restrictions and prohibitions;

2) A list or citation of any categorical standards that would be applicable upon commencement of nondomestic wastewater discharge;

3) A requirement to apply for and obtain a wastewater discharge permit prior to commencing discharge of nondomestic wastewater to the POTW;

4) A requirement for notification of slug or accidental discharges; and

5) A statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements.

(A) Notice of Discharge Prohibition may also contain one or more of the following:

1) A requirement to prepare and submit a Slug Discharge Control Plan;

2) A requirement to install and maintain one or more spill containment systems;

3) A requirement for maintaining and retaining plant records relating to wastes removed from the facility; and

4) A requirement to submit an annual written statement to the Manager certifying that no nondomestic wastewater has been discharged to the POTW during the previous year other than discharges of which the Manager was properly notified and that no nondomestic wastewater will be discharged during the forthcoming year without proper notification and/or obtaining a Wastewater Discharge Permit.

4.13 CIVIL PENALTIES.

(A) Any user violating any provision of this Ordinance, user's permit, or administrative order, shall be liable to the District for a civil penalty of not more than One Thousand Dollars ($1,000.00) per violation per day for as long as the violation continues, plus actual damages incurred by the District. In addition to these penalties and damages, the Manager may order user to pay District's costs, including reasonable attorney's fees, court costs, and other expenses associated with the enforcement activities, including, but not limited to, sampling, monitoring, laboratory costs, and inspection expenses.

(B) Upon petition by the Manager, through the District Counsel, an award of such penalties, damages and costs shall be ordered against such user by an appropriate court in the County of Riverside. In determining the amount of such penalties, damages and costs, the court shall take into account all relevant circumstances, including but not limited to, the extent of harm caused by the violation, the magnitude and duration, any economic benefit gained through a user's violation, corrective actions by a user, the compliance history of the user, good faith efforts to restore compliance, threat to human health, to the environment and to the POTW, and any other factor as justice requires. The purpose of any civil penalty is to encourage compliance and remedy unquantified damage to the POTW or environment and not to impose criminal sanctions nor retribution.

(C) If any user discharges wastewater into the District's collection system or POTW contrary to the provisions of this Ordinance, federal or state pretreatment requirements, or any order of the District or permit issued under this Ordinance, the Manager through the District Counsel may commence an action for appropriate legal and/or equitable relief in the appropriate court in the County of Riverside.

4.14 CRIMINAL PENALTIES.

(A) Any user which willfully or knowingly violates any provision of this Ordinance, or any orders or permits issued hereunder shall, upon conviction, be guilty of a misdemeanor punishable by a fine not to exceed One Thousand Dollars ($1,000.00) or imprisonment for not more than six months, or both per violation per day. This penalty shall be consistent with the Federal Clean Water Act, 33 U.S.C. 1251, et seq. and amendment thereto, and shall apply to the exclusion of any other more lenient Ordinance provision. A user shall be guilty of a separate violation for each day a violation of any provision of this Ordinance or industrial user permit is committed or continued by such user.

(B) Any user that willfully or knowingly makes any false statements, representations, or certifications in any application, record, report, plan, or other document filed or required to be maintained pursuant to this Ordinance or the user's industrial user permit, which falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this Ordinance shall, upon conviction, be guilty of a misdemeanor punishable by a fine of not more than One Thousand Dollars ($1,000,00) per violation per day or imprisonment for not more than six months, or both, per violation per day. This penalty is to be consistent with the Federal Clean Water Act, 33 U.S.C. 1251, et seq. and amendments thereto and shall apply to the exclusion of any other more lenient Ordinance provisions.

4.15 **PROBATIONARY PERIODS.** A user issued a written warning shall be issued a maximum six month probationary period for the violation stated in the written warning. All users issued a notice of violation shall be issued a maximum 12 month probationary period for the violation stated in the notice of violation. If the user commits the same violation within the probationary period, then enforcement will be escalated to the next appropriate level. If the user commits the same violation after the end of the probationary period, then the violation will be treated as a new violation for purposes of enforcement. Repeated same violations will only be granted two probationary periods. If the same violation occurs after two consecutive probationary periods for either a written warning or a notice of violation, then the enforcement actions will be escalated to the next appropriate level.

4.16 **REMEDIES NONEXCLUSIVE.** The violation enforcement remedies for this Ordinance are not exclusive. The Manager may take any, all or any combination of these remedies against a noncompliant user. Enforcement of Ordinance violations will generally be in accordance with the District's Enforcement Response Plan. The Manager, however, may take alternative actions against a user when the circumstances warrant. The Manager is also empowered to take more than one enforcement action against any noncompliant user.

4.17 **LEGAL ACTION.** If any user discharges wastewater into the District's collection system or POTW contrary to the provisions of this Ordinance, federal or state pretreatment requirements, or any order of the District, the District Attorney may commence an action for appropriate legal, equitable or injunctive relief in the appropriate court of Riverside County.

4.18 **JUDICIAL COLLECTION.** After an order making any monetary amount owing under this Ordinance has become final, or after a court in an action has entered a final judgment in favor of the District, the Manager through the District Counsel may initiate a civil action, if not earlier filed as a part of the Judicial Review, in the appropriate court to recover such amount plus prevailing interest from the date of the final order or the date of the final judgment, as the case may be. In such an action, the validity, amount, and appropriateness of such penalty shall not be subject to review. Any user who fails to pay on a timely basis the amount of an assessment of a civil penalty as described in this Section shall be required to pay to the District, in addition to such amount and interest, District's attorneys' fees and costs, including filing fees, process service fees for collection proceedings and a quarterly nonpayment penalty for each quarter during which such failure to pay persists. Such nonpayment penalty shall be in an amount equal to twenty (20) percent of the aggregate amount of such person's penalties and nonpayment penalties which are unpaid as of the beginning of such quarter.

4.19 **JUDICIAL REVIEW.** Unless the user given a notice of violation or order makes a timely responsive statement or a request for hearing, the notice or order is a final order. If a timely request for a hearing is made, the order constituting the hearing decision shall be a final order. Any person adversely affected by a final order may appeal the order to the appropriate court in the County of Riverside.

4.20 **DAMAGE TO FACILITIES OR INTERRUPTION OF NORMAL OPERATIONS.** When a user's discharge of waste causes an obstruction, damage, interference, pass through or any other impairment to the District's collection system, POTW, or storm drain system, the Manager may assess a charge, including administrative costs attributable thereto, against the user for costs incurred by the District for extra monitoring, investigation, quantifiable damages and work required to clean, repair, and resume normal operations. A ninety (90) percent administrative fee shall be added to the direct charges. Unless appealed as provided herein, such charge shall be payable by the user within thirty (30) calendar days of being notified of such charge and is subject to collection by civil suit or other procedures provided in this Ordinance.

4.21 **APPEALS.**

(A) Any user affected by and dissatisfied with any decision, order, or enforcement action, made by the Manager interpreting or implementing the provisions of this Ordinance or industrial user permit, may file with the Manager a written appeal requesting reconsideration of such decision, order or

enforcement action within ten (10) days from the receipt of the notice of such decision, order or enforcement action. The user shall state in detail the facts supporting the user's request for reconsideration. The Manager shall render a ruling on the request for reconsideration to the user in writing within ten (10) calendar days from receipt of the appeal. Submission of such a request in no way relieves the user of liability for any violations occurring before or after receipt of decision, order, or enforcement action, nor stay the requirements of achieving or maintaining compliance.

(B) If the ruling on the request for reconsideration made by the Manager is unsatisfactory to user, the user requesting reconsideration may, within ten (10) calendar days after receipt of the Manager's ruling, file a written appeal with the District's Board of Directors, lodging such appeal with the District Clerk along with an appeals fee of one hundred dollars ($100.00). The written appeal shall be heard by the District's Board of Directors within thirty (30) days from the date of filing. The District's Board of Directors shall make a ruling on the appeal within forty-five (45) days from the date of filing.

(C) The District's Board of Directors' final ruling shall be deemed a final decision, order or action by the District which any person adversely affected by such decision, order or action may appeal to the appropriate court in the County of Riverside. No person may obtain judicial review of any decision, order or enforcement action by the District under the Ordinance without first having exhausted his or her administrative remedies set forth in this Ordinance.

4.22 ALTERNATIVE ENFORCEMENT PROCEDURES. As additional and alternative enforcement provisions, the Manager may utilize the procedures and seek the civil penalties, the payment of excess costs and the imposition of a lien upon user's real property, as provided in Sections 54739, 54740, 54740.5, and 54740.6 of the California Government Code and amendments thereto for violations of this Ordinance, federal or California pretreatment requirements or the terms and provisions of any permits issued pursuant to this Ordinance.

4.23 INVALIDITY. If any provision of this Ordinance or the application thereof to any user or circumstance is held invalid, the remainder of this Ordinance and the application of such provision to other users or circumstances shall not affected thereby.

4.24 INTERPRETATION-INTENT. All the provisions of this Ordinance are to be reasonably interpreted. The intent herein is to recognize that there are varying degrees of hazard to the District's collection system, POTW, the POTW's sludge, personnel, storm drain, surface and subsurface waters, environment and the public and to apply the principle that the degree of protection shall be commensurate with the degree of hazard.

4.25 CONFLICT. All other ordinances and parts of other ordinances inconsistent or conflicting with any part of this Ordinance are hereby repealed to the extent of such inconsistency or conflict.

Section 3: Adoption. This Ordinance shall take effect thirty (30) days after the date of its adoption and prior to the expiration of fifteen (15) days from its passage shall be published once in a newspaper of general circulation printed and published in the County of Riverside, together with the names of the member of the Board of Directors voting for and against the same.

PASSED AND ADOPTED by the Rubidoux Community Services District Board of Directors at a regular meeting held on the 19th day of June 2003, by the following vote:

AYES: Armando Muniz, Garth Newberry, Ruth Anderson Wilson, Leland Thompson, Forest Trowbridge

NOES: None

ABSENT: None

ABSTENTIONS: None

Armando Muniz, President
Rubidoux Community Services District

(SEAL)

ATTEST:

David D. Lopez, Secretary-Manager

APPROVED AS TO FORM AND CONTENT:

John R. Harper, General Counsel

SECTION i
RCSD RESOLUTION

RESOLUTION NO. 665

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE RUBIDOUX COMMUNITY SERVICES DISTRICT ADOPTING A WATER AND SANITARY SEWER SYSTEM DESIGN AND CONSTRUCTION MANUAL

WHEREAS, District Staff has prepared and made available to the Rubidoux Community Services District Board of Directors for inspection a proposed Rubidoux Community Services District Water and Sanitary Sewer System Design and Construction Manual; and,

WHEREAS, the purpose of adopting a Water and Sewer Design and Construction Manual is to establish procedures for design and construction of District facilities by developers, contractors, and owners of property that desire to develop property within the Rubidoux Community Services District boundary; and,

WHEREAS, the Board of Directors concur with the standardization of design standards, water and sewer materials, and installation and construction techniques contained in the Water and Sewer Manual for the efficient operation of District services; and,

NOW, THEREFORE, BE IT RESOLVED, ORDERED AND ADOPTED by the Board of Directors as follows:

1. That the Foregoing Recitals are True and Correct.

2. That Best Management Practice supports the Standardization of Design and Construction Installation of District Water and Sewer Facilities.

3. That the Rubidoux Community Services District's Water and Sanitary Sewer System Design and Construction Manual is hereby adopted by the Board of Directors.

4. Resolution No. 665 shall take effect immediately upon the adoption by the Rubidoux Community Services District Board of Directors.

INTRODUCED AND APPROVED this 5th day of June, 1997, upon the following vote:

AYES: Ron Robinson, Anita B. Smith, Armando Muniz, Gilbert J. Calzada, and Leland Thompson

NOES: None

ABSENT: None

ABSTENTIONS: None

(SEAL)

Ronald L. Robinson, President
Rubidoux Community Services District

ATTEST:

David D. Lopez, Secretary-Manager

APPROVED TO FORM AND CONTENT:

John R. Harper, District General Counsel

RESOLUTION NO. 728

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE RUBIDOUX COMMUNITY SERVICES DISTRICT, SETTING FORTH THE NONDOMESTIC WASTEWATER DISCHARGE PERMIT FEES, INSPECTION FEES, SAMPLING AND ANALYSIS FEES, NONCOMPLIANCE FEES, AND PRETREATMENT PLAN CHECK FEES IN ACCORDANCE WITH THE RUBIDOUX COMMUNITY SERVICES DISTRICT ORDINANCE 105.

WHEREAS the National Pollutant Discharge Elimination System Permit issued to the City of Riverside, "Agreement for Regional Advanced Wastewater Treatment between City of Riverside and Jurupa Community Services District, Rubidoux Community Services District and Western Municipal Water District", dated December 1, 1976, and "Agreement for Regional Primary and Secondary Wastewater Treatment between City of Riverside, Jurupa Community Services District, Rubidoux Community Services District and Western Municipal Water District", dated May 4, 1978 (the "Regional Agreements"), require that the District adopt an ordinance regulating the discharge of nondomestic wastes; and

WHEREAS the Rubidoux Community Services District, California, has adopted an ordinance which regulates the discharge of nondomestic waste into the sewerage system of the Rubidoux Community Services District; and

WHEREAS it is necessary to implement a nondomestic waste discharge permit program to comply with the Federal Government's requirements for the Rubidoux Community Services District;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Rubidoux Community Services District as follows: In accordance with the provisions of the Rubidoux Community Services District Ordinance 105, the following permit system, regulations, classifications, and fees are hereby enacted and shall read as follows:

"INDUSTRIAL WASTEWATER DISCHARGE FEES"

The Rubidoux Community Services District has implemented an industrial waste pretreatment program which requires permitting of Industrial Users. In addition, the District must conduct Industrial User inspections, conduct sampling and analyses of Industrial User discharges, enforce pretreatment requirements and review plans for pretreatment facilities required to comply with the Rubidoux Community Services District Ordinance 105. The following is a schedule of fees for existing Users, the fees shall be added to the Users monthly utility bill.

PERMIT FEES

Users shall be subject to the following fees for issuance of nondomestic wastewater discharge permits and routine compliance assessment. Said fees do not include sampling and analysis.

PERMIT CLASS	INDUSTRIAL USER DESCRIPTION	PERMIT DURATION	PERMIT APPLICATION & RENEWAL FEE
I	Industrial User with annual average wastewater flows of 25,000 gals/day or more; or Significant industrial user; or Categorical User which has a federally regulated process wastestream discharge	2 yrs	$1,000.00
II	Industrial User with annual average wastewater flows between 10,000 and 24,999 gals/day	2 yrs	$500.00
III	Industrial User with annual average wastewater flows between 1 and 9,999 gals/day where the discharge has reasonable potential for adversely affecting the POTW's operation or violating any pretreatment standard, prohibition, or requirement of this Chapter	2 yrs	None
IV	Person storing hazardous substances on-site	Less than 2 yrs	$500.00
V	Temporary user	Less than 180 days	$500.00

INSPECTION FEES

Annual permit fees cover up to two industrial waste inspections per year at no additional charge. Users shall be subject to an inspection fee of $100.00 for each additional inspection which may be required to verify compliance with approved construction drawings or District enforcement actions.

SAMPLING AND ANALYSIS FEES

Costs for sampling and analysis conducted by the District shall be payable by the User whose discharge is sampled. Fees shall be based on all costs for sample collection and analysis plus fifteen (15) percent to cover District administrative costs.

NONCOMPLIANCE FEES

Noncompliance Monitoring Programs

Users required to initiate noncompliance monitoring programs shall be subject to a noncompliance fee of $100.00 for each sample analysis indicating violation or violations of limits specified in User's permit or limits established by District resolution. Users shall also be subject to a noncompliance fee of $100.00 for each sample analysis not submitted by the User to the District in accordance with the schedule specified in the program.

Administrative Orders

Users served with an Administrative Order (Compliance Order, Cease and Desist Order, or Termination of Service) shall be subject to one or more of the following fees, as applicable:

Administrative Order	Fee
Compliance Order	$250.00
Cease and Desist Order	$500.00
Termination of Service	$500.00

PRETREATMENT PLAN CHECK FEES

Users shall be subject to the following fees for District review of construction drawings for proposed monitoring and treatment facilities:

Facility	Fee
Sampling Manhole	$100.00
Discharge Flowmeter	$200.00
Gravity Separation Interceptor	$100.00
Other Pretreatment Facilities	$500.00

BE IT FURTHER RESOLVED that this resolution shall take effect 30 days after adoption.

PASSED AND ADOPTED by the Rubidoux Community Services District Board of Directors at a regular meeting held on the 19th day of June 2003, by the following vote:

AYES: Armando Muniz, Garth Newberry, Ruth Anderson Wilson, Leland Thompson, Forest Trowbridge

NOES: None

ABSENT: None

ABSTENTIONS: None

Armando Muniz, President
Rubidoux Community Services District

(SEAL)

ATTEST:

David D. Lopez, Secretary-Manager

APPROVED AS TO FORM AND CONTENT:

John R. Harper, General Counsel

RESOLUTION NO. 2018-841

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE RUBIDOUX COMMUNITY SERVICES DISTRICT, CALIFORNIA, ESTABLISHING MAXIMUM WASTEWATER CONCENTRATION LIMITS IN ACCORDANCE WITH SECTIONS 3.2, 3.4, AND 3.23 OF THE RUBIDOUX COMMUNITY SERVICES DISTRICT ORDINANCE 105 AND SUPERSEDING RUBIDOUX COMMUNITY SERVICES DISTRICT RESOLUTION NO. 727

WHEREAS the National Pollutant Discharge Elimination System Permit issued to the City of Riverside, "Agreement for Regional Advanced Wastewater Treatment between City of Riverside and Jurupa Community Services District, Rubidoux Community Services District and Western Municipal Water District", dated December 1, 1976, and "Agreement for Regional Primary and Secondary Wastewater Treatment between City of Riverside, Jurupa Community Services District, Rubidoux Community Services District, and Western Municipal Water District", dated May 4, 1978 (the "Regional Agreements"), require that the District adopt an ordinance regulating the discharge of non-domestic wastes; and

WHEREAS the Rubidoux Community Services District has adopted an ordinance which regulates the discharge of non-domestic waste into the sewerage system of the Rubidoux Community Services District; and

WHEREAS it is necessary to periodically reevaluate the maximum allowable concentration levels of wastewater pollutants and to make adjustments in those levels;

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the District of the Rubidoux Community Services District does hereby establish the following maximum concentration levels of wastewater pollutants in Table I in accordance with Sections 3.2, 3.4, and 3.23 of the Rubidoux Community Services District Ordinance 105, which sections are part of the Ordinance regulating the discharge of non-domestic waste into the sewerage system of the Rubidoux Community Services District.

TABLE I
WASTEWATER POLLUTANT SURCHARGES AND MAXIMUM LIMITATIONS

POLLUTANT	MAXIMUM CONCENTRATION LIMIT (mg/L)
Arsenic	0.18
Boron	5.2
Cadmium	0.15
Chloride	350
Chromium	0.68
COD	8,000
Copper	3.0
Cyanide	0.17
Fluoride	12
Lead	1.2
Manganese	1.0
Mercury	0.001
Nickel	2.3
Oil & Grease	250
Silver	0.8, 5.0 (1)
Sodium	250
Sulfate	250
Total Dissolved Solids	1,210
Total Hardness	2,500
Total Nitrogen	500
Total Suspended Solids	2,000
Zinc	6.7
pH	5.0 to 11.5

(1) The lower Silver limit will apply to all non-domestic dischargers. The higher limit will apply to all non-domestic dischargers who are: 1) properly registered by the District; 2) employ approved pretreatment equipment, that reduces the Silver concentration to acceptable levels; and 3) have applied for and been issued the higher limit by the District.

BE IT FURTHER RESOLVED that this resolution shall supersede Resolution No. 727 and take effect 30 days after adoption.

PASSED AND ADOPTED by the Rubidoux Community Services District Board of Directors at a regular meeting held on the 7th day of June 2018, by the following vote:

AYES: Christopher Barajas; Armando Muniz; F. Forest Trowbridge; Hank Trueba; Bernard Murphy

NOES: None

ABSENT: None

ABSTENTIONS: None

Bernard Murphy, President
Rubidoux Community Services District

(SEAL)

ATTEST:

David D. Lopez, Secretary-Manager

APPROVED AS TO FORM AND CONTENT:

John R. Harper, General Counsel

APPENDIX D

AGREEMENTS PERTAINING TO WASTEWATER TREATMENT

Dec 1, 1976

587.1.4

AGREEMENT FOR REGIONAL ADVANCED WASTEWATER TREATMENT

BETWEEN

CITY OF RIVERSIDE,

JURUPA COMMUNITY SERVICES DISTRICT,

RUBIDOUX COMMUNITY SERVICES DISTRICT

AND

WESTERN MUNICIPAL WATER DISTRICT

ORIGINAL

AGREEMENT FOR REGIONAL

ADVANCED WASTEWATER TREATMENT

TABLE OF CONTENTS

AGREEMENT FOR REGIONAL ADVANCED WASTEWATER TREATMENT

1. PARTIES AND DATE.

1.1 THIS AGREEMENT is made on the ____ day of _____, 1976, by and between the City of Riverside, hereafter called "Riverside", Jurupa Community Services District, hereafter called "Jurupa", Rubidoux Community Services District, hereafter called "Rubidoux", and Western Municipal Water District of Riverside County, hereafter called "Western."

2. RECITALS.

2.1 WHEREAS, at the present time, Riverside, Jurupa and Rubidoux each operate their own separate wastewater treatment plants to provide primary and secondary wastewater treatment, and

2.2 WHEREAS, the existing Riverside, Jurupa and Rubidoux wastewater treatment plants now discharge into the Santa Ana River, which is a live stream, and

2.3 WHEREAS, the California Regional Water Quality Control Board, Santa Ana Region, has adopted Orders No. 74-3, 74-25 and 74-24 as well as Orders No. 75-141, 75-142 and 75-143 affecting waste discharges from the treatment facilities of Riverside, Jurupa, and Rubidoux, respectively, and

2.4 WHEREAS, these Orders, in compliance with the Water Quality Control Plan of the Regional Board, require that the wastewater discharges of each of these entities meet the wastewater reclamation criteria for nonrestricted recreation as specified in Title 22, Section 60315 of the California Administrative Code; full compliance by Riverside, Jurupa and Rubidoux has been ordered by June 15, 1978, and requires advanced wastewater treatment of all such wastewater discharges, and

2.5 WHEREAS, Riverside, Jurupa and Rubidoux wish to proceed with the construction and operation of facilities necessary to comply with such orders, and recognize that lower costs may be achieved if the problems are approached on a regional basis and, furthermore, a regional approach may be essential in order to qualify for state and federal grants, and

2.6 WHEREAS, Riverside, Jurupa and Rubidoux have applied for grant funding from the United States of America and the State of California under the Clean Water Grant Program administered by the State Water Resources Control Board, and have received concept approval for the construction of a regional advanced wastewater treatment system consisting of a low dose chemical feed system and filters at the Riverside treatment plant, and interceptor sewers from the respective service areas of Jurupa and Rubidoux for consolidation at the Riverside treatment plant

to achieve compliance with the aforementioned requirements, and

2.7 WHEREAS, Riverside has received a grant offer for certain work necessary for the design of the advanced wastewater treatment plant at the existing City of Riverside treatment plant site, and

2.8 WHEREAS, Jurupa and Rubidoux have received grant offers for certain work necessary for the design of interceptor sewers from their respective service areas to the advanced wastewater treatment plant, and

2.9 WHEREAS, concept approval of the construction of a centralized low-dose chemical feed system and filters at the Riverside treatment plant site and interceptor sewers from the respective service areas of Jurupa and Rubidoux are contingent upon execution of an Agreement for Regional Advanced Wastewater Treatment.

2.10 WHEREAS, in order to meet its obligations under the judgment in the case of Orange County Water District vs. City of Chino, et al., Orange County Superior Court No. 117628, Western owns and controls the quantities of treated effluent derived from Riverside sewage which Riverside is obligated to discharge to the Santa Ana River under that certain agreement between Western and Riverside dated November 20, 1968.

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

3. THE REGIONAL ADVANCED WASTEWATER TREATMENT SYSTEM.

3.1 The Regional Advanced Wastewater Treatment Plant. Riverside shall acquire, construct, own and operate a regional advanced wastewater treatment plant for the advanced wastewater treatment of sewage effluent from its own primary and secondary treatment facilities, and for the advanced wastewater treatment of sewage effluent delivered by Jurupa and Rubidoux to the advanced wastewater treatment plant. The effluent delivered by Jurupa and Rubidoux to the advanced wastewater treatment plant shall already have received primary and secondary treatment, which treatment shall be the responsibility of Jurupa and Rubidoux. The Riverside advanced wastewater treatment plant shall consist of a centralized low-dose chemical feed system and filters with an average daily design flow of 26 million gallons per day (MGD). Flood protection works, including modifications to and extensions of the present dike system, shall be constructed to protect the advanced wastewater treatment plant from the 100-year flood.

3.2 The Regional Advanced Wastewater Conveyance Facilities. Jurupa and Rubidoux shall be responsible for the delivery of effluent to be treated at the regional advanced wastewater treatment plant at the delivery point described in Exhibit "A". Jurupa and Rubidoux shall each construct the interceptor sewer conveyance facilities required to transport effluent from their respective service

areas to the regional advanced wastewater treatment plant. The facilities described in Sections 3.1 and 3.2 constitute the regional advanced wastewater treatment system (sometimes hereinafter called "regional system").

3.3 Amount of Capacity Right. On the basis of a plant design of 26 MGD, and subject to the payment provisions hereinafter provided, the capacity rights of the parties in the advanced wastewater treatment plant are as follows: 22.2 MGD for Riverside, 2.3 MGD for Jurupa, and 1.5 MGD for Rubidoux. In the event either Jurupa or Rubidoux fail to execute this Agreement, Riverside may proceed with construction of the advanced wastewater treatment plant with such lesser capacity as may be eligible for grant funds, and with the remaining parties to the Agreement. In the event the actual capacity of the advanced wastewater treatment plant as constructed is greater or lesser than 26 MGD, the respective capacity rights of the parties to this Agreement shall be increased or decreased proportionally, unless the parties shall agree otherwise.

3.4 Nature of Advanced Wastewater Treatment Capacity Right. The capacity rights of Jurupa and Rubidoux shall be deemed a right to deliver effluent treated in accordance with the standards set forth in Section 11 to the advanced wastewater treatment plant, with a concurrent obligation on the part of Riverside to provide advanced treatment and to dispose of all such effluent pursuant to the terms of this Agreement, except as otherwise provided

in Section 14.1, and in such a manner as to comply with all applicable laws, rules and regulations. Jurupa and Rubidoux shall not by reason of ownership of such capacity rights be deemed to have or acquire any ownership in specific advanced wastewater treatment plant facilities.

4. REGIONAL ADVANCED WASTEWATER TREATMENT SYSTEM CONTINGENT UPON GRANT APPROVAL.

4.1 Obtaining Grant Approval. Riverside, Jurupa and Rubidoux agree to use their best efforts to obtain the maximum amounts of grants and other financial assistance which may be available from any state or federal source to defray all or any part of the capital costs and the maintenance and operation expenses of the regional system. Implementation of the regional system under this Agreement is specifically contingent upon receipt by Riverside, Jurupa and Rubidoux of Step 3 grants of 87.5% of the eligible costs of construction thereof. Riverside, Jurupa and Rubidoux shall each continue to process their own applications for such purposes. The administrative costs attributable to obtaining grants for construction of the advanced wastewater treatment plant and the flood protection works necessary to protect the advanced wastewater treatment plant shall be borne by Riverside. The administrative costs attributable to obtaining grants for the construction of the conveyance facilities shall be borne by Jurupa and Rubidoux.

4.2 Responsibility For Local Matching Funds. Each party to this Agreement shall be responsible for raising its own share of local matching funds as required by the terms of federal or state grants which it receives in connection with the regional advanced wastewater treatment system. Local matching funds which will be needed for construction of the regional system must be secured by Riverside, Jurupa and Rubidoux no later than necessary to comply with the requirements of the Clean Water Grant Program for the financing of construction of the regional system.

In the event that Jurupa or Rubidoux, or both, should fail to secure timely financing for their portions of local matching funds required for construction of the regional advanced wastewater treatment system, the remaining party or parties shall be entitled to proceed without delay with construction of the advanced wastewater treatment plant with such lesser capacity as may be eligible for grant funds, and with such interceptor facilities as may be required. In the event that any party to this Agreement does not provide its portion of local matching funds required for construction of the regional advanced wastewater treatment plant, it shall be deemed to have forfeited any right whatsoever to the capacity right otherwise provided in this Agreement.

5. ALLOCATION OF CAPITAL COSTS.

5.1 Allocation of Capital Costs for Advanced Wastewater Treatment Plant. Capital costs of the advanced wastewater treatment plant shall be shared by Riverside, Jurupa and Rubidoux in proportion to their respective capacity rights. Based upon participation by all parties and a plant design of 26 MGD, such costs shall be allocated as follows:

TABLE 1. COST ALLOCATION

Entity	MGD	% of Capital Costs of Construction
Riverside	22.2	85.38
Jurupa	2.3	8.85
Rubidoux	1.5	5.77
TOTAL	26.0	100.00

In addition to their respective shares of capital costs, Jurupa and Rubidoux together shall pay to Riverside for administrative expenses incurred by Riverside one-tenth of one percent of the amount of the construction contract to build the advanced wastewater treatment plant. Such payment shall be shared equally by the two community services districts.

5.2 Description of Capital Costs. Capital costs of the advanced wastewater treatment plant shall include: (a) those costs required for the design and construction of a centralized low-dose chemical feed system and filters, and any additional facilities or methods of treatment which may

be required in the initial design, or at any later time, by any federal, state or regional agency having jurisdiction over the advanced wastewater treatment plant and the discharge of effluent therefrom; (b) that portion of the flood protection costs of the regional system which are attributable to the protection of the advanced wastewater treatment plant; and (c) the fair market value of the site provided by Riverside and necessary for the construction, maintenance, and operation of the advanced wastewater treatment plant. Capital costs contributions required of the parties for the advanced wastewater treatment facility shall be reduced by the amounts of any applicable grants or related funding thereafter received by Riverside from the federal or state governments.

5.3 Billing and Payment of Capital Costs for Advanced Treatment Plant. Riverside initially shall pay all capital costs of constructing the regional advanced wastewater treatment plant. Periodically throughout the construction period, it shall bill Jurupa and Rubidoux for their respective shares of such costs. Such amounts shall be paid to Riverside within thirty (30) days from receipt of billing. Jurupa's and Rubidoux's respective pro rata shares of any federal or state grant monies received shall either be paid to them 10 days after receipt of such grant funds, or, in the event Riverside should elect to do so, shall be used by Riverside to pay the capital costs of constructing the plant and as an offset against the capital

costs which otherwise would be billed to Jurupa and Rubidoux. A final adjustment to capital costs shall be made for all federal or state grant monies received.

5.4 Allocation of Costs for Conveyance Facilities. Jurupa and Rubidoux shall each acquire, construct, own, operate and maintain its respective conveyance facilities which are required as part of the regional system. Such conveyance facilities shall consist of any facilities necessary for the delivery of wastewater from the treatment facilities of Jurupa and Rubidoux, respectively, to the advanced wastewater treatment plant. Riverside shall be obligated to provide Jurupa and Rubidoux without charge all rights-of-way and access over Riverside's existing sewage treatment plant site necessary to construct, maintain and operate their respective conveyance facilities. Riverside shall be further obligated, where reasonable, to make its best effort to provide Jurupa and Rubidoux at reasonable charge all rights-of-way and access over all other property owned by Riverside necessary to construct, maintain and operate their respective conveyance facilities. Jurupa and Rubidoux shall each pay its own costs for the construction, operation and maintenance of its respective conveyance facilities, including any deposits on payments required under the Wastewater Capital Reserve Fund regulations.

6. DESIGN COSTS OF REGIONAL ADVANCED WASTEWATER TREATMENT PLANT.

6.1 Design Costs of Advanced Wastewater Treatment Plant. In order to meet the time schedules for compliance imposed upon it by the California Regional Water Quality Control Board, Santa Ana Region, Riverside has received Step 2 grant approval and has begun design and preparation of specifications for the advanced wastewater treatment plant. Jurupa and Rubidoux each agree to pay its pro rata share as allocated in Section 5.1 of this Agreement of such design costs, less grant reimbursements. Such payments shall be made no later than the date of opening of bids for construction of the advanced wastewater treatment plant. Jurupa and Rubidoux shall each pay its pro rata share of these design costs whether or not it participates in the construction of the advanced wastewater treatment plant under the terms of this Agreement.

7. IMPLEMENTATION SCHEDULE OF REGIONAL ADVANCED WASTEWATER TREATMENT SYSTEM.

7.1 Due Diligence. Construction of the regional system may involve several principal phases, namely, construction of the advanced wastewater treatment plant, and construction of the conveyance facilities from Jurupa and Rubidoux. Riverside, Jurupa and Rubidoux agree to use due

diligence to complete construction and operation of each phase, and construction of the advanced wastewater treatment plant shall not be dependent upon the progress of construction of the conveyance facilities from Jurupa and Rubidoux. Riverside shall obtain all permits, discharge requirements, licenses, rights-of-way and land, including any revisions to Riverside's NPDES permit, necessary for the construction, operation and maintenance of the advanced wastewater treatment plant. If the advanced wastewater treatment plant should be completed before the conveyance facilities, or either of them, Riverside may place the plant into operation for treatment of the effluent from Riverside alone, or in conjunction with whichever community services district may then be ready to deliver its effluent.

8. WASTEWATER CAPITAL RESERVE FUND.

8.1 WCRF Requirements. Riverside shall establish a Wastewater Capital Reserve Fund (WCRF) for the advanced wastewater treatment plant, in accordance with the "Revenue Program Guidelines for Wastewater Agencies", September 1974, or the latest revision, by the California State Water Resources Control Board. The amounts required to be deposited into the WCRF each year shall comply with federal and state laws, regulations and the above referred to guidelines. Each party to this Agreement shall share in these deposits according to its pro rata share of advanced wastewater treatment plant

capacity right. Riverside may disburse amounts from the WCRF in compliance with Federal and state laws, regulations and the above referred to guidelines. Deposits to, interest earned on monies retained in, and disbursements from the WCRF shall be separately accounted for as to Riverside, Jurupa and Rubidoux. Should the regional system or any part thereof cease operations and be abandoned, all remaining costs including outstanding indebtedness shall be paid by the party or parties responsible therefor, and each party's WCRF account may be used in connection therewith, except as limited by grant regulations. Any balances thereafter remaining in such account shall be returned to the party entitled thereto.

9. DELIVERY OF TREATED EFFLUENT.

9.1 Sewage Collection Systems. Jurupa and Rubidoux shall separately own, operate, construct and maintain all sewage collection works within their respective jurisdictions and may provide, if they choose, primary and/or secondary treatment within their own boundaries.

9.2 Acquisition of Primary and Secondary Treatment Capacity Facilities Rights. It is understood that Riverside's obligations under this Agreement are limited to the acceptance for advanced treatment of effluent which has already received primary and secondary treatment in accordance with the standards and provisions hereof. If Jurupa and Rubidoux do not

continue to provide their own primary and secondary treatment, they shall make other arrangements for such treatment. If primary and secondary treatment for Jurupa and Rubidoux is provided at the existing Riverside treatment plant, through an expansion of such facilities, any such arrangements shall be the subject to a separate agreement with Riverside.

10. QUANTITY STANDARDS FOR TREATED EFFLUENT DELIVERED TO REGIONAL ADVANCED WASTEWATER TREATMENT SYSTEM.

10.1 General Quantity Standards. The quantity of treated effluent delivered by Riverside, Jurupa and Rubidoux into the advanced wastewater treatment plant shall meet the Quantity Standards set forth in Exhibit "B".

10.2 Changes in Quantity Standards. The Regional Advisory Committee may, from time to time, amend or order changes in the Quantity Standards set forth in Exhibit "B", so long as they are reasonably related to quantity criteria applicable to waste discharges by Riverside, Jurupa and Rubidoux, and are necessary and sufficient to protect the regional system, and to comply with the requirements of any governmental agency having jurisdiction over discharges from the regional system.

11. QUALITY STANDARDS FOR TREATED EFFLUENT DELIVERED TO REGIONAL ADVANCED WASTEWATER TREATMENT SYSTEM.

11.1 General and Special Quality Standards. The

quality of treated effluent delivered by Riverside, Jurupa and Rubidoux into the advanced wastewater treatment plant shall meet the Quality Standards set forth in Exhibit "B". The standards shall contain both general and special restrictions on the quality of such effluent. The general restrictions shall consist of limitations upon or prohibitions against the discharge into the regional system of specifically enumerated solid, liquid or gaseous material which may tend to damage its normal maintenance and operation. The special restrictions shall consist of specifications of the physical, chemical, and biological qualities of the effluent.

11.2 Changes In Quality Standards. The Regional Advisory Committee may, from time to time, amend or order changes in the Quality Standards set forth in Exhibit "B", so long as they are reasonably related to quality criteria applicable to waste discharges by Riverside, Jurupa and Rubidoux, and are necessary and sufficient to protect the regional system, and to comply with the requirements of any governmental agency having jurisdiction over discharges from the regional system.

Riverside, Jurupa and Rubidoux shall each have the responsibility of delivering to the advanced wastewater treatment plant a quality of effluent which independently will permit all requirements of any regulatory authority to be met. This responsibility shall include measures, if necessary, to improve its respective water supply if the poor quality of its supply causes or threatens violations of any regu-

latory authority requirement.

12. ORDINANCES ESTABLISHING RULES AND REGULATIONS FOR DISCHARGE OF SEWAGE AND INDUSTRIAL WASTES.

12.1 Enactment of Sewer Use Ordinances. Each party to this Agreement agrees to enact, maintain and enforce a sewer use ordinance which shall prohibit discharge into the regional system of substances which may be hazardous to or may impair the structures, equipment, functions or processes thereof, or which would prevent compliance with all lawful requirements affecting the discharge of effluent therefrom. Such ordinances shall also require control of the quantity, rate of flow, and concentration of compatible pollutants, of incompatible pollutants, and of toxic substances; and for the issuance of permits to industrial users within the respective sewerage systems of the parties, and for establishment of user charges including the mandated recovery of federal grant funds from industrial users. These ordinances shall meet all applicable requirements of the Federal Water Pollution Control Act of 1972, as amended. Nothing in this Agreement shall prevent Riverside, Jurupa and Rubidoux from adopting more restrictive standards.

13. QUANTITY AND QUALITY SURCHARGE.

13.1 Quantity and Quality Surcharge Formula. In the event the quantity or quality of treated effluent delivered

by any party to the advanced wastewater treatment plant reaches the surcharge levels set forth in Exhibit "B", and Riverside treats and discharges the effluent, then, in addition to the payment of the monthly service charge (reference Section 19), such party shall pay a surcharge based upon the formula in Exhibit "C". The amount of the surcharge shall be subject to review periodically by the Regional Advisory Committee and may be adjusted as necessary by the Committee. The surcharge shall represent the additional maintenance and operation expenses, and any added capital costs, involved in treating and disposing of the excessive amounts or inferior quality of effluent. Any surcharges due from Jurupa and Rubidoux shall be billed and paid in the same manner provided for billing and payment of the monthly service charge. Any surcharge amounts owed by Riverside shall be deducted from the operation and maintenance costs in which Jurupa and Rubidoux share.

14. QUANTITY AND QUALITY VIOLATIONS.

14.1 Limitations on Quantity and Quality Violations. In the event quantity or quality of effluent delivered by any party to the advanced wastewater treatment plant reaches the surcharge levels set forth in Exhibit "B", Riverside shall treat and dispose of the excessive amounts or inferior quality of effluent when feasible, subject to the Quantity and Quality surcharges provided for in Section 13. The parties

recognize, however, that the capacity and limitations of the advanced wastewater treatment plant will not always allow the accomodation of effluent at surcharge levels; and each of the parties agrees to use due diligence to cease the delivery of effluent into the regional system and to the advanced wastewater treatment plant which is in the surcharge categories, and in no event to deliver effluent which exceeds the maximum limitations contained in Exhibit "B". The Regional Advisory Committee shall have the power after reasonable notice to prohibit delivery into the regional system and to the advanced wastewater treatment plant of effluent which is in violation of the maximum limitations in Exhibit "B", or which cannot be treated under the surcharge provisions thereof. Until such condition has been remedied, there shall be no further obligation hereunder to accept such effluent for treatment at the advanced wastewater treatment plant.

14.2 Damage and Penalty Payments. If any quantity or quality violations result in damage to the treatment or disposal facilities of the regional system, or require additional treatment, then the violating party shall pay the cost of repairing any such damage or providing necessary treatment. All fines or penalties levied by any federal, state or regional agency or court as a result of any discharge or treatment violation from the regional system shall be paid by the party responsible for the violation.

15. MEASUREMENT AND RECORDS OF EFFLUENT.

15.1 Flow Quality and Quantity. Riverside shall meter and determine the quantity and quality of effluent which is delivered into the regional system by each of the parties, and shall also measure and determine the quality of the total amount of effluent discharged from the advanced waste treatment plant. Riverside shall install, maintain, and operate such measuring devices and equipment as may be necessary, at locations mutually agreed upon by the contracting parties. The measuring devices shall be examined, tested and serviced regularly to insure their accuracy. Accurate records of effluent flow and quality measurements shall be kept. All such measurements and records shall be open for inspection by any party and by the Regional Advisory Committee. All facilities comprising the regional system shall also be open for inspection by any of the contracting agencies, and Riverside shall have the right to inspect the community sewer systems of Jurupa and Rubidoux for the purpose of determining compliance with quality standards.

15.2 Well Water Metering. Riverside, Jurupa and Rubidoux shall meter the quantity of flow, and determine the quality thereof, from each well and/or other water sources which are pumped into its domestic water supply system. Water quality analyses shall be made at least annually, and shall include tests for such constituents as may be required by any regulatory authority in its monitoring program.

16. LIABILITY.

16.1 Liability for Negligence. Riverside or any of its officers or employees or any other person or entity whose negligent or wrongful act or admission would be imputed to Riverside, shall not be liable to any other party to this Agreement for direct or consequential loss or damage to any other party to this Agreement arising out of an occurrence resulting from the design, construction, operation and maintenance, use or ownership of the regional advanced wastewater treatment plant, except as follows:

(a) For damage resulting from willful action or damage covered by Riverside's insurance.

(b) For damage to any property owned by Jurupa and Rubidoux, which results from any action or non-action by Riverside while engaged in activities related to the advanced wastewater treatment plant.

16.2 Hold Harmless. Except for liability resulting from willful action, any party to this Agreement whose sewer customer shall have a claim or bring an action against any other party to this Agreement for any death, injury, loss or damage arising out of or in connection with interruptions to or curtailment of sewer service to such customer caused by the operation or failure of the regional advanced wastewater treatment plant or any portion thereof shall indemnify and hold harmless such other party to this Agreement, its directors, officers and employees, from and

against any liability for such death, injury, loss or damage. Provisions of this Section 17.2 shall not be construed so as to relieve any insurer of its obligation to pay for any insurance claims in accordance with the terms and conditions of the advanced wastewater treatment plant insurance policies.

17. OPERATION AND MAINTENANCE OF THE REGIONAL ADVANCED WASTEWATER TREATMENT SYSTEM.

17.1 Operation and Maintenance. Riverside shall administer, operate, and control the advanced wastewater treatment plant subject to the terms of this Agreement, and shall maintain the plant in good condition and repair, reasonable wear and tear excepted. Riverside shall be obligated initially to pay the costs and expenses of operating and maintaining the advanced wastewater treatment plant, and shall keep complete records thereof and of all payments required hereunder. Such records shall be open for inspection by any party and by the Regional Advisory Committee. Jurupa and Rubidoux shall each administer, operate, and maintain its respective conveyance facilities in good condition and repair, reasonable wear and tear excepted, and to pay its own costs in connection therewith without reimbursement from any party.

18. ALLOCATION OF COSTS FOR OPERATION AND MAINTENANCE OF THE ADVANCED WASTE TREATMENT FACILITY.

18.1 O & M Costs. Operation and maintenance (sometimes O & M) costs of the advanced wastewater treatment plant shall consist of:

(a) All labor, materials, energy and other expenses incurred in the operation and maintenance of all treatment facilities comprising the advanced wastewater treatment plant, and all disposal facilities required for the disposition of any treated effluent discharged from that facility; and

(b) All expenses of measuring the quantity and determining the quality of effluent delivered into, and discharged from the regional system, and all expenses for insurance, technical assistance, legal proceedings and general administration; and

(c) Costs and expenses of replacement of any facilities which are customarily considered a part of the costs and expenses of ordinary and usual maintenance and operation.

18.2 Allocation of O & M Costs. O & M costs of the advanced wastewater treatment plant shall be allocated among the parties in proportion to the actual volume of flow which each party delivers to the plant for treatment.

19. PAYMENT OF O & M COSTS.

19.1 Service Charge Rate. A service charge rate shall be fixed annually by the Regional Advisory Committee for Jurupa and Rubidoux. This rate shall be expressed in dollars and cents for each million gallons of effluent delivered into the regional advanced wastewater treatment plant, and shall be computed by dividing the total estimated O & M costs (reference Section 18) of the regional advanced treatment plant by the total estimated quantity of effluent to be delivered into the system. Such charge shall be adjusted periodically on the basis of actual flows and actual costs of operation and maintenance. Jurupa and Rubidoux shall each retain the right to raise the funds necessary to pay their monthly service charge to Riverside by whatever method may be legally available to it, that is, by user charges, by standby or availability charges, or by taxation, subject only to such grant regulations as may be applicable.

19.2 Payment of Service Charge. Within 15 days after the end of each month, Riverside shall mail statements of service charges to Jurupa and Rubidoux, setting forth the quantity of treated effluent delivered during the prior month and the total service charge due, including any surcharge. Jurupa and Rubidoux shall pay their respective service charges by the fifteenth day of the month following receipt of the statement. At the end of each year, Jurupa and Rubidoux shall be required to pay any additional amounts

necessary to pay in full their respective shares of O & M costs. Any overage shall be credited against the service charges due for the following year.

20. REGIONAL ADVISORY COMMITTEE.

20.1 Composition of The Regional Advisory Committee. A Regional Advisory Committee shall be established, composed of four members appointed by Riverside, two members each appointed by Jurupa and Rubidoux, and one member appointed by Western or their nominees. Riverside members shall include the Director of Public Works and the Superintendent of Sewerage Systems Divisions. The Regional Advisory Committee shall select its own chairman, shall meet at periodical intervals, and shall consult with and advise Riverside upon all aspects of the regional system, including, but not limited to, review of plans and specifications, operation and maintenance procedures, annual budgets and costs, quality requirements, regulatory authority discharge requirements, and expansion of or capital improvements to the regional system. Plans and specifications for each portion of the regional system shall be reviewed by the Regional Advisory Committee before submission to the State Water Resources Control Board for grant approval.

The Regional Advisory Committee shall also meet at the request of any party to this Agreement, and any member may propose or initiate suggestions, complaints, operating

procedures or policies for the consideration of the Committee. A quorum of the Regional Advisory Committee shall require five members, including at least one member from each contracting agency; provided that if any contracting agency has no member present for three consecutive meetings, any four members of the Committee shall thereafter constitute a quorum. The Regional Advisory Committee shall act on the basis of a majority vote of the members present at any meeting at which a quorum exists.

21. PRIMARY AND SECONDARY TREATMENT PLANTS; DEBTS.

21.1 Existing Community Services District Plants. Jurupa and Rubidoux shall continue to own their existing primary and secondary treatment plants. These plants shall not be part of the regional system, and may be operated by the community services districts as they choose, but at their own expense. If permitted by regulatory authorities, each community services district may dispose of treated effluent from its own plant without delivering such effluent to the regional system for advanced waste treatment. Riverside shall also have the right, subject to Paragraph 2.10 of this Agreement, and subject to all requirements of regulatory authorities, to utilize effluent originating from its sewer system after such effluent has received primary and secondary, but not advanced waste treatment. Each party shall be solely responsible for the payment of any existing

bonds or other existing indebtedness against its respective primary and secondary treatment plant or collection system.

22. CONTROL AND DISPOSITION OF TREATED EFFLUENT.

22.1 Excess Flows. Riverside shall retain all rights set forth in its agreement of November 20, 1968 with Western to excess flows originating from within its boundaries. Riverside shall also retain all rights to the effluent derived from sewage delivered by Rubidoux, which it acquired under deed recorded October 16, 1953, in Book 1517, page 298, Official Records of Riverside County. Disposal of sewage by Rubidoux into the regional system, in lieu of continuously and perpetually operating its own primary and secondary treatment plant, and producing and discharging effluent therefrom, shall not be grounds for reversion of the property described in such deed; provided that nothing contained herein shall affect the rights of Riverside in the event of abandonment, sale, transfer or disposal of such Rubidoux plant.

Subject to the terms of the judgment and agreement referred to in Paragraph 2.10, and the deed described above, each party shall have the right to utilize or dispose of effluent from the advanced waste treatment plant in amounts equivalent to the sewage originating within its boundaries. All facilities required to make such use of such effluent shall be the responsibility of the party claiming the effluent. To the extent,

however, that the parties do not use or dispose of such effluent from the advanced wastewater treatment plant, such effluent shall be owned by and under the control of Western. Any revenues realized by Western from the sale or use of such effluent, in excess of that pledged to Western under its agreement with Riverside, shall be paid to Riverside by Western and apportioned and credited to the accounts of Riverside, Jurupa and Rubidoux as an offset against O & M Costs.

23. NON-ASSIGNABILITY.

23.1 Prohibition on Assignment. No party to this Agreement shall assign or otherwise transfer its rights or any other interests under this Agreement, without the written consent of all parties to this Agreement.

24. DISTRIBUTION OF ASSETS.

24.1 Disposal of Advanced Wastewater Treatment Plant. In the event the parties should cease to use the advanced wastewater treatment plant, and such plant should be abandoned or disposed of, any proceeds realized therefrom shall be distributed to the parties in proportion to their respective capacity rights; provided that Riverside shall have the right to retain or separately dispose of the site used for the advanced wastewater treatment plant so long as it refunds to Jurupa and Rubidoux

the amounts they contributed under Paragraph 5.2(c) hereof.

DATED this 1st day of December, 1976.

CITY OF RIVERSIDE

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM

_____ 11/24/76
ASST. CITY ATTORNEY

JURUPA COMMUNITY SERVICES DISTRICT

By: _____
President

ATTEST:

_____
Secretary

RUBIDOUX COMMUNITY SERVICES DISTRICT

By: _____
President

ATTEST:

_____
Secretary

WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY

By: _____
President

ATTEST:

_____
Deputy Secretary

EXHIBIT "A"

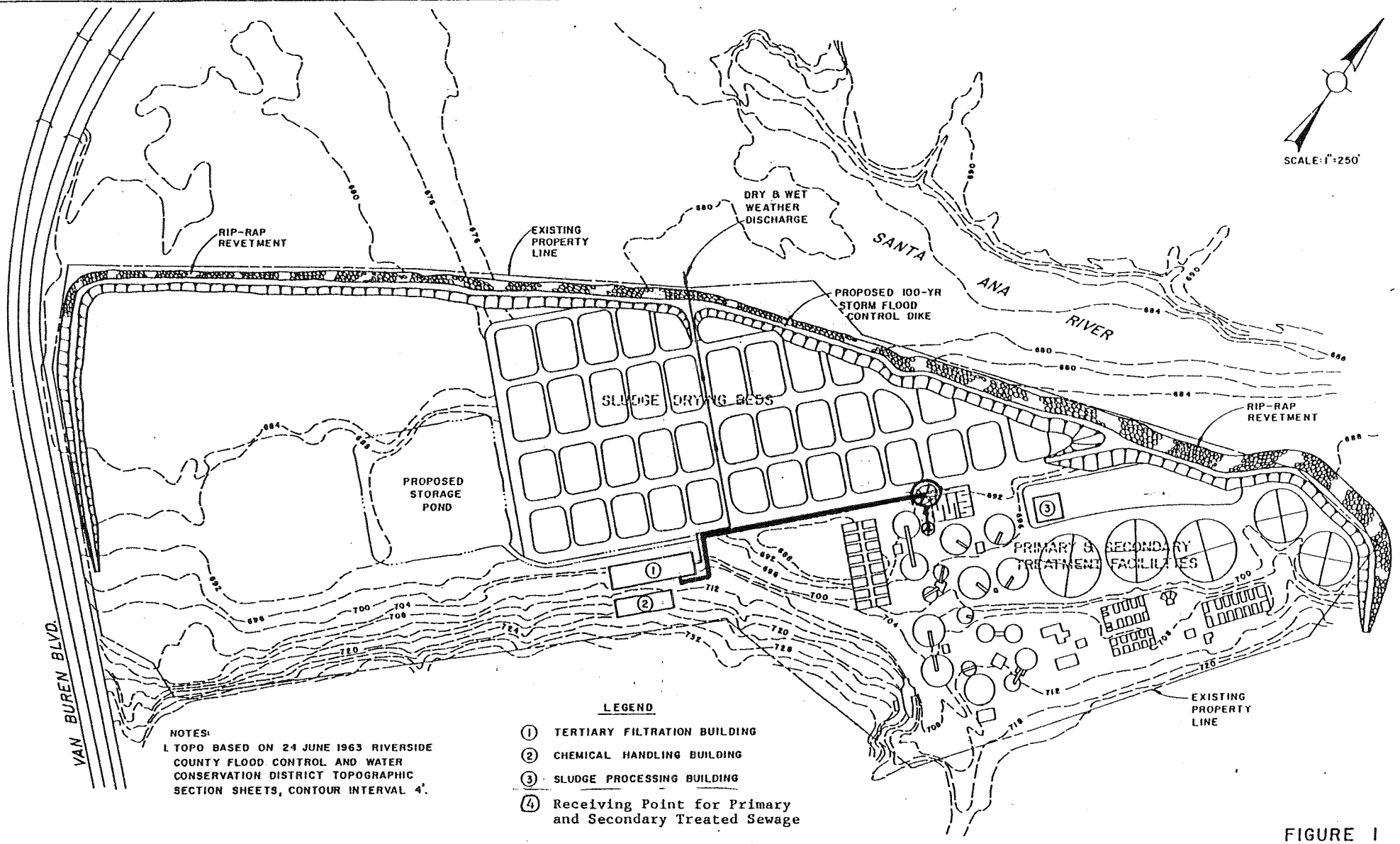


FIGURE I
CITY OF RIVERSIDE
WASTEWATER TREATMENT PLANT
TERTIARY FILTRATION FACILITY LOCATION

EXHIBIT "B"

QUANTITY AND QUALITY STANDARDS

FOR TREATED EFFLUENT

1. Quantity Standards For Treated Effluent

If the quantity of effluent delivered by any party to the advanced wastewater treatment plant exceeds the following amounts, such party shall pay a surcharge in accordance with Section 13 of this Agreement:

(a) 115% of the capacity right of the party, computed on a daily basis.

(b) 145% of the peak hourly flow allocated to each party. Based upon the capacity right of each party, and upon the construction and operation of the advanced wastewater treatment plant, the Regional Advisory Committee shall determine a peak hourly flow rate for each party to the Agreement.

In no event shall the quantity of effluent delivered by any party to the advanced wastewater treatment plant exceed the following maximum limitations:

(a) 145% of the capacity right of the party, computed on a daily basis.

(b) 200% of the peak hourly flow rate allocated to the party.

2. Quality Standards For Treatment Effluent

(a) Special Quality Standards

If the quality of effluent delivered by any party to the advanced wastewater treatment plant exceeds the

following standards, such party shall pay a quality surcharge in accordance with Section 13 of this Agreement:

Constituent	30-Day Average Discharge Concentration	Maximum Daily Discharge Instantaneous Maximum
B.O.D.	30 mg/l	45 mg/l
Suspended Solids	30 mg/l	45 mg/l
Ammmonium (as NH_4)	15 mg/l	16.5 mg/l
Nitrate (as NO3)	45 mg/l	50 mg/l
Chlorine Residual	1.0 mg/l	1.0 mg/l
Settleable Solids	0.1 ml/l	0.2 ml/l

If analysis of the quality of treated effluent delivered to the Advanced Wastwater Treatment Plant by any party to this Agreement reveals a concentration of 50 percent (%) or more in excess of any of the limits set forth above then the violating party shall be subject to the limitations on Quality Violations set forth in Section 14 of this Agreement.

(b) General Quality Standards

The quality of treated effluent delivered by the parties to this Agreement in addition to meeting the special quality limitations set forth above shall conform to the following general quality limitations which prohibit secondary effluent containing one or more of the following wastes:

1. Any gasoline, benzene, naphtha, solvent, fuel oil or any liquid, solid or gas that would cause or tend to cause flammable or explosive conditions to result in the sewerage system.

2. Any waste containing toxic or poinsonous solids, liquids or gases in such quantities that, alone or in combination with other waste substances, may create a hazard for humans, animals or the local

environment, interfere detrimentally with wastewater treatment processes, cause a public nuisance, or cause any hazardous condition to occur in the sewerage system.

3. Any waste having a pH lower than 6.0 or having any corrosive or detrimental characteristic that may cause injury to wastewater treatment or maintenance personnel or may cause damage to structures, equipment or other physical facilities of the sewerage system.

4. Any solids or viscous substances of such size or in such quantity that they may cause obstruction to flow in the sewer or be detrimental to proper wastewater treatment plant operations. These objectionable substances include, but are not limited to, asphalt, dead animals, offal, ashes, sand, mud, straw, industrial process shavings, metal, glass, rags, feathers, tar, plastics, wood, whole blood, paunch manure, bones, hair and fleshings, entrails, paper dishes, paper cups, milk containers, or other similar paper products, either whole or ground.

5. Any rainwater, storm water, groundwater, street drainage, subsurface drainage, roof drainage, yard drainage, water from yard fountains, ponds or lawn sprays or any other uncontaminated water.

6. Any water added for the purpose of diluting wastes which would otherwise exceed applicable maximum concentration limitations.

7. Any nonbiodegradable cutting oils, commonly called soluble oil, which form persistent water emulsions.

8. Any excessive concentrations of nonbiodegradable oil, petroleum oil or refined petroleum products.

9. Any dispersed biodegradable oils and fats, such as lard, tallow or vegetable oil in excessive concentrations that would tend to cause adverse effects on the sewerage system.

10. Any waste with an excessively high concentration of cyanide.

11. Any strongly odorous waste or waste tending to create odors.

12. Any wastes containing over 0.1 miligram per liter of dissolved sulfides.

13. Any wastes with a pH high enough to cause alkaline incrustations on sewer walls.

14 Any substance promoting or causing the promotion of toxic gases.

15. Any waste having a temperature of 120° F or higher.

16. Any wastes requiring an excessive quantity of chlorine or other chemical compound used for disinfection purposes.

17. Any excessive amounts of chlorinated hydrocarbon or organic phosphorus type compounds.

18. Any excessive amounts of deionized water, steam condensate or distilled water.

19. Any waste containing substances that may precipitate, solidify or become viscous at temperatures between 50° F and 100° F.

20. Any waste producing excessive discoloration of wastewater or treatment plant effluent.

21. Any garbage or waste that is not ground sufficiently to pass through a 3/8-inch screen.

22. Any wastes containing excessive quantities of iron, boron, chromium, phenols, plastic resins, copper, nickel, zinc, lead, mercury, cadmium, selenium, arsenic or any other objectionable materials toxic to humans, animals, the local environment or to biological or other wastewater treatment processes.

23. Any blow-down or bleed water from cooling towers or other evaporative coolers exceeding one-third of the makeup water.

24. Any excessive quantities of radioactive material wastes.

25. Recognizable portions of the human anatomy.

EXHIBIT "C"

QUANTITY AND/OR QUALITY SURCHARGE

FOR TREATED EFFLUENT

Surcharge payments be computed by means of the following formula:

$$S = (a \times V) + (b \times P) + (c \times BOD) + (d \times SS)$$

Where:

S = Surcharge in dollars

a = Cost of handling hydraulic loads (pumping and disinfection costs)

V = Total average daily flow over the limit (in MG)

b = Cost of handling excessive hydraulic loads (pumping and disinfection costs)

P = Peak hourly flow over the limit (in MG)

c = Cost of handling organic loads (filtration and disinfection costs)

BOD = Total monthly organic load over the 30-day average limit plus ten times the total instantaneous organic load over the limit (each occurance considered lasting minimum one hour) in 1000 pounds

d = Cost of handling solid loads (filtration and sludge handling costs)

SS = Total monthly solid load over the 30-day average limit plus ten times the total instantaneous solid load over the limit (each occurance considered lasting minimum one hour) in 1000 pounds

May 9 1978
587-1.A

AGREEMENT FOR REGIONAL PRIMARY AND SECONDARY WASTEWATER TREATMENT

BETWEEN

CITY OF RIVERSIDE,

JURUPA COMMUNITY SERVICES DISTRICT,

RUBIDOUX COMMUNITY SERVICES DISTRICT

AND

WESTERN MUNICIPAL WATER DISTRICT

ORIGINAL

AGREEMENT FOR REGIONAL

PRIMARY AND SECONDARY WASTEWATER TREATMENT

TABLE OF CONTENTS

AGREEMENT FOR REGIONAL PRIMARY AND SECONDARY WASTEWATER TREATMENT

1. PARTIES AND DATE.

1.1 THIS AGREEMENT is made on the 4th day of May, 1978, by and between the City of Riverside, hereafter called "Riverside," Jurupa Community Services District, hereafter called "Jurupa," Rubidoux Community Services District, hereafter called "Rubidoux," and Western Municipal Water District of Riverside County, hereafter called "Western."

2. RECITALS.

2.1 WHEREAS, at the present time, Riverside, Jurupa and Rubidoux each operate their own separate wastewater treatment plants to provide primary and secondary wastewater treatment, and

2.2 WHEREAS, the existing Riverside, Jurupa and Rubidoux wastewater treatment plants now discharge into the Santa Ana River, which is a live stream, and

2.3 WHEREAS, the California Regional Water Quality Control Board, Santa Ana Region, has adopted Orders No. 74-3, 74-25 and 74-24 as well as Orders No. 75-141, 75-142 and 75-143 affecting waste discharges from the treatment facilities of Riverside, Jurupa and Rubidoux, respectively, and

2.4 WHEREAS, these Orders, in compliance with the Water Quality Control Plan of the Regional Board, require that the wastewater discharges of each of these entities meet the wastewater reclamation criteria for nonrestricted recreation as specified in Title 22, Section 60315 of the California Administrative Code; full compliance by Riverside, Jurupa and Rubidoux has been ordered by June 15, 1978, and requires advanced wastewater treatment of all such wastewater discharges, and

2.5 WHEREAS, Riverside, Jurupa and Rubidoux have applied for grant funding from the United States of America and the State of California under the Clean Water Grant Program administered by the State Water Resources Control Board for the construction of a regional advanced wastewater treatment plant and regional primary and secondary wastewater treatment plant facilities at the Riverside water quality control plant site, and interceptor facilities from the respective service areas of Jurupa and Rubidoux to the Riverside water quality control plant site to achieve the most cost effective compliance with the aforementioned requirements, and

2.6 WHEREAS, Riverside, Jurupa, Rubidoux and Western executed an "AGREEMENT FOR REGIONAL ADVANCED WASTEWATER TREATMENT" on December 1, 1976, whereby Riverside is to acquire, construct, own and operate a regional advanced wastewater treatment plant for the advanced wastewater treatment of sewage effluent from its own primary and secondary

treatment facilities, and for the advanced wastewater treatment of sewage effluent delivered by Jurupa and Rubidoux to the advanced wastewater treatment plant, and

2.7 WHEREAS, Riverside has received a grant offer for design of the regional advanced wastewater treatment facilities to be located at the site of the existing Riverside water quality control plant, and

2.8 WHEREAS, under the provisions of the AGREEMENT FOR REGIONAL ADVANCED WASTEWATER TREATMENT referred to in Section 2.6, Jurupa and Rubidoux are required to transport wastewater to the regional advanced wastewater treatment plant, and it is more practical to discontinue use of their existing plants and replace such plants through construction of regional primary and secondary wastewater treatment facilities at the site of the existing Riverside water quality control plant, and

2.9 WHEREAS, Jurupa has received a Step 1 grant offer for certain work necessary for concept approval of 3.8 million gallons per day (MGD) of primary and secondary wastewater treatment facilities at the existing City of Riverside treatment plant site, and

2.10 WHEREAS, it is necessary to upgrade the existing Riverside primary and secondary plant in certain respects in order to operate it properly in conjunction with the regional advanced wastewater treatment plant, and in order to meet all requirements of the Regional Board, and

2.11 WHEREAS, Riverside, Jurupa and Rubidoux wish

to operate the proposed primary and secondary facilities and the existing Riverside primary and secondary plant as a regional facility, recognizing that lower costs may be achieved and, furthermore, that a regional approach may be essential in order to qualify for state and federal construction grants, and

2.12 WHEREAS, Jurupa and Rubidoux have received grant offers for the design of interceptor facilities from their respective service areas to the Riverside primary and secondary plant, and

2.13 WHEREAS, in order to meet its obligations under the judgment in the case of Orange County Water District v. City of Chino, et al., Orange County Superior Court No. 117628, Western owns and controls the quantities of treated effluent derived from Riverside sewage which Riverside is obligated to discharge to the Santa Ana River under that certain agreement between Western and Riverside dated November 20, 1968,

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

3. THE REGIONAL PRIMARY AND SECONDARY WASTEWATER TREATMENT SYSTEM.

3.1 The Regional Primary and Secondary Wastewater Treatment Plant. At the site of its existing primary and

secondary plant, Riverside shall construct additional primary and secondary wastewater treatment facilities sufficient to receive an average daily flow of 3.8 million gallons per day (MGD) for the treatment of wastewater delivered by Jurupa and Rubidoux to the regional primary and secondary wastewater treatment facilities. As part of the same construction project, Riverside shall also upgrade its existing primary and secondary plant, including installation of a nitrification system, in order to operate the regional system properly in conjunction with the regional advanced wastewater treatment plant and to meet all requirements of the Regional Board. Riverside shall also modify and extend its existing and planned flood protection works, including modifications to and extensions of the present dike system, to protect the regional primary and secondary treatment facilities from a 100-year flood. The regional primary and secondary wastewater treatment facilities (hereinafter sometimes referred to as the "Facilities") shall thereupon consist of the existing Riverside primary and secondary plant, and all facilities and improvements required to be constructed or made under this Section.

3.2 The Regional Primary and Secondary Wastewater Conveyance Facilities. Jurupa and Rubidoux shall be responsible for the delivery of wastewater to be treated at the Facilities at the respective delivery points described in Exhibit "A." Jurupa and Rubidoux shall each construct, operate and maintain all sewage collection works within

their respective jurisdictions and shall provide, construct, operate and maintain in good condition all such pumping stations, force mains, and trunk sewers as may be necessary to deliver wastewater to the regional primary and secondary wastewater treatment facilities. The facilities and works described in Sections 3.1 and 3.2 shall constitute the regional primary and secondary wastewater treatment system (sometimes herein called "regional system").

3.3 Amount of Capacity Right. On the basis of constructing 3.8 MGD of primary and secondary wastewater treatment facilities to replace the existing primary and secondary wastewater treatment plants operated by Jurupa and Rubidoux, and subject to the payment provisions hereinafter provided, Jurupa and Rubidoux shall acquire and own capacity rights in the Facilities as follows: 2.3 MGD for Jurupa, and 1.5 MGD for Rubidoux. In the event that either Jurupa or Rubidoux should fail to execute this Agreement, Riverside may proceed with construction of the Facilities with such lesser capacity as may be eligible for grant funds, and with the remaining parties to the Agreement. In the event the actual capacity of the Facilities constructed for Jurupa and Rubidoux should be greater or less than 3.8 MGD, the respective capacity rights of Jurupa and Rubidoux shall be increased or decreased proportionally, unless the parties shall agree otherwise.

3.4 Nature of Primary and Secondary Wastewater Treatment Capacity Right. The respective capacity rights of

Jurupa and Rubidoux shall be deemed a right to deliver wastewater, in quantity and quality not exceeding the standards set forth in Exhibit "B," to the Facilities, with a concurrent obligation on the part of Riverside to provide primary and secondary treatment and to convey and discharge all such wastewater to the regional advanced wastewater treatment facility, pursuant to the terms of this Agreement, and the Agreement for Regional Advanced Wastewater Treatment, and in such a manner as to comply with all applicable laws, rules and regulations. Jurupa and Rubidoux shall not by reason of ownership of such capacity rights be deemed to have or acquire any ownership in specific regional primary and secondary wastewater treatment facilities.

4. REGIONAL PRIMARY AND SECONDARY WASTEWATER TREATMENT SYSTEM CONTINGENT UPON GRANT APPROVAL.

4.1 Obtaining Grant Approval. Riverside, Jurupa and Rubidoux agree to use their best efforts to obtain the maximum amounts of grants and other financial assistance which may be available from any state or federal source to defray all or any part of the capital costs and the maintenance and operation expenses of the regional primary and secondary wastewater treatment system. Implementation of the regional system under this Agreement is specifically contingent upon receipt by Riverside, Jurupa and Rubidoux of the maximum amounts of grants and other financial assistance

which may be available from any state or federal source to help defray the eligible costs of construction thereof. Riverside, Jurupa and Rubidoux shall each continue to process their own applications for such purposes.

4.2 Responsibility for Local Matching Funds. Each party to this Agreement shall be responsible for raising its own share of local matching funds as required by the terms of federal or state grants which it receives in connection with the regional primary and secondary wastewater treatment system. Local matching funds which will be needed for construction of the regional system must be secured by Jurupa and Rubidoux no later than necessary to comply with the requirements of the Clean Water Grant Program for the financing of construction of the regional system.

In the event that Jurupa or Rubidoux, or both, should fail to secure timely financing for their portions of local matching funds required for construction of the Facilities, the remaining parties shall be entitled to proceed without delay with construction of the Facilities with such lesser interceptor facilities as may be required. In the event that any party to this Agreement does not provide its portion of local matching funds required for construction of the Facilities, it shall be deemed to have forfeited any right whatsoever to the capacity right otherwise provided in this Agreement.

5. DESCRIPTION AND ALLOCATION OF CAPITAL COSTS.

5.1 Description of Capital Costs. Capital costs of the Facilities to be constructed shall include: (a) costs required to design and prepare specifications for the regional primary and secondary wastewater treatment facilities; (b) costs required to construct primary and secondary wastewater treatment facilities designed to provide 3.8 MGD capacity for Jurupa and Rubidoux at the existing Riverside treatment plant site; (c) costs of upgrading the existing Riverside primary and secondary plant, and providing flood protection as required in Section 3.1; (d) the fair market value of the site provided by Riverside and necessary for the construction, maintenance and operation of 3.8 MGD of primary and secondary wastewater treatment facilities; and (e) the fair market value of existing primary and secondary wastewater treatment plant facilities at the Riverside treatment plant, including that portion of existing flood protection levees necessary to protect the regional primary and secondary wastewater treatment plant facilities, which are incorporated and used in the design and construction of the regional plant. These incorporated facilities are specified in Exhibit "E." Capital and administrative costs contributions required of Jurupa and Rubidoux for the construction of the regional primary and secondary wastewater treatment facilities shall be reduced by their shares of any applicable grants or related funding thereafter received by Riverside from the

federal or state governments.

5.2 Payment of Design Costs for Primary and Secondary Treatment Facilities. In order to meet the time schedules for compliance imposed upon it by the California Regional Water Quality Control Board, Santa Ana Region, Riverside shall make application for Step 2 grant approval and shall design and prepare specifications for the Facilities. Jurupa and Rubidoux each agree to pay its respective share of such design costs in accordance with the allocations in Exhibit "D." These shares shall be calculated on the basis of construction costs as estimated by the design engineer, excluding the costs of flood protection works. Such payments shall be made no later than the date of opening of bids for construction of the Facilities. Jurupa and Rubidoux shall each pay its share of design costs whether or not it participates further in the regional system. Such shares of design costs shall be adjusted to actual costs of construction if all parties participate in the construction.

5.3 Allocation of Costs of Constructing Regional Primary and Secondary Wastewater Treatment Facilities. The costs of constructing the Facilities, as set forth in 5.1(b) and (c) above, shall be shared by the parties in accordance with the schedule in Exhibit "D." In addition to their respective shares of construction costs, Jurupa and Rubidoux shall each pay to Riverside for administrative expenses incurred by Riverside one-tenth of one percent of their respective shares of construction costs.

5.4 Billing and Payment of Construction Costs for Regional Primary and Secondary Treatment Facilities. Riverside initially shall pay all capital costs of constructing the Facilities. Periodically throughout the construction period, it shall bill Jurupa and Rubidoux for their respective shares of such costs. Such amounts shall be paid to Riverside within thirty (30) days from receipt of billing. Jurupa's and Rubidoux's respective shares of any federal or state grant monies received by Riverside for those items on Exhibit "D" shall either be paid to them by Riverside within ten (10) days after receipt of such grant funds, or, in the event Riverside should elect to do so, shall be used by Riverside to pay the capital costs of constructing the Facilities and offset against the capital costs which otherwise would be billed to Jurupa and Rubidoux. A final adjustment and accounting of capital costs shall be made for all federal or state grant monies received.

5.5 Payment of Land Acquisition Costs for 3.8 MGD of Primary and Secondary Treatment Facilities. Jurupa agrees to pay $8,400.00 and Rubidoux agrees to pay $5,200.00 to Riverside for the fair market value of the site provided by Riverside and necessary for the construction, maintenance and operation of 3.8 MGD of primary and secondary wastewater treatment facilities. Such payments shall be made no later than the date of the opening of bids for construction of the Facilities.

5.6 Billing and Payment of Costs For Use of Existing Riverside Treatment Plant Facilities. Jurupa and Rubidoux each agrees to pay its share as specified in Exhibit "E" of this Agreement of the fair market value of existing primary and secondary wastewater treatment plant facilities at the Riverside treatment plant which are incorporated and used in the design and construction of the regional primary and secondary wastewater treatment facilities. Such amounts shall be paid to Riverside in five (5) equal annual installments commencing no later than the date the regional primary and secondary wastewater treatment facilities begin operation. Jurupa and Rubidoux shall not by reason of making such payments to Riverside be deemed to have or acquire any ownership, if any, in specific regional and primary secondary wastewater treatment facilities prior to making the last such payment hereunder.

5.7 Allocation of Costs for Conveyance Facilities. Jurupa and Rubidoux shall each construct, own, lease, or otherwise acquire, and shall operate and maintain its respective conveyance facilities which are required as part of the regional system. Such conveyance facilities shall consist of any facilities necessary for the delivery of wastewater from the collection systems of Jurupa and Rubidoux, respectively, to the regional primary and secondary wastewater treatment plant. Riverside shall be obligated to provide Jurupa and Rubidoux without charge all rights-of-way and access over Riverside's existing treatment plant site necessary to construct, maintain and operate their respective

conveyance facilities. Riverside shall be further obligated, where reasonable, to make its best effort to provide Jurupa and Rubidoux at reasonable charge all rights-of-way and access over all other properties owned by Riverside which are necessary to construct, maintain and operate their respective conveyance facilities. Jurupa and Rubidoux shall each pay its own costs for the construction or other acquisition, and for operation and maintenance of its respective conveyance facilities, including charges incurred for the use of the Santa Ana Interceptor, and including any deposits or payments required under the Wastewater Capital Reserve Fund regulations.

6. IMPLEMENTATION SCHEDULE OF REGIONAL PRIMARY AND SECONDARY WASTEWATER TREATMENT SYSTEM.

6.1 Due Diligence. Construction of the regional primary and secondary wastewater treatment system may involve several principal phases, namely, design and construction of the regional primary and secondary wastewater treatment facilities, and conveyance facilities from Jurupa and Rubidoux. Riverside, Jurupa and Rubidoux agree to use due diligence to complete design and construction and to commence operation of each phase, and construction of the Facilities shall not be dependent upon the progress of construction of conveyance facilities from Jurupa and Rubidoux. Riverside shall obtain all permits, discharge requirements, licenses, rights-of-way and land, including any revisions to Riverside's NPDES

permit, necessary for the construction, operation and maintenance of the Facilities. If the regional primary and secondary wastewater treatment facilities should be completed before any conveyance facilities are constructed, Riverside may place the plant into operation for treatment of sewage from Riverside, and from whichever community services district may then be ready to deliver its wastewater.

7. WASTEWATER CAPITAL RESERVE FUND.

7.1 WCRF Requirements. Riverside shall establish a Wastewater Capital Reserve Fund (WCRF) for the Facilities, in accordance with the "Revenue Program Guidelines for Wastewater Agencies," September 1974, or the latest revision, by the California State Water Resources Control Board. The amounts required to be deposited into the WCRF each year shall comply with federal and state laws, regulations and the above referred to guidelines. Each party to this Agreement shall share in these deposits according to its appropriate share of contributions. Riverside may disburse amounts from the WCRF in compliance with federal and state laws, regulations and the above referred to guidelines. Deposits to, interest earned on monies retained in, and disbursements from the WCRF shall be separately accounted for as to Riverside, Jurupa and Rubidoux. Should the Facilities and the respective conveyance facilities of Jurupa and Rubidoux, or any part thereof, cease operations and be abandoned, all remaining costs including outstanding indebtedness shall be paid by

the party or parties responsible therefor, and each party's WCRF account may be used in connection therewith, except as limited by grant regulations. Any balances thereafter remaining in such account shall be returned to the party entitled thereto.

8. DELIVERY OF WASTEWATER.

8.1 Sewage Collection Systems. Jurupa and Rubidoux shall separately own, operate, construct and maintain all wastewater collection works within their respective jurisdictions.

8.2 Use of the Riverside Water Quality Control Plant. Jurupa and Rubidoux may complete or otherwise acquire the conveyance facilities necessary to deliver wastewater to the site of the regional primary and secondary wastewater treatment facilities before such facilities are completed. If during that period of time Riverside has surplus wastewater treatment capacity in its existing primary and secondary treatment plant, Riverside shall make such surplus capacity available to Jurupa or Rubidoux. The amount, availability and duration, if any, of such surplus capacity shall be determined by Riverside every six months subject to approval by the Regional Water Quality Control Board. If both Jurupa and Rubidoux are ready to make use of any such surplus wastewater treatment capacity, they shall share in proportion to their

respective primary and secondary wastewater treatment capacity rights provided for in Section 3.3 of this Agreement. If surplus capacity for full primary and secondary wastewater treatment should not be available, Riverside nonetheless may make available any surplus hydraulic capacity remaining in its existing plant to accept secondary treated effluent and to convey such effluent through the plant to the regional advanced wastewater treatment plant. If hydraulic capacity is not available, Jurupa and Rubidoux shall have the right to construct temporary facilities by-passing the existing plant in order to reach the regional advanced wastewater treatment plant. Jurupa and Rubidoux shall each pay Riverside for its actual costs of providing surplus primary and secondary treatment capacity, or hydraulic capacity for secondary treated effluent, in proportion to the volume of flow which each party may deliver to the Riverside treatment plant. Riverside shall consult with the Regional Advisory Committee in determining such costs.

9. QUANTITY STANDARDS FOR WASTEWATER DELIVERED TO REGIONAL PRIMARY AND SECONDARY WASTEWATER TREATMENT FACILITIES.

9.1 General Quantity Standards. The quantity of wastewater delivered by Riverside, Jurupa and Rubidoux into the regional primary and secondary wastewater treatment facilities shall meet the Quantity Standards set forth in Exhibit "B."

9.2 Changes in Quantity Standards. The Regional Advisory Committee may, from time to time, amend or order changes in the Quantity Standards set forth in Exhibit "B," to the extent necessary and sufficient to protect the regional system, and to comply with the requirements of any governmental agency having jurisdiction over discharges from the regional system; provided, however, that no such amendments or changes may increase or decrease the respective capacity rights of the parties, unless the parties shall agree otherwise.

10. QUALITY STANDARDS FOR WASTEWATER DELIVERED TO REGIONAL PRIMARY AND SECONDARY WASTEWATER TREATMENT FACILITIES.

10.1 General Quality Standards. The quality of wastewater delivered by Riverside, Jurupa and Rubidoux into the regional primary and secondary wastewater treatment facilities shall meet requirements with respect to quality, characteristics, and prohibited substances contained in Exhibit "B."

10.2 Changes in Quality Standards. The Regional Advisory Committee may, from time to time, amend or order changes in the Quality Standards set forth in Exhibit "B," so long as they are necessary and sufficient to protect the regional agency having jurisdiction over discharges from

the regional system, or the regional advanced wastewater treatment plant.

Notwithstanding any other provision of this Agreement, Riverside, Jurupa and Rubidoux shall each have the responsibility of delivering to the regional primary and secondary treatment facilities a quality of wastewater which independently complies with all lawful requirements of any regulatory authority of competent jurisdiction. This responsibility shall include measures, if necessary, to improve the respective water supply of any party if the poor quality of its supply causes or threatens violations of any regulatory authority requirement.

11. ORDINANCES ESTABLISHING RULES AND REGULATIONS FOR DISCHARGE OF SEWAGE AND INDUSTRIAL WASTES.

11.1 Enactment of Sewer Use Ordinances. Each party to this Agreement agrees to enact, maintain and enforce a sewer use ordinance which shall prohibit discharge into the regional system of substances which may be hazardous to or may impair the structures, equipment, functions or processes thereof, or which would prevent compliance with all lawful requirements affecting the discharge of effluent therefrom. Such ordinances shall also require control of the quantity, rate of flow, and concentration of compatible pollutants, of incompatible pollutants, and of toxic substances; and for the issuance of permits to industrial users within

the respective sewerage systems of the parties, and for establishment of user charges including the mandated recovery of federal grant funds from industrial users. These ordinances shall meet all applicable requirements of the Federal Water Pollution Control Act of 1972, as amended. Nothing in this Agreement shall prevent Riverside, Jurupa and Rubidoux from adopting more restrictive standards.

12. QUANTITY AND QUALITY SURCHARGE.

12.1 Quantity and Quality Surcharge Formula. In the event the quantity or quality of wastewater delivered by any party to the Facilities reaches the surcharge levels set forth in Exhibit "B," and Riverside treats and discharges the effluent, then, in addition to the payment of the monthly service charge (reference Section 18), such party shall pay a surcharge resulting from the formula in Exhibit "C." The amount of the surcharge, or the surcharge formula, shall be subject to review periodically by the Regional Advisory Committee and may be adjusted as necessary by the Committee. The surcharge shall represent the additional maintenance and operation expenses, and any added capital costs, involved in treating and disposing of the excessive amounts or inferior quality of wastewater. Any surcharges due from Jurupa and Rubidoux shall be billed and paid in the same manner provided for billing and payment of the monthly service charge. Any surcharge amounts owed by Riverside shall be deducted from

the operation and maintenance costs in which Jurupa and Rubidoux share.

13. QUANTITY AND QUALITY VIOLATIONS.

13.1 Limitations on Quantity and Quality. In the event the quantity or quality of wastewater delivered by any party to the Facilities reaches the surcharge levels set forth in Exhibit "B," Riverside shall treat and dispose of the excessive amounts or inferior quality of effluent when feasible, subject to the surcharges provided for in Exhibit "C." The parties recognize, however, that the capacity and other limitations of the Facilities will not always allow the accommodation of wastewater at surcharge levels; and each of the parties agrees to use due diligence to cease the delivery of wastewater into the Facilities which is in any of the surcharge categories, and in no event to deliver wastewater which exceeds the maximum limitations contained in Exhibit "B." The Regional Advisory Committee shall have the power after reasonable notice to prohibit delivery into the Facilities of wastewater which is in violation of the maximum limitations in Exhibit "B," or which cannot be treated under the surcharge provisions thereof. Until such condition has been remedied, there shall be no further obligation hereunder to accept such effluent for treatment at the Facilities.

13.2 Damage and Penalty Payments. If any quantity

or quality violations result in damage to the treatment or disposal facilities of the regional system, or require additional treatment, then the violating party shall pay the cost of repairing any such damage or providing necessary treatment. All fines or penalties levied by any federal, state or regional agency or court as a result of any discharge or treatment violation from the regional system shall be paid by the party responsible for the violation.

14. MEASUREMENT AND RECORDS OF WASTEWATER.

14.1 Flow Quality and Quantity. Riverside shall meter and determine the quantity and quality of wastewater which is delivered into the Facilities by each of the parties, and shall also measure and determine both the quantity and the quality of effluent discharged from the regional advanced wastewater treatment plant. Riverside shall install, maintain, and operate such measuring devices and equipment as may be necessary, at locations mutually agreed upon by the parties hereto. The measuring devices shall be examined, tested and serviced regularly to insure their accuracy. Accurate records of wastewater flow and quality measurements shall be kept. All such measurements and records shall be open for inspection by any party and by the Regional Advisory Committee. All facilities comprising the regional system shall also be open for inspection by any of the contracting agencies, and Riverside shall have the right to inspect the community

sewer systems of Jurupa and Rubidoux for the purpose of determining compliance with quality standards.

14.2 Well Water Metering. Riverside, Jurupa and Rubidoux shall meter the quantity of flow, and determine the quality thereof, from each well or other water sources which are pumped into its domestic water supply system. Water quality analyses shall be made as required by the NPDES permit, and shall include tests for such constitutents as may be required by any regulatory authority in its monitoring program. All such measurements and records shall be submitted to Riverside as required for compliance reports under the NPDES permit and shall be open for inspection by any party and by the Regional Advisory Committee.

15. LIABILITY.

15.1 Liability for Negligence. Riverside, or any of its officers or employees or any other person or entity whose negligent or wrongful act or admission would be imputed to Riverside, shall not be liable to any other party to this Agreement for any direct or consequential loss or damage to such party arising out of an occurrence resulting from the design, construction, operation and maintenance, use or ownership of the Facilities, except as follows:

(a) For damage resulting from willful action, or damage covered by Riverside's insurance.

(b) For damage to any property owned by

Jurupa and Rubidoux, which results from any action or non-action by Riverside while engaged in activities related to the regional primary and secondary wastewater treatment facilities.

15.2 Hold Harmless. Except for liability resulting from willful action, any party to this Agreement whose sewer customer shall have a claim or bring an action against any other party to this Agreement for any death, injury, loss or damage arising out of or in connection with interruptions to or curtailment of sewer service to such customer caused by the operation or failure of the regional system, or any portion thereof, shall indemnify and hold harmless the other parties to this Agreement, their directors, officers and employees, from and against any liability for such death, injury, loss or damage. Provisions of this Section 15 shall not be construed so as to relieve any insurer of its obligation to pay for any insurance claims in accordance with the terms and conditions of the Facilities insurance policies.

16. OPERATION AND MAINTENANCE OF THE REGIONAL PRIMARY AND SECONDARY WASTEWATER TREATMENT FACILITIES.

16.1 Operation and Maintenance. Riverside shall administer, operate and control the Facilities subject to the terms of this Agreement, and shall maintain the Facilities in good condition and repair, reasonable wear and tear excepted. Riverside shall be obligated initially to pay the

costs and expenses of operating and maintaining the regional Facilities, and shall keep complete records thereof and of all payments required hereunder. Such records shall be open for inspection by any party and by the Regional Advisory Committee. Jurupa and Rubidoux shall each administer, operate and maintain its respective conveyance facilities in good condition and repair, reasonable wear and tear excepted, and to pay its own costs in connection therewith without reimbursement from any party. Riverside shall operate and maintain the Santa Ana Interceptor in good condition and repair, reasonable wear and tear excepted, and Rubidoux's annual rental payment to Riverside provided for in Section 8.2 shall include its share of such costs.

17. ALLOCATION OF COSTS FOR OPERATION AND MAINTENANCE OF THE REGIONAL PRIMARY AND SECONDARY WASTE TREATMENT FACILITIES.

17.1 O & M Costs. Operation and maintenance (sometimes O & M) costs of the Facilities shall consist of all labor, materials, energy and other expenses incurred in the operation, maintenance and repair of all facilities comprising the regional primary and secondary wastewater treatment facilities, and all disposal facilities required for the disposition of any treated wastewater discharged from those facilities; including but not limited to:

(a) All labor, materials, energy and other

expenses incurred in the operation of those treatment and disposal facilities required to treat and dispose of untreated wastewater delivered to the regional primary and secondary wastewater treatment facilities by private or commercial septic tank haulers;

(b) All expenses of measuring the quantity and determining the quality of wastewater delivered into, and discharged from the regional system, and all expenses for accounting, insurance, technical assistance, legal and administrative proceedings, and general administration;

(c) Costs and expenses of replacement of any facilities which are customarily considered a part of the costs and expenses of ordinary and usual maintenance and operation.

17.2 Allocation of O & M Costs. O & M costs of the regional primary and secondary wastewater treatment facilities, less any revenues received from surcharges and septic tank haulers, shall be allocated among the parties in proportion to the actual volume of flow which each party delivers to the plant for treatment.

18. PAYMENT OF O & M COSTS.

18.1 Service Charge Rate. A monthly service charge rate shall be fixed annually in advance by the Regional Advisory Committee for Jurupa and Rubidoux. This rate shall be expressed in dollars for each million gallons of wastewater

delivered into the Facilities, and shall be computed by dividing the estimated O & M costs (reference Section 17.2) of the Facilities by the total estimated quantity of wastewater to be delivered into the system. Such charge shall be adjusted periodically on the basis of actual flows and actual costs of operation and maintenance and the service charge rate so determined shall be applied to the actual quantity of wastewater delivered into the system and shall be billed in accordance with the provisions of Section 18.2 of this Agreement. Jurupa and Rubidoux shall each retain the right to raise the funds necessary to pay their monthly service charge to Riverside by whatever method may be legally available to it, that is, by user charges, by standby or availability charges, or by taxation, subject only to such grant regulations as may be applicable.

18.2 Payment of Service Charge. Within 15 days after the end of each month, Riverside shall mail statements of service charges to Jurupa and Rubidoux, setting forth the quantity and quality characteristics of wastewater delivered by each entity during the prior month and the total service charge due, including any surcharge. Jurupa and Rubidoux shall pay their respective charges by the fifteenth day of the month following receipt of the statement. At the end of each year, Jurupa and Rubidoux shall be required to pay any additional amounts necessary to pay in full their respective shares of O & M costs. Any overage shall be credited against the service charges due for the following

year.

19. REGIONAL ADVISORY COMMITTEE.

19.1 Composition of the Regional Advisory Committee. A Regional Advisory Committee shall be established, composed of four members appointed by Riverside, two members each appointed by Jurupa and Rubidoux, and one member appointed by Western, or their nominees. Riverside members shall include the Director of Public Works and the Superintendent of Sewerage Systems Divisions. The Regional Advisory Committee shall select its own chairman, shall meet at periodical intervals, and shall consult with and advise Riverside upon all aspects of the regional system, including, but not limited to, review of plans and specifications, operation and maintenance procedures, annual budgets and costs, quality requirements, regulatory authority discharge requirements, and expansion of or capital improvements to the regional system. Plans and specifications for each portion of the regional system shall be reviewed by the Regional Advisory Committee before submission to the State Water Resources Control Board for grant approval.

The Regional Advisory Committee shall also meet at the request of any party to this Agreement, and any member may propose or initiate suggestions, complaints, operating procedures or policies for the consideration of the Committee. A quorum of the Regional Advisory Committee shall require

five members, including at least one member from each party hereto; provided that if any party has no member present for three consecutive noticed meetings, any four members of the Committee shall thereafter constitute a quorum. The Regional Advisory Committee shall act on the basis of a majority vote of the members present at any meeting at which a quorum exists.

20. PRIMARY AND SECONDARY TREATMENT PLANTS; DEBTS.

20.1 Existing Community Services District Plants. Jurupa and Rubidoux shall continue to own their existing primary and secondary treatment plants. These plants shall not be part of the regional system. Each party shall be solely responsible for the payment of any existing bonds or other existing indebtedness against its respective primary and secondary treatment plant or collection system.

21. NON-ASSIGNABILITY.

21.1 Prohibition on Assignment. No party to this Agreement shall assign, or otherwise transfer its right or any other interests under this Agreement, without the written consent of all parties to this Agreement.

22. DISTRIBUTION OF ASSETS.

22.1 Disposal of Regional Primary and Secondary Wastewater Treatment Plant. In the event that parties should cease to use the regional primary and secondary wastewater treatment facilities, and such plant should be abandoned or disposed of, any proceeds realized therefrom shall be distributed to the parties in proportion to their respective capacity rights; provided that Riverside shall have the right to retain or separately dispose of the site used for the regional primary and secondary wastewater treatment plant so long as it refunds to Jurupa and Rubidoux the amounts they contributed under Section 5.4 hereof.

DATED this 4th day of May, 1978.

CITY OF RIVERSIDE

By: _____
Mayor Pro Tempore

APPROVED AS TO FORM
_____ 3/6/78
ASST. CITY ATTORNEY

ATTEST:

_____
City Clerk

JURUPA COMMUNITY SERVICES DISTRICT

By: _____
President

ATTEST:

_____
Secretary

RUBIDOUX COMMUNITY SERVICES DISTRICT

By: _____
President

ATTEST:

_____
Secretary

WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY

By: _____
President

ATTEST:

_____
Secretary

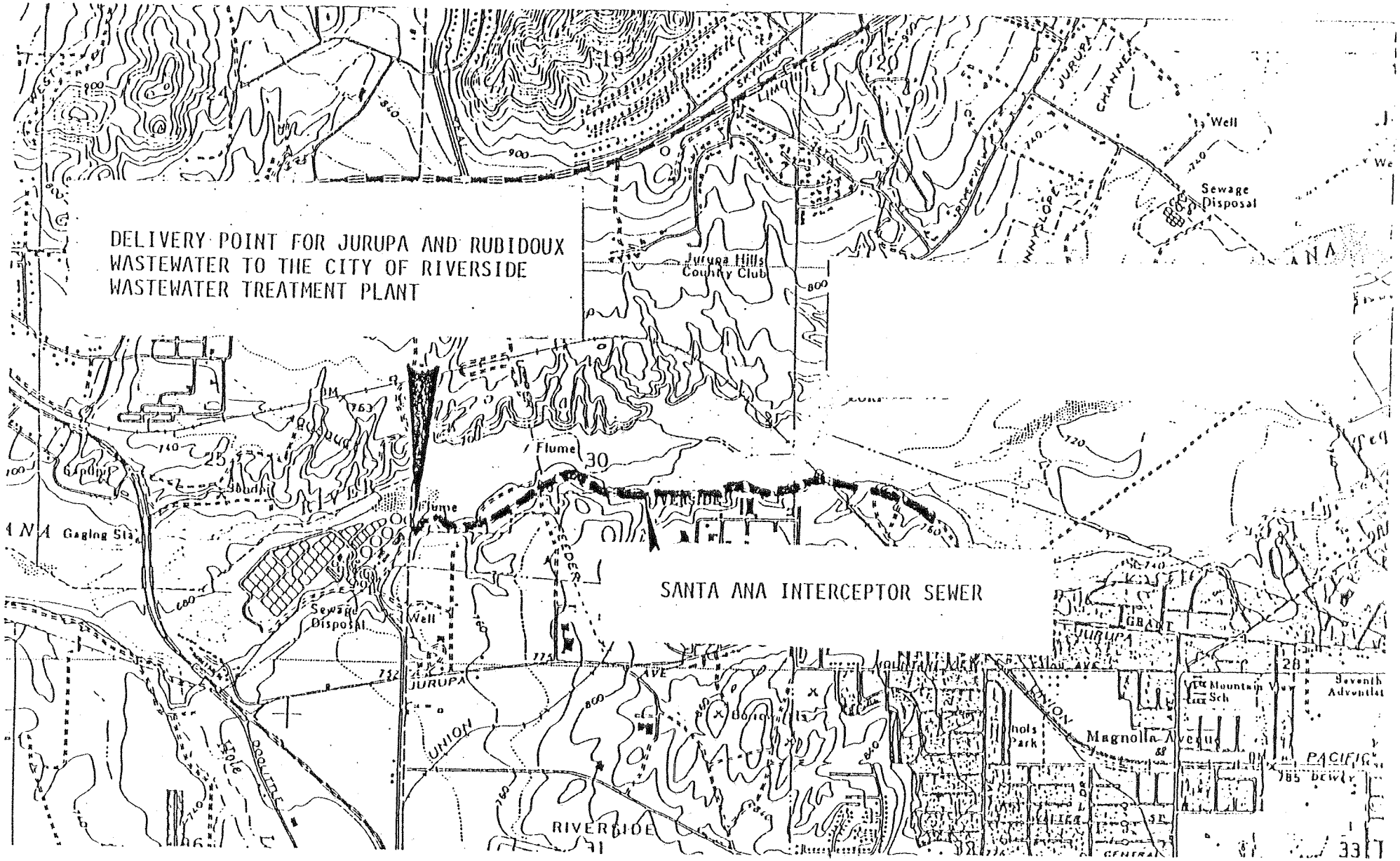

DELIVERY POINT FOR JURUPA AND RUBIDOUX WASTEWATER TO THE CITY OF RIVERSIDE WASTEWATER TREATMENT PLANT
SANTA ANA INTERCEPTOR SEWER
Jurupa Hills Country Club
Well
Sewage Disposal
Flume
Gaging Sta
JURUPA
UNION
RIVERSIDE
Magnolia Avenue
Mountain View Sch
Seventh Adventist
PACIFIC

EXHIBIT "A"

EXHIBIT "B"

QUANTITY AND QUALITY STANDARDS

FOR DELIVERED WASTEWATER

1. Quantity Standards for Wastewater Discharged Into The Regional System.

If the quantity of raw wastewater delivered by any party to the regional primary and secondary wastewater treatment facilities exceeds the following amounts, such party shall pay a surcharge in accordance with Section 13 of this Agreement:

	30-day Average Flow	Peak Hourly Flow
Riverside	24 mgd	31.2 mgd
Jurupa CSD	2.3 mgd	4.9 mgd
Rubidoux CSD	1.5 mgd	3.9 mgd

In no event shall the quantity of wastewater delivered by any party to the regional primary and secondary wastewater treatment facilities exceed the following maximum limitations for more than three consecutive months:

(a) 130% of the capacity right of the party, as set forth in Section 3.3 of this Agreement, computed on an average 30-day basis.

(b) 130% of the peak hourly flow rate allocated to the party.

2. Quality Standards for Wastewater Discharged Into the Regional System.

(a) Special Quality Standards.

If the quality of wastewater delivered by any party to the regional primary and secondary wastewater treatment facilities exceeds the following standards, such party shall pay a quality surcharge in accordance with Section 12 of this Agreement:

Constituent	30-day Average Wastewater Concentration
BOD_5	230 mg/l
Suspended Solids	220 mg/l
Ammonium (as NH_3)	32 mg/l

If analysis of the quality of wastewater delivered to the regional wastewater treatment facilities by any party to this Agreement reveals loadings in excess of the following maximum limits, then the violating party shall be subject to the limitations on Quantity and Quality Violations set forth in Section 13 of this Agreement.

	30-day Average BOD_5 Loading	30-day Average Suspended Solids Loading	30-day Average Ammonium (NH_3) Loading
Riverside	57,557 lbs/day	54,504 lbs/day	7,266 lbs/day
Jurupa CSD	6,215 lbs/day	5,755 lbs/day	913 lbs/day
Rubidoux CSD	4,054 lbs/day	3,754 lbs/day	568 lbs/day

(b) General Quality Standards.

The quality of wastewater delivered by the parties to this Agreement in addition to meeting the

special quality limitations set forth above shall conform to the following general quality limitations which prohibit wastewater containing one or more of the following wastes:

1. Any gasoline, benzene, naphtha, solvent, fuel oil or any liquid, solid or gas that would cause or tend to cause flammable or explosive conditions to result in the sewerage system.

2. Any waste containing toxic or poisonous solids, liquids or gases in such quantities that, alone or in combination with other waste substances, may create a hazard for humans, animals or the local environment, interfere detrimentally with wastewater treatment processes, cause a public nuisance, or cause any hazardous condition to occur in the sewerage system.

3. Any waste having a pH lower than 6.0 or having any corrosive or detrimental characteristic that may cause injury to wastewater treatment or maintenance personnel or may cause damage to structures, equipment or other physical facilities of the sewerage system.

4. Any solids or viscous substances of such size or in such quantity that they may cause obstruction to flow in the sewer or be detrimental to proper wastewater treatment plant operations. These objectionable substances include, but are not limited to, asphalt, dead animals, offal, ashes, sand, mud, straw, industrial process shavings, metal, glass, rags, feathers, tar, plastics, wood, whole blood, paunch manure, bones, hair and fleshings, entrails, paper dishes, paper cups, milk containers, or other similar paper products, either whole or ground.

5. Any rainwater, storm water, groundwater, street drainage, subsurface drainage, roof drainage, yard drainage, water from yard fountains, ponds or lawn sprays or any other uncontaminated water.

6. Any water added for the purpose of diluting wastes which would otherwise exceed applicable maximum concentration limitations.

7. Any nonbiodegradable cutting oils, commonly called soluble oil, which form persistent water emulsions.

8. Any excessive concentrations of nonbiodegradable oil, petroleum oil or refined petroleum products.

9. Any dispersed biodegradable oils and fats, such as lard, tallow or vegetable oil in excessive concentrations that would tend to cause adverse effects on the sewerage system.

10. Any waste with cyanide concentration in excess of 0.2 mg/l.

11. Any strongly odorous waste or waste tending to create odors.

12. Any wastes containing over 0.1 milligram per liter of dissolved sulfides.

13. Any wastes with a pH high enough to cause alkaline incrustations on sewer walls.

14. Any substance promoting or causing the promotion of toxic gases.

15. Any waste having a temperature of 120° F or higher.

16. Any wastes requiring an excessive quantity of chlorine or other chemical compound used for disinfection purposes.

17. Any excessive amounts of chlorinated hydrocarbon or organic phosphorus type compounds.

18. Any excessive amounts of deionized water, steam condensate or distilled water.

19. Any waste containing substances that may precipitate, solidify or become viscous at temperatures between 50° F and 100° F.

20. Any waste producing excessive discoloration of wastewater or treatment plant effluent.

21. Any garbage or waste that is not ground sufficiently to pass through a 3/8-inch screen.

22. Any wastes containing excessive quantities of iron, boron, chromium, phenols, plastic resins, copper, nickel, zinc, lead, mercury, cadmium, selenium, arsenic or any other objectionable materials toxic to humans, animals, the local environment or to biological or other wastewater treatment.

23. Any blow-down or bleed water from cooling towers or other evaporative coolers exceeding one-third of the makeup water.

24. Any measurable quantity of radioactive material wastes.

25. Recognizable portions of the human anatomy.

26. Any waste containing a chlorine residual in excess of 1.0 mg/l.

EXHIBIT "C"

QUANTITY AND/OR QUALITY SURCHARGE
FOR DELIVERED WASTEWATER

1. Surcharge for Flow:

$$P_1 = (Q_1 - Q_2) \times S_1$$

where Q_1 = The total volume of wastewater measured during the billing period in mgd.

Q_2 = The 30-day average flow used in design multiplied by the number of days in the 30-day billing period.

S_1 = Surcharge in dollars.

2. Surcharge for BOD_5:

$$P_2 = (C_1 - C_2) \times Q_1 \times 8.34 \times S_2$$

where C_1 = The actual wastewater BOD_5 concentration in mg/l.

C_2 = The limiting wastewater BOD_5 concentration in mg/l.

Q_1 = The total volume of wastewater measured during the 30-day billing period in mgd.

S_2 = The surcharge for each pound of BOD_5 in dollars.

3. Surcharge for Suspended Solids:

$$P_3 = (C_3 - C_4) \times Q_1 \times 8.34 \times S_3$$

where C_3 = The actual wastewater SS concentration in mg/l.

C_4 = The limiting wastewater SS concentration in mg/l.

Q_1 = The total volume of wastewater measured during the 30-day billing period in mgd.

S_3 = The surcharge for each pound of SS in dollars.

4. Surcharge for Ammonia:

$$P_4 = (C_5 - C_6) \times Q_1 \times 8.34 \times S_4$$

where C_5 = The actual wastewater NH_3 concentration in mg/l.

C_6 = The limiting wastewater NH_3 concentration in mg/l.

Q_1 = The total volume of wastewater measured during the 30-day billing period in mgd.

S_4 = The surcharge for each pound of NH_3 in dollars.

5. Surcharge for Peak Flow:

$$P_5 = (Q_{p1} - Q_{p2})\ S_5$$

where Q_{p1} = The actual peak hourly flow in mgd.

Q_{p2} = The limiting peak hourly flow in mgd.

S_5 = The surcharge for each million gallons in dollars.

Total surcharge, therefore, is: $P = P_1 + P_2 + P_3 + P_4 + P_5$

EXHIBIT "D"

ALLOCATION OF CONSTRUCTION COSTS

Item	Allocation Basis	Allocation Percentage		
		Riverside	Jurupa	Rubidoux
Primary Settling	Flow	5.0	57.5	37.5
Secondary System	BOD_5	7.4	56.0	36.6
Dissolved Air Flotation	Solids	37.9	37.6	24.5
Nitrification System	Ammonia	76.0	14.8	9.2
Upgrading Digesters	Solids	44.9	33.3	21.8
Sludge Drying Beds	Solids	84.3	9.5	6.2
Septage Receiving Station	-	100.0	0	0
Influent Junction Chamber #1	Flow	0	60.5	39.5
Influent Junction Chamber #2	Flow	72.9	16.4	10.7
Low-Rate Filter Improvement	-	100.0	0	0
Blower-Existing Aeration	-	100.0	0	0
Storage/Service Building	Flow	85.5	8.8	5.7
Flood Protection Works	Flow	86.3	8.3	5.4

EXHIBIT "E"
COMPUTED COST FOR JURUPA & RUBIDOUX'S
USE OF THE RIVERSIDE EXISTING WASTEWATER TREATMENT FACILITIES

Item	Actual Cost 1967 ($) A	ENR 1977 / ENR 1968 B	Remain.Econ.Life / Design Econ.Life C	Fair Market Value D	Cost Sharing Multiplier Factor		Community Costs ($)	
					Jurupa E	Rubidoux F	Jurupa G	Rubidoux H
Influent Junction Chamber (est.)	3,000	2.255	40/50 = 0.80	5,412	2.3/20 = 0.115	1.5/20 = 0.075	622	406
Screens, Grit Chamber, Incinerator & Parshall Flume	81,532	2.255	20/30 = 0.67	123,183	2.3/20 = 0.115	1.5/20 = 0.075	14,166	9,239
Mechanical Bar Screens	19,997	2.255	10/20 = 0.50	22,547	2.3/20 = 0.115	1.5/20 = 0.075	2,593	1,691
Grit Air Lifts	7,965	2.255	5/15 = 0.33	5,727	2.3/20 = 0.115	1.5/20 = 0.075	659	430
Diffusser (est.)	500	2.255	5/15 = 0.33	372	2.3/20 = 0.115	1.5/20 = 0.075	43	28
Air Supply (est.)	2,000	2.255	5/15 = 0.33	1,483	2.3/20 = 0.115	1.5/20 = 0.075	171	111
Flow Meter & Controls	10,000	2.255	10/20 = 0.50	11,275	2.3/20 = 0.115	1.5/20 = 0.075	1,297	846
Skimmings Pump Station (est.)	5,000	2.255	30/40 = 0.75	8,456	2.3/15 = 0.153	1.5/15 = 0.10	1,294	846
Flow Distribution Box	1,500	2.255	30/40 = 0.75	2,537	2.3/20 = 0.115	1.5/20 = 0.075	292	190
42" Bypass Pipe (est.)	23,500	2.255	30/40 = 0.75	39,744	2.3/16 = 0.143	1.5/16 = 0.094	5,683	3,736
Existing Flood Protection Levee	106,885	1.74*	20/30 = 0.8	148,648	2.3/27.8 = 0.083	1.5/27.8 = 0.054	12,338	8,027
TOTAL	261,879	--	--	369,384	--	--	39,158	25,550

ENR February 1968 - 1114
ENR March 1977 - 2512

*ENR December 1970 - 1445
ENR March 1977 - 2512

Feb. 13, 1990

AGREEMENT BETWEEN THE CITY OF RIVERSIDE AND RUBIDOUX COMMUNITY SERVICES DISTRICT REGARDING PURCHASE OF ADDITIONAL WASTEWATER TREATMENT CAPACITY AND PAYMENT OF WASTEWATER TREATMENT PLANT UPGRADE COSTS

This AGREEMENT is made as of the 13th day of February 19 90, by and between the CITY OF RIVERSIDE, a municipal corporation ("Riverside"), and RUBIDOUX COMMUNITY SERVICES DISTRICT, a Public Agency ("Rubidoux").

RECITALS

A. Pursuant to the agreements entitled "Agreement for Regional Advanced Wastewater Treatment Between City of Riverside and Jurupa Community Services District, Rubidoux Community Services District and Western Municipal Water District", dated December 1, 1976, and "Agreement for Regional Primary and Secondary Wastewater Treatment Between City of Riverside, Jurupa Community Services District, Rubidoux Community Services District and Western Municipal Water District", dated May 4, 1978 (the "Regional Agreements"), Rubidoux has wastewater treatment capacity rights ("capacity rights") in the Riverside Regional Wastewater Treatment Plant and facilities (the "Plant") including the regional advanced wastewater treatment plant and the regional primary and secondary wastewater treatment plant, referred to in the Regional Agreements. Rubidoux's original entitlement of 1.50 million gallons per day (MGD) was increased by 0.055 MGD with the execution of an agreement entitled "Agreement for Regional Primary, Secondary and Advanced Wastewater Treatment Capacity", dated June 6, 1989 (the

"Supplemental Agreement").

B. Riverside has recently completed certain improvements to the Plant which were necessary to enable the Plant to meet current Federal, State and NPDES permit requirements for discharge of Plant effluent. Based on Rubidoux's original capacity right of 1.50 MGD, Rubidoux is responsible for a portion of the cost of those improvements (the "Plant Upgrade Costs").

C. Rubidoux desires to acquire and purchase an additional capacity right of 1.50 MGD in the Plant, and Riverside is prepared to sell said capacity right to Rubidoux on the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the premises, the parties agree as follows:

1. PURCHASE OF CAPACITY RIGHT. Rubidoux may purchase from Riverside an additional 1.50 MGD of primary, secondary and advance wastewater capacity rights in the Plant by paying Riverside $4.60 per gallon for said capacity ($6,900,000.00). The purchase of this additional capacity right shall entitle Rubidoux to deliver a combined thirty day average wastewater flow of up to 3.055 MGD from Rubidoux's wastewater collection system to the Plant for treatment and disposal as described in the Regional Agreements upon completion of Riverside's tertiary capacity expansion project. The purchase of this additional capacity right shall not entitle Rubidoux to any ownership interest in specific land or facilities. Riverside shall be obligated to operate and maintain the Plant at all times so as

to provide adequately for the treatment and disposal of a total of 3.055 MGD of wastewater delivered by Rubidoux from its wastewater collection system to the Plant while at all times meeting all Federal, State and NPDES permit requirements.

2. PLANT UPGRADE COSTS. Rubidoux shall pay Riverside the sum of $537,000.00 which sum constitutes Rubidoux's obligation for the Plant Upgrade Costs and any future Plant upgrade, added facilities or modifications of facilities which may become necessary to continue providing 3.055 MGD of capacity for Rubidoux in the Plant and enable the Plant to meet all Federal, State and NPDES permit requirements which are in effect on the execution date of this Agreement.

3. PAYMENT OF UPGRADE COSTS AND PURCHASE OF CAPACITY RIGHT. Rubidoux desires to pay Riverside the Plant Upgrade Costs of $537,000.00 and additional capacity right purchase amount of $6,900,000.00 over a five year period at an interest rate of 8% per annum fixed on the outstanding principal. The payment schedule shall consist of 10 equal installments with the first payment due six months after the execution date of this Agreement. Subsequent payments shall be due twice a year, billed to Rubidoux by Riverside on a six month billing cycle.

4. EARLY PAYOFF OF 1.50 MGD ADDITIONAL CAPACITY. In the event that Rubidoux is able to collect or assess sufficient wastewater fees and/or revenues to pay off the principal balance amount due to Riverside sooner than scheduled above, Rubidoux may elect to do so without any penalty for early payment.

5. WATER QUALITY IMPROVEMENT. Rubidoux shall establish

a restrictive account dedicating $200 for every Equivalent Dwelling Unit (EDU) of water capacity sold for the purpose of developing programs and financing projects to improve the potable water supplies within the Santa Ana River Basin.

6. EXPANSION OF PLANT CAPACITY. No later than 210 days after the execution date of this Agreement, Riverside shall award a contract for construction to provide additional Plant capacity. In the event Riverside does not award such a contract timely, both parties agree to negotiate a "Due Diligence" agreement for the resolution of actual wastewater flows over 1.555 MGD and any capacity above 1.555 MGD that Rubidoux may have sold or assigned. Should Riverside fail to award the construction contract and Rubidoux be unable to secure additional wastewater capacity, actual wastewater flows over 1.555 MGD shall be subject to the prevailing surcharge assessment rate for treatment and disposal until the "Due Diligence" agreement is executed by Riverside and Rubidoux, and if requested by Rubidoux, Riverside shall refund the sum of any monies paid to Riverside by Rubidoux plus any interest accrued at an 8% annual percentage rate. In that event, this Agreement shall terminate and be of no further force or effect.

7. CHANGE IN REQUIREMENTS. This Agreement shall not prevent Riverside from assessing Rubidoux its proportionate share of the costs of any facilities which are constructed at the Plant as a direct result of new or revised Federal, State or NPDES permit requirements; provided, however, that such assessments must be directly related to, non-discretionary, and

necessitated by new or revised requirements which become effective following the execution date of this Agreement.

8. OPERATION AND MAINTENANCE COSTS. Riverside shall continue to charge Rubidoux and Rubidoux shall continue to pay Riverside for operation and maintenance costs directly related to the treatment and disposal of wastewater delivered from Rubidoux's wastewater collection system to the Plant as provided in the Regional and Supplemental Agreements; provided, however, that notwithstanding the provisions of the Regional and Supplemental Agreements, such operation and maintenance costs shall not include any additional assessments or costs for upgrades or modification of facilities which are necessary to meet Federal, State and NPDES permit requirements in effect on the execution date of this Agreement, except as provided in paragraph 2.

9. EFFECTIVE DATE. This Agreement shall become effective when adopted by both Rubidoux's and Riverside's respective Board and Council.

10. RELATIONSHIP TO REGIONAL AGREEMENTS. The provisions of the Regional and Supplemental Agreements shall continue to be effective as between Rubidoux and Riverside and this Agreement supplements and amends those agreements. No amendment of the Regional Agreements shall supersede the operative provisions of this Agreement. Termination of this Agreement under Paragraph 6 above shall have no force or effect on the Regional and Supplemental Agreements which shall continue in effect between Rubidoux and Riverside.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed as of the date this Agreement has been approved by the parties.

CITY OF RIVERSIDE,
a municipal corporation

By _____
Mayor

Attest _____
City Clerk

APPROVED AS TO FORM:

_____
Assistant City Attorney

RUBIDOUX COMMUNITY SERVICES DISTRICT, a public agency

By _____
President of the Board
of Directors

Attest _____
Secretary of the Board
of Directors

APPROVED AS TO FORM:

_____
District Legal Counsel

RAS/2167A/jm
10/17/89

ATTACHMENT "A"

FINANCIAL PLAN
SPECIAL WASTEWATER CAPACITY PROGRAM

FINANCIAL PLAN SUMMARY

Rubidoux shall collect revenue that will be used to acquire 0.5 MGD of additional wastewater capacity and thus eliminate surcharge flows to the Regional Plant. The revenue shall be obtained from the following sources:

a) Sewer Service Charges from existing and future users:

$1.00/Month/Equivalent Dwelling Unit (EDU)

b) Wastewater Capacity Charges (Connection Fees) from new users:

$532/EDU *

PROJECTED SEWER SERVICE CHARGE REVENUE

Year	Total EDU's	$/Yr/EDU	$/Yr.	Cumulative $
1989	6250	6	37,500	37,500
1990	6425	12	77,100	114,600
1991	6975	12	83,700	198,300
1992	7675	12	92,100	290,400
1993	8250	12	99,000	389,400

PROJECTED CAPACITY CHARGE REVENUE

Year	Added EDU's	$/Yr/EDU	$/Yr.	Cumulative $
1989	175	532	93,100	93,100
1990	550	532	292,600	385,700
1991	700	532	372,400	758,100
1992	575	532	305,900	1,064,000
1993	725	532	385,700	1,449,700

* Based on 25% of (RCSD capacity charge, $3600/EDU, less $1472/EDU for purchasing Regional capacity from Riverside)

PROJECTED COMBINED REVENUES

Year	Sewer Service Charges $/Yr.	Capacity Charges $/Yr.	Combined $/Yr.	Combined Cumulative * $
1989	37,500	93,100	130,600	130,600
1990	77,100	292,600	369,700	500,300
1991	83,700	372,400	456,100	956,400
1992	92,100	305,900	398,000	1,354,400
1993	99,000	385,700	484,700	1,839,100

* Does not include interest

SDH/kdc
587-1.2
1P2-AT-A
5/26/89

Sept 11, 1985

MEMORANDUM OF UNDERSTANDING IN REGARD TO IMPLEMENTATION AND ENFORCEMENT OF APPROVED PRETREATMENT PROGRAMS

MEMORANDUM OF UNDERSTANDING made this 11th day of September 1985, between City of Riverside, hereafter called "Riverside", Jurupa Community Services District, hereafter called "Jurupa", Rubidoux Community Services District, hereafter called "Rubidoux", and Western Municipal Water District of Riverside County, hereafter called "Western".

WHEREAS the U.S. Environmental Protection Agency (EPA) has promulgated regulations requiring publicly owned treatment works (POTWs) with a design flow greater than five million gallons per day to develop and implement local pretreatment programs according to the specified compliance time schedules.

WHEREAS the pretreatment program and related regulations pertain to industrial waste dischargers that discharge flows of a nature or volume that should be regulated to prevent interference with treatment processes or to prevent the discharge of pollutants which would pass through the treatment system unmodified.

WHEREAS on June 14, 1985, the Regional Water Quality Board held a public hearing to amend the City of Riverside wastewater discharge requirements contained in Order No. 82-186 (NPDES Permit No. CA 0105350) and adopted amendment Order No. 85-77 with an effective date of June 24, 1985.

WHEREAS in accordance with Order No. 82-186, Riverside, Jurupa and Rubidoux have developed and submitted for approval similar pretreatment programs for their collection systems, which were subsequently approved by the State and EPA.

WHEREAS Order No. 85-77 requires the discharger (Riverside) to fully implement and enforce the approved pre-

treatment programs and to submit quarterly and annual reports to the Regional Water Quality Control Board and Environmental Protection Agency.

WHEREAS Order No. 85-77 requires the discharger (Riverside) to develop an agreement with each collection agency (currently Jurupa and Rubidoux) which provides for implementation and enforcement of the approved pretreatment programs.

WHEREAS the parties hereto entered into the "Agreement for Regional Advanced Wastewater Treatment" in December 1976 and the "Agreement for Regional Primary and Secondary Wastewater Treatment" in May 1978.

WHEREAS Section 11.2 of the 1976 advanced treatment agreement and Section 10.2 of the 1978 primary and secondary treatment agreement provide that Riverside, Jurupa and Rubidoux shall deliver wastewater to the treatment plant which independently complies with all lawful requirements of any regulatory authority of competent jurisdiction.

WHEREAS Section 3.4 of the 1978 primary and secondary agreement provides that Jurupa and Rubidoux's right to deliver wastewater to the regional plant is subject to compliance with all applicable laws, rules and regulations.

WHEREAS Section 11.1 of the 1978 primary and secondary agreement provides that Riverside, Jurupa and Rubidoux shall implement and enforce ordinances which shall prohibit delivery of wastewater to the regional plant which would prevent compliance with all lawful requirements affecting the discharge of effluent from the regional plant.

WHEREAS it is the purpose of this MEMORANDUM OF UNDERSTANDING to delineate the specific responsibility of each collection entity needed to provide compliance with Order No. 85-77 and to provide a method of insuring future compliance in the event that a collection agency does not fulfill its responsibility.

IT IS HEREBY UNDERSTOOD AND AGREED as follows:

1. Riverside shall comply with Regional Board Order No. 85-77 and fully implement and enforce the approved pretreatment programs of wastewater collection entities which deliver wastewater to the regional plant in accordance with this Memorandum. Such wastewater collection agencies currently consist of Riverside, Jurupa and Rubidoux.

2. In order for Riverside to comply with Order No. 85-77, each wastewater collection entity (Riverside, Jurupa, and Rubidoux) shall:

a. be responsible for the performance of all pretreatment requirements contained in 40 CFR Part 403 and shall be subject to enforcement actions, penalties, fines, and other remedies by the U. S. Environmental Protection Agency (EPA), or other appropriate parties, as provided in the Clean Water Act, as amended (33 USC 1351 et seq.) (hereafter "Act").

b. implement and enforce its Approved POTW Pretreatment Program.

c. enforce the requirements promulgated under Sections 307(b), 307(c), 307(d), and 402(B) of the Act.

d. cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharger.

e. perform the pretreatment functions as required in 40 CFR Part 403 including, but not limited to:

(1) Implement the necessary legal authorities as provided in 40 CFR 403.8(f)(1);

(2) Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;

(3) Implement the programmatic functions as provided in 40 CFR 403.8(f)(2); and

(4) Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3).

3. Jurupa, Rubidoux and any other collection agency delivering wastewater to the regional plant other than Riverside shall provide Riverside with all data and reports acquired or developed in the performance of the requirements of Section 2 above and the Pretreatment Reporting requirements of Order No. 85-77 which are necessary for preparation of the quarterly and annual reports required under said order. Such data and reports shall be delivered to Riverside within 30 days of the end of each quarter of the calendar year.

4. Riverside shall prepare the quarterly and annual reports in accordance with Order No. 85-77 and shall notify the Regional Advisory Committee of all failures to comply with the pretreatment requirements or failure to provide the pretreatment data and reports.

5. Upon notification from Riverside as provided for in Section 4, the Regional Advisory Committee shall meet and determine if there has been non-compliance with the pretreatment requirements and this Memorandum. If there is non-compliance, the Committee may request from the collection agency the reasons for non-compliance and a plan and schedule for future compliance and may adopt the compliance plan and time schedule. If the collection agency then cannot or will not comply with the compliance plan and time schedule adopted by the Committee, the Committee may direct Riverside to implement and enforce the collection agency's pretreatment program. If the Committee directs Riverside to implement and enforce the collection agency's pretreatment program, the collection agency shall pay to Riverside the cost of such work.

IN WITNESS WHEREOF, the parties have executed this Memorandum, to be effective on the date written above.

CITY OF RIVERSIDE

Public Works Director

JURUPA COMMUNITY SERVICES DISTRICT

General Manager

RUBIDOUX COMMUNITY SERVICES DISTRICT

General Manager

WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY

General Manager

APPENDIX E

SEWER SYSTEM MAP

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALE ACCORDINGLY

KRIEGER & STEWART Engineering Consultants
3602 Inland Empire Boulevard, Ontario, CA 91764
www.kriegerstewart.com • tel: 909.483.9444

RUBIDOUX COMMUNITY SERVICES DISTRICT
SEWER SYSTEM MANAGEMENT PLAN
SEWER SYSTEM MAP

APPENDIX E

SCALE: 1"=500' | DATE: 06/27/21 | DRAWN BY: PMD | CHECKED BY: HSN | W.O. 587-40.0

APPENDIX F

COPIES OF CHAPTER III AND RELEVANT FIGURES AND PLATES OF THE RUBIDOUX COMMUNITY SERVICES DISTRICT WASTEWATER FACILITIES MASTER PLAN (2015)

CHAPTER III

RECOMMENDED WASTEWATER SYSTEM IMPROVEMENTS

CHAPTER III
RECOMMENDED WASTEWATER SYSTEM IMPROVEMENTS

Portions of the District's wastewater collection system are currently operating at or near capacity. The system was analyzed to determine existing and ultimate flows within the collection system, to identify existing and ultimate collection system deficiencies, and to recommend needed collection system improvements, including additions, reinforcements, and replacements.

A. WASTEWATER CONVEYANCE SYSTEM CAPACITY

1. Design Criteria

The District's Sewer Design Criteria are set forth in the District's Water and Sanitary Sewer Design & Construction Manual. Said design criteria were utilized to determine capacity of existing wastewater conveyance facilities for both existing and ultimate wastewater flows and are summarized as follows:

- The minimum sewer diameter (D) will be 8".
- The coefficient of roughness (n) for gravity sewers will be 0.013.
- Peak flow (Q_{Peak}) will be computed from the average daily flow and the following equation (both Q_{Peak} and Q_{Avg} are expressed in MGD):

  $$Q_{Peak} = 2.3\ (Q_{Avg})^{0.89}$$

- Capacity of sewers will be determined by the "Manning" formula:

  $$Q = A\ \frac{1.486}{n}\ r^{2/3}\ s^{1/2}$$

  (where A = cross-sectional area of sewer in ft^2, r = hydraulic radius in ft, n = coefficient of roughness, and s = sewer slope)

- The ratio of the depth of flow to the sewer diameter (d/D) at peak flow will not exceed 0.50 for sewer diameters 10" and smaller, and 0.75 for sewer diameters 12" and larger.
- Gravity sewers will be designed for a minimum velocity of 2 fps and a maximum velocity of 10 fps at peak flow.

2. Capacity

Groundwater infiltration and wet weather inflow into the existing wastewater collection system were investigated and evaluated in the 1997 Master Plan and determined at the time, to be insignificant. For the purposes of this Master Plan, it is assumed that they remain insignificant.

As set forth in **Appendix A**, the distribution of wastewater flows was determined by dividing the District's service area into 106 planning areas based on current City of Jurupa Valley Zoning Maps. The number of existing residential dwelling units and the acreage of existing non-residential development were identified for each planning area by aerial photographs. Wastewater unit flows (based on District's records and the 1997 Master Plan) were applied to existing development densities to estimate the existing wastewater flow for each planning area.

Future wastewater flows within each of the 106 planning areas were projected based on ultimate development. The type and maximum permissible densities for future development were based on the current City of Jurupa Zoning Maps.

To determine the capacity of existing wastewater conveyance facilities, nodes were assigned to all major junctions and the planning areas tributary to each node were determined. Thereafter, using the existing and future wastewater flows for each planning area as set forth in **Appendix A**, the existing and ultimate average daily flow and peak flow at each node were determined.

Capacities of existing sewers for both existing and ultimate peak wastewater flows were determined by utilizing an H_2OMAP Sewer Model developed for this Master Plan. Data for the model was entered using GIS data provided by the District. The model calculated the sewer slope based on manhole invert elevations and length of sewer between manholes.

For all deficient sewers, the sewer slope as calculated by the model was checked against the sewer slope shown on the District's sewer atlas sheets. In the case of a significant discrepancy, the slope as shown on the sewer atlas sheets was used to determine if a sewer was deficient. A sewer was considered deficient if the ratio of the depth of flow to the sewer diameter (d/D ratio) at peak flow exceeded 0.50 for sewers 10" and smaller, and 0.75 for sewers 12" and larger.

A tabulation of existing and ultimate wastewater flows for each reach of the modeled sewers is set forth in **Appendix B**. **Figures B-1 and B-2 in Appendix B** show all modeled sewers, which sewers are deficient for ultimate peak wastewater flows, and recommended improvements for the deficient sewers. **Figures B-1 and B-2** also show existing average daily flow, existing peak flow, ultimate average daily flow, and ultimate peak flow for major junctions of the District's wastewater conveyance system.

B. CONVEYANCE SYSTEM DEFICIENCIES AND RECOMMENDED CAPITAL IMPROVEMENTS

The wastewater system deficiencies and recommended corrective facilities described below are based on the data presented in **Appendix B**. Proposed wastewater system facilities are shown on **Plate 2**.

1. Existing Wastewater Flows

For existing wastewater flows, the following reaches of the District's wastewater conveyance facilities are deficient:

- Agua Mansa Road

  A short segment of the existing 8" sewer between Wilson Street and Brown Avenue has a d/D ratio of between 0.52 and 0.62 for existing peak wastewater flows.

Since the d/D of 0.62 represents a depth of flow of approximately only 1" in excess of the District's design criteria, it would not be practical to replace the sewer in this reach to accommodate existing peak wastewater flows.

- Pontiac Avenue

  One segment of the existing 8" sewer in Pontiac Avenue just northerly of Mission Boulevard has a d/D ratio of 0.58 for existing peak wastewater flows.

  Since the d/D of 0.58 represents a depth of flow of approximately only 1" in excess of the District's design criteria, it would not be practical to replace this sewer to accommodate existing peak wastewater flows.

- Project 1 - Rustic Lane, Pacific Avenue, and 42nd Street

  An extensive length of the existing 8" and 10" sewers (6,900± LF) in Rustic Lane, Pacific Avenue, and 42nd Street have d/D ratios that range from 0.52 to 1.00 for existing peak wastewater flows.

  The existing 8" and 10" sewers should be replaced with a 12" sewer (6,900± LF) to accommodate existing peak wastewater flows and ultimate peak wastewater flows. Said work will include replacement of 21 sewer manholes and connections to approximately 135± sewer laterals.

- Project 2 - Limonite Avenue and Plaza Lane

  A short section of the existing 8" sewer (330± LF) in Limonite Avenue and Plaza Lane has a d/D ratio that ranges from 0.73 to 1.0 for existing peak wastewater flows.

  The existing 8" sewer should be replaced with a 12" sewer to accommodate existing peak wastewater flows and ultimate peak wastewater flows. Said work will include connections to approximately four sewer laterals.

2. Ultimate Wastewater Flows

For ultimate wastewater flows, the following reaches of the District's wastewater conveyance facilities are deficient:

- Limonite Avenue and Plaza Lane

  In addition to the short segment of 8" sewer to be replaced to accommodate existing peak wastewater flows, three additional segments of 8" sewer have d/D ratios that vary from 0.51 to 0.55 for ultimate peak wastewater flows.

  Since these d/D ratios represent a depth of flow of approximately only 0.40" in excess of the District's design criteria, it would not be practical to replace these segments of existing sewers to accommodate the ultimate peak wastewater flow.

- Project 3 - Agua Mansa Road

  The existing 8" and 10" sewers in Agua Mansa Road between Hall Avenue and Wilson Street have d/D ratios that vary from 0.52 to 1.0 for ultimate peak wastewater flows.

  Approximately 1,800 LF of the existing 8" sewer and approximately 1,100 LF of the existing 10" sewer should be replaced with a 12" sewer (2,900± LF) to accommodate ultimate peak wastewater flows (it would not be practical to replace those sections of the existing 8" sewer with a d/D ratio of only 0.52). Said work will include replacement of 11 sewer manholes and connections to approximately eight sewer laterals.

  A new 8" or 10" sewer constructed parallel to the existing 8" and 10" sewers would not have sufficient capacity to accommodate ultimate peak wastewater flows.

- Project 4 - 20th Street

  Two segments of the existing 10" sewer in 20th Street westerly of Rubidoux Boulevard have d/D ratios that vary from 0.53 to 0.64 for ultimate peak wastewater flows. Two segments of the existing 12" sewer in 20th Street westerly of Rubidoux Boulevard have d/D ratios of 0.77 for ultimate peak wastewater flows.

  Approximately 240 LF of the existing 10" sewer should be replaced with a 12" sewer to accommodate ultimate peak wastewater flows (it would not be practical to replace the existing 10" sewer with a d/D ratio of only 0.53 and the 12" sewers with a d/D ratio of only 0.77). Said work will include connection to one sewer lateral.

- Project 5 - Rubidoux Boulevard/24th Street

  The existing 12" and 15" sewers in Rubidoux Boulevard between 20th Street and 24th Street and the existing 10" and 12" sewers in 24th Street between Rubidoux Boulevard and Hall Avenue have d/D ratios of 1.0 for ultimate peak wastewater flows.

  In Rubidoux Boulevard between 20th Street and 24th Street, approximately 1,300 L.F. of the existing 12" and 15" sewers should be replaced with a 15" sewer to accommodate ultimate peak wastewater flows. The existing 15" sewer just southerly of 20th Street should be replaced with a new 15" sewer at a steeper slope. Said work will include replacement of three sewer manholes and connections to approximately two sewer laterals.

  In 24th Street between Rubidoux Boulevard and Hall Avenue, approximately 1,430 L.F. of the existing 10" and 12" sewers should be replaced with a 15" sewer to accommodate ultimate peak wastewater flows. Said work will include replacement of four sewer manholes and connections to approximately six sewer laterals.

As an alternative, if the existing 10", 12", and 15" sewers remain in service and sufficient space is available, a parallel 12" sewer in conjunction with the existing 10", 12", and 15" sewers could accommodate ultimate peak wastewater flows. However, for the purposes of this Master Plan, it is assumed the existing sewers will be removed and the new 15" sewer will be constructed in the same location.

- Project 6 - Hall Avenue

  The existing 15" sewer in Hall Avenue between 24th Street and the 60 Freeway has a d/D ratio of 1.0 for ultimate peak wastewater flows.

  Approximately 3,300 LF of the existing 15" sewer should be replaced with an 18" sewer to accommodate ultimate peak wastewater flows. Said work will include replacement of ten sewer manholes and connections to approximately 41 sewer laterals.

  As an alternative, if the existing 15" sewer remains in service and sufficient space is available, a parallel 12" sewer in conjunction with the existing 15" sewer could accommodate ultimate peak wastewater flows. However, for the purposes of this Master Plan, it is assumed the existing 15" sewer will be removed and the new 18" sewer will be constructed in the same location.

- Project 7 - Wallace Street

  The existing 18" sewer in Wallace Street between 34th Street and the 60 Freeway has d/D ratios that vary from 0.69 to 1.0 for ultimate peak wastewater flows; assuming one half of the wastewater flow from the Emerald Meadows development is discharged into Manhole G7118 and the other one half of the Emerald Meadows wastewater flow is discharged into Manhole H7104 as shown on **Figure B-1**.

Approximately 800 LF of the existing 18" sewer should be replaced with a 21" sewer to accommodate ultimate peak wastewater flows (it would not be practical to replace the existing 18" sewer with a d/D ratio of only 0.76 to 0.80). Said work will include replacement of one sewer manhole and connections to approximately nine sewer laterals. The precise length of existing sewer to be replaced will depend on the actual location of the discharge point(s) of the wastewater flow from the Emerald Meadows Development.

As an alternative, if the existing 18" sewer remains in service and sufficient space is available, a parallel 10" sewer in conjunction with the existing 18" sewer could accommodate ultimate peak wastewater flows. However, for the purposes of this Master Plan, it is assumed the existing 18" sewer will be removed and the new 21" sewer will be constructed in the same location.

- Project 8 - Pontiac Avenue (Northerly of the 60 Freeway and Mission Boulevard to 34th Street)

  The existing 8" sewer in Pontiac Avenue northerly of the 60 Freeway has a d/D of 1.0 for ultimate peak wastewater flows.

  The existing 8" sewer in Pontiac Avenue between Mission Boulevard and 34th Street has a d/D ratio that varies from 0.39 to 1.0 for ultimate peak wastewater flows.

  Approximately 600 LF of the existing 8" sewer in Pontiac Avenue northerly of the 60 Freeway should be replaced with a 12" sewer to accommodate ultimate peak wastewater flows. Approximately 1,400 LF of the existing 8" sewer in Pontiac Avenue between Mission Boulevard and 34th Street should be replaced with a 10" sewer to accommodate ultimate peak wastewater flows. Said work will include replacement of four sewer manholes and connections to approximately 34 sewer laterals.

- Project 9 - 42nd Street (Fort Drive to Rubidoux Boulevard)

  The existing 21" sewer in 42nd Street between Fort Drive and Rubidoux Boulevard has a d/D ratio of 1.0 for ultimate peak wastewater flows.

  Approximately 500 LF of the existing 21" sewer should be replaced with a 24" sewer to accommodate ultimate peak wastewater flows. Said work will include replacement of five sewer manholes and connections to approximately two sewer laterals.

  As an alternative, if the existing 21" sewer remains in service and sufficient space is available, a parallel 10" sewer in conjunction with the existing 21" sewer could accommodate ultimate peak wastewater flows. However, for purposes of this Master Plan, it is assumed the existing 21" sewer will be removed and the new 24" sewer will be constructed in the same location.

- Project 10 - Rubidoux Boulevard/Riverside County Flood Control and Water Conservation District (RCFC&WCD) Right-of-Way (42nd Street to 46th Street)

  The existing 21" and 24" sewers in Rubidoux Boulevard and the RCFC&WCD right-of-way have d/D ratios of 1.0 for ultimate peak wastewater flows. Approximately 700 LF of the existing 21" sewer should be replaced with a 24" sewer to accommodate ultimate peak wastewater flows. Said work will include replacement of four sewer manholes.

  As an alternative, if the existing 21" sewer remains in service and sufficient space is available, a parallel 12" sewer in conjunction with the existing 21" sewer could accommodate ultimate peak wastewater flows. However, for purposes of this Master Plan, it is assumed the existing 21" sewer will be removed and the new 24" sewer will be constructed in the same location.

Approximately 2,300 LF of the existing 24" sewer should be replaced with a 27" sewer to accommodate ultimate peak wastewater flows. Said work will include replacement of nine sewer manholes and connections to approximately three sewer laterals.

As an alternative, if the 24" sewer remains in service and sufficient space is available, a parallel 15" sewer in conjunction with the existing 24" sewer could accommodate ultimate peak wastewater flows. However, for purposes of this Mater Plan, it is assumed the existing 24" sewer will be removed and the new 27" sewer will be constructed in the same location.

C. LIFT STATIONS

As set forth in Chapter I, the District has six (6) wastewater lift stations, with the Juan Diaz Lift Station and the Regional Lift Station being the District's two major lift stations.

The Juan Diaz Lift Station and the Regional Lift Station capacities and estimated ultimate peak wastewater flows, are summarized as follows:

Lift Station	Pumping Units	Lift Station Capacity with One Pumping Unit as a Standby Unit	Ultimate Peak Wastewater Flow
Juan Diaz	Two 420 gpm pumping units	420 gpm (0.61 MGD)	0.55 MGD
Regional	Four 1,850 gpm pumping units	5,500 gpm (8.0 MGD)	7.72 MGD

Both lift stations have adequate capacity to accommodate the ultimate peak wastewater flows.

D. WASTEWATER TREATMENT FACILITIES

As stated in Chapter I, all of the District's wastewater is conveyed through the Regional and Juan Diaz Lift Stations and Force Mains for treatment at the Riverside Regional Water Quality Control Plant, owned and operated by the City of Riverside. Currently, the District has 3.055 MGD (average daily flow) of capacity rights in the Riverside Regional Water Quality Control Plant for wastewater treatment and disposal.

Based on the projected wastewater flows (**Table II-2**), it is anticipated the District will require 0.50 MGD of additional wastewater treatment and disposal capacity between 2020 and 2025 and then an additional 0.445 MGD of wastewater treatment and disposal capacity between 2025 and 2030.

E. ESTIMATED PROJECT COST AND PROPOSED CONSTRUCTION SCHEDULE

Estimated project costs and related construction schedules for the proposed wastewater system improvements are set forth in **Table III-1**. The estimated project costs for facilities are based on 2015 costs (ENR CCI for Los Angeles for June 2015 is 10,981) and consists of construction costs, a 20% allowance for construction contingencies, and a 15% allowance for administrative, legal, and engineering fees. Proposed facilities are shown on **Plate 2**.

The construction cost for sewers includes installation of sewers, manholes, and connections to existing sewer laterals; wastewater bypass pumping; removal and disposal of existing sewers; crushed rock in the pipe zone; hauling and disposing of excess excavated material; and pavement removal and replacement (where applicable).

For the 0.5 MGD of additional wastewater treatment and disposal capacity, the cost will range between $2,500,000 (if the District continues purchasing capacity rights from the City) and $5,500,000 (if the District constructs a new wastewater treatment plant). For the 0.445 MGD of additional wastewater treatment and disposal capacity, the cost will range between $2,225,000 and $4,895,000.

TABLE III-1
PROPOSED PROJECTS
ESTIMATED PROJECT COSTS[1] AND SCHEDULE

	2015-2020	2020-2025 [2]	2025-2030	2030-2035	Total
Project 1 - Rustic Lane, Pacific Avenue, and 42nd Street (6,900± LF - 12")	$2,650,000				$2,650,000
Project 2 - Limonite Avenue and Plaza Lane (330± LF - 12")	$120,000				$120,000
Project 3 - Agua Mansa Road (2,900± LF - 12")		$1,090,000			$1,090,000
Project 4 - 20th Street (240± LF - 12")		$90,000			$90,000
Project 5 - Rubidoux Boulevard / 24th Street (2,730± LF - 15")		$1,140,000			$1,140,000
Project 6 - Hall Avenue (3,300± LF - 18")		$1,510,000			$1,510,000
Project 7 - Wallace Street (800± LF - 21")		$420,000			$420,000
Project 8 - Pontiac Avenue (Northerly of the 60 Freeway and Mission Boulevard to 34th Street (1,400± LF - 10" and 600± LF - 12")		$730,000			$730,000
Project 9 - 42nd Street (Fort Drive to Rubidoux Boulevard) (500± LF - 24")		$310,000			$310,000
Project 10 - Rubidoux Boulevard / Riverside County Flood Control and Water Conservation District Right-of-Way (42nd Street to 46th Street) (700± LF - 24" and 2,300± LF - 27")		1,650,000			$1,650,000
Additional Wastewater Treatment and Disposal Capacity		$5,500,000 [3]	$4,895,000 [3]		$10,395,000
Total:	**$2,770,000**	**$12,440,000**	**$4,895,000**	**$0**	**$20,105,000**

[1] The estimated project costs include construction costs, a 20% allowance for construction contingencies, and a 15% allowance for administration, legal, and engineering fees.

[2] It is unclear when the various projects will be required since the schedules are dependent on when and where future development projects are implemented. Therefore, for purposes of this Master Plan, all improvements to accommodate ultimate peak wastewater flows are shown for the 2020-2025 time period.

[3] For purposes of this Master Plan, it is assumed additional wastewater treatment and disposal capacity will be provided by construction of a new wastewater treatment plant.

DWG. NO.: SB-44 Figure B1-B2 FILE NO.: 587-44 UPDATE BY: MRN PROJ. ENG.: MEM PLOT DATE: 08/06/15 PLOT TIME: 10:46AM PLOT SCALE: 1=1

MISSION BLVD

36TH ST

AVALON ST

PONTIAC AVE

34TH ST

RUBIDOUX BLVD

20TH ST

AVALON ST

HALL AVE

WALLACE ST

24TH ST

AGUA MANZA RD

HALL AVE

WILSON ST

PROJECT No.8
12" (600± LF)

PROJECT No.8
10" (1,300± LF)

10"
(100± LF)

PROJECT No.7
21" (800± LF)

PROJECT No.6
18" (3,300± LF)

PROJECT No.5
15" (1,300± LF)

PROJECT No.5
15" (1,450± LF)

PROJECT No.4
12" (240± LF)

PROJECT No.3
12" (2,900± LF)

0.07	0.18
0.22	0.49

0.55	2.01
1.35	4.28

0.45	1.45
1.14	3.21

0.35	1.29
0.90	2.89

0.37	1.34
0.95	2.98

0.08	0.11
0.25	0.33

0.09	0.72
0.28	1.72

0.25	0.57
0.67	1.39

0.25	0.55
0.66	1.36

0.14	0.45
0.41	1.12

MH H7104

MH G7118

LEGEND

EXISTING RCSD BOUNDARY

EXISTING MANHOLE

LEGEND

EXISTING GRAVITY MAIN DIAMETER	PIPE COLOR
8"	
10"	
12"	
15"	
16"	
18"	
21"	
24"	
27"	
30"	

LEGEND

EXISTING WASTEWATER FLOW (MGD)	ULTIMATE WASTEWATER FLOW (MGD)
AVERAGE DAY	AVERAGE DAY
PEAK	PEAK

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

KRIEGER & STEWART Engineering Consultants

3602 University Avenue • Riverside, CA 92501
www.kriegerandstewart.com • 951 • 684 • 6900

RUBIDOUX COMMUNITY SERVICES DISTRICT

WASTEWATER FACILITIES MASTER PLAN

PROPOSED WASTEWATER SYSTEMS FACILITIES

FIGURE B-1

SCALE: 1"=500' DATE: 07/31/15 DRAWN BY: SPK CHECKED BY: MEM W.O.: 587-44

DWG. NO.: SB-14 Figure#1&2 FILE NO.: 587-44 UPDATE BY: MRN PROJ. ENG.: MEM PLOT DATE: 08/06/15 PLOT TIME: 10:41AM PLOT SCALE: 1=1

PACIFIC AVE
RUSTIC LN
NISSION BLVD
42ND ST
46TH ST
TILTON AVE
AVALON ST
36TH ST
PONTIAC AVE
34TH ST
FORT DR

PROJECT No.1
12" (1,300± LF)

PROJECT No.1
12" (1,200± LF)

PROJECT No.1
12" (4,400± LF)

PROJECT No.2
12"
(300± LF)

PROJECT No.10
27" (2,300± LF)

PROJECT No.10
24" (700± LF)

PROJECT No.10
24" (500± LF)

PROJECT No.8
10" (1,300± LF)

10"
(100± LF)

PROJ
21"

0.25	0.28
0.67	0.75

0.12	0.20
0.36	0.54

JUAN DIAZ
LIFT STATION

0.15	0.16
0.42	0.46

REGIONAL
LIFT STATION

0.36	0.86
0.92	2.01

0.03	0.04
0.10	0.13

1.47	2.88
3.25	5.89

1.80	3.69
3.89	7.36

1.67	3.46
3.63	6.95

0.13	0.19
0.37	0.53

0.02	0.04
0.06	0.13

0.19	0.23
0.51	0.63

1.49	3.23
3.27	6.53

1.40	3.12
3.10	6.33

0.33	0.38
0.85	0.98

0.32	0.49
0.84	1.22

0.75	2.23
1.79	4.70

0.55	2.01
1.35	4.28

LEGEND

EXISTING RCSD BOUNDARY

EXISTING MANHOLE

LEGEND

EXISTING GRAVITY MAIN DIAMETER	PIPE COLOR
8"	
10"	
12"	
15"	
16"	
18"	
21"	
24"	
27"	
30"	

LEGEND

EXISTING WASTEWATER FLOW (MGD)		ULTIMATE WASTEWATER FLOW (MGD)	
AVERAGE DAY		AVERAGE DAY	
PEAK		PEAK	

VERIFY SCALES
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RUBIDOUX COMMUNITY SERVICES DISTRICT

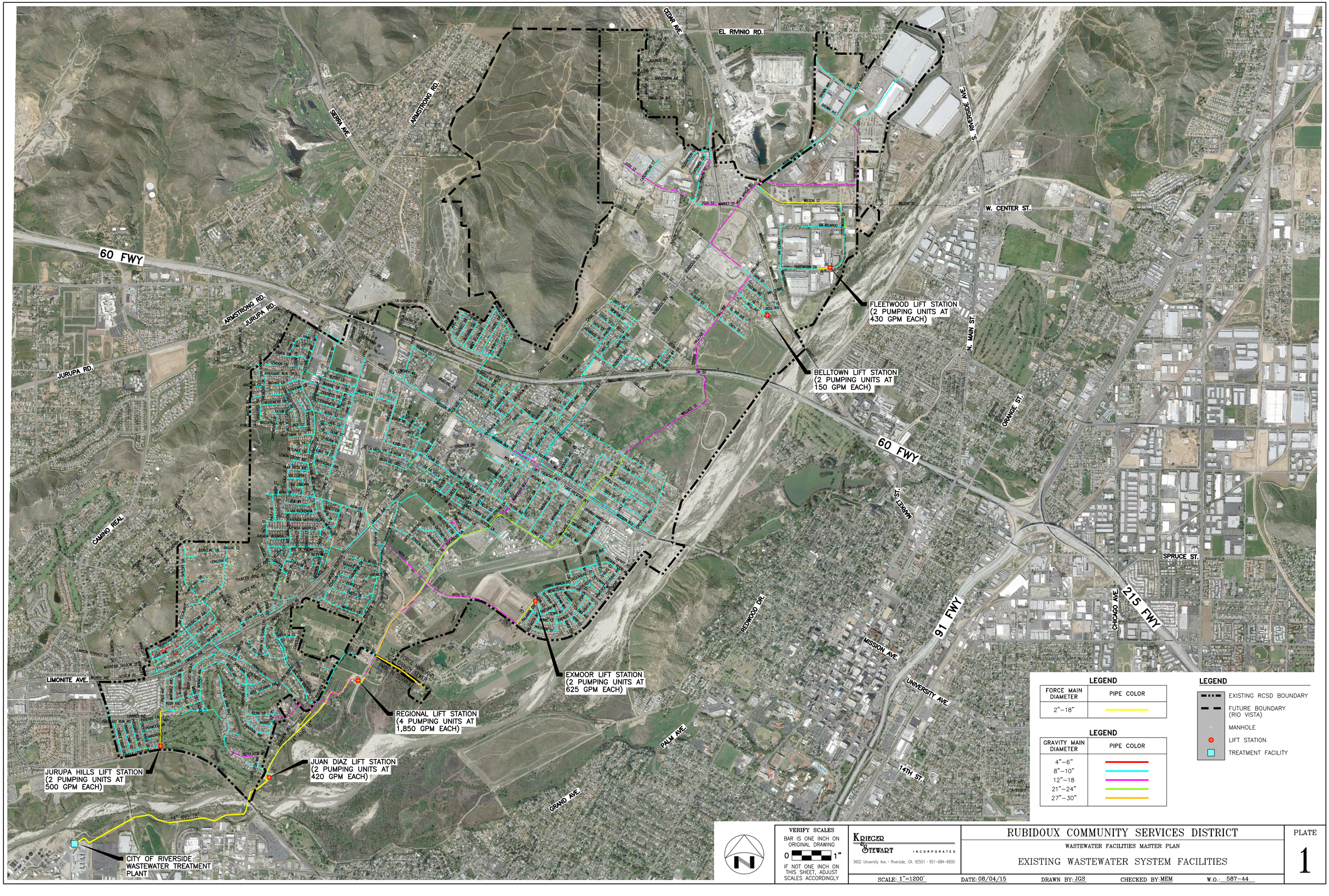
WASTEWATER FACILITIES MASTER PLAN

PROPOSED WASTEWATER SYSTEMS FACILITIES

FIGURE B-2

SCALE: 1"=500' DATE: 08/04/15 DRAWN BY: SPK CHECKED BY: MEM W.O.: 587-44

Plates



LEGEND

FORCE MAIN DIAMETER	PIPE COLOR
2"–18"	

LEGEND

GRAVITY MAIN DIAMETER	PIPE COLOR
4"–6"	
8"–10"	
12"–18"	
21"–24"	
27"–30"	

LEGEND

- EXISTING RCSD BOUNDARY
- FUTURE BOUNDARY (RIO VISTA)
- MANHOLE
- LIFT STATION
- TREATMENT FACILITY

VERIFY SCALES
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RUBIDOUX COMMUNITY SERVICES DISTRICT

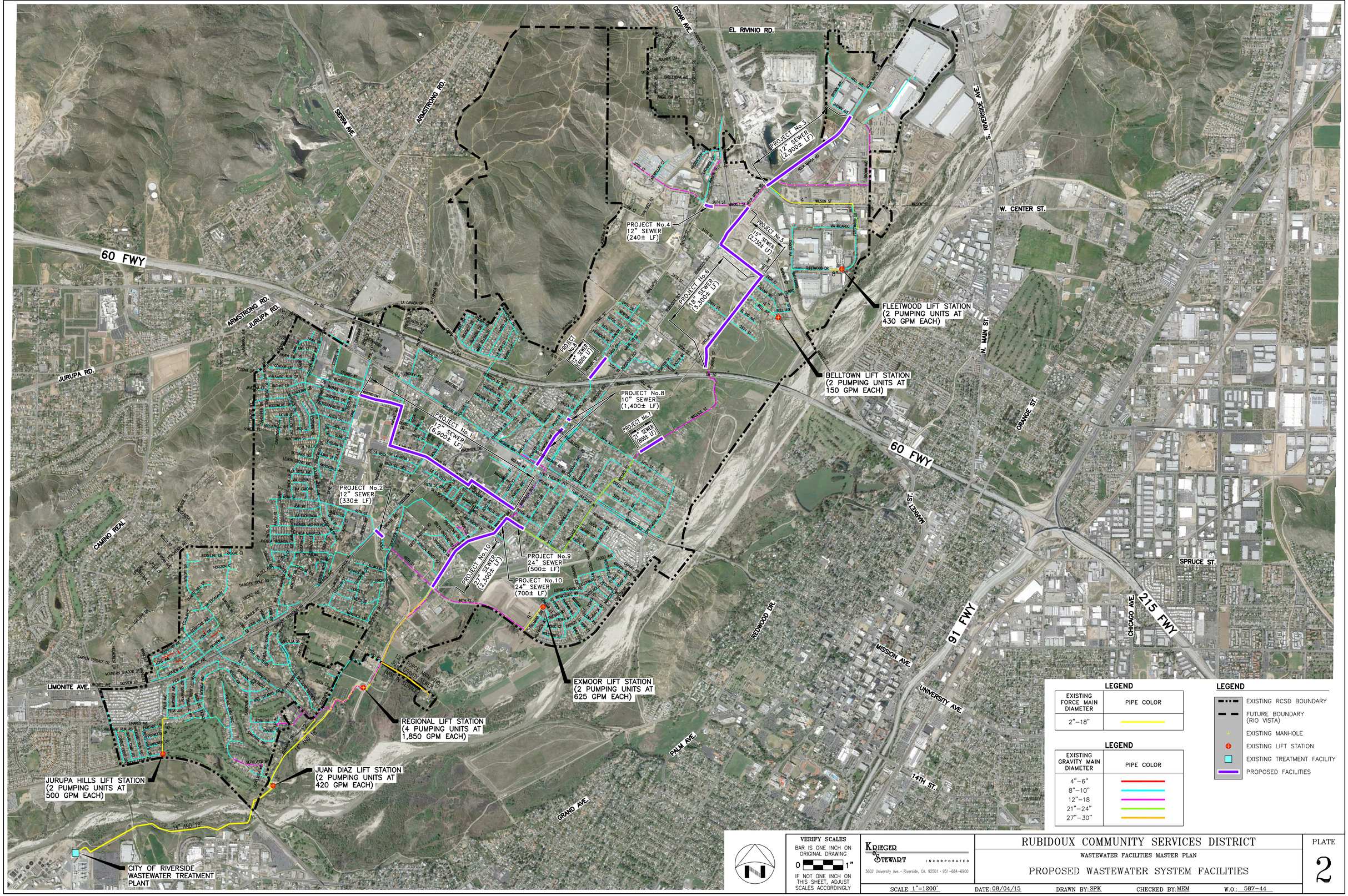
WASTEWATER FACILITIES MASTER PLAN

EXISTING WASTEWATER SYSTEM FACILITIES

SCALE: 1"=1200' DATE: 08/04/15 DRAWN BY: JGS CHECKED BY: MEM W.O.: 587-44

PLATE 1

DWG. NO.: 587-44 Plate1 FILE NO.: 587-44 UPDATE BY: SPK PROJ. ENG.: MEM PLOT DATE: 08/04/15 PLOT TIME: 8:54AM PLOT SCALE: 1=1



LEGEND	
EXISTING FORCE MAIN DIAMETER	PIPE COLOR
2"–18"	

LEGEND	
EXISTING GRAVITY MAIN DIAMETER	PIPE COLOR
4"–6"	
8"–10"	
12"–18	
21"–24"	
27"–30"	

LEGEND

- EXISTING RCSD BOUNDARY
- FUTURE BOUNDARY (RIO VISTA)
- EXISTING MANHOLE
- EXISTING LIFT STATION
- EXISTING TREATMENT FACILITY
- PROPOSED FACILITIES

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RUBIDOUX COMMUNITY SERVICES DISTRICT

WASTEWATER FACILITIES MASTER PLAN

PROPOSED WASTEWATER SYSTEM FACILITIES

PLATE 2

SCALE: 1"=1200' | DATE: 08/04/15 | DRAWN BY: SPK | CHECKED BY: MEM | W.O.: 587-44

DWG. NO.: 587-44 Proj FILE NO.: 587-44 UPDATE BY: SPK PROJ. ENG.: MEM PLOT DATE: 08/04/15 PLOT TIME: 9:15AM PLOT SCALE: 1=1

APPENDIX G

RUBIDOUX COMMUNITY SERVICES DISTRICT
WATER AND SANITARY SEWER
DESIGN AND CONSTRUCTION MANUAL
(REVISED JANUARY 2005)

RUBIDOUX COMMUNITY SERVICES DISTRICT

WATER
AND
SANITARY SEWER

DESIGN & CONSTRUCTION MANUAL

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RUBIDOUX COMMUNITY SERVICES DISTRICT
WATER AND SANITARY SEWER SYSTEM
DESIGN AND CONSTRUCTION MANUAL

JANUARY 2005

Mailing Address:
P.O. Box 3098
Rubidoux, CA 92519-3098

Street Address:
3590 Rubidoux Blvd.
Rubidoux, CA 92509

WATER AND SANITARY SEWER SYSTEM DESIGN AND CONSTRUCTION MANUAL

This manual has been prepared under the direction of the Assistant General Manager/District Engineer of the Rubidoux Community Services District and originally approved on June 5, 1997 for use in accordance with the Code, Rules, Regulations and Policies of the Rubidoux Community Services District.

APPROVED BY:

Steven W. Appel

STEVEN W. APPEL, P.E.
Assistant General Manager/
District Engineer

REGISTERED PROFESSIONAL ENGINEER
STEVEN W. APPEL
No. C48109
Exp. 6/30/06
CIVIL
STATE OF CALIFORNIA

RUBIDOUX COMMUNITY SERVICES DISTRICT

TELEPHONES:
Area Code: 951
District
684-7580
Fax
369-4061
Water Department
684-7321
Fire Department
683-4561
Fire Protection
Water Service
Water Quality Control
Refuse Collection
Street Lights
Weed Abatement

FOREWORD

To: All Parties involved with the Planning, Design and/or Construction of Water and Sewer Facilities within the boundaries of the Rubidoux Community Services District.

From: Steven W. Appel, P.E.
Assistant General Manager/District Engineer

Subject: Rubidoux Community Services District's water and sanitary sewer system design and construction manual.

The purpose of this manual is twofold. The first purpose is to ensure that water and sewer facilities constructed for the Rubidoux Community Services District are complete, correctly operating, and in compliance with government codes and good water and wastewater industry practice. The protection of public health and safety is of utmost importance. The second purpose of this manual is to provide interested parties with the District's procedures, policies, and requirements in order to aid in the cost effective planning, design and construction of water and wastewater facilities within the District.

Compliance with these requirements does not waive requirements of other governing bodies or agencies. Additionally, since these are "standard" procedures and requirements, they cannot apply to all conditions. The District will review all plans and may revise or modify any details, concepts, or plans submitted.

The Design and construction of water and sewer systems for the District shall conform to this design and construction manual including standard drawings incorporated herein whether the work is constructed by developers or others for the District. When the District elects to contract work, this manual shall become a part of the contract by reference.

Please call if you have any questions or comments.

Steven W. Appel

STEVEN W. APPEL, P.E.
Assistant General Manager/
District Engineer

P.O. Box 3098 • 3590 Rubidoux Blvd. • Rubidoux, CA 92519

REVISIONS LISTING

The Rubidoux Community Services District will periodically issue revisions to this manual. With each revision, the District will reissue this page showing all updates issued since the last time the entire manual was issued. It is the responsibility of the user to confirm receipt of all updates by contacting the District.

REV. NO.	DESCRIPTION	DATE	SECTION	PAGES
1	Entire Manual (Initial Distribution)	6/97	All	All
2	Entire Manual (Complete Revision)	1/05	All	All

RUBIDOUX COMMUNITY SERVICES DISTRICT
WATER AND SANITARY SEWER SYSTEM
DESIGN AND CONSTRUCTION MANUAL

TABLE OF CONTENTS

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SECTION i
RCSD RESOLUTION

RESOLUTION NO. 665

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE RUBIDOUX COMMUNITY SERVICES DISTRICT ADOPTING A WATER AND SANITARY SEWER SYSTEM DESIGN AND CONSTRUCTION MANUAL

WHEREAS, District Staff has prepared and made available to the Rubidoux Community Services District Board of Directors for inspection a proposed Rubidoux Community Services District Water and Sanitary Sewer System Design and Construction Manual; and,

WHEREAS, the purpose of adopting a Water and Sewer Design and Construction Manual is to establish procedures for design and construction of District facilities by developers, contractors, and owners of property that desire to develop property within the Rubidoux Community Services District boundary; and,

WHEREAS, the Board of Directors concur with the standardization of design standards, water and sewer materials, and installation and construction techniques contained in the Water and Sewer Manual for the efficient operation of District services; and,

NOW, THEREFORE, BE IT RESOLVED, ORDERED AND ADOPTED by the Board of Directors as follows:

1. That the Foregoing Recitals are True and Correct.

2. That Best Management Practice supports the Standardization of Design and Construction Installation of District Water and Sewer Facilities.

3. That the Rubidoux Community Services District's Water and Sanitary Sewer System Design and Construction Manual is hereby adopted by the Board of Directors.

4. Resolution No. 665 shall take effect immediately upon the adoption by the Rubidoux Community Services District Board of Directors.

INTRODUCED AND APPROVED this 5th day of June, 1997, upon the following vote:

AYES: Ron Robinson, Anita B. Smith, Armando Muniz, Gilbert J. Calzada, and Leland Thompson

NOES: None

ABSENT: None

ABSTENTIONS: None

(SEAL)

Ronald L. Robinson

Ronald L. Robinson, President
Rubidoux Community Services District

ATTEST:

David D. Lopez, Secretary-Manager

APPROVED TO FORM AND CONTENT:

John R. Harper, District General Counsel

SECTION I
INTRODUCTION

TABLE OF CONTENTS

SECTION I
INTRODUCTION

A. GENERAL

In 1952 the Rubidoux Community Services District was formed under the "Community Services District Act" to provide, among other services, water supply and wastewater disposal to the Rubidoux area of Riverside County in a safe, reliable, environmentally sensitive, and financially responsible manner.

The Rubidoux Community Services District is a public agency governed by an elected five member Board of Directors to serve four-year staggered terms. The District is directed by its General Manager and Assistant General Manager.

The Rubidoux Community Services District supplies its customers water for potable and non-potable uses, as well as providing sewer service. Potable water users are supplied from Rubidoux Community Services District's potable production wells. Non-potable users are supplied from Rubidoux Community Services District's non-potable wells.

B. POLICY

Rubidoux Community Services District'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 facilities and the Developer designs and constructs all secondary facilities.

Primary facilities are those facilities required to produce and deliver water to each pressure zone from water sources, whether domestic or imported. Storage facilities, pumping stations, treatment facilities, water production wells, and major supply pipelines are considered to be primary facilities.

Secondary facilities are designated as those facilities necessary to distribute the required waters 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.

At the discretion of the District's General Manager, deviations from these requirements may be allowed. All requests for variances to these requirements must be in writing, stating the reasons for the request.

In the event of any discrepancy between portions of this document, or any referenced document, the District reserves the right to hold the Developer/Engineer/Contractor to the more stringent requirements.

C. REQUIREMENTS

1. The Developer shall design, construct, and dedicate to the Rubidoux Community Services District the secondary water facilities in accordance with the requirements of the Rubidoux Community Services District.

2. The Developer shall provide all financial arrangements necessary to plan, design, and construct the project.

3. The Developer shall obtain and dedicate water and/or sewer utility rights-of-way to the Rubidoux Community Services District.

4. The Developer shall pay current applicable fees in addition to completing those requirements listed above. Fees may include: Plan Checking fees, Connection Charges, Inspection Fees, and Meter Charges. District Staff should be consulted for current and applicable fees.

5. The Rubidoux Community Services District will review all drawings, and may revise, modify, or require redesign of any concepts, drawings, or details submitted. All concepts and drawings must be approved by the District Engineer, General Manager, and/or the Assistant General Manager.

6. The Developer shall provide the District with a corrosion site survey for all CML/CMC steel and ductile iron pipelines. If required, the Developer shall have cathodic protection design performed by a qualified engineer.

7. Procedures for development of water and/or sewer systems are similar for Tract Map developments, Parcel Map developments, and single lot main extension developments. Most procedures and design requirements herein have been prepared for Tract Map developments, but certain portions apply to all water and/or sewer system development work within the Rubidoux Community Services District's service area.

8. When applicable, the Developer shall also submit for review all improvement drawings within existing or future public rights-of-way for approval by the County of Riverside Transportation Department. All plan check, inspection and permit fees required by the County shall be paid by the developer, and all other requirements of the County shall be fulfilled prior to any construction within the public rights-of-way.

D. SAVINGS

If any provision of this manual are held to be contrary to law by a court of competent jurisdiction, or by the final tribunals of appropriate regulatory agencies, such provisions will not be deemed valid and subsisting except to the extent permitted by law, but all other provisions will continue in full force and effect.

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SECTION II
PROCEDURES
CONSTRUCTION DRAWING APPROVAL

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SECTION II
PROCEDURES
CONSTRUCTION DRAWING APPROVAL

A. CONSTRUCTION DRAWING APPROVAL

District Staff will review all water and/or sewer construction drawings and 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 the Water and/or Sewer Construction Drawings. If more than one year has elapsed, the project must go through the plan check procedure again before starting construction. The steps required to obtain Water and/or Sewer Construction Drawing approval is as follows:

1. Submit the required Plan Check Deposit.
2. Submit Tract Water and/or Sewer System and Hydraulic Network Analysis (Water).
3. Submit first plan check.
4. Submit subsequent plan checks.
5. Submit original Construction Drawings for approval.
6. Provide the District with the drawings.

A flow chart for Construction Drawing Approval is shown in Appendix "A". A plan check status sheet to be used by the District is shown in Appendix "B". Each required step is discussed in detail below:

1. Submit the required Plan Check Deposit - The Plan Check Deposit will be determined by the District and shall be submitted prior to any Staff effort commencing on the project.

2. Submit Tract Water and/or Sewer System and Hydraulic Network Analysis (Water) - Approximately one week after receiving the plan check deposit, District Staff will provide hydraulic grade elevations at connections to the District's water system. For the sewer facilities, the District Staff will provide contributing sewer flows at connections to the District's system. If the District has no data on existing contributing sewer flows, then the District may direct the developer to measure the sewer flows at selected manholes. In addition, District Staff may request analysis of project impact on existing downstream facilities. District Staff may, in addition, provide design recommendations for the water and/or sewer systems.

   For Commercial and Industrial developments, pretreatment may be required in accordance with District Ordinance No. 105.

   Based on the hydraulic grade elevations, contributing sewer flows, and design recommendations provided by the District, Developer shall submit to the District the following:

   a. One copy of the County of Riverside Conditions of Approval.

b. Two copies of a master plan of the Tract with the proposed water and/or sewer facilities super-imposed on same. For the water facilities, Said plan shall show the node network, pipeline diameters, length, elevation at nodes, valve locations, and fire hydrant locations. For the sewer facilities, said plan shall show sewer manholes, diameter and slopes of sewers between manholes, and average daily flow for each reach of sewer between manholes.

c. Two copies of the hydraulic network analysis of the proposed water system and two copies of the sewer system analysis of the proposed sewer facilities.

d. Fire flow letter from the Riverside County Fire Department.

Details regarding the hydraulic network analysis are included in Section IV, WATER DESIGN CRITERIA.

District Staff will review the Tract Water and/or Sewer system, the hydraulic network analysis, and the sewer system analysis and return one set with comments to the Developer. Minor revisions may be incorporated in the first plan check submittal. If major revisions are required, the Tract Water and/or Sewer system and hydraulic network analysis shall be resubmitted until approved by District staff.

3. Submit First Plan Check - After review and approval of the Tract Water and/or Sewer System and hydraulic network analysis, Developer shall submit the following, as applicable:

a. Three copies of the water and/or sewer construction drawings.

b. One copy of the street improvement drawings.

c. One copy of the grading plan.

d. One copy of the approved Tract Water and/or Sewer System, hydraulic network analysis and sewer system analysis.

e. Two copies of easement documents.

f. One copy of the Tract/Parcel Map.

g. One copy of the Corrosion Site Survey (for Steel and Ductile Iron Pipe only)

h. Copy of receipt showing submittal to the County for plan check of facilities within the public rights-of-way.

Submittals must be complete or they will be rejected. Each submittal shall include a transmittal listing all items submitted and referencing the District project number.

Details regarding preparation of construction drawings and easement documents are included in Section III, CONSTRUCTION DRAWING PREPARATION. Details regarding waterline design criteria are included in Section IV, WATER DESIGN CRITERIA. Details regarding sewerline design criteria are included in Section V, SEWER DESIGN CRITERIA.

Water and sewer drawings should be combined and shown on the same drawing whenever possible.

The District will provide comments on one set of the water and/or sewer construction drawings and return same to the Engineer for revision. 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 the plans, and completeness of the drawings.

4. Submit Subsequent Plan Checks - For each subsequent plan check, the Developer shall submit the following:

   a. The previous District plan check set and a copy of the previous District transmittal.

   b. Three copies of the revised Water and/or Sewer construction drawings.

   c. Two copies of easement documents.

   d. Any additional material requested.

   Submittals must be complete or they will be rejected. If drawings and easement documents are not yet satisfactory, the District will make 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 complete. If Engineer does not return the previous District plan sets, then the plan check procedure will start from the beginning including payment of the plan check deposit.

   Each cycle of the subsequent plan check would normally be completed in approximately three weeks.

5. Submit Original Construction Drawings for Approval - After all plan checks are completed and the water and/or sewer construction drawings are acceptable to the District, the original drawings shall be submitted to the District for signature. Prior to the District approval of the water and/or sewer construction drawings, Developer shall pay all remaining plan checking fees, capacity fees and submit:

   a. The previous District plan check set and one copy of the revised water and/or sewer construction drawings.

   b. A copy of the Tentative Tract/Parcel Map showing dedications of streets for road purposes and public utilities purposes,

      or

   c. Executed Grant of Easement, minimum width of 30 feet.

6. Provide the District with the Drawings - When the drawings have been fully approved by all agencies, the Developer shall provide the District with a clean set of photo mylars and three sets of bluelines for the District's use. In addition, the Developer's Engineer preparing the improvement plans shall submit a digital graphics file containing water and/or sewer facilities as necessary to facilitate transferring of the information into the District's mapping system. Details of this requirement are outlined in Section III, CONSTRUCTION DRAWING PREPARATION.

SECTION III
CONSTRUCTION DRAWING PREPARATION

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SECTION III
PROCEDURES
CONSTRUCTION DRAWING PREPARATION

A. GENERAL

A licensed Engineer in the State of California experienced in the design of similar systems shall prepare the water and/or sewer 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 a Rubidoux Community Services District approval block.

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

Water and sewer designs shall not be shown on the same drawings.

B. COVER SHEET

The cover sheet shall show as a minimum:

1. General notes (Appendix "C")
2. Legend (RCSD Standard Drawing G80)
3. Estimate of Quantities (RCSD Standard Drawing G60 and/or G70)
4. District Signature Block
5. Water and/or Sewer system Certification
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 (1"=400' or 1"=100')
   b. North Arrow
   c. Tract layout with street names and lot numbers
   d. Proposed waterlines and/or sewerlines identified by size and type
   e. Symbols for all appurtenances
      i) Fire Hydrants
      ii) Air Valves
      iii) Blowoffs
      iv) Tees and Crosses
      v) Valves
      vi) Water Services and/or sewer laterals
      vii) Detector Checks
      viii) Manholes
      ix) Cleanouts
   f. Sheet numbers corresponding to Plan and Profile sheets

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

C. 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:

1. Plan Portion

   a. Title Block - The Title Block shall show the Tract Number, and scale of drawings. District approval blocks shall be incorporated into the title block.

   b. North Arrow - The North Arrow shall point up or to the left if possible to conform with item k.

   c. Right-of-way - Existing and proposed rights-of-way shall be identified with dimensions for same shown.

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

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

   f. Street Names - All street names shall be shown.

   g. Lot Lines - All lot lines and parcel lines shall be shown. All lots shall be numbered or labeled. All adjacent Tracts shall be identified.

   h. Utilities - All existing and proposed utilities shall be shown. Utilities to be shown shall include, but not limited to, water (existing waterlines shall be identified by District Plan No.), sewer (existing sewerlines shall be identified by District Plan No.), 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.

   i. 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.

   j. Match Lines - Match lines for each end of the street shall be shown as follows:

      Sta 15+00 Match Line
      See Sheet 5

   k. Stationing - Stationing along the centerline of the improvement shall be shown. Unless otherwise specified, stationing shall increase from left to right. Stationing shall be identified with tick marks at 100' intervals.

   l. Proposed Pipeline - The 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

℄ _____" C-900 (Class ____) Pipeline

m. 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, valves, manholes, and cleanouts shall be identified by station, size and Rubidoux Community Services District Standard Number as Follows:

Sta 12+25.00 ℄ 2" Air Valve per RCSD Std. Dwg. No. _____

All water meter services and sewer laterals shall be indicated on the drawings. The stationing of services and sewer laterals 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 services on the record drawing.

All connections to existing water and/or sewer systems shall be identified by station and size. A station equation and District plan number shall be used to reference existing water and/or sewer lines. Details for connections shall be used where required.

2. Profile Portion

Only profiles for 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).

a. Stationing - Stations shall be shown along the bottom of the profile at 100' intervals. Profile stationing shall line up with plan stationing.

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

c. 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"

d. Match Lines - Match lines for each end of the sheet shall be shown as follows:

Sta 15+00 Match Line
See Sheet 5

e. Flow Lines (FL) - Flow lines of the proposed pipeline shall be identified as follows:

FL ____" CML&C (____Gauge Minimum) Pipeline

or

FL ____" C-900 (Class ____) Pipeline

f. Stationing and Flow Line Elevation - Pipeline stationing and flow line elevations shall be shown for each grade break (GB) as follows:

Sta 14+00.00 GB
1098.35FL

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
1090.00FL

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

Sta 12+25.00 4" Blowoff
1090.00FL

Sewer stationing and flow line elevations shall be shown into and out of each sewer manhole as follows:

Sta 12+25.00
1090.00FL

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

g. 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 (or CML&C)

h. Maximum trench width and Load Factor – For gravity sewers, the maximum trench width and load factor shall be shown.

i. Welded Joint Limits - Length of welded joints for welded steel pipe shall be identified as "Fully Welded Joints" with station limits shown.

j. Minimum cover - 42" minimum cover (48" minimum cover in unpaved areas) shall be shown between top of pipe and existing or proposed ground surface.

k. Maximum Cover - The maximum cover shall be 8' between the top of pipe and existing or proposed ground surface.

A checklist for the preparation of water Construction Drawings is shown in Appendix "D".

D. GRANT OF EASEMENTS

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

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 prepared by a California Registered Civil Engineer or Land Surveyor and signed and stamped by said engineer or surveyor.

A copy of the Grant of Easement form is shown in Appendix "E".

E. APPROVAL AND CERTIFICATION BLOCKS

1. **Water and Sewer Certification** (Cover Sheet only). On plans for system improvements proposed to become part of the District shall have the following:

WATER CERTIFICATION BLOCK
I certify that the design of the Water System in Tract No. _____ is in accordance with the water system master plans of the Rubidoux Community Services District, and that the water service, storage and distribution system will be adequate to supply water service to said tract. This certification does not constitute a guarantee that it will supply water to said tract at any specific quantities, flows, or pressures for fire protection or any other purpose.
_____ Assistant General Manager/ District Engineer, RCE 48109
_____ Date

SEWER CERTIFICATION BLOCK
I certify that the design of the Sewer System in Tract No. _____ is in accordance with the sewer system master plans of the Rubidoux Community Services District, and that the waste disposal system is adequate at this time to treat the anticipated wastes from the proposed tract.
_____ Assistant General Manager/ District Engineer, RCE 48109
_____ Date

2. **Approval Signature Block** (same location on all sheets)

Approved by the Rubidoux Community Services District for Construction:	
_____ Date	_____ Assistant General Manager/ District Engineer, RCE 48109
Void after one year from this date	

F. DIGITAL GRAPHIC FILES

The District requires the developer's engineer preparing improvement plans to submit one consolidated graphics file indicating the entire improvement area. The graphics file must contain water and/or sewer pipelines, improvement area boundary, street centerline, right-of-way, and lot/parcel line data to facilitate transferring the information into the District's mapping system. The digital drawing shall be at a 1:1 scale, and will be required prior to the District signing the plans. If the Developer's engineer does not have the capability to provide such files, the District will input the data into the existing mapping system and recover the costs from the Developer.

1. Format of Data for Conversion - The preferred format for digital submissions of the graphical data is AutoCAD Release 2000 or newer. The District will also accept the generic DXF format or Shape (.SHP) file.

2. Digital Media Formats – All digital information shall be submitted to the District on one of the following:

   - CD ROM;
   - 3 ½" Windows formatted diskette (1.44 Mb); or
   - email (steve@rcsd.org)

   All media will be submitted with labels indicating the following information:

DATE:	*(date submitted)*
MAP NAME:	*(TR, PM, PP, ETC.)*
RCSD WO NO.	*(leave blank)*
COMPANY:	*(engineering firm)*
MEDIA CREATOR:	*(person creating the diskette)*
FILE NAME:	*(Filename with extension)*

3. Requirements for Hardcopy Submission - In conjunction with the digital submission of the proposed improvements, a printed overall layout of the information will be required. The scale of this plan shall be either 1"=100', 1"=200', or 1"=400' whichever best fits a D-size (24" x 36") drawing sheet.

4. Data Integrity - Common points must be coincident to within 0.001'. A tie to a known location point is required, such as: section corners, quarter corners, street intersections, etc. The tie coordinates will be based on the California State Plane Coordinate system (NAD 83) in at least two locations, preferably on opposite sides of the area being mapped.

5. Symbol Representation - All water and sewer symbols will conform to those shown in RCSD Standard Drawing G80. To aid the engineers with standardization of these symbols, the District will make the symbols available electronically in AutoCAD format.

6. Data Layering Requirements - The data will be layered into the following features:

   a. Boundary Data
   b. Road Centerline Data
   c. Lot/Parcel Data
   d. Rights-of-Way Data
   e. Easement Data
   f. Tie Data
   g. Waterline Data (if applicable)
   h. Sewer Data (if applicable)
   i. Miscellaneous

Essentially, data specific to the improvements being submitted which is directly applicable to the landbase maintenance is to be separated and split into corresponding layers. All other data is transmitted on a single layer.

The following table indicates which features must be transmitted digitally and which are desirable but not required:

a.	Boundary Data:	Boundary Line	Required
		Map Name	Required
		Bearings/Distances/Curve Data	Optional
b.	Road Centerline Data:	Centerline	Required
		Street Name	Required
		Bearings/Distances/Curve Data	Optional
c.	Lot/Parcel Data:	Assessor Parcel Numbers	Required
		Lot Lines	Required
		Lot Numbers	Required
		Lot Bearings	Optional
		Lot Distances	Optional
d.	Right-of-Way Data:	Right-of-way Lines	Required
		Descriptive Data	Optional
		Bearings/Distances/Curve Data	Optional
e.	Easement Data:	Easement Lines	Required
		Descriptive Data	Optional
		Bearings/Distances/Curve Data	Optional
f.	Tie Data:	Graphic Representation	Required
		Ca State Plane Coord Values	Required
		Bearings/Distances/Curve Data	Optional
g.	Waterline Data:	Water Lines	Required
		Valves, and other appurtenances	Required
		Descriptive Data	Required
h.	Sewer Data:	Sewer Lines	Required
		Manholes, and other appurtenances	Required
		Descriptive Data	Required
i.	Miscellaneous:	All other Data	Optional

SECTION IV
WATER DESIGN CRITERIA

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SECTION IV
WATER DESIGN CRITERIA

Water system improvements, including reservoirs and pump stations, proposed for inclusion into the Rubidoux Community Services District service area shall be designed in accordance with all appropriate AWWA standards and the following criteria:

A. HYDRAULIC NETWORK ANALYSIS CRITERIA

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 residential areas is 8". The minimum pipeline diameter for commercial/industrial areas is 12". The District accepts only the following diameters: 8", 12", 16", 20", and 24". Larger sizes will be considered on a case by case basis.

   The District reserves the right to specify sizing of any pipeline. In some instances, the District may require a larger size pipeline than normally required for system distribution requirement purposes. Rubidoux's Board of Directors may authorize participation and payment of increased cost of such pipeline in accordance with District criteria.

2. Pipeline Friction Factors - Pipeline friction factors shall be as follows:

Pipe Material	Hazen-Williams Coefficient
Polyvinyl Chloride	C=130
Cement Mortar Lined Steel	C=120
Ductile Iron	C=120

3. Water System Unit Demands - Average Day unit demands shall be as follows:

Land Use	Average Day Unit Demand Factors
Residential	900 gpd/DU (1 acft/yr/DU)

   All other land uses shall be analyzed separately. The Developer will be required to submit analysis of the anticipated flow demands, as specified in Section 6 herein. The District shall accept or modify the submitted analysis as necessary.

4. Peaking Factors - The peaking factors to be used are as follows:

   a. Maximum Day Demand: The Maximum Day Demand shall equal 2.0 times the Average Day Demand.

   b. Peak Demand: The Peak Demand shall equal 3.0 times the Average Day Demand.

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 for the type of development under construction.

6. System Analysis - The proposed water system shall be analyzed for the following two conditions:

   a. Peak Demand

   b. Maximum Day Demand plus fire flow

   For the Peak Demand flow condition, the pressure at each node shall be designed for 40 psi minimum. The maximum pressure at each node shall be 120 psi. The maximum velocity in the pipe shall be 5 feet per second.

   For the Maximum Day Demand plus fire flow, the pressure at each node shall be a minimum of 20 psi and a maximum of 120 psi. The maximum velocity in the pipeline shall be 10 feet per second. Fire flow shall be taken from the hydrant furthest from the connection(s) to the District's distribution system, at the highest elevation, and as directed by the District.

B. WATER CONSTRUCTION DRAWING CRITERIA

1. Pipeline Location - Unless otherwise approved by the District, all waterlines shall be located on the South or West side of the street, 7 feet off of the curb face or berm per Riverside County Road Department standards. Location shall not interfere with other existing utilities. See RCSD Standard Drawing G10.

   Pipe joint deflection shall not be more than the manufacturer's recommended offset in a curved alignment. The joint deflection angle shall be indicated on all horizontal and vertical curves.

   Waterline installation near sewer lines shall be in accordance with the State Department of Health Services, Criteria for the Separation of Watermains and Sanitary Sewers and RCSD Standard Drawing W1010. In general, waterlines should cross perpendicular to sewer lines a minimum of 1 foot above the sewer. If the waterline crosses beneath the sewer, then it should have a minimum separation of one foot, have no joints within 10 feet of each side of the sewer and shall be constructed of materials per aforementioned Standard Drawing. Waterlines parallel to sewer lines shall be located a minimum of ten feet from the sewer (outside diameter to outside diameter). When crossing other utilities, provide a minimum of one foot vertical clearance.

   The District will require pipeline looping whenever possible. Dead-end mains are undesirable.

2. Minimum Pipe Cover - The minimum cover over the top of the pipe shall be 42" from finished paved road grade (48" if unpaved), and shall provide adequate depth so that the gate valve stems and operating nuts have a 12" clearance to finished road grade. District Staff may increase or decrease this required dimension as necessary to cover non-standard conditions. When the required cover cannot be provided, concrete encasement or protective slab construction over the pipeline may be required. Consult with District staff.

   Pipelines shall be installed after roads are constructed to final sub-grade, and the developer certifies this in writing on District form.

3. Pipe Materials - Unless otherwise authorized by the District, all waterlines 12" and smaller shall be Polyvinyl Chloride (PVC) Pipe, Cement mortar lined and cement mortar coated welded steel pipe, or ductile iron pipe in accordance with AWWA and District standards. All waterlines 16" and larger shall be cement mortar lined and cement mortar coated welded steel pipe or ductile iron pipe in accordance with AWWA and District standards. Refer to the Technical Specifications for more detailed information. Minimum allowable pipe shall be as follows:

   PVC = Class 150
   CML&C Steel Pipe, All sizes = 10 ga
   Ductile Iron Pipe = Class 150

   Pipe shall be provided only from District approved pipe manufacturers. See Section VII, LIST OF APPROVED MANUFACTURED MATERIALS.

4. Pipe Slope - The minimum pipe slope of waterlines shall be 0.5% unless otherwise authorized by the District.

5. Thrust Restraint - The Engineer shall analyze all likely thrust loads and conditions in water lines including those at elbows, tees, crosses, ends, and angle points greater than 2 degrees. Thrust shall be restrained by the use of thrust blocks per RCSD Standard G40 for PVC pipe, by restrained joints for ductile iron pipe, and welded joints for welded steel pipe per RCSD Standard Drawing W1240. For special circumstances, particularly where joining to existing pipe when the joint type is unknown, thrust blocks, or thrust collars may be substituted for joint welding. Always construct thrust blocks against undisturbed earth. Calculate bearing areas using allowable bearing load of 1,500 psf or other engineering value.

6. Valves - Valves 12" and smaller shall be flanged resilient wedge gate valves per District standards. Valves 16" and larger shall be flanged butterfly valves per District standards. Valves shall be the same size as the nominal pipeline diameter. Gaskets are to be high quality natural or synthetic rubber, non-asbestos, ring type, sized for flanges to be provided.

   Three valves shall be installed on each tee and four valves shall be installed on each cross. Valves shall be spaced at 1,000 foot maximum intervals or as directed by the District staff.

7. Fire Hydrants - Fire hydrants shall be in accordance with District standards, constructed at right angles to the waterline. 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 330 foot intervals.

8. Air Valves - Air valves shall be combination air vacuum and air release valves in accordance the AWWA and District standards, constructed at right angles to the waterline. Air valves shall be located at all high points in the pipeline and downstream of valves. Minimum size of air valves shall be 1" and shall be sized as follows:

Pipeline Diameter	Air Valve Size
8"	1"
12" and 16"	2"
20" and Larger	Consult with District staff

9. Blowoffs - Fire hydrants shall be used in place of blowoffs. Blowoffs shall be located at all low points in the pipeline, at all dead-ends or terminal points, and upstream of valves. Minimum size of blowoffs shall be 2". Consult with District Staff regarding required size.

10. Services Installations - Service Installations shall be in accordance with District standards, constructed at right angles to the water main. No water service laterals shall be installed between appurtenances (i.e. fire hydrants, blowoffs, air valves, etc.) and pipeline dead-ends.

    All requests for domestic and irrigation service installations larger than 1" must be specifically approved in writing by the District.

    All non-residential water services shall have a District approved backflow prevention device installed adjacent to the meter unless otherwise approved by the District. Additionally, as specified by the District Engineer, certain residential services shall also be installed with District approved backflow prevention devices.

11. Minimum Design Pressure - The minimum design pressure shall be the static pressure plus 50%.

12. 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.

13. Easement Criteria - Pipelines that cannot be located within the 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 in writing by the District. Easements for other utilities may overlap the District easement only if proper separations are maintained. Details for Grant of Easement documents are in Section III, CONSTRUCTION DRAWING PREPARATION.

19. Protection of Appurtenances – Depending on the location, above-ground water appurtenances may require guard posts or concrete retaining walls. When required by the District Engineer, or when shown on the approved plans, guard posts or retaining walls shall be installed in accordance with the District's Standard Drawing G130 and/or W1160.

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SECTION V
SEWER DESIGN CRITERIA

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SECTION V
SEWER DESIGN CRITERIA

The following pertain to the design of the various components within the sewage collection system. Exceptions and deviations from these specifications may only be made with approval, in writing, by the District Engineer, General Manager, or the Assistant General Manager for the Rubidoux Community Services District.

A. GENERAL

1. Scope - All sewers, sewage lift stations, treatment facilities and appurtenances to be owned, maintained and/or operated by the District shall be designed according to the criteria set forth in this section. The criteria shall hold for systems served but not owned, maintained and/or operated by the District insofar as said criteria may affect the efficiency of the District's system. All additions to the District's system shall be plan checked and inspected by the District.

2. Design Competence - All District facilities shall be designed by California Registered professional engineers knowledgeable in sewer design and construction practices, and according to accepted practices in the sewerage field.

3. Sewage Lift Station and Inverted Siphons - Every effort should be made, within economic reason, to avoid sewage lift stations, inverted siphons and exposed piping. Their use will be allowed only upon written approval by the District.

4. Legal Access - Each lot to be served by sewer shall abut a public street or recorded easement containing a sewer, or provided with permanent legal access to such a sewer. The location of the street, easement or legal access shall permit gravity flow from the lot to the sewer main. Deviation from any of the criteria adopted herein may be permitted upon written request to and approval by the District.

B. SEWERS AND APPURTENANCES

1. Flows - The flow used for the design capacity for sewers and sewage lift stations shall be the "computed peak flow", which shall be determined on the basis of projected land use and average daily per Dwelling Unit flow. The average per Dwelling Unit flow shall be as follows:

DWELLING UNIT TYPE	GPD/DU
Single Family	270
Multi Family	270

Sewer flows shall be computed from projected land use and population density over the area tributary to the sewer reach under consideration. The peak flow for the above units consists of a peaking factor multiplied by the average daily flow as given in the following formula:

$$Q_{peak} = 2.3(Q_{avg})^{0.89}$$

Design flows from commercial and industrial areas shall be determined in consultation with the District.

2. Formula - Capacity of all sewers shall be determined by the use of the "Manning" formula:

$$Q = A\frac{1.486}{n}r^{2/3}s^{1/2}$$

Where: Q = flow capacity, CFS

A = cross-sectional area, ft^2
n = coefficient of roughness
r = hydraulic radius, ft
s = slope

3. Pipe Materials - Sewers shall be specified to be extra strength vitrified clay pipe (VCP) or Polyvinyl Chloride (PVC) unless authorized otherwise by the District. All materials shall conform to and be installed in accordance with District standards. Refer to the Technical Specifications for more detailed information.

4. Roughness Coefficient - The roughness coefficient used in design shall be n = 0.013 for all sewers.

5. Pipe Size - All gravity sewer pipe up to and including 10" diameter shall be sized to carry the peak flow when flowing half full (50%). All larger sewer pipe, except those designed as laterals, shall be sized to carry the peak flows when flowing three-quarters full (75%). No sewer main with an internal diameter less than 8" shall be installed without written approval of the District.

6. Design velocities - The purpose of this requirement is to prevent sewage sedimentation and subsequent generation of corrosive gases. Design velocities at design flow (Q) are presented below:

	Preferred	Minimum	Extreme Minimum
Sewer mains	3 fps	2 fps	1.5 fps
Force mains	3 fps	2 fps	1.5 fps
Inverted siphons	4 fps	3 fps	3 fps

The maximum velocity at design flow allowed in any sewer pipe is 10 fps.

7. Sewer Slopes - Minimum slopes to be used with various pipe sizes are listed below:

Diameter (Inches)	Slope (ft/ft)
8	0.0040
10	0.0029
12	0.0022
15	0.0016
18	0.0012

8. Exceptions to minimum slopes - where topography limits or prevents the use of minimum slopes as described herewith, the District may require an engineer's report. This report shall describe the alternatives and their economies. The report shall also include an evaluation of prospective maintenance and sewer gas problems. Greater minimum slopes than those specified in the above hereof may be required where the presence of hydrogen sulfide may be detrimental to and affect the life of the sewer pipe being used.

9. Slopes in Force Mains - In force mains a continuous uphill slope shall be provided from the pressure sources to the outlet. The intention is to avoid formation of air pockets.

10. Location - All sewer mains shall be located in public streets or recorded easements such that each lot within a development can be served by gravity flow, and the laterals shall be extended according to RCSD Standard Drawing S2080 or S2090. In public streets, the sewer main shall be located 6 feet from street centerline and whenever possible north or east of centerline. See RCSD Standard Drawing G10

11. Curved Sewers - Horizontal or Vertical sewers are prohibited.

12. Sewer under Structures - No main sewer shall be located beneath a structure except as approved in writing by the District.

13. Structural Integrity - Provisions shall be made in all cases to preserve the structural integrity of pipes, conduits, or structures affected.

14. Depth of Sewer - Permission from the District must be obtained if the following minimum depths cannot be met. In general, the load on the pipe must be considered and adequate precautions taken to protect it, either by means of encasement, supports or added strength. Minimum Cover of pipe for various locations:

Locations	Depth
Sewer in Public Streets and easements	7 feet
Lateral at curb or edge of pavement	5 feet
Lateral at property line	4 feet
Stream crossings	Below scour line

15. Sewer Laterals - A sewer lateral serving a single family dwelling or equivalent shall be at least 4" inside diameter from the main to the right-of-way. Laterals for all other facilities shall be at least 6" from the main to the right-of-way. Sewer lateral design shall conform to RCSD Standard Drawing S2080 and requirements of the Technical Specifications. Sewer laterals in waterways, easements, and deep cuts should have the house service brought to a minimum depth of 5 feet. Backfill for sewer laterals within the public right-of-way shall be a controlled density fill material (cement slurry).

    Sewer laterals from opposite sides of the street shall be connected to the sewer main at different stations. A tee or wye shall be used for sewer lateral connections. The alignment of the lateral shall be perpendicular to the alignment of the sewer main.

    District approval shall be obtained prior to design of chimney and deep laterals.

16. Special Sewer Design Conditions - When it is necessary to construct sewers and appurtenances in areas where a potential erosion hazard exists, individual design considerations shall be given to provide additional protection to the sewer facilities to prevent their damage. Special design considerations can be applied to stream and canyon crossings, parallel construction to stream beds, construction on steep slopes requiring special anchorage, and shallow sewer construction in roadways. Concrete encasements, cut-off walls, special backfill material (cement slurry) and special erosion control facilities may be required.

    The sewer may be designed to pass under lawns in planned residential developments, but the design concept shall be reviewed by the District prior to Plan and Profile preparation.

    Sewer laterals of the same size as the sewer shall be connected by using a manhole. The drop across the manhole shall apply in accordance with RCSD Standard Drawing S2030.

17. Clearance from other utilities - Special care shall be exercised in locating sewer lines near other utilities, and especially water lines. Sewer lines shall, whenever possible, by located 3' below water lines and where parallel installations occur, horizontal separation shall be maintained in accordance with RCSD Standard Drawing S2020.

18. Backwater Valves - Backwater valves shall be required whenever structures served by sewer laterals are subject to flooding in the event a sewer main stoppage causes the upstream manhole to overflow. Residences with slab elevations lower than street elevation shall have backwater valves (see RCSD Standard Drawing S2110)

    Backwater valves shall not be required wherever intermediate manholes can be placed to economically preclude the need for backwater valves (such spacing not to be less than 120 feet). Ordinarily, one additional manhole can be economically justified if it eliminates 4 backwater valves.

    Valves should be in accordance with the current District standard drawings and installed at the shallowest location allowing for future inspection and maintenance.

    The Design Engineer shall show all backwater valves and their locations where installations are proposed on private property by the property owner or developer. Those valves shall be indicated on both the location map (cover sheet) and the Plan and Profile sheets.

19. Protection of Appurtenances – Depending on the location, above-ground sewer appurtenances may require guard posts or concrete retaining walls. When required by the District Engineer, or when shown on the approved plans, guard posts or retaining walls shall be installed in accordance with the District's Standard Drawing G130 and/or W1160.

C. FUTURE DEVELOPMENT

1. Alignment design considerations for future development - Potential future development shall be considered when selecting alignment and depth. The District may require stub-outs for future extension and greater depths in order to meet the minimum required depths in future, adjacent developments.

2. Oversizing Required by the District - The District may find that the capacity of certain new sewers and pump stations within an area under development should be increased to accommodate existing or future additional development. In such a case, the quantity of additional flow shall be determined by the District. The flow resulting from the addition of the developer's and the District's "computed peak flow" shall be used as the basis of design.

D. MANHOLES AND CLEANOUTS

1. Manhole Location and Spacing - Manholes shall be located at all junctions, all changes in direction, all changes in slope, and all changes in pipe size. When the distance between manholes required for the foregoing reasons exceeds 350 feet, good judgment should be used in placing intermediate manholes at points of probable sewer intersections, at beginning or end of curves, or lacking other reasons, at approximately equal intervals. In general, the maximum of 350 feet should be observed. Good judgment should be used in location of manholes along water courses. Manholes should not be placed directly in the water courses. Manholes shall conform to RCSD Standard Drawing S2030.

2. Manhole Inlet and Outlet - The sewer flow line of the inlet shall be designed with an elevation 0.10 foot greater than the outlet; however, if the manhole is designed at a grade break, the

slope of the inlet sewer shall continue to the outlet before changing grade. If the manhole is designed to accommodate a change in direction of flow and the change in direction exceeds 45 degrees, the inlet shall be designed with an elevation 0.25 foot greater than the outlet.

3. Shallow Manholes - Manholes 3 feet or less in depth above the shelf shall be of special design.

4. Cleanouts - Dead-end sewers shall generally terminate in standard manholes. Cleanouts may be used within 175 feet of a manhole if there are no more than 4 connections between the cleanout and the nearest downstream manhole.

   Cleanouts shall be brought to ground surface in a long radius or two 45 degree angles with a full sewer diameter opening. Cast-iron frame and cover shall be provided. Dead-ends over 175 feet shall terminate in standards manholes unless future extension of said dead-end will include a manhole within 350 feet, in which case a temporary cleanout is permitted. Cleanouts shall conform to RCSD Standard Drawing S2070 and requirements of the Technical Specifications.

   All Sewer Lateral installations will have a cleanout installed at the property line.

5. Drop Manholes - Drop manholes shall be avoided if at all possible. Drop Manholes may be permitted after review by the District of the criteria creating the need. Drop manholes shall conform to RCSD Standard Drawing S2040.

6. Frame and Cover - All manholes and cleanouts shall have cast-iron frames and covers. Frames and covers shall conform to RCSD Standard Drawing S2060 and requirements of the Technical Specifications.

7. Manhole Diameters - Manholes shall be 48 inches in diameter minimum for sewer diameters 18" and less, and 60 inches in diameter for sewer diameters 21" and larger.

8. Marker Posts - Marker posts shall be required if manholes or cleanouts are to be installed outside of paved areas.

E. SEWAGE LIFT STATIONS AND INVERTED SIPHONS

1. General - Sewage lift stations, inverted siphons or nonstandard construction should be avoided whenever possible. In situations requiring such installations, they shall be designed by the District, a District retained consultant, or the developer's engineer in conjunction with District staff. The District should be consulted in the early planning stages to access the need for such installations and to develop site specific design criteria. At that time, the District will determine whether the District or the developer's engineer will perform the design.

2. Residential Sewage Pumping – Where gravity service is not feasible, special application may be made to the District to allow installation of a residential sewage pump system. The District must approve the design of the system, and the District reserves the right to prohibit the installation of a residential sewage pump system. When the installation of a residential sewage pump system is approved, the following general requirements must be met:

   a. Installation of the sewer ejector pump, electrical work, and holding tank, must: a) meet the codes and regulations of the building and safety department of the County of Riverside; and b) be inspected by an inspector from said building department.

b. The discharge line from the building outlet to the sewage pump must be gravity flow and be equipped with a blowoff cleanout. The pressurized discharge line from the holding tank must be equipped with a check valve as close as possible to the holding tank, followed by a gate valve. The pressurized discharge line must be installed for the shortest distance feasible, at which point the pressurized line must be converted to gravity flow using a wye, and a cleanout must be installed on the flow portion of the wye. A pressurized discharge line will not be permitted to connect to the sewer main unless no other alternative is possible AND, in the opinion of the District, the sewer main can facilitate the pressurized connection.

All gravity and pressure discharge lines must be inspected by a District inspector before being covered.

F. INDUSTRIAL WASTE PROVISIONS

1. General - The Developers of all commercial/industrial projects shall provide the District with detailed information concerning the project's expected wastewater quantity and quality. The District will review this information and determine which of the following facilities are required:

   a. Building sewer sampler.
   b. Wastewater flow monitoring station.
   c. Gravity separator.
   d. Industrial Waste clarifier.
   e. Pretreatment facilities.

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SECTION VI
PROCEDURES FOR
WATER AND SANITARY SEWER SYSTEM
FACILITY CONSTRUCTION

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SECTION VI
PROCEDURES FOR
WATER AND SANITARY SEWER SYSTEM
FACILITY CONSTRUCTION

A. WATER AND SANITARY SEWER SYSTEM FACILITY CONSTRUCTION

All water and/or sewer facility projects shall be constructed by the 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 and/or sewer facilities are as follows:

1. Submit the Inspection Deposit and other District required fees.
2. Provide Submittals, Water and/or Sewer System Construction Agreement, Bonds, and Certificate of Insurance.
3. Attend a mandatory Preconstruction Meeting
4. Notify the District Regarding the Start of Construction
5. Construct Water and/or Sewer System Facilities
6. Test and Disinfect the Water and/or Sewer System Facilities
7. Provide Continuity Test (Welded Steel Water pipe only)
8. Pay Remaining Inspection Fees
9. Connect to Existing Water and/or Sewer System
10. Submit Application for unmetered Construction Water (Water)
11. Remove Unmetered Connections (Water)
12. Provide unconditional Lien Waiver and Release, Water System Grant Deed and/or Sewer System Grant Deed, and Record Drawings.
13. Install Permanent Meters (Water)
14. Notice of Completion Filed by the District.

A flowchart for Water and/or Sewer system facility construction is shown as Appendix "F". A construction status sheet to be used by the District is shown in Appendix "G". Each required step is discussed in detail below:

1. Submit the Inspection Deposit - The inspection deposit, any other District fee, and three copies of the approved water and/or sewer construction drawings shall be submitted.

2. Provide Submittals, Water and/or Sewer System Construction Agreement, Bonds, and Certificate of Insurance - The Developer shall submit to the District Staff the following:

   a. Contractor information sheet (Appendix "H")
   b. Materials list, in accordance with RCSD approved Materials listed in Section VII.
   c. Two copies of Encroachment Permits
   d. One copy of the recorded tract/parcel map showing dedication of streets for road and public utility purposes (not required if executed Grant of Easement was provided earlier)
   e. Water and/or Sewer System Construction Agreement (Appendix "I")

   After the District executes the Water and/or Sewer System Construction Agreement, approves the Contractor, and approves the material list, Developer shall submit the following:

   a. A copy of the Contract between the Developer and Contractor verifying the cost of water and/or sewer system facility construction
   b. Certification of streets to final grade (Appendix "J")
   c. Certificates of Insurance for Contractor (Appendix "K")
   d. Faithful Performance Bond (Appendix "L"). Performance bonds provided to the County are satisfactory if the facilities to be turned over the District are included.

   After the District reviews and approves all submittals, the Developer shall schedule a pre-construction meeting with the District. A one week notice is required prior to said preconstruction meeting.

3. Attend a Mandatory Preconstruction Meeting - A Preconstruction meeting shall be held at the District office and shall be attended by the Developer's representative, Developer's contractor, and construction superintendent as well as by the District (Appendix "M"). After the pre-construction meeting, the District will issue a Notice to Proceed.

4. Notify the District Regarding the Start of Construction - The contractor shall notify the District, in writing, a minimum of one week prior to the start of construction. Prior to construction, the contractor shall submit three copies of the construction cut sheets for District use during construction. Waterline staking shall be at 50 foot intervals and at all water services, fire hydrants, tees, crosses, elbows, valves, air valves, blowoffs, and grade breaks. Sewerline staking shall be at 25 foot intervals and at all laterals, manholes, and cleanouts.

   The Contractor shall provide and distribute to all occupants along the streets of the proposed work, printed notices 8 1/2" x 11" in size, of the impending construction. A sample is available from the District.

5. Construct Water and/or Sewer System Facilities - The water and/or sewer system facilities shall be constructed by the Developer's contractor and inspected by District inspectors. After completion of construction, Developer's contractor shall complete all items on the District's inspection list prior to testing and disinfecting of the water and/or sewer facilities.

6. Test and Disinfect the Water and/or Sewer System Facilities - After the water and/or sewer facilities are completed to the satisfaction of the District inspector including all items on the inspector's deficiencies list, and after the Contractor furnishes evidence that compaction of trenches has been completed to the satisfaction of the County of Riverside Transportation Department and the District, the Contractor shall test the water and/or sewer facilities and disinfect the water facilities in accordance with the Technical Specifications, herein.

After the system has been tested and disinfected, the District will take samples for bacteriological tests. Acceptable bacteriological test results must be obtained before the District will allow connections to the existing water system. Sewer systems shall be video inspected in accordance with Section VIII-5.

7. Provide Continuity Test (Welded Steel Water pipe only) - After the water facilities are tested and disinfected, the Contractor shall perform a continuity test on all corrosion control equipment. The Contractor shall provide written results of said test to the District. The District shall approve said tests before the District will allow connections to the existing water system.

8. Pay Remaining Inspection Fees - Before the District will allow connections to the existing water and/or sewer system, any remaining inspection fees must be paid in full.

9. Connect to existing Water and/or Sewer System - After all fees have been paid and the water system has been disinfected, the Contractor may connect water and/or sewer facilities to the existing water facility system. No connections will be allowed on Fridays. Contractor shall provide the District with three weeks written notification requesting a system shutdown to make connections to the existing District facilities. Additionally, Contractor shall base pave all streets to be served by the new water and/or sewer systems prior to connection to the District's existing system. Thereafter, the District will release the new water system facilities for fire protection and construction water.

   The Contractor shall provide and distribute to all occupants along the streets of the proposed work, printed notices 8 1/2" x 11" in size, of the impending service disruption(s). A sample is available from the District.

10. Submit Application for unmetered Construction Water (Water) - The Developer shall submit an application for unmetered construction water with the appropriate fee to the District (Appendix "N")

    After approval of same, Developer shall install unmetered connections in accordance with RCSD Standards, W1100 or W1110, Note 5.

11. Remove Unmetered Connections (Water) - After construction is completed, the contractor shall remove unmetered connections and prepare for meters as follows:

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

12. Provide unconditional Lien Waiver and Release, Water System Grant Deed and/or Sewer System Grant Deed, and Record Drawings - Before the District will release the meters, the Contractor shall:

    a. Provide an Unconditional Lien Waiver and Release for waterline and/or sewerline construction (Appendix "O").
    b. Provide a Grant Deed dedicating the water and/or sewer system to the District. Said Grant Deed is effective only after the final Notice of Completion for water and/or sewer system facilities is filed by the District. The Grant Deed must be filed on the form provided by the District (Appendix "P").
    c. Provide the District with the water and/or sewer system record ("As-Builts") drawings.

13. Install Permanent Meters - After all of the above has been completed to the satisfaction of the District, the District will release the permanent meters to the contractor for installation in accordance with the Standard Drawings.

14. Notice of Completion Filed by the District - After receipt, and approval of items in the above, the District will file a Notice of Completion.

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SECTION VII
LIST OF APPROVED MANUFACTURED MATERIALS

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SECTION VII
LIST OF APPROVED MANUFACTURED MATERIALS

A. GENERAL

The Rubidoux Community Services District maintains a list of Approved Manufactured Materials for both water and sewer system improvements. Only those indicated on the most current list have been approved for use within the District. It is the sole responsibility of the user to assure that the product proposed for use is currently approved. The District may require installation of a different product in special circumstances.

Manufacturers may request approval by (1) making a formal written request for approval, (2) providing detailed drawings and technical information on their product, and (3) providing a non-returnable sample of the product for District use. Documentation of use by other local water purveyors (with phone numbers and contact names) will assist the District in evaluating such requests. The District will evaluate the product and make a determination within 90 days. If determined as being suitable for District use, the product will be placed on this approved Manufactured Materials list. Inventory of spare parts is a consideration. All products shall always comply with District Standard Specifications.

B. LIST OF APPROVED MANUFACTURED MATERIALS

1. Pipe

   a. PVC Pipe (AWWA C-900)
   JM Pipe, PW Pipe, VinylTech

   b. Ductile Iron Pipe (AWWA C-151)
   Pacific States, Tyler Pipe, Union Foundry, U.S. Pipe

   c. Welded Steel Pipe (AWWA C-200)
   Ameron, Kelly Pipe, Northwest, West Coast Pipe Linings

   d. Vitrified Clay Sewer Pipe
   Pacific Clay Products, Mission Clay Products, Gladding McBean

2. Valves, Fire Hydrants and Related Products

   a. Butterfly Valves
   Pratt, DeZurik

   b. Gate Valves
   American AVK, American Flow Control, Clow, Mueller

   c. Air Valves
   APCO (143C or 145C), Crispin (UL10 or UL20), Val-Matic (201C or 202C)

d. Eccentric Plug Valves (Force Mains)

Clow, DeZurik, Val-Matic

e. Fire Hydrants

AVK (24-150-40-000 or 24-150-50-000), Jones (J-4040D or J-4060D), Clow (850 or 860)

f. Fire Hydrant Break-off Check

Long Beach (LB-400), Clow (#40)

g. Traffic Box Valve Cover (Stamped RCSD)

Unimproved: Brooks (4TT), Southbay Foundry (SBTT)
Improved: Southbay Foundry

h. Valve Box Extension

Brooks

i. Gaskets, Ring Flange (Non-Asbestos)

Garlock, Klinger

j. Nuts and Bolts (5/8" to 1-1/2" diameter U.S. only A325)

Nucore, Rosenberg

k. Air Valve Screen

Cebe Products, Knox (M16-8)

l. Reduced Pressure Backflow Devices

Any device approved by USC Cross-Connection Foundation and California Department of Health Services Office of Drinking Water (Latest List)

m. Double Detector Check Assemblies

Febco (806YD), Watts (709DCDA), Hersey, Ames

3. Water Service Materials

a. Service Saddle (double strap, bronze 1pt)

Ford (S91 or 202B), Jones (J-979 or J-996), Mueller (H-13483 or H-16116)

b. Corporation Stops

Ford (FB1100-7-G), Jones (J-1957-SG), Mueller (H-25028 or H-15023)

c. Type K Soft Copper Tubing

Cerro, Halsead, Mueller, or Streamline

d. 1" Angle Meter Stops

Ford (KV43-444W-G), Jones (J-4201-SG), Mueller (H-14258)

e. 2" Angle Meter Stops

Ford (Ball Valve, BFA13-777W), Jones (Ball Valve, J-1974-W), Mueller (Ball Valve, B-24286)

f. Meter Boxes (with concrete base plate and polymer cover with quick read port)

Armorcast, J&R, or Brooks

g. Linesetters (5/8 x 3/4", 3/4", or 1")

Ford (LSVBG-95040-016), Jones (J05CCTSFIPAMV04AH)

4. Miscellaneous Materials

a. Flange Coupling Adapters

Tyler, U.S. Pipe, Smith-Blair, or Romac

b. Connector Couplings (with Stainless Steel nuts and bolts and epoxy coated, interior and exterior, 12 mils min)

Romac (501), Baker

c. Standard Galvanized Pipe

Frontier 1, Stockton, Union Steel

d. Pipe Tape Wrap

Protecto Wrap (200A)

e. Sample Stations

John C. Kupferle Foundry (Model No. 88 Eclipse)

f. Manhole Frame and Covers

Southbay Foundry, Alhambra Foundry, Neenah

g. Grease Interceptors/Sand Oil Separators

Pyramid Precast, Nottingham, Jensen

SECTION VIII
TECHNICAL SPECIFICATIONS

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TECHNICAL SPECIFICATION - GENERAL REQUIREMENTS

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SECTION VIII-1
TECHNICAL SPECIFICATION - GENERAL REQUIREMENTS

A. DEFINITIONS

Whenever the terms herein defined occur in these Specifications or other related documents, they shall have the meanings here given.

1. "District" or "Rubidoux" shall mean the RUBIDOUX COMMUNITY SERVICES DISTRICT, 3590 Rubidoux Boulevard, Rubidoux, California, 92509, its Manager, and any other person or persons designated by the District to act on its behalf.

2. "Manager" shall mean the person designated by the Board of Directors of the RUBIDOUX COMMUNITY SERVICES DISTRICT to have charge, supervision, and administration of said District.

3. "Engineer" shall mean the California Registered Professional Engineer designated by the District to give the work general engineering supervision.

4. "Developer" shall mean the person, persons, or firm having legal authority to enter into agreements with the District as related to work performed within the public rights-of-way and Public Utility Easements and having legal responsibility of the Developer's Engineer and Contractor retained or contracted by the Developer to perform the work.

5. "Developer's Engineer" shall mean the California Registered Engineer designated by the Developer to design the proposed water and/or sewer system facilities in accordance with District rules, regulations and standards.

6. "Contractor" shall mean the person, firm, or corporation responsible for the construction of water and/or sewer system facilities and improvements or any portions thereof to be integrated into the District's water and/or sewer system either on behalf of the District or on behalf of a Developer.

   Contractor shall at all times be represented on the Work in person or by a duly designated agent or superintendent. Contractor shall hold a valid Contractor's License in accordance with the provisions of Division 3, Chapter 9 of the Business and Professions Code of the State of California, and any amendments thereto.

7. "County" shall mean Riverside County, California and/or San Bernardino County, California.

8. "Work" shall mean all Work to be performed by Contractor and shall be as specified by these Specifications and the Construction Drawings, Special Requirements, and Specific Directions for any particular project.

   The District may at any time during Work, by written order, make such changes as found necessary in the character, quality, or quantity of the Work to be furnished.

9. "Construction Drawings" shall mean those drawings approved by the District showing dimensions, details, features, and requirements of the Work. Said Construction Drawings shall be used in conjunction with Special Requirements or Specific Directions and shall be augmented by these Specifications and the Standard Drawings.

10. "Special Requirements" shall mean those requirements describing Work not specified by Construction Drawings or Specific Directions, clarifying Work as shown by Construction Drawings or as described by Specific Directions, or supplementing or modifying these Specifications. Said requirements may be written or verbal.

11. "Specific Directions" shall mean those instructions of the District supplementing or modifying the Construction Drawings, Special Requirements, and Specifications and shall include all Work not specified by Construction Drawings or Special Requirements. Said instructions may be written or verbal.

12. "Specifications", also "Construction Specifications", shall mean the requirements contained herein and shall apply to all Work, where applicable, unless specified otherwise, in the Construction Drawings, Special Requirements, or Specific Directions. Said Specifications shall augment Construction Drawings, Special Requirements, or Specific Directions and shall pertain to all methods and materials of construction.

13. "Standard Drawings" shall mean all drawings referenced as such and bound with the Specifications. Said Standard Drawings shall be considered an integral part of the Specifications.

14. "Standard Specifications" shall mean the Standard Specifications for Public Works Construction, latest edition, as published by Building News, Inc, Los Angeles, California. The Standard Specifications shall augment, not supersede, the "Construction Specifications". As used herein, the Standard Specifications shall not apply to measurement, payment, schedule, delays, or extra work.

B. ABBREVIATIONS

Whenever used in these Specifications, the following abbreviations shall refer to the agency shown:

1.	AASHTO	American Association of State Highway and Transportation Officials
2.	ACI	American Concrete Institute
3.	AISC	American Institute of Steel Construction
4.	AISI	American Iron and Steel Institute
5.	ANSI	American National Standards Institute
6.	API	American Petroleum Institute
7.	ASTM	American Society for Testing Materials
8.	AWWA	American Water Works Association
9.	AWS	American Welding Society
10.	CRSI	Concrete Reinforcement and Steel Institute
11.	DIPRA	Ductile Iron Pipe Research Institute
12.	EIA	Electronic Industries Association
13.	IEEE	Institute of Electrical and Electronic Engineers
14.	IPCEA	Insulated Power Cable Engineers' Association
15.	NBFU	National Board of Fire Underwriters
16.	NEC	National Electrical Code
17.	NEMA	National Electrical Manufacturing Association
18.	REA	Rural Electrification Administration
19.	SSPC	Steel Structures Painting Council
20.	UL	Underwriters' Laboratories

All references to Specifications of any of the above agencies shall mean the latest editions thereof.

C. PERMITS, CERTIFICATES, LAWS, AND ORDINANCES

Unless specified otherwise, Contractor shall at no cost to the District, obtain all necessary permits, certificates, and licenses from such Federal, State, and local agencies as required to perform the Work. Contractor shall comply with all laws, ordinances, or rules and regulations of said agencies in performance of the Work.

D. CONTRACTOR'S LIABILITY

Contractor shall be responsible, and the District shall not be answerable or accountable in any manner, for any loss or damage that may happen to the Work performed by Contractor, subcontractors, or those associated with or working under Contractor, or for any of materials or equipment used or employed in performing the Work, or for injury to any person or persons, including employees, the public, or others, or for damage to property from any cause which might have been prevented by Contractor, subcontractors, or those associated with or working under Contractor. Contractor having control over such Work must properly guard and does indemnify and hold the District harmless, and will defend the District therefrom at Contractor's own expense, against all injuries or damages to persons and property.

Contractor shall indemnify, defend, and hold the District harmless from any and all claims, demands, fines, and penalties imposed or levied by any Federal, State, or local agency associated with or related to the taking (as defined by the United States Fish and Wildlife Service and, or the California Department of Fish and Game) of any protected animal or plant species or habitat by Contractor, subcontractors, or those associated with or working under Contractor.

E. RIGHTS-OF-WAY

Rights-of-way for the pipelines and appurtenances to be constructed shall be acquired before the Notice to Proceed is issued. Neither the terms hereof nor anything shown on the drawings in connection with the right-of-way shall be construed to entitle the Contractor to conduct operations in said right-of-way in violation of any public agency ordinance or regulation restricting interference with water courses and drainage channels, road, alley, or street, until the Contractor has obtained permits from the proper authorities.

In all of the streets in which the Contractor's work may interfere with ingress or egress of the occupants of the abutting property or of their vehicles, the Contractor shall maintain temporary practical means of ingress and egress or shall make satisfactory arrangements with the occupants for the obstructing of ways to their properties for the duration of the interference. Such arrangements shall be made in writing and a copy submitted to the District.

Nothing herein shall be construed to entitle the Contractor to the exclusive use of any public street or way during performance of the contract work, and the Contractor shall so conduct the work as not to interfere unnecessarily with the authorized work of other agencies in such streets and ways.

1. Permanent Rights-of-Way - For Developer financed Work, Developer shall provide the District with all permanent rights-of-way or permanent easements in a form approved by the District, unless specified otherwise.

   For District financed Work, the District will obtain all permanent rights-of-way or permanent easements as required to perform the Work unless specified otherwise. Said rights-of-way will not include rights-of-way for which permits, certificates, and licenses are required from Federal, State, and local agencies, unless specified otherwise.

2. Access or Temporary Rights-of-Way - Contractor shall, at no cost to the District, obtain all access or construction rights-of-way of a temporary nature other than specified.

F. INTERFERENCES

Any and all crossings of public utility facilities such as waterlines, sewerlines, gas lines, electrical or control cables and/or conduits, telephone and/or telegraph cables and/or conduits shall be made by Contractor in accordance with requirements and Specifications of appropriate agencies. Contractor shall obtain any necessary permits, licenses, and/or agreements required by said agencies.

Whenever facilities are encountered, the Contractor shall ascertain the ownership thereof and shall make all necessary arrangements with the owners for the protection, removal, relocation, and/or replacement thereof. Contractor shall give the owners due notice of the requirements and shall give them convenient access and cooperate with them in every way while any work of removal and/or replacement is being performed.

G. SANITATION

All parts of the Work shall be maintained in a neat, clean, sanitary condition. Fixed and portable toilets, inaccessible to insects, shall be provided wherever needed for use by employees and their use shall be strictly enforced. All waste and refuse from sanitary facilities or from any source related to Contractor's operations shall be disposed of in a sanitary manner satisfactory to the District and in accordance with laws and regulations pertaining thereto. Contractor shall rigorously prohibit and prevent committing of nuisance within the Work area or upon the District's right-of-way or adjacent private property. Contractor shall furnish all facilities and means for proper sanitation for the Work and shall indemnify, protect, and save the District harmless from any liability resulting from improper or insufficient sanitation.

H. ACCIDENT PREVENTION AND FIRST AID

Contractor shall provide a safe working environment for all persons working on or affected by the Work. Contractor shall take precautions for the protection of persons and property at all times during the course of the Work. Contractor shall exercise and observe the safety provisions of applicable laws and building and construction codes. Contractor shall maintain in good and safe operating condition all equipment and facilities required for proper execution and inspection of the Work.

Contractor shall guard machinery, equipment, and hazards in accordance with safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, the Construction Safety Orders and Trench Construction Safety Orders as issued by the Division of Industrial Safety of the Department of Industrial relations of the State of California, and Chapter 8 ("Traffic Control and Protection of Workmen") of the Manual of Instruction for the Maintenance Department of the California State Division of Highways, to the extent that such provisions are not inconsistent with applicable laws or regulations.

All warning signs, lights, barricades, and other measures designed to protect the traveling public shall be erected and maintained in good order by Contractor in accordance with applicable provisions of Chapter 21 ("Maintenance Signs, Barricades, and Traffic Control") of the Manual of Instruction for the Maintenance Department of the California State Division of Highways and of the applicable ordinances of the public agency having jurisdiction over the maintenance and policing of highways, thoroughfares, and streets. Special regard shall be given to the rights and convenience of the traveling public and the property owners and residents in the area of Work. Cross-over boards or steel plates approved by the District shall be placed and other precautions taken

whenever necessary to provide for at least one-way traffic along all traveled streets and to provide access to driveways and residences, unless specified otherwise.

I. FIRST AID FACILITIES

Contractor shall keep first aid facilities and supplies on the jobsite. Contractor shall provide instruction in first aid as required by State regulations. Contractor shall provide emergency first aid treatment and supplies for Contractor's employees sufficient to comply with all applicable laws.

J. MATERIALS

Contractor shall furnish only approved materials as listed in the District's approved material list. All materials to be furnished by Contractor shall be new and of the best quality for their intended use. All like materials shall be of one manufacture for any particular project.

Contractor shall submit 3 copies of all material lists to the District for approval thereof. Said material lists shall include manufacturer's name, designation, description, and related information of all materials to be furnished and installed or otherwise used by Contractor in the performance of the Work. Said material lists shall be submitted at or prior to project preconstruction meeting and said lists shall be approved by the District prior to beginning construction.

K. CONSTRUCTION

Contractor alone shall be responsible for the safety, efficiency, and adequacy of Contractor's plant, equipment, appliances, and methods and for any damage which may result from their failure or their improper construction, maintenance, or operation.

Contractor shall be responsible for examining all Construction Drawings, Specifications, Standard Drawings, Work site, delivery routes, and local conditions which may affect the Work.

Before proceeding with the Work, Contractor shall furnish the District any information required by the Construction Drawings, Specifications, Standard Drawings, Special Requirements, and Directions of the District.

Contractor shall keep at jobsite a complete set of Construction Drawings, Specifications, Standard Drawings, permits, certificates and licenses for the Work, and all other data required by the District. Contractor shall be responsible for checking all dimensions and quantities on said drawings or schedules and shall notify the District of any errors and omissions found.

Until acceptance of the Work by the District, Contractor shall bear the risk of injury or damage to any part of the Work by action of the elements or from any other cause and Contractor shall rebuild, repair, restore, and make good any injuries or damages to the Work except as limited in the Contract Appendix.

Contractor shall cooperate with other contractors who are working in the project area as the District may specify and shall comply with all orders of the District. Contractor shall employ only competent and skillful persons to perform the Work. Said persons shall be qualified or certified to perform the Work in accordance with requirements of said person's trade.

Contractor shall submit to the District for approval a construction schedule covering all Work based on normal work periods. Contractor shall not deviate from approved schedule without prior permission from the District. Whenever Contractor arranges to work at night or at any time other than normal work periods or to vary the period during which Work is to be carried on each day,

Contractor shall obtain special permission from the District to do so and shall keep the District properly informed of Contractor's activities. Construction schedule shall show the order in which Contractor proposes to carry out Work, dates of anticipated commencement and completion of Work and salient components thereof, and estimated percentage of Work to be completed at any time during the construction period.

L. RECORDS OF CONSTRUCTION

Contractor shall maintain at least one complete set of Construction Drawings on the jobsite during the course of construction upon which changes in the Work shall be noted as they occur. Contractor shall maintain said Drawings so that the District may at any time during the course of construction ascertain the changes that have occurred. Said Construction Drawings shall be the basis of the two sets of record drawings that Contractor shall provide the District upon completion of the Work.

M. INSPECTION

All materials and equipment furnished and all Work performed shall be subject to rigid inspection by the District. Contractor may be required to remove and replace under proper inspection any Work performed in the absence of prescribed inspection, with the entire cost being borne by Contractor irrespective of whether such Work is found to be defective. Work covered up without authority of the District shall, upon order of the District, be uncovered to the extent required to permit inspection, repair, or replacement and thereafter be recovered, and Contractor shall bear entire cost.

N. EXAMINATION OF WORK

Contractor shall furnish the District every reasonable facility for ascertaining whether Work is being accomplished in accordance with the requirements and intention of the Construction Drawings, Specifications, Standard Drawings, Special Requirements, and Directions of the District.

O. RIGHT TO OCCUPY WORK

The District may wish to occupy or place in service portions of the Work before its final completion and shall be at liberty to do so. Such occupancy or placing in service of any portion of the Work shall not relieve Contractor of the responsibility of protection and care of all Work until final completion and acceptance provided, however, that expense directly attributable to operation and placing portions of Work in service shall not be chargeable to Contractor.

P. MAINTENANCE AND GUARANTEE

Contractor shall guarantee that all Work performed meets all requirements specified as to character, quality, and quantity of materials and workmanship. Contractor shall replace all materials and pay all installation costs made necessary by defects in materials or workmanship supplied that become evident within one year after acceptance of the facilities.

Contractor shall replace all defective materials promptly upon receipt of written notice from the District. If Contractor fails to replace all defective materials promptly, the District may secure the service of others to perform the Work and Contractor shall be liable to the District for any costs including removal and replacement thereof.

Q. CONSTRUCTION POWER

Contractor shall provide all necessary power required for Contractor's operations, and shall provide and maintain in good order such modern power equipment and installation as shall be adequate, in the opinion of the District, to perform the required Work in a safe and satisfactory manner.

R. CONSTRUCTION WATER

Unless specified otherwise, the District will provide construction water to Contractor from its existing non-potable wells at established rates. Contractor shall furnish and install all necessary piping and appurtenances necessary to convey water from the District's metered service connection to place of use.

S. WELDING

Welding shall be done by the electric arc method using a process which excludes the atmosphere from the molten metal, except where otherwise approved by the District. Welding electrodes used for manual welding shall be an approved type. Except as modified herein, welding process qualification and operator qualification shall comply with the applicable requirements of the "Code for Arc and Gas Welding in Building Construction" of the AWS.

Each weld shall be uniform in width and size throughout its entire length. Each layer shall be smooth, free from slag, cracks, pinholes, and undercut and shall be completely fused to adjacent weld beads and base metal. Cover pass shall be completely free of course ripples, irregular surfaces, non-uniform bead pattern, high crown, deep ridges, or valleys between beads, and shall blend smoothly and gradually into surface of base metal. Butt welds shall be slightly convex, of uniform height, and shall have full penetration. Fillet welds shall be of size indicated, with full throat, and with each leg of equal length. Repair, chipping, or grinding of welds shall not gouge, groove, or reduce base metal thickness.

T. ENVIRONMENTAL FACTORS

Contractor shall take all reasonable precautions to protect the environment.

1. Air Pollution - Contractor shall use only machinery and equipment which is equipped with suitable air pollution control devices so that undue quantities of pollutants are not added to the atmosphere in the vicinity of the Work site. Contractor's equipment shall meet all Federal, State, and local requirements for air quality emissions and Contractor shall comply with all applicable Federal, State, and local air pollution control regulations.

   Contractor shall also take all necessary precautions to control dust created by construction operations. Contractor shall be especially diligent in implementing a dust control program and shall be prepared to respond immediately and positively to any instructions for corrective action given by the District. Contractor shall use dust palliatives if necessary to satisfactorily control dust; however, Contractor shall secure the District's approval for use of dust palliatives other than water.

2. Explosives - Contractor shall handle, transport, store, and use explosives in accordance with applicable Federal, State, and local laws and regulations. Contractor shall be responsible for and make good any damage caused by Contractor's use of explosives.

3. Fires - Contractor shall exercise all precautions necessary to prevent unauthorized fires within or adjacent to the limits of the Work. Contractor shall be responsible for all damage resulting

from fire due directly or indirectly to Contractor's employees' activities or the activities of subcontractors or their employees.

4. Drainage and Flooding - Contractor shall manage excavation and spoil banks such that existing drainage conditions are not impaired. Contractor shall provide drainage in all cases where the existing drainage conditions are being unavoidably altered or disturbed by Contractor's operations. Temporary diversions, ditches, checks, swales, or other drainage structures or features necessary to ensure proper drainage and flood control shall be provided by Contractor at no extra cost to the District.

5. Historical and Archaeological Sites - If Contractor should encounter any evidence of historical or archaeological significance, the contractor shall immediately cease construction, notify the District, and refrain from any activity until the District orders Work to resume.

6. Noise Pollution - Contractor shall equip all machinery and equipment used for construction with noise control devices such as mufflers for internal combustion engines or other suitable noise suppressers. Noise produced by construction operations shall be kept to a minimum and shall be consistent with reasonable human health requirements considering time of day and location of Work site. Contractor shall comply with all applicable Federal, State, and local noise pollution control regulations.

   Unless specified otherwise, noise levels in connection with the Work shall not exceed 75 dB(A) at a distance of one hundred (100) feet for relatively continuous exposure and they shall not exceed 90 dB(A) at that same distance for relatively infrequent intermittent exposure. Contractor shall be prepared to respond immediately and positively to any instructions for corrective action given by the District particularly with respect to complaints from the public.

7. Public Relations - Contractor shall give due consideration to the comfort and convenience of the public and shall instruct Contractor's employees to be polite and respectful in their dealings with the public at the Work site and in traveling to and from the Work site.

8. Traffic - Contractor shall adequately protect the public using any roads which are involved in Contractor's operations and shall maintain safe traffic flow in the vicinity of the Work. Contractor shall use signs, barricades, delineators, flashers, and flagmen, all in strict compliance with Federal, State, and local rules and regulations regarding traffic control. Public roadways shall not be barricaded or blockaded except in accordance with requirements of public agencies having jurisdiction over same. Contractor shall provide access to all walkways, sidewalks, driveways, and streets at all times. If requested by the District, Contractor shall furnish a traffic control program for the Work.

9. Vegetation and Wildlife - Contractor shall not destroy or disturb any vegetation or habitat unless absolutely necessary for the performance of the Work. Contractor shall take all steps necessary to ensure that Contractor's employees do not destroy or disturb any vegetation or wildlife in the prosecution of the Work or incidental thereto, including travel to and from the Work site.

10. Water Pollution - Contractor shall discard materials which might adversely affect ground or surface water at approved dump sites only. Chemicals and other water pollutants shall not be discharged into natural watercourses or on land tributary to said watercourses. Contractor shall comply with all applicable Federal, State, and local water pollution control regulations.

11. Cleanup - Premises occupied by the Contractor shall be kept in a neat, clean condition free from unsightly accumulation of rubbish. Contractor shall maintain all Work areas within or

without the project limits free from dust which would cause a hazard to the Work, operations of other contractors, or other persons or property. Upon completion of the Work, Contractor shall satisfactorily dispose of or remove from the vicinity of the Work all plants, building, rubbish, unused materials, concrete forms, and other equipment and materials belonging to or used under the Contractor's direction during construction and, if the Contractor fails to do so, the same may be removed and disposed of by the District at Contractor's expense.

U. PROTECTION OF FACILITIES AND PROPERTY

The drawings identify the various pipelines, conduits, and other existing utility structures as they are supposed to exist in construction areas, but no error or omission on said drawings shall be construed to relieve the Contractor from the responsibility of protecting any such pipeline, conduit, or other existing utility structures.

When deemed necessary by the District, revisions to the contract drawings and additional detailed drawings may be issued to the Contractor during the progress of the work.

No District valves or appurtenances of other utility facilities shall be operated by the Contractor without approval and/or instruction from the District or the utility, as appropriate.

Insofar as practical during the progress of the work, the property of any owner (including facilities such as a pipeline, conduit, sewer, culvert, storm drain, drainage ditch, flood control channel, overhead wire, cable, underground wire, or any other facility) shall not be disturbed but shall be supported and protected against injury and maintained in good operating condition at the expense of the Contractor. In no case shall any such property be disturbed or removed without the consent of the owner and approval of the District. The Contractor shall be responsible for making good all damage due to his operations and the provisions of this section shall not be abated even in the event such damage occurs after backfilling, or is not discovered until after completion of backfilling.

The Contractor shall explore the location and depth of underground facilities, sewers, and storm drains sufficiently in advance of pipeline laying or other construction operations so that changes in line or grade, or both, can be made in the pipeline without delay of the Contractor's construction schedule, without relaying or reconstructing previously installed pipelines or other facilities and to avoid wherever possible moving, altering, or reconstruction of the obstructing underground facilities, sewers, or storm drains.

It shall be the responsibility of the Contractor to verify the location of all obstructions shown on the plans and to locate any other underground utilities and structures which might necessitate a change in the line and/or grade of the new work. If the Contractor, while performing the work of construction, discovers utility facilities not identified in contract plans or specifications, the Contractor shall immediately notify the District.

In no case shall any utility that has been damaged, whether shown or not shown on the plans, be backfilled without the Contractor notifying the utility company of the damage. If the work requires, as shown on the drawings or as specified, or as required for the Contractor's convenience, that the surface and overhead facilities, underground facilities, sewers and storm drains should be moved, altered, relocated, reconstructed, or temporarily supported, in order that the facilities included in the contract can be constructed, the Contractor shall make all arrangements, therefore, with the respective owners and shall bear all expenses for moving, altering, relocating, or temporarily supporting the facilities.

In addition, the District may require the moving, altering, or reconstructing of obstructing underground facilities, sewers, or storm drains, and any compensation, therefore, will be the responsibility of the contracting party and not the District.

Pipelines determined to be abandoned may be destroyed if conflicting with the contract work and properly disposed of after approval by the District. All pipelines abandoned in place shall be crushed or filled (sand/cement slurry) and exposed ends of abandoned pipelines shall be plugged for water tightness as approved by the District.

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SECTION VIII-2
TECHNICAL SPECIFICATION - CONCRETE

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SECTION VIII-2
TECHNICAL SPECIFICATION - CONCRETE

A. SCOPE

Contractor shall furnish all materials for concrete and mortar, and shall form, mix, place, cure, repair, finish and do all other work required to produce finished concrete structures.

All cast-in-place concrete falls into one of the following categories and shall comply with all requirements of this basic specification.

1. Structural Concrete (or Class "A" Concrete). Concrete to be used in all cases except where noted otherwise in the Contract Documents.

2. Sitework Concrete (or Class "B" Concrete). Concrete to be used for curbs, gutters, catch basins, sidewalks, pavements, fence and guard post embedment, underground duct bank encasement and all other concrete appurtenant to electrical facilities unless otherwise shown.

3. Lean Concrete (or Class "C" Concrete). Concrete to be used for thrust blocks, pipe trench cut-off blocks and cradles, where the preceding items are detailed on the drawings as unreinforced. Concrete to be used as protective cover for dowels intended for future connection.

B. CONTRACTOR SUBMITTALS

1. Mix Designs - Prior to beginning the work, Contractor shall submit to Engineer, for review, preliminary concrete mix designs which shall show the proportions and gradations of all materials proposed for each class and type of concrete to be used on the job. The mix designs shall be designed by an independent testing laboratory acceptable to Engineer. All costs related to such mix design shall be borne by the Contractor.

2. Certified Delivery Tickets - Where ready-mix concrete is used, Contractor shall provide certified delivery tickets at the time of delivery of each load of concrete. Each certificate shall show the total quantities (by weight) of cement, sand, each class of aggregate, and admixtures, and the amounts of water (by gallons) in the aggregate and added at the batching plant as well as the amount of water allowed to be added at the site for the specific design mix. Each certificate shall, in addition, state the mix number, total yield in cubic yards, and the time of day, to the nearest minute, corresponding to when the batch was dispatched, when it left the plant, when it arrived at the job, the time that unloading began, and the time that unloading was finished.

C. CONCRETE MATERIALS

1. Materials shall be delivered, stored, and handled so as to prevent damage by water or breakage. Only one brand of cement shall be used. Cement reclaimed from cleaning bags or leaking containers shall not be used. All cement shall be used in the sequence of receipt of shipments.

2. All materials furnished for the work shall comply with the requirements of Sections 201, 203, and 204 of ACI 301, as applicable.

3. Storage of materials shall conform to the requirements of Section 205 of ACI 301.

4. Materials for concrete shall conform to the following requirements:

   a. Cement - shall be standard brand portland cement conforming to ASTM C150 for Type II or Type V. Portland cement shall contain not more than 0.60 percent alkalies. A single brand of cement shall be used throughout the work, and prior to its use, the brand shall be acceptable to the Engineer. The cement shall be suitably protected from exposure to moisture until used. Cement that has become lumpy shall not be used. Stacked cement shall be stored in such a manner so as to permit access for inspection and sampling. Certified mill test reports for each shipment of cement to be used shall be submitted to the Engineer if requested regarding compliance with these specifications.

   b. Water - shall be potable, clean, and free from objectionable quantities of silty organic matter, alkali, salts and other impurities. The water shall be considered potable, for the purposes of this section only, if it meets the requirements of the local governmental agencies. Agricultural water with high total dissolved solids (over 1000 mg/l TDS) shall not be used.

   c. Aggregates - shall be obtained from pits acceptable to the Engineer, shall be non-reactive, and shall conform to ASTM C33. Maximum size of coarse aggregate shall be as specified in Paragraph 2.07B. Lightweight sand for fine aggregate will not be permitted.

      i) Coarse aggregates shall consist of clean, hard, durable gravel, crushed gravel, crushed rock or a combination thereof. The coarse aggregates shall be prepared and handled in two or more size groups for combined aggregates with a maximum size greater than 3/4 inch. When the aggregates are proportioned for each batch of concrete the two size groups shall be combined.

      ii) Fine aggregates shall be natural sand or a combination of natural and manufactured sand that are hard and durable.

      iii) Combined aggregates shall be well graded from coarse to fine sizes, and shall be uniformly graded between screen sizes to produce a concrete that has optimum workability and consolidation characteristics. Where a trial batch is required for a mix design, the final combined aggregate gradations will be established during the trial batch process.

   d. Ready-mix concrete - shall conform to the requirements of ASTM C94.

D. CONCRETE DESIGN REQUIREMENTS

1. General - Concrete shall be composed of cement, admixtures, aggregates and water. These materials shall be of the qualities specified. The exact proportions in which these materials are to be used for different parts of the work will be determined during the trial batch. In general, the mix shall be designed to produce a concrete capable of being deposited so as to obtain maximum density and minimum shrinkage and, where deposited in forms, to have good consolidation properties and maximum smoothness of surface. Mix designs shall not contain more than 43 percent of sand of the total weight of fine and coarse aggregate. The aggregate gradations shall be formulated to provide fresh concrete that will not promote rock pockets around reinforcing steel or embedded items. The proportions shall be changed whenever necessary or desirable to meet the required results at no additional cost to the District. All changes shall be approved by Engineer.

2. Water-Cement Ratio and Compressive Strength - The minimum compressive strength and cement content of concrete shall be not less than that specified in the following tabulation.

Type of Work	Min. 28-Day Compressive Strength (psi)	Max. Size Aggregate (in.)	Min. Cement per cu yd (sacks)	Max. W/C Ratio (by wt.)
Structural Concrete (Class "A"):	3,500	1	6.2	0.48
Sitework concrete (Class "B"):	3,000	1	5.5	0.52
Lean concrete (Class "C"):	2,000	1	4.0	0.60

Note: One sack of cement equals 94 lbs.

3. Adjustments to Mix Design - Mixes used shall be changed whenever such change is necessary or desirable to secure required strength, density, workability, and surface finish and Contractor shall be entitled to no additional compensation because of such changes. Approval shall be obtained from Engineer prior to any changes.

E. CONSISTENCY

The quantity of water entering into a batch of concrete shall be just sufficient, with a normal mixing period, to produce concrete which can be worked properly into place without segregation, and which can be compacted by vibratory methods herein specified to give desired density, impermeability and smoothness of surface. The quantity of water shall be changed as necessary, with variations in the nature of moisture content of the aggregates, to maintain uniform production of desired consistency. The consistency of the concrete in successive batches shall be determined by slump tests in accordance with ASTM C143. The slumps shall be as follows:

Part of Work	Slump (in.)
Structural concrete	3 inches (±1 inch)
Other work	4 inches (±1 inch)

F. READY-MIXED CONCRETE

1. At Contractor's option, ready-mixed concrete may be used provided it meets all requirements as to materials, batching, mixing, transporting, and placing as specified herein and in accordance with ASTM C94, including the supplementary requirements specified in Paragraphs 2.09B through 2.09F, herein.

2. Ready-mixed concrete shall be delivered to the site of the work, and discharge shall be completed within 90 minutes after the addition of the cement to the aggregates or before the drum has been revolved 250 revolutions, whichever is first. In hot weather (ambient temperature above 95°F) or under conditions contributing to quick stiffening of the concrete, or when the temperature of the concrete is 85 degrees F or above, the time between the introduction of the cement to the aggregates and discharge shall not exceed 45 minutes.

3. Truck mixers shall be equipped with electrically-actuated counters by which the number of revolutions of the drum or blades may be readily verified. The counter shall be of the resettable, recording type, and shall be mounted in the driver's cab. The counters shall be actuated at the time of starting mixers at mixing speeds.

4. Each batch of concrete shall be mixed in a truck mixer for not less than 70 revolutions of the drum or blades at the rate of rotation designated by the manufacturer of equipment. Additional mixing, if any, shall be at the speed designated by the manufacturer of the equipment as agitating speed. All materials including mixing water shall be in the mixer drum before actuating the revolution counter for determining the number of revolution of mixing.

5. Truck mixers and their operation shall be such that the concrete throughout the mixed batch as discharged is within acceptable limits of uniformity with respect to consistency, mix, and grading. If slump tests taken at approximately the 1/4 and 3/4 points of the load during discharge give slumps differing by more than 1 inch when the specified slump is 4 inches or less, or if they differ by more than 2 inches when the specified slump is more than 4 inches, the mixer shall not be used on the work unless the causing condition is corrected and satisfactory performance is verified by additional slump tests. All mechanical details of the mixer, such as water measuring and discharge apparatus, condition of the blades, speed of rotation, general mechanical condition of the unit, and clearance of the drum, shall be checked before a further attempt to use the unit will be permitted.

6. Each batch of ready-mixed concrete delivered at the job site shall be accompanied by a certified weighmaster delivery ticket furnished to the Engineer in accordance with Paragraph 1.03B, herein.

7. Non-agitating equipment for transporting ready-mixed concrete shall not be used. Combination truck and trailer equipment for transporting ready-mixed concrete shall not be used. The quality and quantity of materials used in ready-mixed concrete and in batch aggregates may be subject to continuous inspection at the batching plant by the Engineer.

8. Transit mix trucks delivering concrete to the site shall have full water tanks upon arrival at the site. Any addition of water must be approved by Engineer. Added water must be incorporated by additional mixing of at least 35 revolutions.

G. FORMS

Forms to confine the concrete and shape it to the required lines shall be used wherever necessary. Forms shall be smooth, tongue and groove boards, shiplap or plywood. Forms shall not be removed until permission to do so has been given by the Engineer.

H. TAMPING AND VIBRATING

As concrete is placed in forms or in excavations, it shall be thoroughly settled and compacted throughout the entire depth of the layer which is being consolidated, into a dense, homogeneous mass. Except in special cases where their use is deemed impracticable by the Engineer, the Contractor shall use high-speed internal vibrators of an approved immersion type.

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SECTION VIII-3
TECHNICAL SPECIFICATIONS - PAINTING

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SECTION VIII-3
TECHNICAL SPECIFICATIONS - PAINTING

A. SCOPE

Contractor shall provide all labor, material, and equipment and perform all operations necessary for all painting work specified including the painting of concrete block walls, reinforced concrete walls, concrete slab floors, and exposed iron and steel work including pumping units, electrical switchgear, piping, valves, and miscellaneous metal.

B. MATERIALS

1. Contractor shall deliver all painting materials to the work site in original containers with seals and labels intact. Containers shall not be opened until after they have been inspected by the District.

2. Painting materials for prime and finish coats shall be Kop-Coat, Rust-Oleum, or approved equal.

3. Contractor shall submit a color chart to District, who in turn will verify compliance with specified finish color(s) or in the alternative select finish color(s) where unspecified.

4. Prepared material shall be used without cutting or diluting except as specified herein or as directed by manufacturer and approved by District.

C. WORKMANSHIP

All work shall be done by thoroughly qualified painters in a neat and workmanlike manner. All work which shows carelessness or lack of skill in execution or is defective due to any other cause will be rejected. Said work shall be redone to satisfaction of District prior to acceptance of work.

D. APPLICATION

1. Unless otherwise specified, paint shall be applied by brush or spray. Paint system shall have a dry film thickness of five (5) mils minimum, unless specified otherwise.

2. Paint shall be applied only on thoroughly clean and dry surfaces, unless specified otherwise. Paint shall not be applied in extreme heat, cold, damp, or humid weather or in dust or smoke-laden air.

3. Paint materials shall be kept sealed or covered when not in use. Oily rags or waste shall be kept in covered containers and disposed of at frequent intervals.

4. If brushes are used, they shall have sufficient body and length of bristle to spread paint in a uniform coat. Paint shall be evenly spread and thoroughly brushed out and no residual brush marks shall remain. On surfaces which are inaccessible for brushing, paint shall be applied by spray, sheepskin daubers, or other means as approved by the District.

5. If a spray method is used, the operator shall be thoroughly qualified in use of the equipment required. Air compressors employed in spray painting shall be equipped with suitable trapping devices to keep water, oil, and other impurities from entering air lines. Runs, sags, thin areas,

or other imperfections in paint coat shall be considered as cause for rejection and Contractor shall be required to make all necessary corrections to satisfaction of the District.

6. All exposed iron and steel work together with pumping units, electrical switchgear, piping, valves, and miscellaneous metal shall receive a prime coat(s), shop applied if possible, before installation. After installation, said materials shall be cleaned and all welds, tool marks, and other defects shall receive a touch-up prime coat. Said materials shall then receive two finish coats.

E. PAINT SYSTEMS

1. Previously Uncoated Concrete Block Walls

   a. All surface defects shall be repaired and surfaces shall be cured a minimum of 7 days thereafter. Surfaces shall then be cleaned with steam or with a commercial cleaner to remove all grease, oil, and chemical residues and then thoroughly rinsed with water.

   b. The prime coat, Kop-Coat Block Sealer, Rust-Oleum 5199 White Masonry Filler, or approved equal shall be applied while surfaces are damp.

   c. The finish coat, Kop-Coat 200 HB Epoxy, Rust-Oleum series 9300, or approved equal shall be applied in the color specified and in sufficient quantity to achieve specified thickness.

   d. Minimum drying time between prime coat and finish coat shall be 24 hours.

2. Previously Uncoated Reinforced Concrete Walls

   a. All surface defects shall be repaired and surfaces shall be cured a minimum of 7 days thereafter. Surfaces shall be cleaned with steam or with a commercial cleaner to remove all grease, oil, and chemical residues and then thoroughly rinsed with water.

   b. The prime coat, Kop-Coat Block Sealer, Rust-Oleum series 5199, or approved equal shall be applied while surfaces are damp.

   c. The finish coat, Kop-Coat 200 HB Epoxy, Rust-Oleum series 9300, or approved equal shall be applied in the color specified and in sufficient quantity to achieve specified thickness.

   d. Minimum drying time between prime coat and finish coat will be 24 hours.

3. Previously Coated Concrete or Masonry Walls

   a. Prior to any work, the existing paint shall be tested for compatibility by applying thinner, Kop-Coat 10,000, Rust-Oleum 160, or approved equal to a small test portion of wall. If after 30 minutes the existing paint has begun to lift or wrinkle, manufacturer shall be consulted before performing any work. If the existing paint has not begun to lift or wrinkle, the paint system shall be applied as specified herein.

   b. All surface defects shall be repaired and all surfaces shall be scraped to remove deteriorated coatings and other deleterious materials. Surfaces shall then be cleaned with steam or with a commercial cleaner to remove all grease, oil, and chemical residues.

   c. The prime coat, Kop-Coat Surfacer, Rust-Oleum 9391 Flat White, or approved equal shall be applied to thoroughly dry surfaces.

d. The finish coat, Kop-Coat 200 HB Epoxy, Rust-Oleum series 9300, or approved equal shall be applied in the color specified and in sufficient quantity to achieve specified thickness.

e. Minimum drying time between prime coat and finish coat shall be 24 hours.

4. Previously Uncoated Concrete Slab Floors

a. All surface defects shall be repaired and surfaces shall be cured a minimum of 30 days. Floor shall be cleaned with etching solution, Rust-Oleum Surfa-Etch 108 (Rust-Oleum paint system only) or approved equal, and then thoroughly rinsed with water.

b. The prime coat, Kop-Coat 200 HB Epoxy, Rust-Oleum series 9300, or approved equal shall be applied to thoroughly dry surfaces (4 days minimum drying time) after it has been thinned approximately 25% with thinner, Kop-Coat 10,000, Rust-Oleum 160 or approved equal.

c. The finish coat, Kop-Coat 200 HB Epoxy, Rust-Oleum series 9300, or approved equal with 1-1/2 pounds pumice per gallon, shall be applied in the color specified and in sufficient quantity to achieve specified thickness.

d. Minimum drying time between prime coat and finish coat shall be 16 hours and minimum drying time before normal traffic shall be 24 hours.

5. Previously Coated Concrete Slab Floors

a. Prior to any work, the existing paint shall be tested for compatibility by applying thinner, Kop-Coat 10,000, Rust-Oleum 160, or approved equal to a small test portion of the floor. If after 30 minutes the existing paint has begun to lift or wrinkle, manufacturer shall be consulted before performing any work. If the existing paint has not begun to lift or wrinkle, the paint system shall be applied as specified herein.

b. All surface defects shall be repaired and allowed to dry thoroughly. Floor shall then be cleaned with commercial cleaner.

c. The prime coat, Kop-Coat 200 HB Epoxy, Rust-Oleum series 9300, or approved equal shall be applied to thoroughly dry surfaces.

d. The finish coat, Kop-Coat 200 HB Epoxy, Rust-Oleum series 9300, or approved equal with 1-1/2 pounds pumice per gallon, shall be applied in the color specified and in sufficient quantity to achieve specified thickness.

e. Minimum drying time between prime coat and finish coat shall be 16 hours and minimum drying time before normal traffic shall be 24 hours.

6. Galvanized Metal

a. Surfaces shall be cleaned with commercial cleaner and dried thoroughly. Prior to using Kop-Coat Coating System, treat galvanized metal with Kop-Coat 30 Metal Conditioner or approved equal.

b. The prime coat, Kop-Coat 622 HB Rust Penetrating Primer, Rust-Oleum 3202 Undercoat, or approved equal shall be applied in one very thin coat.

c. The finish coat, Kop-Coat Rustarmor 500 HB, Rust-Oleum New Color Horizons System, or approved equal shall be applied in the color specified in sufficient quantity to achieve specified thickness (two coats minimum).

d. The first finish coat shall be applied between 1 and 24 hours after application of the primer. Minimum drying time between the two finish coats shall be 24 hours.

7. Bare Steel

a. Mill scale and rust shall be removed. Surfaces shall be cleaned with commercial cleaner and dried thoroughly.

b. The first prime coat, Kop-Coat 662 HB Rust Penetrating Primer, Rust-Oleum X-60 Red Bare Metal Primer, or approved equal shall be applied to thoroughly dry surfaces.

c. The second prime coat, Rust-Oleum 960 Zinc Chromate Primer (Rust-Oleum paint system only), shall be applied to thoroughly dry surfaces.

d. The finish coat, Kop-Coat Rustarmor 500 HB, Rust-Oleum New Color Horizons System, or approved equal shall be applied in the color specified and in sufficient quantity to achieve specified thickness (two coats minimum).

e. Minimum drying time between each coat shall be 24 hours.

8. Previously Painted Steel

a. Surfaces shall be cleaned with commercial cleaner and dried thoroughly.

b. All welds, tool marks, and bare spots shall be primed with Kop-Coat 622 HB Rust Penetrating Primer, Rust-Oleum 960 Zinc Chromate Primer, or approved equal.

c. The finish coat, Kop-Coat Rustarmor 500 HB, Rust-Oleum New Color Horizons System, or approved equal shall be applied in the color specified and in sufficient quantity to achieve specified thickness (two coats minimum).

d. Minimum drying time between each coat shall be 24 hours.

F. PROTECTION

1. Contractor shall protect freshly painted surfaces from accumulation of dust, dirt, water, or other foreign materials, whatever the cause or source. Any damaged surfaces shall be wiped clean, sanded, or stripped to a clean, dry condition and repainted to satisfaction of the District.

2. Contractor shall protect all parts of the work site during construction. Tarps and cloths shall be placed where required to protect floors and equipment from spatter and droppings. Electric switchplates, lighting fixtures, nameplates, hardware, glass, vehicles, and all other items not to be painted shall be removed, covered, or otherwise protected during painting operations. Contractor shall clean or otherwise restore any surfaces which are painted as a result of Contractor's failure to provide proper protection and said restoration shall be performed to satisfaction of the District.

G. DATA TO BE SUBMITTED BY THE CONTRACTOR

Contractor shall submit a material list for all materials required for painting work and said list shall include manufacturer's name, designation, description, color charts, and related data. Contractor shall also submit appropriate catalog data including applicable material specifications. Contractor shall furnish five (5) copies of material list and two (2) copies of catalog data to the District and obtain approval therefore before beginning construction.

SECTION VIII-4
TECHNICAL SPECIFICATIONS - PAVING

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SECTION VIII-4
TECHNICAL SPECIFICATIONS - PAVING

A. SCOPE

1. General - Contractor shall furnish all labor, materials, and equipment and perform all operations necessary for construction of pavement surfacing and resurfacing in all areas of construction as specified by the District or as shown by the Drawings. Drawings shall consist of construction drawings, standard drawings, and clarifying diagrams or sketches.

   Whenever pavement surfacing or resurfacing is to be constructed in rights-of-way not under jurisdiction of the District (public highways, thoroughfares, streets, etc), it shall be constructed in accordance with permits issued by the agency having jurisdiction (State, County).

   Whenever pavement surfacing or resurfacing is to be constructed in rights-of-way over which the District has jurisdiction (pumping plants, reservoirs, service yards, access roads, etc), it shall be constructed in accordance with the specifications.

   The Standard Specifications shall augment, not supersede, these specifications. As used herein, the Standard Specifications shall not apply to measurement, payment, schedule, delays, or extra work.

B. NEW PAVEMENT SURFACING

New pavement surfacing shall be asphalt concrete or Portland cement concrete placed on a prepared surface in accordance with the specifications and in conformance with the lines, grades, and dimensions as specified in the Drawings.

1. Subgrade Preparation - Subgrade shall be brought to proper grade, prepared, and compacted in conformance with the requirements of Subsection 301-1 of the Standard Specifications. All organic material shall be removed and discarded at legal disposal site(s), at Contractor's expense. The top 12 inches of such subgrade material shall be scarified, cultivated and then compacted to not less than 95 percent relative compaction (ASTM D1557).

2. Aggregate Base

   a. General - Aggregate base material shall be furnished, placed, and compacted at the locations and thickness as specified in the Contract Documents.

   b. Materials - Aggregate base material shall consist of crushed aggregate base conforming to requirements of Subsection 200-2.2 of the Standard Specifications.

   c. Placement of Aggregate Base - Aggregate base material shall be spread and compacted in conformance with the requirements of Subsection 301-2.3 of the Standard Specifications. Aggregate base material shall be compacted to a relative compaction of not less than 95 percent (ASTM D1557).

3. Asphalt Concrete Pavement

a. General - Asphalt concrete pavement shall be furnished, placed, and compacted at the locations and thicknesses specified.

b. Materials

i) Asphalt - Asphalt to be mixed with mineral aggregate shall conform to Subsection 203-6.2.1 of the Standard Specifications. The viscosity grade shall be AR-4000 unless specified otherwise.

ii) Aggregate - Aggregate shall conform to the requirements in Subsection 203-6.2.2 of the Standard Specifications. Course aggregate shall be crushed rock.

The grading of combined aggregates and percentage asphalt shall be in accordance with Subsection 203-6.3 of the Standard Specifications. Unless otherwise specified the following asphalt concrete mixtures shall be used:

All asphalt concrete except overlays shall be	C1-AR-4000
Overlays (2" maximum, leveling courses and overlaps)	DI-AR-4000

c. Placement of Asphalt Concrete

i) General - All construction methods shall conform to the requirements of Subsection 302-5 of the Standard Specifications. Along all pavement edges which will not abut existing concrete paving, building foundations, curbs, gutters, or other similar structures, a firmly staked 2 inch x 4 inch redwood header shall be placed unless specified otherwise.

ii) Weed Killer - Weed killer, "SPIKE" (manufactured by Dow Elanco) or equal shall be applied to the area to be paved at the rate of 100 gallons per 10,000 square feet. The mixture applied shall consist of 1 pound of chemical per 100 gallons of water or per manufacturer's recommendations. Contractor shall obtain a permit to use "SPIKE" weed killer prior to its application.

iii) Prime Coat - A prime coat consisting of grade SC-250 liquid asphalt shall be applied at a rate between 0.10 and 0.25 gallons per square yard. Grade SC-70 liquid asphalt may be used when approved by the District. Unless otherwise specified prime coat shall be required on all aggregate base material or untreated subgrade on which asphalt concrete pavement is to be directly placed. The prime coat shall be allowed to cure 24 hours and any excessively oily areas shall be blotted with sand in preparation for application of asphalt concrete.

iv) Tack Coat - A tack coat shall be required at all joints, overlays and overlaps. Tack coat shall conform to the requirements of Subsection 302-5.4 of the Standard Specifications and shall be Grade SS-1h emulsified asphalt. Tack coat shall be applied at approximate rates of 0.05 gallon per square yard for leveling courses and overlays, and 0.10 gallon per square yard for asphalt concrete roll berms and dikes.

v) Geotextile Fabric - Geotextile fabric shall conform to the requirements in Subsections 213 and 302-7 of the Standard Specifications. Geotextile fabric shall be placed such

that wrinkles large enough to cause laps do not occur. Geotextile fabric shall be placed in accordance with manufacturer's recommendations.

vi) Fog Seal Coat - A seal coat shall be applied to surface of all asphalt concrete no sooner than 24 hours nor later than 14 days after placement. Seal coat shall consist of an emulsion paving asphalt (Grade SS-1h) conforming to test requirements of Subsection 203-3.2 of the Standard Specifications. Seal coat shall be applied to provide coverage of 0.10 gallons per square yard. Seal coat shall not be applied when weather conditions are unsuitable or when atmospheric temperature is below 40°F. Seal coat shall be applied to only one traffic lane at a time and the entire width of the lane shall be covered in one operation. The cut off of asphaltic emulsion shall be made on building paper or similar suitable material spread over the surface. Traffic shall not be allowed on seal coat until emulsion breaks and seal coat is sticky to the touch and will not be picked up by traveling vehicles.

vii) Rolling - Unless specified otherwise, at least 2 operational steel drum pavement rollers shall be present during all paving operations.

d. Temporary Surfacing - Unless permanent pavement is to be placed immediately, temporary surfacing 2 inches thick, or as otherwise specified, shall be placed and properly maintained as determined by the District until the permanent pavement is placed at locations specified. In any event, in paved streets where immediate access is required to provide for public or private use, Contractor shall place and maintain said temporary pavement. Temporary pavement shall be placed at all locations which are not barricaded and are open to traffic. When Contractor delays the placing or repairing of temporary pavement, District reserves the right to have such pavement placed or repaired at Contractor's expense.

Temporary resurfacing shall conform to Subsection 306-1.5.1 of the Standard Specifications and shall be placed as soon as trench backfill is 95% compacted and shall remain in place until permanent resurfacing is placed. Prior to permanent resurfacing, temporary resurfacing shall be removed and discarded at legal disposal site(s) at Contractor's expense. The cost of furnishing, placing, maintaining, removing and disposing of temporary resurfacing shall be included in the Contractor's bid price for related work if no bid item is specifically called out in the bid sheets.

At the end of each day, temporary striping shall be placed complying with the Drawings and State, or County requirements. Temporary striping shall conform with Section 214 of the Standard Specifications.

e. Permanent Resurfacing - Unless otherwise specified, all permanent resurfacing shall be 1" or greater in thickness than the original surfacing removed. Contractor shall remove all loose pieces of existing pavement prior to placing any pavement. Said pavement shall be replaced in accordance with requirements of the agency (State, County) having jurisdiction over the roadway.

4. Portland Cement Concrete Pavement

a. General - Portland cement concrete shall comply with the Basic Concrete Specifications unless specified otherwise. Construction methods shall comply with Subsection 302-6 of the Standard Specifications. Portland cement concrete shall be furnished and placed at the locations and thicknesses specified.

b. Concrete Design Mix - All concrete shall be 520-C-2500 concrete in accordance with Subsection 201-1.1.2 of the Standard Specifications. Design mix shall be approved by the District prior to purchase or placing of concrete.

c. Reinforcement - Replacement concrete pavement shall have equal or better reinforcement than original concrete pavement. Reinforcement shall be provided whenever and wherever specified. Grade 60 reinforcing steel shall be used unless specified otherwise.

d. Admixtures - Admixtures shall conform to Subsection 201-1.2.4 of the Standard Specifications. Unless otherwise specified, concrete mixtures shall have air entrainment of 5% $\pm$ 1%.

e. Placing Concrete - Concrete shall be placed on an aggregate base sufficiently dampened to ensure that no moisture will be absorbed from the newly placed concrete. Concrete shall be placed on the aggregate base to specified uniform depth.

f. Finishing - Concrete shall be distributed uniformly between forms as soon as it is placed, struck off, and tamped. Tamping shall continue until concrete is thoroughly consolidated into the specified cross-section and sufficient mortar for finishing purposes has been brought to the surface. After tamping, surface of concrete shall be floated and finished. Where the concrete placed is to abut existing concrete surfaces, it shall be finished to match existing concrete as nearly as practical. Vat black or other approved pigments shall be added to concrete to obtain required result. Edges which do not abut existing concrete shall be rounded to a 1/2 inch radius. Upon completion of final finishing, work surface shall be free of any unevenness greater than 1/8 inch when checked with a 10-foot straightedge placed on the surface.

g. Curing - Pavement shall be cured by a pigmented sealing compound method. Curing shall commence as soon as free water leaves the concrete surface but no later than 3 hours following initial placement of concrete upon aggregate base. Curing compound shall be applied to the entire surface by spraying at the rate of one gallon per 200 square feet. All curing compounds shall be approved by the District. Curing compound shall conform to the requirements of Subsection 201-4 of the Standard Specifications.

h. Temporary Striping - At the end of each day, temporary striping shall be placed complying with the Drawings and State, or County requirements. Temporary striping shall conform with Section 214 of the Standard Specifications.

C. PAVEMENT REMOVAL

Pavement removal shall be limited to the maximum trench width as shown by the standard drawings plus a reasonable allowance for sloping sides of trench as required by appropriate safety standards or as otherwise specified.

Pavement shall be removed to clean straight lines. Pavement edges shall be saw cut unless an acceptable alternative method is permitted. Contractor shall discard all removed pavement at legal disposal site(s) at Contractor's expense. Removal and disposal of materials shall conform to the requirements of Subsection 300-1.3 of the Standard Specifications.

D. FINISHING PAVEMENT SURFACES

1. General - Upon completion of all construction operations the entire roadway area or newly surfaced areas shall be finished, cleaned, and left in a neat, presentable condition.

2. Shoulders - The shoulders around paved surfaces shall be trimmed and shaped to produce a smooth uniform cross section. Shoulders shall be finished, graded, and compacted so as to match the finish grade of the newly paved surfacing. Excess earth, debris, or other waste material shall be removed and discarded at legal disposal site(s) at Contractor's expense.

3. Paved Surfaces - All finished paved surfaces shall be clean of all dirt, debris, and foreign material. All manholes, boxes, and covers, shall be raised to finished grade. All curbs, gutters, and cross gutters shall be broomed clean and flushed with water to insure proper drainage. All street signs and striping shall comply with the construction drawings, specifications, and Section 214 of the Standard Specifications.

4. Survey Monuments - Prior to construction, Contractor shall have a registered civil engineer or licensed land surveyor set at least 4 ties for each monument within the construction area. After construction, Contractor shall have the same civil engineer or licensed land surveyor use the aforementioned ties to replace any monuments which have been disturbed or destroyed. Contractor shall file a corner record for all replaced monuments. Contractor shall also place monument wells in compliance with County standards over all monuments in the construction area.

SECTION VIII-5
TECHNICAL SPECIFICATIONS - PIPELINE

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SECTION VIII-5
TECHNICAL SPECIFICATIONS - PIPELINE

Unless otherwise stated, "Pipelines" shall include waterlines, sewer force mains, and gravity sewers.

A. SCOPE

Compliance with these requirements does not waive requirements of other governing public bodies or agencies. Requirements of all other governing public bodies are to be closely adhered to, including all safety orders, encroachment permits, and other federal, state, county and local laws and ordinances.

This specification is applicable to the construction phase of pipeline facilities, and is effective only after the District's design requirements for water & wastewater plans and systems have been complied with and improvement plan drawings have been approved and signed by the District. All pipeline work shall be installed by a Contractor holding either a current and valid Class "A" General Engineering Contractor's License or a Class "C-34" Pipeline Specialty License.

Contractor shall furnish all pipe, fittings, materials, equipment, and labor and perform all operations necessary to construct pipelines and appurtenances as specified by the District as shown by the Drawings. Drawings shall consist of construction drawings, installation drawings, laying drawings, standard drawings, detailed drawings, layout drawings, fabrication drawings, shop drawings, and clarifying diagrams or sketches.

The Work shall consist of all traffic control (including furnishing and installing all barricades, signs, delineators, arrow boards, and flagmen); all utility location and verification (excavating, exposing, and verifying locations, depths, and dimensions of utility facilities); all pavement removal and disposal; all earthwork (including trenching, shoring, dewatering if required, blasting if required, bedding, backfilling, and compacting); furnishing and installing all pipe, fittings, appurtenances, and making all related connections; protecting in place or removing and replacing all existing utilities and public and private improvements; removing and replacing all asphalt and Portland cement concrete pavement; pavement striping and restriping as required; disinfecting and testing all waterlines; testing all sewers; disposing of excess soil and rock material; and restoring all areas and improvements to pre-construction conditions.

Contractor shall, upon completion of pipeline construction and appurtenances required herein, initially operate all components of the Work installed or furnished and installed by him, and make any additional adjustments, corrections, repairs, replacements, and reconstructions necessary to provide the District with complete, correctly operating pipelines and appurtenances.

This paragraph pertains to gravity sewers only: "Standard Specifications" shall mean the Standard Specifications for Public Works Construction, latest edition, as published by Building News, Inc, Los Angeles, California. The Standard Specifications shall augment, not supersede, the "Construction Specifications". As used herein the Standard Specifications shall not apply to measurement, payment, schedule, delays, or extra work.

B. SURVEY MONUMENTS AND CONSTRUCTION STAKES

Contractor shall not disturb or destroy any existing monuments or bench marks. If any survey monuments or bench marks need to be removed and replaced, Contractor shall have all necessary services performed by a registered civil engineer or a licensed land surveyor. If Contractor fails to comply, the District will have said services performed at Contractor's expense.

Before removing any monuments in preparation for construction, Contractor shall have a registered civil engineer or licensed land surveyor set at least four ties for each monument to be removed and replaced; after construction Contractor shall have the same registered civil engineer or licensed land surveyor replace each monument using the aforementioned ties and file a corner record for each replaced monument.

Unless specified otherwise, Contractor shall use construction stakes and cut sheets for pipeline construction and the District will use them for construction inspection. All construction stakes shall be set by a registered civil engineer or licensed land surveyor. The District must approve cut sheets before actual construction. Contractor shall protect all construction stakes set for construction and shall restore any construction stakes destroyed or disturbed. If Contractor fails to comply, the District will have services performed at Contractor's expense.

C. TRAFFIC CONTROL

Contractor shall prepare, submit, and provide traffic control drawings for construction. Said traffic control drawings shall be approved by the District and agencies having jurisdiction over highways, thoroughfares, and streets prior to starting construction.

Traffic control requirements may be modified by the District or said agencies as conditions warrant. Contractor shall modify traffic control as required by the District or said agencies at no additional cost. Throughout the Work, Contractor shall inspect traffic control equipment (signs, barricades, arrowboards, and delineators) and shall maintain same in accordance with said traffic control drawings.

All construction signing, lighting, and barricading shall comply with State of California, Department of Transportation "Manual of Traffic Controls, Warning Signs, Lights, and Devices for Use in Performance of Work Upon Highways", latest edition.

D. UNDERGROUND UTILITIES (SUBSURFACE INSTALLATIONS)

Where underground utility facilities (conductors or conduits for water, gas, sewer, telephone, electric power, cable television, or other utilities) are shown on Construction Drawings, Contractor shall assume that service facilities (services or laterals for water, gas, sewer, telephone, electric power, cable television, or other utilities) extend from each utility facility to each parcel or property whether or not service facilities are shown.

At least two (2) working days but no more than fourteen calendar days before commencing any excavation on the Work, Contractor shall request Underground Service Alert (USA) and non-member companies or utilities to mark or otherwise indicate the locations of their subsurface facilities including, but not limited to, structures including vaults, main conductors or conduits, and service connections or facilities. Contractor shall be responsible for such notification of sub-Contractor's work, or shall require sub-Contractor to assume this responsibility.

Contractor shall comply with applicable laws pertaining to subsurface installations, especially with respect to excavations and permits. Contractor shall specifically comply with applicable provisions of Sections 4215 through 4216.9 of the Government Code. Contractor shall take all actions necessary to maintain a valid inquiry identification number during the Work.

At least ten days in advance, or 1,000 feet minimum ahead of pipeline trenching, and dimensions, Contractor shall excavate, expose, and determine ("pothole") the exact locations, depths, and dimensions of each and every potential interference, including, but not limited to, all facilities shown

specifically (depth and location) on Construction Drawings, or which have been marked by their respective owners.

Upon learning of the existence or location of any utility facility omitted from or shown incorrectly on Construction Drawings, or improperly marked or otherwise indicated, Contractor shall immediately notify the District, providing full details as to depth, location, size, and function. Contractor shall immediately notify utility having jurisdiction over facility.

Contractor shall not interrupt or disturb any utility facility without written permission from the Utility or written order from the District. Where protection is required to ensure integrity of utility facilities located as shown on Construction Drawings or visible to Contractor or marked or otherwise indicated as stated herein, Contractor shall, unless otherwise provided, furnish and place all necessary protection at no cost to the District.

Contractor is advised that the District has no knowledge or information about trench backfill conditions of utility facilities adjacent to or parallel with pipeline being constructed pursuant to these Specifications; therefore, Contractor shall protect against adjacent or parallel trench backfill failure. If adjacent or parallel trench fails, Contractor shall, at no cost to the District, remove and replace said backfill material in accordance with trench backfill requirements herein and remove and replace asphalt concrete pavement and any other improvements damaged in connection therewith.

E. STORAGE OF EQUIPMENT AND MATERIALS

Contractor shall not store equipment or materials on private or public property without written permission from property owner(s) approving such use. Said permission shall be submitted to and approved by the District before Contractor moves equipment or materials onto site.

Contractor shall not park equipment or store materials in public right-of-way except while performing Work. Contractor shall remove equipment from public right-of-way and place it in Contractor's storage or construction yard by the end of each work day. Contractor shall keep materials in Contractor's storage or construction yard until they are needed for the Work.

Storage site or construction yard shall be completely fenced prior to moving any equipment or materials onto site or into yard. Contractor shall control dust in construction yard at all times, from establishing construction yard through construction, and until all Work has been completed and Contractor has moved all equipment, materials, and fencing from site.

F. TRENCH EXCAVATION

1. General - Unless specified otherwise, excavation for pipelines and appurtenances shall be open trench to the depth and in the direction specified by the Construction Drawings. Excavation for trenches shall include removal of all material of any nature as required for installation of pipe, fittings, or appurtenances and shall include blasting, either sloping or shoring, and all necessary dewatering, if any, all at Contractor's expense.

   Contractor is advised that unsuitable earth may be encountered during trenching operations. Where such material is encountered, Contractor shall, at no cost to the District, remove such material, discard it at legal disposal site(s), and thereafter replace it with approved backfill material.

2. Excavation Safety Drawings - Before excavating any earth or soil to a depth of five (5) feet or more in depth, Contractor shall, submit to the District detailed drawings (hereafter referred to as excavation safety drawings) showing design of shoring, bracing, sloping, or other provisions

to be made for worker, individual, or property protection. Said excavation safety drawings shall comply with OSHA Construction Safety Orders (Cal/OSHA or Federal OSHA, whichever is applicable at time of construction) and shall be prepared and certified by a registered civil or structural engineer, engaged by Contractor at no cost to the District, who shall affix his/her signature and seal to each sheet of said excavation safety drawings. Contractor shall not excavate until the District has received and acknowledged properly certified excavation safety drawings. Contractor shall comply with all applicable requirements of Labor Code Section 6705 and, as therein provided, no requirements of that Section shall be construed to impose tort liability on District or District's representatives, including District's Engineer.

3. Trench and Bell Hole Sloping or Shoring - Trenches and bell holes shall be adequately sloped or shored so that earth will not slide or settle into trench, so that all existing improvements and utilities (above and below ground) will be fully protected from damage, and so that workers and individuals are protected from injury. At minimum, Contractor shall keep toe of trench spoil at least 5 feet from top of trench. Contractor shall assume full responsibility for all damages caused by inadequate sloping or shoring. Contractor shall make all necessary repairs or perform all reconstruction at no cost to the District and shall bear all other expenses resulting from such damages.

4. Trench Length, Width, and Depth - Unless specified otherwise, trenches shall be excavated not more than 1,000 feet in advance of pipe laying and open trenches shall be properly barricaded and signed as required for individual and property protection. Trenches shall not be excavated or left open nights, weekends, or holidays.

   Unless specified otherwise, all pipeline trenches within pipe zone shall, wherever possible, have vertical sides and minimum widths as specified on the Standard Drawings, however, trenches shall be sloped or shored as required for worker, individual, and property protection.

   Whenever maximum allowable trench width, as shown by the Drawings, is exceeded for any reason, the District may, at its discretion, require Contractor, at no cost to the District, to cradle pipe (Class B Portland cement concrete) or to provide higher class bedding to support pipe as required to limit load on pipe to allowable supporting strength. The District shall approve method of support prior to its use.

   Trenches shall be excavated to depths specified by or shown on Construction Drawings or as otherwise directed by the District. If trench excavation is carried below grade without direction or permission, Contractor shall, at no cost to the District, refill trench to proper grade with crushed rock (sewers), moist clean sand, sand and gravel, or other suitable material as approved by the District, tamped in place to 90 percent relative compaction minimum. Excess excavated material shall be incorporated in backfill or discarded at legal disposal site(s) by Contractor at no cost to the District.

5. Excavated Materials - All material excavated from trench shall be placed for minimum obstruction to traffic (automobile and pedestrian). Gutters shall be kept clear and other provisions shall be made for street or road drainage. Excess excavated material, including material rejected by the District for use as backfill, shall be discarded at legal disposal site(s) by Contractor at no cost to the District.

   If pipe, fittings, or appurtenances belonging to the District are uncovered or removed during excavation, they shall be salvaged and deposited as directed by the District. If the District determines that certain materials need not be salvaged, said materials shall be discarded at legal disposal site(s) by Contractor at no cost to the District.

6. Blasting - Blasting for excavation will be permitted only with approval of the District and only after proper precautions have been taken for protection of persons and property, provided Contractor has secured all necessary permits. Blasting shall be limited to specific periods as approved by the District. Any damage caused by blasting shall be repaired by Contractor at no cost to the District. Contractor's blasting methods and procedures shall conform with State and local laws and County and municipal ordinances. Contractor shall post signs warning radio equipment operators that blasting operations are in progress and advising that radio transmissions are prohibited during blasting operations.

G. TRENCH BEDDING

1. General - Trenches shall have flat bottoms conforming with grades to which pipe is to be laid. Trench bottoms shall be uniform and provide firm and uniform bearing for installed pipeline. Unless specified or shown otherwise, trenches shall be overexcavated to accommodate crushed rock bedding material having 9 inches minimum thickness between bottom of excavated trench and pipe bell for gravity sewers.

   Pipe shall be laid so that pipe barrel bears evenly on trench bottom or on bedding material. Bell holes shall be excavated in trench bottom and sides as necessary to permit satisfactory construction and inspection of pipe joints.

2. Unsuitable Soil - Where unstable soil consisting of loose, soft, spongy, or organic earth is encountered, it shall be removed from trench bottom to depth determined in field by the District and trench shall be refilled to proper grade with moist clean sand, sand and gravel, or other suitable material as approved by the District, tamped in place to 90 percent relative compaction minimum. Trench bottom shall be graded flat and prepared to provide firm and uniform bearing for pipe or bedding material.

   Where unyielding soil consisting of rock, rocky earth, or cemented earth is encountered, it shall be removed from trench bottom to at least 9 inches below grade, or pipe bell, and trench shall be refilled to proper grade with crushed rock (sewer), moist clean sand, sand and gravel, or other suitable material as approved by the District, tamped in place to 90 percent relative compaction minimum. Trench bottom shall be graded flat and prepared to provide firm and uniform bearing for pipe or bedding material.

   Unless specified otherwise, Contractor shall, at no cost to the District, remove unsuitable soil, replace it with suitable soil, and discard unsuitable soil at legal disposal site(s). Contractor shall not deposit or store unsuitable soil on private or public property without written permission of property owner(s) and without applicable governmental permits pertaining to earthwork, including compaction, and the environment. Before placing any material on private or public property, Contractor shall provide the District with evidence of written permission to do so and shall then obtain the District's written approval for same.

H. TRENCH BACKFILL

1. General - In addition to meeting backfill requirements specified herein, Contractor shall also comply with backfill requirements established through permits issued by jurisdictions (State, County) having control over rights-of-way in which construction is taking place. Whenever the separate requirements conflict with one another, the more stringent shall apply. Backfill shall not commence without prior approval of the District.

   Backfill material shall be either select excavated material, screened or washed if necessary, or commercially processed material. Backfill material shall meet separate specific requirements

for backfill within pipe zone and backfill above pipe zone. Backfill material meeting pipe zone requirements may be used for above pipe zone backfill material but not the reverse.

After sheeting, shoring, or shields have been removed, all backfill material including pipe zone backfill material shall be compacted to 90 percent relative compaction minimum except that the upper 12 inches of backfill material shall be compacted to 95 percent relative compaction minimum, as verified by field compaction tests. Relative compaction shall be based on maximum dry density determined in accordance with ASTM D1557. The District will specify where (number & location) compaction tests are to be taken.

Unless specified otherwise, the District will have all necessary compaction tests performed by soils engineer of its choosing. The Developer will pay for all compaction tests. Contractor shall notify the District when any segment of backfill has been compacted and is ready for compaction testing and the District will then have such tests performed.

Unless determined otherwise, compaction tests will be taken along the pipeline, in the pipe zone, above the pipe zone, and at ground surface or subgrade at 300 foot intervals maximum and along all service runs, fire hydrant runs, laterals and sewer extensions. Contractor shall assist, at no additional cost to the District, soils engineer in taking all compaction tests. Contractor shall furnish all equipment (including shoring), labor, and materials needed for such assistance. Compaction testing shall be completed and accepted by the District prior to hydrostatic and leakage testing of pipelines and appurtenances.

Contractor is advised that rock or unacceptable trench backfill material may be encountered during trenching operations. Where such material is encountered, Contractor shall, at no additional cost to District, furnish and install suitable bedding and backfill material in accordance with the Contract Documents.

Within highways, thoroughfares, and streets, Contractor shall, at the end of each work day and by 5:00 PM, unless permitted otherwise, completely backfill trenches with material sufficiently compacted to support traffic. Contractor shall then place 2 inch minimum thickness temporary asphalt concrete pavement over trench; it shall be compacted, rolled smooth with a steel wheeled pavement roller and placed flush with adjacent pavement. Contractor shall maintain and repair backfilled and paved areas to prevent potholes or pavement failures. Highways, thoroughfares, and streets shall be completely open to traffic at night (after 5:00 PM), on weekends, on holidays, and whenever Contractor is not actively working in specific area.

Contractor shall not excavate trenches or install pipe in highways, thoroughfares, and streets on weekends and holidays. Holidays include union holidays, District holidays, and County and municipal holidays. Contractor shall not leave any excavation open overnight or on weekends or holidays.

2. Backfill Within Pipe Zone - Backfill for gravity sewers within pipe zone shall be as shown on the Drawings for the trench load factor specified and as specified herein.

Unless specified otherwise, 3/4 inch crushed rock (for gravity sewers) and select excavated material, screened or washed if necessary, shall be used and it shall consist of moist clean, loose earth, sand, or gravel (1 inch maximum size) free of clay and silt as well as brush, roots, and organic substances. Pipe zone backfill for PVC pipe shall be clean imported sand (minimum sand equivalent of 50 and maximum 6% fines).

Initial backfilling shall be performed as soon as possible after pipe has been laid. 3/4 inch crushed rock (for gravity sewers), loose, moist backfill material, or approved backfill material

shall be placed in trench simultaneously on each side of pipe to a depth not greater than pipe centerline (springline) or 12 inches (loose measurement), whichever is less, and it shall then be tamped under pipe so that all voids are eliminated and material is compacted to 90 percent relative compaction minimum.

Subsequent backfilling shall be performed immediately following initial backfilling. Crushed rock (for gravity sewers), loose, moist backfill material, or approved backfill material shall continue to be placed in trench simultaneously on each side of pipe in lifts not exceeding 12 inches in thickness (loose measurement), with each lift being tamped, until the pipe has been covered by at least 12 inches of well compacted material. Alternatively, backfill material may be densified by water settlement until the pipe has been covered by at least 12 inches of well densified material. Backfilled material shall be tamped or settled to 90 percent relative compaction minimum.

Regardless of compaction or densification technique, care in backfilling shall be exercised to avoid any damage to pipe, fittings, and appurtenances, to avoid any damage to persons or property, and to achieve relative compaction of backfilled material of at least 90 percent minimum.

3. Backfill Above Pipe Zone - Backfill material shall consist of moist clean loose earth, sand, gravel, or rock free of clay and silt as well as brush, roots, and organic substances. From the top of selected backfill in the pipe zone to within 1 foot of ground surface or pavement subgrade, backfill material shall be free of material exceeding 8 inches in greatest dimension. It shall also be compacted to 90 percent relative compaction minimum. Within 1 foot of ground surface or pavement subgrade, backfill material shall be free of material exceeding 2 inches in greatest dimension and it shall be compacted to 95 percent relative compaction minimum. Rocks shall be mixed with suitable soil to eliminate voids; they shall not be nested. Backfill material shall be well graded.

   Backfill material shall be placed in lifts not exceeding 12 inches in thickness (loose measurement) and each lift shall be compacted to 90 percent relative compaction minimum by hand tampers, pneumatic tampers, or mechanical compactors except that the upper 12 inches of backfill shall be compacted with mechanical compactors or compaction equipment, excluding stompers, to 95 percent relative compaction. Alternatively and except for the upper 12 inches of backfill, sandy, granular soils may be densified by water settlement. Trench to be backfilled by water settlement shall be diked at suitable intervals not exceeding 100 feet. Impounded water shall be of sufficient depth so that earth pushed or shoveled into trench will at all times fall into water, becoming completely saturated. If necessary, jetting may augment flooding. Backfill densified by water settlement shall be densified to 90 percent relative compaction minimum. Contractor shall use mechanical compactors or compaction equipment, excluding stompers, to achieve required compaction if required densification is not achieved by water settlement.

4. Imported Backfill Material - Whenever excavated material is unsuitable as backfill material and Contractor is unable to process or screen such material for backfill material or whenever excavated material is insufficient to accomplish backfill and Contractor must secure additional material, Contractor shall import such material and the material and its source shall be approved by the District.

   Unless specified otherwise, imported backfill material shall be commercially processed and it shall be selected, clean, loose earth, sand, or gravel (1 inch maximum size). Said material shall be granular and it shall be free of clay, silt, and fine sand. It shall be suitable for compaction with minimum effort.

5. Backfill Completion - Where pavement is not required, trench backfill shall be brought to grade of existing surface and dressed to provide firm, stable, and even surface without ruts or irregularities. It shall conform with grades of existing surface. Where pavement is required, trench backfill shall be brought to subgrade for pavement structure. Pavement shall then be placed in accordance with paving specifications.

I. PIPELINES AND APPURTENANCES

1. Construction Materials - Contractor shall furnish only approved materials as listed in the District's approved materials list. All materials shall be new and of the best quality for their intended use. All like materials shall be of one manufacture for any particular project.

   Contractor shall, in addition to furnishing other data herein required, submit three signed and dated copies of the shop drawings, cut sheets, specification data for materials, and list of materials to be used in pipeline and appurtenance construction including but not limited to pipeline installations (water, force main, and gravity sewer), pipeline valve installations, air valve installations, blowoff installations, service installations, fire hydrant installations, manhole installations, sewer lateral installations, cleanout installations, and related appurtenances for Districts approval.

2. Pipeline Construction

   a. Pipelines and Appurtenances - Pipelines and appurtenances shall be constructed in accordance with these Specifications and the Drawings and as specified by the District.

   b. Valves and Appurtenances - Waterline valves at pipeline intersections shall be connected directly to pipeline intersection fittings (cross or tee) and, unless specified otherwise. All water mainline or side outlet valves shall be located 3 feet minimum from any curb face. Pipeline valves shall not be placed under curb or gutter or in parkway unless approved by the District.

      All appurtenances, including but not limited to air valve installations, blowoff installations, and related facilities, such as fire hydrants, fire services, and water services, shall not be installed within 5 feet of curb returns, curb depressions, and driveway approaches, or in inaccessible locations or locations where interferences may restrict facility operation, unless permitted otherwise by the District.

      Unless specified otherwise, air valve installations shall be constructed at all pipeline high spots and blowoff installations shall be constructed at all pipeline low spots. Contractor shall construct, at no additional cost to the District, air valve installations and blowoff installations in addition to those specified, if necessary to accommodate the work and schedule.

   c. Pipeline Length - All pipeline lengths noted by the Construction Drawings or otherwise specified or referenced shall mean net horizontal constructed lengths and said lengths shall extend through all fittings and appurtenances including manholes, bends, outlets, tees, flanges, and valves. Contractor shall provide all pipe necessary to accommodate any vertical alignment of the pipeline and said pipe shall be represented by the net horizontal constructed length.

   d. Pipeline Alignment - All pipelines shall be constructed with no basic variation in horizontal alignment as shown by the Drawings or as specified by the District. Pipelines shall be

constructed parallel with centerlines of streets or rights-of-way and appurtenances shall be constructed perpendicular thereto unless the Construction Drawings specify otherwise. Pipelines may be constructed by the use of pulled joints, short joints, bevels, bends, and elbows, provided pipelines are constructed in conformance with the drawings.

In all non-critical areas and subject to the District's approval, pipelines (except gravity sewers) may be constructed at variance with vertical alignment as shown by the Construction Drawings by the use of pulled joints, short joints, bevels, bends, and elbows provided pipelines are constructed as specified at pipeline connections and underground interferences, and where pipeline cover is limited. The District will not approve any variation in vertical alignment until it has determined that proposed alignment is proper and modifications are in order.

e. Pipeline Tolerances - With regard to vertical alignment, waterlines and force mains shall be constructed so that actual flow line elevations, measured at pipe joints, are within 0.1 foot of design flow line elevations. Waterlines and force mains, when installed, shall have continuous slope upgrade or downgrade, corresponding with design slope, without any high spots.

With regard to vertical alignment, gravity sewers shall be constructed so that actual flow line elevations, measured at pipe joints, are within 0.02 foot of design flow line elevations. Gravity sewers, when installed, shall have continuous slope upgrade corresponding with design slope.

With regard to horizontal alignment, pipelines shall be constructed so that actual pipeline centerlines, measured at pipe joints, are within 0.1 foot of design pipeline centerlines. Pipelines, when installed, shall closely follow specified horizontal alignment.

Pipeline construction shall conform with Construction Drawings and layout, shop, fabrication, installation, or laying drawings (design drawings which show flow line elevations and pipeline centerlines) in accordance with the above specified tolerances. Contractor shall make or assist the District in making all necessary measurements, as determined by the District, to confirm or verify compliance with construction tolerances.

f. Pipeline Cover - Pipeline cover as shown by the Construction Drawings is hereby defined as design cover over pipeline. If field conditions determined during construction staking show that pipe grade changes are required to provide design cover, Contractor shall, at no cost to the District, make required changes in pipeline grade and construct pipeline accordingly.

Pipeline cover from top of pipe to ground surface over pipeline shall not be less than 42 inches for waterlines and force mains, and 84 inches for gravity sewers, unless otherwise specified. Where future ground surface elevation over pipeline has been established and where actual ground surface is greater, pipeline cover shall be referenced to future (established) ground surface elevation, not actual ground surface elevation.

J. PIPE MATERIALS AND PIPE INSTALLATION

1. Polyvinyl Chloride (PVC) Pipe (Waterlines and Force Mains)

a. Scope - PVC pipe furnished and installed under these Specifications shall conform to applicable portions of AWWA C900, as modified herein, by the Construction Drawings, or by District.

All pipe furnished shall be manufactured by an organization which has had not less than 5 years successful experience in the manufacture of the type of pipe specified. District shall approve manufacturer's product before its use.

b. Data to be Submitted by Contractor - Contractor shall furnish three (3) copies of an Affidavit of Compliance in accordance with Section 1.4, AWWA C900. Contractor shall also furnish three (3) certified copies of test reports containing results of all physical and chemical tests on pipe and couplings showing compliance with AWWA C900 as modified herein.

Wherever specified by the Construction Drawings or by District, Contractor shall prepare detailed installation or laying drawings showing pipe, fittings, appurtenances, station and elevation for each fitting, and each change in alignment or slope. Contractor shall submit the detailed installation or laying drawings to District for approval in all cases in time sufficient to allow review and approval as hereinafter specified and to accommodate the Contractor's construction schedule.

Installation or laying drawings shall be submitted in triplicate. District will return one set of drawings to Contractor within 15 days marked either "Accepted", "Rejected", "Revise and Resubmit", "Submit Specified Item", or "Furnish as Corrected". In the last case, all revisions will be clearly shown on the returned set of drawings which shall be considered the approved drawings and only drawings or prints so corrected shall be used for installation. Contractor shall furnish District five (5) sets of all approved drawings.

c. Pipe and Couplings - All pipe and couplings furnished shall conform to AWWA C900 and the following additional requirements:

i) Unless otherwise specified or shown on Drawings, AWWA C900 pipe and couplings shall be minimum Class 150 (DR-18). PVC pipe shall have same dimensions as ductile iron pipe and pipe bell and pipe spigot shall have same thickness as pipe barrel.

ii) Standard lengths of pipe shall have nominal length of 20 feet, 0 inches, plus or minus 1 inch. Standard lengths of pipe shall be furnished with integral bells and spigots and with rubber gaskets. Couplings may be used for closures and curved alignments where permitted.

iii) Pipe shall have sufficient strength to withstand an internal hydrostatic pressure of four times rated operating pressure (5 second duration) for its class per AWWA C900.

d. Fittings - All fittings shall be Class 350 ductile iron unless otherwise specified or shown on the Drawings.

Ductile iron fittings shall conform with AWWA C110, C111, and C153 (ANSI A21.10, A21.11, and A21.53, respectively). Unless specified otherwise, fittings shall be push-on joint and comply with AWWA C111 (ANSI A21.11).

Fittings shall have an asphaltic outside coating in accordance with AWWA C110 or C153 (ANSI A21.10 or A21.53), and cement mortar lining in accordance with AWWA C104 (ANSI A21.4). Fittings shall have standard lining thickness and shall be seal coated with

asphaltic material or other material. The lining process must produce a dense, compacted lining that shall be bonded to the interior of the fitting and have a smooth surface.

This paragraph for force mains only: Where PVC fittings are specified on the Drawings or permitted as an alternative as specified on the Drawings, fittings shall be in compliance with AWWA C907 (4" through 8"). Affidavits and testing results shall be submitted as required for PVC pipe.

Where "Special lining" is specified, it shall be provided in accordance with Section P, herein.

e. Testing - All pipe and couplings furnished shall be tested in the United States in accordance with Section 3.3, AWWA C900.

f. Manufacturing Inspection - District shall at all times have the right to inspect all work and materials in the course of manufacture. Manufacturer shall furnish District reasonable facility for obtaining such information as may desire regarding the progress and manner of the work and the character and quality of materials used.

g. Loading and Transporting - After the pipe has been tested in accordance with Section e above, it shall be loaded on rubber-tired vehicles, adequately supported and chocked to prevent any damage during transportation, and delivered to jobsite. All pipe and couplings (AWWA C900) shall be unloaded and stored in accordance with AWWA manual M23. During the unloading and stringing operations, the pipe shall be moved in such a manner as to prevent injury to the pipe and/or couplings. Unloading shall be accomplished in a workmanlike manner as directed by the manufacturer. Under no circumstances are pipe sections to be dropped or bumped in handling.

h. Defective or Damaged Material - The pipe and couplings shall be carefully inspected for defects. Any pipe, coupling, sleeve, or rubber ring found to be defective in workmanship or material or so damaged as to make repair and use impossible shall be rejected and removed from the jobsite.

In the event that pipe is damaged, the damaged portion may be removed, as approved by District, and discarded. Remaining sound portions may be used with ductile iron fittings or with couplings. Contractor shall be responsible for any and all damage to material and shall bear all expense of repairing or replacing same. Contractor shall take proper precautions to assure that the rubber gaskets are protected from oxidation or undue deterioration.

i. Installation - Pipe manufacturer, fitting manufacturer, and material supplier, in addition to the District and the District's representative, shall have access to the Work during installation. Contractor shall use assistance provided by either manufacturer or supplier where required for proper installation of pipe, fittings, or materials; however, Contractor shall limit role of either manufacturer or supplier to advisory service.

All pipe shall be laid true to line and grade and at the locations as shown by the Construction Drawings or as specified. Pipe shall be installed in accordance with AWWA Manual M23, applicable provisions of manufacturers installation guides (latest) and manufacturer's directions. The District shall approve manufacturer's product before its use. Contractor shall furnish the District with two manufacturer's installation guides for use during construction. Bell ends shall be placed uphill unless otherwise specified.

Unless otherwise specified, backfill within the pipe zone shall have a minimum sand equivalent of 50 and a maximum percent fines of 6 as determined by ASTM D2419.

After pipe has been set in trench, exterior of spigot and interior of bell shall be thoroughly cleaned. Lubricant recommended by the pipe manufacturer and as approved by the District shall be applied to the rubber gasket. Lubricant shall be water soluble, nontoxic, shall impart no objectionable taste or odor to the water, shall have no deteriorating effects on the rubber gaskets, and shall not support growth of bacteria. Excess lubricant shall be removed. Pipe ends shall be aligned, and spigot shall be pulled into bell with come-along devices, or hoists with chains and slings, unless permitted otherwise. If either pry bar or the backhoe bucket method is permitted, a timber header shall be placed between the pipe and the pry bar or backhoe bucket before the spigot is pushed into bell.

Curved alignments by use of longitudinal bending is prohibited; however, curved alignments by use of pulled joints will be permitted. The maximum joint deflection shall not exceed that recommended by the manufacturer. For purposes of reducing angular deflections at pipe joints and for closure sections, Contractor may install pipe sections of less than standard length. Where closing sections are required, Contractor shall make all necessary measurements to select appropriate pipe lengths and closure couplings for correct installation.

Whenever cutting of pipe is required, it shall be done with a special cutting tool specifically made for cutting and machining PVC pipe. Cut ends and rough edges shall be ground smooth and beveled for push-on joints.

Pipe locator wire (No. 14 AWS insulated copper) shall be installed in trench with pipe where shown by the Standard Drawings unless it is specifically deleted by the Construction Drawings or by the District. It shall be held in place by looping the pipe at 20 foot intervals maximum, or as specified.

As work progresses, a pipe cleaning tool as approved by District shall be drawn through the pipe to remove dirt, rocks, or other foreign material. At the end of each day's work, all openings in the pipeline shall be plugged with watertight expandable plugs or approved equal.

Unless specified otherwise, PVC pipe shall not be encased with concrete. If protection is necessary it shall be accomplished by the use of conductor casing(s) as approved by District.

2. Polyvinyl Chloride (PVC) Pipe – Provisional Approval (Gravity Sewers)

   a. Scope – The District has granted provisional approval (on a case-by-case basis) for the furnishing and installation of PVC gravity sewers for use within the District.

      PVC sewer pipe and fittings are only to be used for gravity sewers 12 inches in diameter or less. All gravity sewer pipe and fittings shall be green in color. All sewer pipe larger than 12 inches shall be extra strength VCP.

      These specifications are intended to be used in conjunction with the "Standard Specifications", and all requirements of applicable Codes and Regulations from the State of California Department of Health Services regarding the construction phase of sanitary sewerage systems. The District should be consulted for any modifications or deviations from these Specifications.

Certain work in connection with tying into existing sewers and manholes may require the temporary handling of sewage either by temporary bypass lines, pumping, bulk heading at low flows, or other means, to be approved by the District. Sewage so diverted shall be handled in a manner so as not to create a public nuisance or health hazard. Bypassing of untreated or partially treated wastewater to surface waters, drainage courses, or storm drains will not be permitted.

All pipe furnished shall be manufactured by an organization which has had not less than 5 years successful experience in the manufacture of the type of pipe specified. The District shall approve manufacturer's product before its use.

b. Data to be Submitted by Contractor - Contractor shall furnish three (3) copies of an Affidavit of Compliance in accordance with the applicable ASTM D3034. Contractor shall also furnish three (3) certified copies of test reports containing results of all physical and chemical tests on pipe and couplings showing compliance with ASTM D3034 as modified herein.

Wherever specified by the Construction Drawings or by District, Contractor shall prepare detailed installation or laying drawings showing pipe, fittings, appurtenances, station and elevation for each fitting, and each change in alignment or slope. Contractor shall submit the detailed installation or laying drawings to District for approval in all cases in time sufficient to allow review and approval as hereinafter specified and to accommodate the Contractor's construction schedule.

Installation or laying drawings shall be submitted in triplicate. District will return one set of drawings to Contractor within 15 days marked either "Accepted", "Rejected", "Revise and Resubmit", "Submit Specified Item", or "Furnish as Corrected". In the last case, all revisions will be clearly shown on the returned set of drawings which shall be considered the approved drawings and only drawings or prints so corrected shall be used for installation. Contractor shall furnish District five (5) sets of all approved drawings.

c. Pipe and Couplings – All material shall be new and conform to, or exceed, the standard for each type of pipe, fitting, etc. as required by this specification. PVC sewer pipe shall conform to the requirements of ASTM D3034, SDR 35. The minimum pipe stiffness for PVC sewer pipe shall be 46 psi in accordance with ASTM D2412. All pipe, fittings, and couplings shall be clearly marked at 5 foot intervals (maximum spacing) with the following:

i) Nominal pipe diameter

ii) PVC cell classification

iii) Company, plant, shift, ASTM, SDR, and date designation

iv) Service designation or legend

d. Joints - PVC pipe shall be push-on joints with integral bells conforming to ASTM D3212 with an elastomeric gasket conforming to ASTM F477. The gasket shall be factory installed in the bell end of the pipe. All pipe shall have a home mark on the spigot end to indicate proper penetration when the joint is made. The socket and spigot configurations for the fittings and couplings shall be compatible to those used for the pipe.

e. Fittings - Shall be PVC sewer fittings conforming to the requirements of ASTM D3034, SDR 35. Fittings shall include branches of every type and stoppers. These fittings shall

conform to these specifications and shall equal or exceed the pipe in quality. Branches shall be of the type called for on the plan and standard drawings and shall be securely and completely fastened to the barrel of the pipe in the process of manufacture.

Pipe Stoppers shall be strong enough to sustain all applied earth and hydrostatic tests or air testing. Stoppers shall be capable, unbraced, of remaining in place when subjected to an air pressure of up to 5 psi.

f. Testing – shall be performed on PVC sewer pipe and fittings conforming to ASTM D3034. A manufacturer's certification shall be furnished to the District certifying that the material was manufactured, sampled, tested, and inspected in accordance with ASTM D3034 and the material meets all requirements of ASTM D3034. The certification shall include all of the test data.

g. Manufacturing Inspection – The District shall at all times have the right to inspect all work and materials in the course of manufacture. Manufacturer shall furnish District reasonable facility for obtaining such information as may desire regarding the progress and manner of the work and the character and quality of materials used.

h. Loading and Transporting - After the pipe has been tested in accordance with Section f above, it shall be loaded on rubber-tired vehicles, adequately supported and chocked to prevent any damage during transportation, and delivered to jobsite. All pipe and fittings shall be unloaded and stored in accordance with AWWA manual M23. During the unloading and stringing operations, the pipe shall be moved in such a manner as to prevent injury to the pipe and/or fittings. Unloading shall be accomplished in a workmanlike manner as directed by the manufacturer. Under no circumstances are pipe sections to be dropped or bumped in handling.

i. Defective or Damaged Material - The pipe and fittings shall be carefully inspected for defects. Any pipe, coupling, sleeve, or rubber ring found to be defective in workmanship or material or so damaged as to make repair and use impossible shall be rejected and removed from the jobsite.

The Contractor shall be responsible for any and all damage to material and shall bear all expense of repairing and/or replacing same. Contractor shall take proper precautions to assure that the rubber gaskets are protected from oxidation or undue deterioration.

j. Installation – Installation of all sewer pipeline materials required for the construction of sewer collection systems shall be in accordance with all provisions of these specifications including ASTM D2321 (Underground Installation of Thermoplastic Pipe for Sewers and other gravity-flow applications), the Technical Concrete Specification (Section VIII-2), the District's Standard Drawings (Section IX), the Approved Materials List (Section VII), and in accordance with the manufacturers specifications and applicable published standards unless modified herein.

The District will provide an Inspector for the inspection of sewer pipeline construction work. The Inspector will check for compliance with District requirements for sewer pipeline construction, but will not have the responsibility for checking survey work (horizontal and vertical control) nor installed quantities of pipe. The District's Inspector is not a Safety Inspector and is not responsible for enforcing compliance with OSHA or other safety requirements. Jobsite safety is not the District's responsibility and the District does not accept any liability connected with the construction.

Installation requiring connection to existing District facilities must be done as shown on the District's Standard Drawings and under continuous inspection by the District. Any existing sewer pipeline damaged by such work will be completely removed and replaced as directed by the District's Inspector.

Pipe laying shall proceed upgrade with the spigot ends of bell-and spigot pipe pointing in the direction of flow. Each pipe shall be laid true to line and grade and in such a manner as to form a close concentric joint with the adjoining pipe. Care shall be taken by the Contractor to ensure safe installation of the pipe in an undamaged condition. Pipe which is damaged after installation shall be removed and replaced.

At all times when the work of installing sewer pipeline is not in progress, all openings into the pipe and the ends of the pipe in the trench shall be kept tightly closed to prevent entrance of animals and foreign materials. The Contractor shall take all necessary precautions to prevent the pipe from floating due to water entering the trench from any source. The Contractor shall assume full responsibility for any damage due to any cause and shall restore and replace the pipe to its specified condition and grade if it is damaged during construction. The pipe sections shall be installed in the trench to true alignment and grade in accordance with the plans and these specifications. Exceptional care shall be taken in placing the pipe and making the field joint. All pipe shall be installed without break, up-grade from structure to structure, with the socket (bell) ends of the pipe up-grade.

Pipe shall be installed true to line and grade with a uniform bearing under the full length of the barrel of the pipe. Suitable excavation shall be made to receive the socket (bell) of each pipe section. All adjustments to line and grade must be made by scraping away or tamping earth under the body of the pipe, and not by wedging or blocking up the spigot. Pipe shall be installed only in dry trenches.

Unless waived by the District, metallic locator tape 2 inches wide shall be placed in the trenches of all mains and laterals for future pipeline locating. The tape shall be placed at least 6 feet above the pipe but no deeper than 4 feet below final grade.

Where sewer lines are placed crossing above existing waterlines, C900 Class 200 PVC pipe shall be used 10 feet on each side of the waterline in accordance with the State of California Department of Health Services' guidelines. No joints shall be allowed in the C900 Class 200 PVC pipe.

PVC sewers shall be installed with bedding and backfill as specified herein and as shown on the drawings for the trench load factor specified.

Before final acceptance of sewer facilities or prior to putting any sewer on line, all sewer facilities shall be flushed with water and "balled" or cleaned by acceptable method prior to final air testing to ensure that all dirt, debris, and obstructions are removed from the system. After cleaning and backfill compaction, the Contractor shall provide a video inspection of the sewer lines by a District approved firm experienced in performing sewer system services. The video inspection shall be performed in the presence of the Inspector. Complete videotapes and a detailed report of the inspection shall be furnished to the District.

3. Ductile Iron Pipe (Waterlines and Force Mains)

a. Scope - Ductile iron pipe and fittings shall conform with applicable provisions of AWWA C104, C105, C110, C111, C115, C150, C151, and C153, as modified herein, by the Drawings, or by the District.

All ductile iron pipe shall be manufactured by organizations which have had not less than ten years successful experience in the manufacture of the type of pipe specified. The District shall approve manufacturer's product before its use.

b. Data to be Submitted by Contractor - Contractor shall furnish three copies of an Affidavit of Compliance in accordance with Section 51-5, AWWA C151. Contractor shall also furnish certifications, three copies each, of the following:

i) Material Certification

1) Grade of iron (chemical requirements)
2) Flanges
3) Nuts and bolts
4) Flange gaskets
5) Rubber Gaskets

ii) Manufacturing Certification

1) Hydrostatic Test Reports
2) Tensile Test Reports
3) Impact Test Reports

Unless specified otherwise, Contractor shall furnish detailed installation or laying drawings showing pipe, fittings, appurtenances, station, and elevation for each fitting, and each change in alignment or slope. Contractor shall submit the installation or laying drawings to the District for acceptance in all cases in time sufficient to allow review and acceptance as hereinafter specified and to accommodate the Contractor's construction schedule.

Installation or laying drawings shall be submitted in triplicate. District will return one (1) set of drawings to Contractor within fifteen (15) days marked either "Accepted", "Rejected", "Revise and Resubmit", "Submit Specified Item", or "Furnish as Corrected". In the last case, all revisions will be clearly shown on the returned set of drawings which shall be considered the accepted drawings and only drawings or prints so corrected shall be used for installation. Contractor shall furnish District five (5) sets of all accepted drawings.

c. Pipe - All pipe shall be ductile iron and shall conform with AWWA C151 (ANSI A21.5, and applicable portions of ASTM A536, Grade 60-42-10), as modified herein by the Drawings, or by the District.

i) Pipe, including standard, random, and special short lengths, shall be Class 150 minimum and, unless specified otherwise, shall have push on joints. Minimum pipe wall thickness shall be as noted by the Construction Drawings or specified by the District; it shall not be less than noted by the Standard Drawings. Pipe wall thickness shall be increased if necessary to accommodate threads or grooves or if required for extremely shallow (less than 2.5 feet) or excessively deep (more than 14 feet) pipeline cover. 90 percent of all pipe of any specific class and size, excluding

special short lengths, shall be furnished in standard lengths. The remaining 10 percent may be furnished in random lengths.

ii) Standard lengths shall have nominal lengths of 18 feet up to 36 inches in diameter and 20 feet above 36 inches in diameter, plus or minus 1 inch. Random lengths of pipe may be up to 2 feet shorter than standard lengths. Special short lengths shall only be furnished where needed to accommodate specified fittings.

iii) Waterline pipe shall have an interior cement mortar lining of double thickness in accordance with AWWA C104 (ANSI A21.4), except that interior mortar lining shall not be asphalt seal coated. Force main pipe shall have an interior cement lining of standard thickness in accordance with AWWA C104 (ANSI A21.4). Said lining shall be full thickness throughout pipe except for bell which shall be cleaned and lightly sprayed or brushed with an asphaltic or bituminous coating in accordance with AWWA C151 (ANSI A21.51). The interior cement mortar lining shall be moisture cured for at least two days before shipment. To prevent moisture loss during the curing period, ends of pipe shall be kept closed with plastic caps or covers which shall remain in place until installation.

Steam curing may be substituted for moisture curing, providing one hour of steam curing is equivalent to six hours moisture curing and ambient vapor is maintained at relative humidity of 85 percent with temperature ranging between 110 degrees Fahrenheit and 150 degrees Fahrenheit for minimum steam curing period of six hours, after which exterior coating may be applied. The lining shall then be cured for another twelve hours before shipment. Other methods of curing the cement mortar lining may be used providing they are acceptable to the District.

Temperature and shrinkage cracks in cement mortar lining less than 1/16 inch in width or 24 inches in length need not be repaired. Cracks wider than 1/16 inch or longer than 24 inches shall be repaired unless it can be demonstrated to the satisfaction of the District that the cracks will heal autogenously under continuous soaking in water.

Where "special lining" is specified, it shall be provided in accordance with Section O, herein.

iv) Pipe shall have an exterior asphaltic or bituminous coating in accordance with AWWA C151 (ANSI A21.51).

v) All pipe shall be furnished with rubber gasketed push-on type joints unless mechanical joints or flanged joints are otherwise specified or permitted. Joint restraints may be required as specified by the District. All joints shall comply with AWWA C111 (ANSI A21.11), as approved by the District.

vi) Rubber gaskets shall conform AWWA C111 (ANSI A21.11).

vii) Each pipe shall be marked with the weight, class, or nominal thickness and casting period. The manufacturers mark, year in which pipe was produced and the letters "DI" or "ductile" shall be cast or stamped on the pipe. All required markings shall be clear and legible and all cast marks shall be on or within 2 feet of bell ends.

viii) Where restrained joints are required, they shall be accomplished with boltless restrained joint gaskets or components. Restrained joints shall be ductile iron in

accordance with applicable provisions of AWWA C111 and C151 (ANSI A21.11 and A21.51, respectively), except as to manufacturer's proprietary dimensions. Set screws shall not be utilized for any application.

Each restrained joint for pipe 4 inches through 12 inches shall consist of a gasket system where stainless steel locking segments molded within the gasket provide restraint for pipe joints or fitting joints.

Each restrained joint for pipe 14 inches through 24 inches shall consist of a gasket system where stainless steel locking segments molded within the gasket provide restraint for pipe joints or fitting joints, or, alternatively, a boltless restrained push-on joint system where ductile iron locking segments inserted through slots in the bell face provide positive axial lock between the bell interior surface and the spigot retainer weldment or gripper ring.

All restraining components must make full contact around the circumference of the pipe, even if it has deflected. Field cut kits shall be composed of full ring gripper rings with serrated edges and shall be compatible with the pipe joints and fitting joints.

d. Fittings - All fittings shall be ductile iron except where fabricated cement mortar lined and cement mortar coated welded steel pipe fittings are specifically permitted or specified. Fabricated cement mortar lined and cement mortar coated fittings shall be flanged and they shall conform with the cement mortar lined and cement mortar coated welded steel pipe fittings specified herein.

Ductile iron fittings shall conform with AWWA C110, C111, and C153 (ANSI A21.10, A21.11, and A21.53, respectively). Unless specified otherwise, fittings shall be push-on joint and comply with AWWA C111 (ANSI A21.11).

Fittings shall have an asphaltic outside coating in accordance with AWWA C110 or C153 (ANSI A21.10 or A21.53), and cement mortar lining in accordance with AWWA C104 (ANSI A21.4). Fittings shall have standard lining thickness and shall be seal coated with asphaltic material or other approved material. The lining process must produce a dense, compacted lining that shall be bonded to the interior of the fitting and have a smooth surface.

Where restrained joints are required, they shall be accomplished with boltless restrained joint gaskets or components and shall comply with all requirements of Section J.2.c.viii. herein. Restrained joint fittings shall be of same joint design as the restrained joint pipe. Restrained joints shall be ductile iron in accordance with applicable provisions of AWWA C110 and C153 (ANSI A21.10 and A21.53), except as to manufacturer's proprietary dimensions.

Where "special lining" is specified, it shall be provided in accordance with Section O, herein.

e. Testing - All pipe, including standard, random, and special short lengths, furnished shall be tested in the United States in accordance with AWWA C151.

f. Inspection - The District shall at all times have the right to inspect all Work and materials during the course of manufacture. Manufacturer shall furnish the District reasonable

facility for obtaining such information as may desire regarding the progress and manner of the Work and the character and quality of materials used.

g. Loading, Transporting, and Unloading - After the pipe has been tested in accordance with Section e above, it shall be loaded on rubber-tired vehicles, and adequately supported and chocked to prevent any damage during transportation, and delivered to the Work site. During loading, unloading, and stringing operations, pipe and fittings shall be moved with care to prevent damage thereto. Unloading shall be accomplished in a workmanlike manner as directed by the manufacturer. Under no circumstances are pipe and fittings to be dropped or bumped in handling.

h. Defective or Damaged Material - Pipe and fittings shall be carefully inspected for defects. Any pipe found to be defective in workmanship or materials or so damaged as to make repair and use impossible shall be rejected and removed from the Work site.

In the event that pipe is damaged, damaged portions may be removed, as approved by the District, and discarded. Remaining sound portions may be used with ductile iron fittings. Contractor shall be responsible for any and all damage to material and shall bear all the expense of repairing or replacing same. Contractor shall take proper precautions to assure that rubber gaskets are protected from oxidation or undue deterioration.

i. Installation - Pipe manufacturer, fitting manufacturer, and material supplier, in addition to the District and the District's representative, shall have access to the Work during installation. Contractor shall use assistance provided by either manufacturer or supplier where required for proper installation of pipe, fittings, or materials; however, Contractor shall limit role of either manufacturer or supplier to advisory service.

All pipe shall be laid true to line and grade and at the locations shown by the Construction Drawings or as specified. Pipe shall be installed in accordance with applicable provisions of AWWA C600, applicable provisions of Ductile Iron Pipe Research Association "Guide for the Installation of Ductile Iron Pipe", latest, and manufacturer's directions. Bell ends shall be placed uphill unless otherwise permitted.

After pipe has been set in trench, exterior of spigot and interior of bell shall be thoroughly cleaned. Lubricant recommended by pipe manufacturer and as approved by the District shall be applied to rubber gasket. Lubricant shall be water soluble, nontoxic, shall impart no objectionable taste or odor to the water, shall have no deteriorating effects on the rubber gaskets, and shall not support growth of bacteria. Excess lubricant shall be removed. Pipe ends shall be aligned, and spigot shall be pulled into bell with come-along devices, or hoists with chains and slings, unless permitted otherwise. If either the pry bar or the backhoe bucket method is permitted, a timber header shall be placed between the pipe and the pry bar or backhoe bucket before the spigot is pushed into bell.

Curved alignment by use of pulled joints will be permitted. Maximum joint deflection shall be 3 degrees. For purposes of reducing angular deflections at pipe joints, Contractor may install pipe sections of less than standard length.

Whenever cutting of pipe is required, it shall be done with a special cutting tool specifically made for cutting and machining ductile iron pipe. Cut ends and rough edges shall be ground smooth and beveled for push-on joints.

Whenever specified, pipe shall be encased with 8 mil (0.2 mm) thick minimum polyethylene tube lapped 1 foot minimum, and valves and fittings shall be wrapped with

polyethylene tube or with polyethylene sheets lapped 1 foot minimum. Polyethylene tube and polyethylene sheets shall be secured in place with suitable adhesive tape. All polyethylene tube and polyethylene sheet encasements shall be installed in accordance with AWWA C105.

As Work progresses, a pipe cleaning tool as approved by the District shall be drawn through pipe to remove dirt, rocks, or other foreign material. At the end of each day's work, all openings in the pipeline shall be plugged with watertight expandable plugs or approved equal.

4. Welded Steel Pipe (Cement Mortar Lined and Cement Mortar Coated) (Waterlines)

   a. Scope - All welded steel pipe shall conform with applicable provisions of AWWA C200, C205, C206, C207, and C208, and applicable portions of M11 "Steel Pipe Manual", as modified herein, by the Drawings, or by the District.

      Pipe shall be manufactured, lined, coated, and cured at the same plant; however, it may be fabricated at the same plant or a separate plant.

      All welded steel pipe shall be manufactured by organizations with at least ten years successful experience in manufacturing, fabrication, lining, and coating of the type of pipe specified. The District shall approve manufacturer's product before its use.

   b. Data to be Submitted by Contractor - Contractor shall furnish three copies of an affidavit of compliance in accordance with Section 1.12, AWWA C200, and Section 1.7 AWWA C205. Contractor shall also furnish certifications; three copies each, of the following:

      i) Material Certification

         1) Steel Skelp
         2) Flanges
         3) Nuts and Bolts
         4) Flange Gaskets
         5) Rubber Gaskets

      ii) Manufacturing Certification

         1) Pipe Mill Reports
         2) Production Weld Test Reports
         3) Hydrostatic Test Reports
         4) Outlet Reinforcement Calculations*
         5) Pipe Wall Thickness Calculations*

         * If not shown by the Drawings.

      Unless specified otherwise, Contractor shall furnish detailed layout and shop or fabrication drawings showing pipe, lining, coating, reinforcement, joints, fittings, appurtenances, and station and elevation for each fitting and outlet and for each pipe joint at each change in pipe class, alignment, or slope. Contractor shall submit detailed layout and shop or fabrication drawings to the District for acceptance in all cases in time sufficient to allow review and acceptance as hereinafter specified and to accommodate the Contractor's construction schedule.

Installation or laying drawings shall be submitted in triplicate. District will return one (1) set of drawings to Contractor within fifteen (15) days marked either "Accepted", "Rejected", "Revise and Resubmit", "Submit Specified Item", or "Furnish as Corrected". In the last case, all revisions will be clearly shown on the returned set of drawings which shall be considered the accepted drawings and only drawings or prints so corrected shall be used for installation. Contractor shall furnish District five (5) sets of all accepted drawings.

Revisions shown on the shop drawings shall be considered changes necessary to meet the requirements of these Specifications and shall not be taken as the basis of claims for extra charges. Contractor shall accept such revisions or submit others for acceptance. When delays are caused by resubmissions of shop drawings, Contractor shall not be entitled to any damages or extensions of time for such delays.

The District's acceptance of detailed layout and shop or fabrication drawings shall apply only to general arrangement and general compliance and not to specific details and dimensions and their correctness and compatibility. Contractor shall correct any misfits due to any errors in the detailed shop or fabrication drawings. Any fabrication in advance of receipt of detailed layout and shop or fabrication drawings marked "Accepted" or "Furnish as Corrected" shall be at Contractor's risk. Contractor shall furnish the District five sets of all accepted layout and shop or fabrication drawings.

c. Pipe and Fittings - All pipe and fittings furnished shall conform with applicable provisions of AWWA C200, C205, C206, C207, and C208, and applicable portions of AWWA M11, "Steel Pipe Manual", as modified herein, by the Drawings, or by the District.

i) Pipe and fittings shall be Class 150 minimum. Minimum steel cylinder thickness shall be as noted by the Construction Drawings or specified by the District; it shall not be less than 10 gage or as noted by the Standard Drawings. All pipe and fittings shall be machine cement mortar lined and machine cement mortar coated.

ii) Curved alignment by use of pulled joints will be permitted. Maximum pull permitted from normal closure on one side of joint shall not exceed 1/2 inch for 8 inch pipe or 3/4 inch for 12 inch and larger. Maximum joint deflections shall not exceed manufacturer's recommendation or 3 degrees; the more restrictive or lesser deflection shall apply.

iii) Where greater curvature is required, Contractor may use fabricated bends as specified by the Construction Drawings or ordered by the District. For the purpose of reducing angular deflections at pipe joints, Contractor may use pipe sections of less than standard length. Closing courses and short sections of pipe shall be fabricated and installed by Contractor as found necessary in the field.

iv) All fittings shall be shop fabricated unless the Construction Drawings indicate that fittings may be field fabricated, Contractor describes methods of fabrication, and the District specifically approves field fabrication. All fittings shall be fabricated from individual pipe sections, welded together, and lined and coated as described hereafter.

v) Lining of Fittings

1) The application of cement mortar lining to miters, angles, bends, reducers, and other special sections, the shape of which precludes application by the machine

spinning process, shall be accomplished by mechanical placement, pneumatic placement, or hand application and finished to produce a smooth, dense surface.

2) If the interior of the fitting has not been previously machine lined, wire-fabric reinforcement or ribbon-mesh reinforcement shall be applied to the interior of fittings larger than 24 inches and shall be secured at frequent intervals by tack welding to pipe, by clips or by wire. Repaired areas of machine applied linings at miters, pipe ends, outlets, and other cuts made in the lining for fabrication of the fittings need not be reinforced if the width of the repair area does not exceed 12 inches. Repairs for widths exceeding 6 inches shall be bonded to the steel and adjacent faces of the lining with an approved bonding agent.

Immediately after lining has been completed, pipe and fittings shall be water cured without being disturbed for at least one day before applying the exterior coating, if such a coating is specified. If cement mortar coating is not specified, the lining shall be kept moist for four days before shipment. In either case, the lining shall be cured for at least four days before shipment. To prevent moisture loss during the curing period, ends of the pipe sections shall be kept closed with plastic end caps or covers which will remain in place until time of installation. The date of lining and class of pipe shall be plainly marked on the inside of each fitting.

vi) Coatings of Fittings

Mortar coating for pipe bends and other special sections not adaptable to the application of spiral-wire coating reinforcement shall be reinforced with wire fabric or ribbon mesh. The wire fabric or ribbon mesh shall be applied over the surface of the pipe to be coated, and may be held away from the pipe shell with self-furring mesh, furring clips, or an equivalent method. The application of the mortar coating shall be by mechanical or pneumatic means to the specified thickness, except that hand application may be substituted for all specials. After the outside coating has been applied, the pipe and fittings shall be kept continually moist by continuous spraying for at least four days. Provisions shall be made to protect the coating from erosion during sprinkling. The date of coating and class of pipe shall be plainly marked on the inside of each fitting.

d. Pipe Joints - Unless specified otherwise, joints shall conform to the following types. Joints shall be as specified on the Construction Drawings or by the District. All joints shall be continuity bonded.

i) Rubber Gasket Joints - All rubber gasket joints shall conform with AWWA C200.

ii) Flanged Joints - All flanges 4 inches through 12 inches shall conform with AWWA C207, Class E (ring) or ANSI B16.5 Class 150. All flanges larger than 12 inches shall conform with AWWA C207, Class E (ring). All flange bolts shall be standard hex head machine and conform with ASTM A325. All flange nuts shall be heavy hex cold pressed semi-finished steel and conform with ASTM A194, 2H.

All flanges shall be fully welded to pipe on both faces, one pass minimum on the inside, and two passes minimum on the outside. Pipe linings shall extend to mating faces of flanges. Bolt threads shall be lubricated with an approved anti-seize compound. Flanges together with bolts and nuts, shall be, once installed, coated with an approved bitumastic material.

iii) Swedged Lap Welded Joints - Bell ends shall be formed integrally with pipe cylinders, being swedged out by machine. Bell ends shall be designed and fabricated to withstand design pressure of class of pipe specified and to permit spigot ends (plain end) to enter belled ends approximately 1 inch with clearance of approximately 1/32 inch.

iv) Banded Lap Welded Joints - Where lap welded joints are required and swedged lap welded joints cannot be fabricated, belled ends shall be formed by welding steel bands to outside circumferences of plain ends of pipe. Bell ends shall be designed and fabricated to withstand design pressure of class of pipe specified and to permit spigot ends (plain ends) to enter belled ends approximately 1 inch with a clearance of approximately 1/32 inch.

v) Sleeve Couplings - Where sleeve couplings are required, they shall conform with the Construction Drawings. Pipe coatings at pipe ends shall be held back 12 inches and pipe shall have weld seams ground flush within 12 inches from pipe ends, unless specified otherwise. For above ground applications, pipe ends and sleeve couplings shall be painted. For below ground applications, pipe ends and sleeve couplings shall be coated with an approved bitumastic material. An approved bitumastic coating shall be substituted for mortar coating within 12 inches of pipe ends. After joints have been coupled, sleeve couplings shall be coated with an approved bitumastic material.

vi) Cut-to-Fit Joints - Where cut-to-fit joints are required, they shall conform with the Standard Drawings and the Construction Drawings. Pipe coatings at cut-to-fit joints shall be held back as required to permit construction of joints; pipe coatings shall thereafter be added in the field. Field applied pipe coatings shall match manufactured pipe coatings. Contractor shall provide, at no cost to the District, cut-to-fit joints, in addition to those specified, if necessary to accommodate the work and schedule.

vii) Shop Testing of Joints and Joint Ends - Every pipe section, standard, or special, shall be hydrostatically tested after joint ends have been completely shop formed and attached in place by welding, as applicable, or dye check tested provided pipe cylinders had been previously hydrostatically tested.

e. Cement Mortar Lining and Cement Mortar Coating

i) General - Cement mortar lining and cement mortar coating shall conform with AWWA C205.

ii) Surface Preparation - Prior to lining and coating, pipe shall be cleaned of all loose mill scale, moisture, rust, sand, dust, oil, grease, and other deleterious or objectionable matter both inside and outside.

iii) Cement Mortar Lining

1) Mortar - Mortar shall consist of one part Portland cement to three parts (by weight) clean, sharp sand. Unless specified otherwise, cement used for cement mortar shall conform with ASTM C150, Type II. Sand shall consist of clean, inert, sharp, durable material, maximum grain size being no more than one-half specified minimum lining thickness. Mortar shall be thoroughly mixed and made

workable with clear, potable water. All cement mortar shall develop a minimum compressive strength of 2,600 psi minimum at seven days and 4,500 psi minimum at twenty-eight days.

2) Application and Treatment - Cement mortar shall be applied to interior surfaces of pipe with equipment specifically designed for that purpose. Said equipment shall have a retracting feed line that will provide uniform cement mortar distribution throughout pipe length. Pipe shall be slowly rotated in horizontal position while cement mortar is being applied. Each end shall be provided with suitable end dam during spinning operation to control lining thickness and provide square-finished lining end.

   Following application of mortar, pipe shall be rotated at sufficient speed to compact lining mortar. Said speed shall be maintained until all excess water has been forced to lining surface. During the spinning operation, surplus water shall be expelled from pipe by blower or other suitable means. Peripheral speed and spinning time shall be sufficient to obtain dense, well compacted lining with smooth surface free from defects. Minimum lining thickness shall be as shown by the Standard Drawings.

   Immediately after lining has been completed, pipe shall be water cured without being disturbed for at least one day. Moisture loss shall be prevented during the curing period.

iv) Cement Mortar Coating

1) Mortar - Mortar shall consist of one part Portland cement to three parts (by weight) clean, sharp sand. Materials for cement mortar coating shall be the same as materials for cement mortar lining. All cement mortar shall develop a minimum compressive strength of 2,600 psi minimum at seven days and 4,500 psi minimum at twenty-eight days.

2) Application and Treatment - After pipe interior has been lined, cement mortar shall be applied to outside of pipe through fixed nozzles to form an even, dense, and tightly adhering coating. During coating operation, pipe shall be rotated and moved beneath said fixed nozzles to obtain uniform coating free from defects. Minimum coating thickness shall be as shown by the Standard Drawings.

   Cement mortar coating shall be reinforced with spirally wound steel (reinforcing) wire embedded midway within coating. Reinforcing wire shall be bright basic wire comprised of low carbon, open hearth steel, unannealed after the last draw, with an approximate ultimate tensile strength of 80,000 psi. Said wire shall be No. 14 gage minimum and it shall be placed at a pitch of 1-1/2 inch maximum in the middle third of the coating.

   Immediately after coating has been completed, each end of each section shall be cleansed to bare metal and cement mortar shall be troweled and shaped suitable for joint being used. All exposed bare metal shall be cleaned and coated and painted for protection against corrosion. Completed pipe shall then be water cured for at least four days without being disturbed.

f. Manufacturing Inspection - The District shall at all times have the right to inspect Work and materials during the course of manufacture. Manufacturer shall furnish the District reasonable facility for obtaining such information as it may desire regarding progress and manner of work and character and quality of materials used.

g. Loading, Transporting, and Unloading Pipe and Fittings - After pipe and fittings have been manufactured as set forth above, they shall be braced at the plant with wooden struts of adequate size to protect against excessive deflection. Each set of struts (two struts minimum to a set) shall be nailed together at right angles as a unit. Wooden wedges may be used to accomplish proper tight fit for the struts. Bracing shall be located 1 foot in from each end of each pipe section for pipe 24 inches and smaller.

After the struts have been installed, pipe shall be loaded on rubber-tired vehicles, adequately supported and choked to prevent damage during transportation, and delivered to Work site.

Plastic end caps or covers shall be placed over the ends of pipe following installation of braces to prevent moisture loss during loading, transporting, unloading, and installing; they shall remain in place until installation. If the plastic and caps or covers are damaged (perforated), they shall be replaced immediately.

During loading, unloading, and stringing operations, pipe and fittings shall be moved with care to prevent damage thereto. They shall be moved with nylon chokers or straps of sufficient width, placed at third points (one-third length of pipe from each end), to prevent damage to exterior coating, and they shall be handled in such manner to prevent damage to interior lining. Steel slings shall not be used.

Unloading shall be accomplished in a workmanlike manner by Contractor and every precaution shall be taken to prevent damage to pipe and fittings. Under no circumstances are pipe sections to be dropped or bumped in handling. Any pipe section that becomes damaged shall be repaired if possible and, if not possible in the opinion of the District, it shall be replaced with an undamaged pipe section. When strung, pipe shall be adequately supported and chocked to avoid movement until it is installed. It shall also be placed to avoid damage during construction.

h. Pipe Installation - Pipe manufacturer, fitting manufacturer, and material supplier, in addition to the District and the District's representative, shall have access to the Work during installation. Contractor shall use assistance provided by either manufacturer or supplier where required for proper installation of pipe, fittings, or materials; however, Contractor shall limit role of either manufacturer or supplier to advisory service.

Contractor shall not move pipe using dozer blades, backhoe buckets, or the like (sharp metal surfaces). Contractor shall use nylon chokers or straps, not steel slings, in moving, placing, or setting pipe. Nylon chokers or straps shall be placed at third points (one-third length of pipe from each end).

All out-of-round pipe shall be rejected and removed from the Work site immediately. Rejected pipe shall be replaced immediately. Contractor shall not use hammers, bars, wrenches, or other tools to modify pipe ends to accommodate installation.

All pipe ends shall be secured with plastic covers. Said plastic covers shall be left in place until pipe is prepared for installation. If any plastic covers are damaged or destroyed before pipe has been installed, they shall be immediately replaced.

All pipe and fittings shall be laid true to line and grade and at the locations shown by the Construction Drawings or as specified. Pipe and fittings shall be installed in accordance with applicable sections of AWWA M11, "Steel Pipe Manual". Bell ends shall be placed uphill unless otherwise permitted.

All flanges shall be fully welded to pipe on both faces, one pass minimum on the inside and two passes minimum on the outside. Pipe linings shall extend to mating faces of flanges and pipe coatings shall extend to backs of flanges, tapered as necessary for installation of bolts and nuts. All exposed steel shall be field coated with an approved bitumastic material.

Special care shall be taken to avoid damaging lining or coating during lowering of pipe into trench and making of field joints. Unless specified otherwise, field joints shall be bell and spigot rubber gasket joints, continuity bonded (two evenly spaced bonding clips per joint minimum). Flanged joints, welded joints, and mechanical joints may be required for particular applications.

After pipe has been set in trench, exterior of spigot and interior of bell shall be thoroughly cleaned. Lubricant as recommended by pipe manufacturer and as approved by the District shall be applied to rubber gasket, and said gasket shall then be snapped into place and excess lubricant removed. Lubricant shall be water soluble, nontoxic, shall impart no objectionable taste or odor to water, shall have no deteriorating effects on the rubber gaskets, and shall not support the growth of bacteria.

Before inserting spigots into bells, to make joints, bells shall be hand mortared with quick setting non-shrink commercial grout mixed with an approved bonding agent. Once spigots have been inserted into bells, joints shall be gauged to ensure that gaskets have been properly seated.

For pipe less than 24 inches in diameter, sufficient quantities of moist cement mortar shall be placed on interior joining ends of pipe to completely fill space between respective mortar linings. Moist mortar shall be placed only after respective mortar linings have been properly wetted. Moist mortar shall not be placed against dry mortar linings. Excess mortar shall be removed by drawing an approved pipe cleaning tool through the pipe after joints have been made (pipe sections have been joined). For fully welded joints, pipe sections shall be pulled together and restrained with come-along devices, or hoists with chains and slings, and mortar shall be allowed to set for twenty minutes before welding joint. Once joint has been pulled closed and cleaning tool has been drawn through pipe sections, pipe alignment shall not be adjusted, nor shall pipe be bounced or hammered. Come-along devices, or hoists with chains and slings, shall be removed only after joint has been fully welded.

For cement mortar coated pipe, joint exteriors shall be coated with cement mortar utilizing a joint diaper. Said diaper shall be furnished by pipe manufacturer and shall be centered over joint and securely fastened to pipe. Cement mortar joint mix consisting of one part Portland cement to two parts (by weight) clean, sharp sand, shall contain just enough water to allow mix to be poured into diaper and flow around circumference of joint. Said mix shall be allowed to set prior to backfilling around joint.

Joints shall be completed to provide continuous interior lining and exterior coating. Field lining and coating must equal or exceed shop lining and coating when completed with

respect to strength, uniformity, and density and there shall be no voids between lining or coating and steel cylinder.

If cement mortar lining has to be removed, Contractor shall scribe, chisel, and remove the lining using appropriate tools. If cement mortar coating has to be removed, Contractor shall first scribe, then saw cut said coating 3/4 of its thickness, and then remove coating using a chisel driven by a hammer, chipping gun, or other suitable tool. Impact shall be applied parallel with pipe barrel, not perpendicular thereto.

At the end of each day's work, all openings in the pipeline shall be plugged with watertight, expandable plugs or approved equal. Said plugs shall be secured in place so that they cannot be removed by children or animals.

i. Field Welding - Whenever field welding is required, Contractor shall attach welding machine ground to pipe only with clamps or other means acceptable to the District unless an alternative means is specified.

Unless specified otherwise, field welded or thrust restrained joints shall consist of flanged joints or fully welded joints. All flanges shall be fully welded to pipe on both faces, one pass minimum on the inside and two passes minimum on the outside. Welded joints shall be made with pipe having ends belled for welding, or alternatively, ends belled for rubber gasket joints, provided pipe manufacturer furnished filler rods of proper diameter, length, and curvature are installed in accordance with pipe manufacturer's recommendations, as approved by District. Belled ends shall not be deformed to accomplish fully welded joints. Full welds for all joints shall be accomplished with two welding passes (beads) minimum.

j. Field Cement Mortar Lining and Cement Mortar Coating - Whenever field cement mortar lining and cement mortar coating is permitted by the District for either repair or fabrication, Contractor shall comply with the following procedures:

i) Cement Mortar Lining

1) Contractor shall square the edge of the remaining lining, leaving no feather edge, and shall clean metal surfaces with a stiff wire brush.

2) Contractor shall apply approved bonding agent to both steel area and edges of adjacent lining. Cement mortar shall then be applied to the area being patched and worked and finished with a trowel until smooth. Contractor shall brush on approved curing compound over the surface of the patch to prevent rapid evaporation of moisture. Otherwise, Contractor shall keep the patched mortar moist by covering it with wet burlap. The pipe shall not be moved until the cement mortar achieves its initial set, not less than three hours.

3) Cement mortar shall consist of not less than one part cement to three parts sand, thoroughly mixed before any water addition. Cement mortar may be approved commercial, packaged dry mortar mix. Cement mortar shall be mixed separately for each area to be patched. Quantity of water shall be just sufficient so that when mortar is firmly compressed into a ball, it will hold its shape without slump.

ii) Cement Mortar Coating

1) Exterior coating which requires removal around the complete circumference of the pipe shall be repaired by:

   a) Removing the coating by chipping with a hammer or chisel, squaring the edges to accept repair patch.

   b) Wrapping the area with 2 x 4 x 14 ga self-furring wire mesh or an approved stucco netting and guniting the area being patched.

   or

   Wrapping the mesh as above and hand troweling mortar onto the area being patched.

   c) Applying an approved curing compound to the patched area.

   d) Avoiding movement and protecting the pipe until the cement mortar achieves its initial set, not less than three hours.

2) Exterior coating that does not extend around the entire circumference of the pipe shall be repaired by:

   a) Removing the coating by chipping with a hammer and chisel, squaring the edges to accept repair patch.

   b) Applying by brush an approved bonding agent to both the steel area and the edges of the remaining coating.

   c) Applying cement mortar to the area being patched and thoroughly compacting it, with finished patch mounding up above and overlapping (at least 1 inch on all sides) the surrounding coating.

   d) Applying an approved curing compound to the patched area. If the repair patch is made on pipe in the ditch, it shall be covered with wet burlap, heavy cloth, or similar material, and dirt shall be placed around and over the patched area by hand before proceeding with placing backfill material.

3) The cement mortar mix proportions shall be the same as for lining repair.

4) If the area to be patched exceeds over half of the pipe circumference, 2 x 4 x 14 GA self-furring wire mesh or an approved stucco netting shall be attached to the pipe prior to the application of the cement mortar.

iii) Installation of Repaired Pipe

After the repaired area has achieved initial set, not less than six hours, the pipe section can be installed, providing the patched area of the coating is backfilled with water saturated or wetted soil.

5. Asbestos Cement Pipe (No longer Approved for Installation)

   a. Control and Disposal of Asbestos Cement Pipe Waste - All external surfaces of equipment shall be maintained free of asbestos cement dust accumulations that might, if dispersed, create asbestos-fiber concentrations above permissible exposure limits. Loose material shall never be dry-swept or blown. Vacuum equipment shall be used when available. Water or other dust suppressants shall be applied in circumstances where sweeping is unavoidable.

      All chips and cuttings shall be collected in sealed bags or closed containers impervious to asbestos dust. No visible emissions to the atmosphere shall result from the collection, processing, packaging, transporting, or disposing of any asbestos-containing material. Asbestos cement wastes shall be deposited at legal waste disposal site(s) in accordance with applicable national, state, and local laws.

6. Vitrified Clay Pipe (VCP) (Gravity Sewers)

   a. Scope - All VCP shall conform with applicable provisions of ASTM C700, as modified herein, by the Drawings, or by the District.

      All VCP shall be manufactured by organizations with at least ten years successful experience in manufacturing, and fabrication of the type of pipe specified. The District shall approve manufacturer's product before its use.

   b. Data to be Submitted by Contractor - Contractor shall furnish three copies of an affidavit of compliance in accordance with ASTM C700, C425, and C301. Contractor shall also furnish certifications; three copies each, of the following:

      i) Material Certification

         1) Pipe
         2) Type "G" Joints

      ii). Manufacturing Certification

         1) Pipe Three (3) Edge Bearing Test Reports
         2) Hydrostatic Test Reports

      Contractor will submit shop drawings for manholes, covers, concrete, and appurtenances.

      Owner will return one (1) set of drawings to Contractor within fifteen (15) days marked either "Accepted", "Rejected", "Revise and Resubmit", "Submit Specified Item", or "Furnish as Corrected". In the last case, all revisions will be clearly shown on the returned set of drawings which shall be considered the accepted drawings and only drawings or prints so corrected shall be used for installation. Contractor shall furnish District five (5) sets of all accepted drawings.

   c. Pipe and Fittings - Pipe and fittings shall be extra strength VCP in accordance with ASTM C700, and the "Standard Specifications" as modified herein, by the Drawings or by the District.

      i) Straight Pipe - Pipe diameter shall not vary from a true circle by more than 3 percent nominal diameter. Standard pipe length, excluding socket depth, shall be 40 inches

and shall not deviate from straight by more than 1/16 inch per foot. All fabricated bends and bevels shall be manufactured from pipe meeting all specified requirements. Pipe and fittings shall not contain blisters, cracks, and chips. Pipes and fittings failing to meet these requirements will be rejected and shall be removed from the job site immediately.

ii) Pipe Fittings - Fittings shall have dimensions that will accommodate Type G joints. Wye and tee branch fittings shall be furnished by manufacturer with spurs securely fastened to pipe barrels. Branches shall not project beyond pipe barrel inner surface.

Tee branch fittings shall have axes perpendicular to the longitudinal axis of the pipe. Wye branch fittings shall have axes 45 degrees from the longitudinal axis of the pipe. Spur barrel shall be of sufficient length to permit proper joining of connecting pipe.

iii) Pipe Stoppers - Stoppers for branch fittings and pipe ends left unconnected shall be strong enough to sustain all applied construction and in-place loads, including field pressure tests. Stoppers for pipe shall be one of the following: polyethylene (PE), polyurethane, polypropylene, acrylonitrile-butadiene-styrene (ABS), PVC, ozone-resistant synthetic rubber, or vitrified clay.

iv). Marking - Each length of pipe and each fitting shall be clearly marked with the name or trademark of the manufacturer, the location of the plant, and the strength designation of the pipe. Each standard length of straight pipe shall also be marked with manufacturer's date code.

d. Pipe Joints - Pipe joints shall be Type G (polyurethane). Type G joints shall consist of polyurethane elastomer sealing components, one bonded to the outside of the spigot and the other bonded to the inside of the socket. The sealing components shall be shaped, sized, bonded, and cured to uniform hardness so as to form a tight seal of the joint when assembled. The sealing components shall resist attack by bacteria and chemicals or combinations of chemicals normally present in domestic or industrial waste sewage.

Each joint within vertical and horizontal curves shall be constructed using factory fabricated mitered or beveled pipe or by deflecting joints. Ends may be beveled up to 4 degrees. In no case shall joints be deflected more than 1 degree.

e. Manufacturing Inspection - The District shall at all times have the right to inspect all materials and work in the course of manufacture. Manufacturer shall furnish the District reasonable facility for obtaining such information as the District may desire regarding the progress and manner of the Work and the character and quality of materials used. Manufacturer shall furnish, upon request, certified test reports on manufactured pipe.

f. Loading and Transporting - Pipe shall be loaded on rubber-tired vehicles, adequately supported and chocked to prevent any damage during transportation, and delivered job site. During the unloading and stringing operations, the pipe shall be moved in such a manner as to prevent injury to the pipe. Unloading shall be accomplished in a workmanlike manner as directed by the manufacturer. Under no circumstances are pipe sections to be bumped or dropped in handling.

g. Defective or Damaged Material - All pipe and fittings shall be carefully inspected for defects. Any pipe, fitting, or joint found to be defective in workmanship or material or so

damaged as to make repair and use impossible, shall be rejected and removed from the job site immediately.

h. Installation - Sewers shall be installed with bedding and backfill as specified herein and as shown on Drawings for the trench load factor specified.

All sewers shall be laid true to line and grade and at the locations as shown by Construction Drawings or as specified. Pipe shall be installed in accordance with the manufacturer's directions, applicable provisions of "Clay Pipe Engineering Manual" as published by the National Clay Pipe Institute and as specified herein.

Before lowering and while suspended at trench side, the pipe shall be inspected for defects. VCP shall be rung with a light hammer to detect cracks. Any defective material shall be rejected and removed from the site. Trench bottom shall be inspected and adjustments made in line and grade. All pipe shall be laid without break, upgrade from structure to structure, with bell end of pipe upgrade.

Unless waived by the District, a metallic locator tape 2 inches wide shall be placed in the trenches of all mains and laterals for future pipeline locating. The tape shall be placed at least 6 feet above the pipe but no deeper than 4 feet below final grade.

As the Work progresses, interior of the sewer shall be cleaned of all dirt and deleterious and superfluous materials with a procedure approved by The District. At the end of each days work, all openings in the sewer shall be plugged with water-tight expandable plugs or approved equal.

Prior to joining pipe sections, the mating surfaces shall be cleaned, and lubricated with a lubricant recommended by the pipe supplier. The pipe shall be joined spigot into socket and when jointing is completed shall be within the following joint space tolerance:

Pipe Size (Inches)	Joint Space (Inches)
15 to 18	5/8
21 to 42	7/8

Joint spaces shall not be increased to accommodate deflected joints on curves.

The pipe and fitting manufacturer shall have free access to the Work during laying, backfilling, and testing. Manufacturer shall be free to observe and verify all tests. Any improper act or operation by Contractor which is observed by manufacturer shall be reported to the District.

K. MANHOLES AND APPURTENANCES

1. Scope - Manholes shall be constructed of precast reinforced concrete in accordance with the requirements of ASTM C478 and shall be designed for H-20 loadings. Dimensions and details of manholes and appurtenances shall be as shown on Construction Drawings, Standard Drawings, or as specified. After final pavement has been placed, manhole covers shall be adjusted to grade.

2. Manhole Bases - Unless specified otherwise, manhole base shall be constructed of Class A concrete. Unless specified otherwise, manhole bases shall be cured twenty-four (24) hours minimum prior to manhole shaft placement.

3. Manhole steps - Unless specified otherwise, manhole steps shall not be installed.

4. Concrete and Mortar for Manholes - Concrete shall be of the class specified on the Drawings and shall comply with the Basic Concrete Specifications.

   Cement mortar shall consist of one part Portland cement and two and one half parts clean, well graded sand of such size that all will pass a number 8 sieve. Cement and sand shall first be combined in proper proportions, and then thoroughly mixed with only that quantity of water necessary to produce a mixture sufficiently workable for the purpose intended.

   Mortar shall be used as soon as possible after mixing and shall show no visible signs of setting prior to use. Mortar shall not be retempered.

5. Manhole Frames and Covers - Manhole frames and covers shall be furnished in accordance with the District's Standard Drawings. Castings shall conform to ASTM, A48, Class 35. Bearing surfaces of the frames and covers shall be machined and covers shall seat firmly into frames without rocking. Manhole frame and covers shall not be set to final grade until the final paving has been completed. Elevations to which the frames and covers are to be constructed shall conform to the construction plans. Where the cover is in an existing road shoulder or other unpaved area, it shall be placed flush with the existing surface or as specified on the plans or by the District. Unless specified otherwise, covers shall have raised letter identification "RCSD SEWER" as specified on the Drawings.

6. Installation – If manhole excavations beyond the required vertical dimension are made during construction, the depth of concrete below the invert of the pipe shall be increased beyond the 12 inch minimum as necessary to meet the invert with the undisturbed excavation. Placement of compacted fill to the desired grade in lieu of concrete will not be allowed.

   Concrete shall be poured to a level ring-section seating surface with the base centered over the sewer intersection unless otherwise specified. A metal forming ring shall be used to form a level joint groove in the manhole base, which will join with the first precast section to form a watertight joint. Base inverts (channel) shall be formed in the field using forms with width and depth equal to the diameter of the sewer pipeline. Channels shall be finished smooth with constant slope from inlet to outlet (at least 2 inches across base). A 2 foot VCP joint (with-out bell) of the same inside diameter as the adjoining pipe shall be placed at the inlet and outlet to each manhole or structure with at least one foot of pipe extending outside of the manhole ring. The floor of the manhole shall have a slope of 1:12 from the sides of the manhole to the open channel. All concrete used to construct the manhole base shall achieve the specified compressive strength prior to installation of the precast sections.

   Once the manhole has been completely constructed and the covers installed, cleaning and scraping of foreign materials from the frames, covers, interior walls and base shall be done to ensure a satisfactory fit. Frames and covers shall be thoroughly cleaned and coated with commercial quality asphalt paint.

   Drop manholes shall be constructed in accordance with the District's Standard Drawings. All materials and construction of drop manholes shall conform in all respects to the applicable provisions of the above specifications with modifications for the addition of drop inlets as set forth in the detail drawing. The inside diameter of the drop inlet pipe and channel shall be the same diameter as the intercepted sewer.

The Contractor shall make connections to existing manholes at the location and elevation shown on the plans. Where new flow-through channels have to be cut in the existing manhole base, they shall be cut so that the resulting section is smooth and conforms to the intended shape. The Contractor shall make necessary provisions to keep pieces of concrete and debris out of the sewer. Deviation from form and grade shall not be greater than 1/4 inch. The channel surface shall be smoothed with epoxy mortar. The new VCP sewer pipeline (not to exceed 24" in length) shall be firmly embedded in epoxy grout where it joins the existing manhole. Where holes are required in existing manhole walls for new or revamped connections, the Contractor will be required to use coring type equipment.

L. LATERALS

Laterals shall be in accordance with the Drawings and shall end at the property line of the lot served. The exact location may be determined in the field by the District's Inspector. The Contractor shall field reference each lateral connection with a surface marker and record the sewer main station for the As-built documentation. Laterals shall be located at least 10 feet from any potable water service; they shall not be located in alleys or driveways.

Tees and wyes shall be of the same material as the sewer main. Tees and wyes of the proper size shown on the plans shall be installed at approximately the locations shown on the plans. The exact location will be determined in the field by the District and shall be referenced by the Contractor with a stake or suitable surface marker. A suitable plug shall be provided and installed prior to backfilling operations to ensure watertight joints.

Sewer laterals shall be installed per the District's Standard Drawings. In no case shall any lateral be constructed at less than a 2% slope unless specifically shown on the plans and approved by the District.

Unless otherwise approved by the District, any required saddle connections to existing mains shall be made with an approved sewer tapping machine or apparatus in accordance with the District's Standard Drawings. The Contractor shall submit his proposed method for tapping. The District may also require the Contractor to provide the manufacturer's tapping equipment descriptions for its review. Under no circumstances will such connections be made by "knocking out" openings in the existing main. Pipe sections damaged during construction shall be removed and replaced at the Contractor's expense.

Unless waived by the District, metallic locator tape 2 inches wide shall be placed in the trenches of all laterals for future pipeline locating. The tape shall be placed at least 6 feet above the pipe but no deeper than 4 feet below final grade.

Once curb and gutter has been placed, an "S" imprint shall be chiseled on the curb face at each service lateral location.

M. VALVES

The Contractor shall be required to furnish and deliver valves as specified in these specifications and all valves and operators shall be Class 150 or greater unless noted otherwise on the plans. All valves shall be designed to work equally well with pressure on either side, have non-rising stems, open left (counterclockwise). Unless otherwise specified by the District, all 8" and 12" pipelines will utilize gate valves and 16" and larger pipelines will utilize butterfly valves.

1. Common Valve features

   i) Cast Markings – In addition to markings required by the appropriate AWWA standards, valves shall have the manufacturer's name, the size of the valve, the model number, and the working pressure cast on the sides of the valve.

   ii) Valve Stems - All valve stems shall be of bronze having a minimum tensile strength of 55,000 psi and a yield point of not less than 40,000 psi, with an elongation of not less than 10 percent in 2 inches. Heat treatment will be permitted to develop these requirements. All bronze shall contain not more than 7 percent zinc or more than 2 percent aluminum. Stem seals shall consist of a minimum of two "O"-rings above the stem collar under full working water pressure with the valves in full open position.

   iii) Valve Coating - All valves shall be fusion bonded epoxy coated (10 mils minimum) inside and outside (except stainless steel parts, rubber surfaces, and flange faces) in accordance with AWWA C550. Air Valves will be epoxy coated on the interior only. The District shall approve epoxy coating materials and methods before application. Completed coating shall be free from all defects and shall be inspected by use of low voltage holiday detecting and non-destructive thickness gauges.

   iv) Valve Manufacturer - The name of the manufacturer of the valves to be furnished by the Contractor shall be listed on the LIST OF APPROVED MANUFACTURERD MATERIALS (Section VII).

1. Gate Valves (Waterlines and Force Mains) - Gate valves shall be manufactured in accordance with AWWA C509, except as specified herein or as shown by the Standard Drawings. Gate valves shall be capable for above grade or buried service as shown on the Drawings. Above grade valves shall be equipped with hand wheel operator. Below grade valves shall be equipped with valve boxes in accordance with the Standard Drawings.

   Gate valves shall have ductile iron bodies, resilient seats, and ANSI B16.1 Class 125 flanges. Valve disc shall be permanently bonded with resilient material to ensure drip tight shut off. Valve stems, each with hand wheel or 2 inch square operating nut, shall be nonrising and shall turn counterclockwise to open. Gate valves shall have "O" ring seals, non-shock cold water working pressure of 200 psi, minimum.

   Contractor shall provide manufacturers certification that all materials used in valves produced under AWWA C509, conform with Section 2.1 of said standard.

2. Butterfly Valves (Water) - Butterfly valves shall be manufactured in accordance with AWWA C504, except as specified herein or as shown by the Standard Drawings. Butterfly valves shall be capable of buried service; they shall be equipped with valve boxes in accordance with the Standard Drawings.

   Unless specified otherwise, butterfly valves shall be short laying length pattern with ANSI B16.1 Class 125 flanges. Butterfly valves shall have heavy duty ductile or grey iron bodies in accordance with ASTM A126 and 316 stainless steel edged ductile or grey iron discs. Valve stems, each with 2 inch square operating nut. Unless specified otherwise, butterfly valves shall be service rated at cold water working pressure of 150 psi minimum.

   Valve shafts shall be manufactured of Type 304 stainless steel with stainless steel journals. Valves shall contain synthetic rubber seats (Buna N or equal) mounted in valve bodies.

Internal retaining rings and screws used with rubber seats shall be Type 304 (18-8) stainless steel.

Contractor shall provide manufacturer's certification that all material used in valves produced under AWWA C504, conform with Section 2.2 of said standard.

3. Air Valves - Air valves shall be manufactured in accordance with AWWA C512, except as specified herein or as shown by the Standard Drawings.

Unless specified otherwise, air valves shall be combination air and vacuum valves (air, vacuum, and automatic release) or combination sewage air and vacuum valves (air, vacuum, and automatic release). They shall permit automatic escape of large quantities of air from pipeline when it is being filled, permit large quantities of air to enter pipeline when it is being emptied, and allow accumulating air to escape while pipeline is in operation and under pressure.

Water air valves shall have ductile iron bodies and covers, stainless steel floats rated 1,000 psi minimum, stainless steel internal working parts, stainless steel pressure seats, and white Viton "O" rings or seats. Unless specified otherwise, air valves shall be service rated at cold water working pressure of 300 psi minimum. Unless specified otherwise, resilient seats shall be service rated for 150 psi maximum operating pressure.

Force main air valves shall be single body double orifice with elongated cast iron bodies and covers, stainless steel floats, stainless steel internal working parts (including guides), stainless steel pressure seats (Buna N), seat hardness shall be selected by the manufacturer for actual operating pressure for the system, and white Viton "O" rings or seats. Unless specified otherwise, force main air valves shall be service rated at cold water working pressure of 150 psi minimum. Unless specified otherwise, resilient seats shall be service rated for 150 psi maximum operating pressure.

Air valve inlets shall be flanged or threaded as specified and outlets shall be threaded at the same nominal sizes as the inlets, minimum. Air valves shall be subjected to factory hydrostatic test at pressure equal to 200 percent rated working pressure with no harmful deflections or other defects.

Air valve outlets shall be adequately screened to prevent entrance of foreign substances or materials. Screens shall be installed in accordance with the Standard Drawings. Where valves contain more than a single outlet, each outlet shall be adequately screened.

Contractor shall provide manufacturer's certification that all materials used in valves produced under AWWA 512, conform with Section 2.1 of said standard.

Unless specified otherwise, sewer force main air valve installations shall include isolation valve (solid wedge gate), blow off valve, 1/2 inch backflushing shutoff valve, and a 5 foot rubber supply hose with disconnect couplings.

Air valves shall be kept clean and free from dirt, earth, debris, and other deleterious materials prior to, during, and after installation and construction. Until in operation, each valve shall be protected by the use of an approved canvas or plastic bag or sack completely covering valve and securely fastened to valve riser.

4. Eccentric Plug Valve (Force mains) - Eccentric plug valves shall be of the non-lubricated eccentric type with round or rectangular port, unless otherwise specified.

The valve body and plug shall be constructed of cast iron meeting the requirements of ASTM A126, Class B. The valve body shall be furnished with a welded overlay raised nickel seat. The valve plug shall be of one piece construction and shall be completely encapsulated with Buna N rubber. Unless otherwise shown or specified on the Drawings, the valves shall be flanged with dimensions, facing, and drilling in full conformance with ANSI B 16.1, Class 125.

With plug in full open position, valve shall have no cavities where debris can collect, have minimal head loss, and be capable of passing a clean out pig with the same nominal diameter as the adjacent pipe. Valves shall be equipped with operators as shown on the Drawings and as specified herein. Valves 4 inches and larger shall be provided with enclosed worm gear operators and hand wheels. Buried valves shall have 2 inch square operating nut and be designed for buried service. All eccentric plug valves shall have a pressure rating of not less than 150 psi, for drip tight shut off.

5. Backflow Valves (Sewer Laterals) - Backflow valves shall be installed as required per the sewer plans and in accordance with the District's Standard Drawings. All valves shall be installed at the shallowest level of the appropriate location and allowing for future inspection and maintenance. Installation of plastic valves and appurtenances shall be permanently made with appropriate solvent glue providing a waterproof connection.

N. SERVICES

1. Service Taps - Service taps shall be on line with meter boxes which shall be perpendicular to mains. Service and other taps shall be made not closer than 2 feet to a bell, coupling, joint, fitting, or other service. Service taps will be permitted only where complete services are to be installed. Under no circumstances will Contractor be allowed to tap existing mains which are in service. Contractor shall tap existing mains only when said mains are out of service and only when specifically permitted by the District.

   a. PVC Pipe Mains - Service taps on existing or new mains shall be made by using an approved PVC service clamp (saddle) for outlet sizes 2 inches and smaller. For outlet sizes larger than 2 inches, taps shall be made by using an approved PVC tapping sleeve, ductile iron tee, or ductile iron cross not less than the nominal diameter of the service outlet. Service taps on existing mains shall incorporate a service saddle or tapping sleeve. Regardless of the outlet size, the pipe cutting tool shall be a shell (hole) cutter which will retain the copper and be designed to accommodate walls as heavy as DR 14.

   b. Ductile Iron Pipe Mains - Service taps on new or existing mains shall be accomplished with double strap bronze service saddles with iron pipe threads.

   c. Welded Steel Pipe Mains - Service taps on new mains shall be made with couplings welded to the pipe, either during pipe fabrication or field construction, as shown by the Standard Drawings. Tapping shall be accomplished with a shell cutter. Care shall be exercised to minimize damage to linings and coatings. Damaged linings and coatings shall be repaired or replaced. Service taps on existing mains shall be accomplished with double strap bronze service saddles with iron pipe threads.

   d. Asbestos Cement Pipe Mains - Service taps on existing mains shall be made by using an approved asbestos cement tapped coupling, ductile iron tapped tee or ductile iron tapped cross constructed in such a manner as to provide a permanent end separation of pipes in each coupling, tee, or cross assembly not less than the nominal diameter of the service outlet. Service taps may, at Contractor's option, be made with a service saddle provided the tap is made with a shell center. Service taps on existing mains shall be made with a

service saddle and tapping shall be accomplished with a shell center. All service taps shall comply with the Standard Drawings.

e. Testing and Disinfection - Service taps used for testing and disinfection shall comply with temporary blow off requirements for PVC, ductile iron or welded steel pipe, whichever is applicable. Once testing and disinfection have been completed, they shall be removed.

2. Services Extensions - In addition to a service tap, each service shall include a corporation stop, service pipe, a line setter, a meter box, and all other materials specified by the Standard Drawings. Unless specified otherwise, service piping shall be continuous from corporation stop to line setter; it shall not be spliced.

3. Meter Boxes - Meter boxes shall be equal to and interchangeable with those shown on the Standard Drawings and shall be installed as shown on the Standard Drawings. They shall be set true to line and grade and shall be flush with concrete curbs and sidewalks.

   Meter boxes shall be installed whenever services are installed, even prior to construction of street improvements including concrete curbs and sidewalks. Meter boxes shall be brought to grade upon construction of concrete curbs and sidewalks.

4. Meter Installation - Except as otherwise indicated on the Construction Drawings or as specified by the District, all meters shall be installed by the Contractor following application for service in accordance with the District's regulations governing water service and any amendments thereto.

O. FIELD HYDROSTATIC TEST AND LEAKAGE TEST

1. Hydrostatic Test (Ductile Iron and Welded Steel Pipe) - Upon completion of pipeline construction and at least seven days after last concrete thrust device has been placed, pipelines and appurtenances constituting the Work shall be filled with water for twenty-four hours minimum. During filling, Contractor shall see that all air valves are open and operating. After pipelines have been completely filled, they shall be allowed to stand for twelve hours minimum under slight pressure for sufficient time to permit all air to escape. During that same period, Contractor shall examine all fittings, flanges, handholes, and connections for leaks. If any leaks are found, they shall be eliminated.

   Unless otherwise specified, test pressure, 225 psi minimum for Class 150 pipe and 150 percent of pipe class for other classes of pipe, shall then be applied to test sections as directed by the District. Test pressures shall be maintained for four hours minimum. Test sections will be selected which give, as nearly as possible, constant pressure throughout section being tested. Normally test pressures will be measured at lowest elevations.

2. Hydrostatic Test (PVC Waterlines) - Upon completion of pipeline construction and at least seven days after last concrete thrust device has been placed, pipelines and appurtenances constituting the Work shall be filled with water for twenty-four hours minimum. During filling, Contractor shall see that all air valves are open and operating. After pipelines have been completely filled, they shall be allowed to stand for twelve hours minimum under slight pressure for sufficient time to permit all air to escape. During that same period, Contractor shall examine all fittings, flanges, handholes, and connections for leaks. If any leaks are found, they shall be eliminated.

   Unless otherwise specified, test pressure for AWWA C900 pipeline shall be 225 psi minimum for Class 150 pipe and 150 percent of pipe class for other classes of pipe. Test pressure shall be

applied to test sections as directed by the District. Test pressures shall be maintained for four hours minimum. Test sections will be selected which give, as nearly as possible, constant pressure throughout the section being tested. Normally test pressures will be measured at the lowest elevations.

3. Leakage Test (Ductile Iron and Welded Steel Pipe) - After pressure test has been satisfactorily completed, pipelines and appurtenances shall be tested for leakage at pressure equal to the pressure class of pipe. Contractor shall test pipelines and appurtenances in test sections as designated by the District and required pressures shall be maintained for two hours minimum during which time leakage shall be accurately measured.

   Measured leakage shall not exceed the limits set by the following formula unless otherwise specified by the Construction Drawings.

$$L = \frac{ND\sqrt{P}}{5000}$$

   L is the allowable leakage in gallons per hour for section of pipeline being tested; N is the number of joints (rubber gasket, flanged, or mechanical joints, not swedged or banded lap welded joints) where leakage could occur in the section of pipeline being tested; D is the nominal diameter (inches) of the pipeline being tested; and P is the weighted average test pressure (psi gauge) within the section of pipeline being tested during the leakage test.

4. Leakage Test (PVC Waterlines) - After pressure test has been satisfactorily completed, pipelines and appurtenances shall be tested for leakage at pressure equal to the pressure class of pipe. Contractor shall test pipelines and appurtenances in test sections as designated by the District and required pressures shall be maintained for two hours minimum during which time leakage shall be accurately measured.

   Measured leakage shall not exceed the limits set by the following formula unless otherwise specified by the Construction Drawings.

$$L = \frac{ND\sqrt{P}}{7400}$$

   L is the allowable leakage in gallons per hour for section of pipeline being tested; N is the number of joints (rubber gasket, flanged, or mechanical joints, not swedged or banded lap welded joints) where leakage could occur in the section of pipeline being tested; D is the nominal diameter (inches) of the pipeline being tested; and P is the weighted average test pressure (psi gauge) within the section of pipeline being tested during the leakage test.

5. General Requirements

   a. Required test pressures shall be applied by pump connected to pipeline sections being tested. The District shall approve pump connections to pipeline before testing begins. As part of the Work, and unless specified otherwise, Contractor shall install, at no cost to the District, top outlets (service taps) required for testing.

      Contractor shall provide calibrated meters for measurement of leakage, and all pumps, piping, fittings, bulkheads, plugs, valves, gages, power equipment, and manpower necessary for conducting all tests required, all at no cost to the District. Contractor shall furnish the District three copies of all records of all tests performed.

b. Unless specified otherwise, Contractor shall test against test plates for pipelines 12 inches and smaller. Contractor shall not remove said test plates until pipelines have been tested, disinfected, and accepted by the District.

c. Contractor, at no cost to the District, shall locate and repair leaks or other defects which may develop or become apparent during test. Contractor shall excavate, including removal of backfill already placed, and make all repairs necessary for required water tightness, and then replace all excavated material, after which Contractor shall retest repaired pipeline section. Pipeline sections shall be repeatedly repaired and tested until they meet requirements set forth herein.

d. Pipe manufacturer and fitting manufacturer shall have free access to the Work during testing. Any improper act on the part of Contractor which the pipe and fitting manufacturer may observe shall be reported to the District. Pipe and fitting manufacturer shall be free to observe and verify all tests.

e. After completed pipeline and appurtenances or test sections have successfully met test requirements to the satisfaction of the District, the entire pipeline or each test section shall be filled or shall remain filled with water until completion of the Work, unless otherwise ordered by the District.

P. LEAKAGE TEST AND VISUAL INSPECTION FOR GRAVITY SEWERS

1. General - Contractor shall, upon completion of sewer and appurtenances, including backfill (prior to final paving), perform leakage tests on sewers and laterals. Contractor shall furnish all labor and equipment necessary to perform testing, including calibrated meters for measurement of the leakage, necessary bulkheads, piping, gages, pumps, power, and plugs. Contractor shall furnish to District copies of all tests performed.

   Contractor, at no cost to the District, shall do all excavation necessary to locate and eliminate leaks or other defects which may develop under test, including removal of backfill and sewer line necessary to achieve the required water tightness. After repair the required test shall be repeated until the sewer main and appurtenances meet the requirements set forth herein. Refer to Section 6 herein for repair.

2. Leakage Test - The leakage test to be performed by the Contractor shall be either the water exfiltration test or the air pressure test in accordance with Section 306-1.4.1, 306-1.4.2 and 306-1.4.4 of the Standard Specifications. The water infiltration test (in accordance with Section 306-1.4.3) will be required only when specified in the Special Requirements, on the Drawings, or where groundwater is encountered.

3. Water Exfiltration Test - Test shall be in accordance with Section 306-1.4.2 of the Standard Specifications as modified herein. The total leakage shall be the decrease in volume of water in the upper structure. The leakage shall not exceed 0.05 gallon per minute per inch of nominal diameter of pipe per 1,000 foot of sewer pipe being tested. The length of house connections shall not be used in computing the length of sewer main being tested. The minimum test duration period shall be two hours.

   If groundwater is encountered and the District requires the infiltration test in accordance with Sections 306-1.4.3, the Contractor will be required to also perform the air pressure test, and the exfiltration test will not be required.

4. Air Pressure Test - The air pressure test shall be in accordance with Section 306-1.4.4 of the Standard Specifications.

5. Inspection of Pipeline Interior - Sewer lines 21 inches and larger will be visually inspected by the District after successful completion of acceptable leakage tests. The Contractor shall furnish all necessary equipment, safety apparatus, and labor to permit said inspection including gas detector ventilation fans, pipe cart, and ropes to permit crawling the line. Ventilation fans (exhaust) shall be provided at manholes upstream and downstream of the manhole being entered.

   Sewer lines smaller than 21 inches will be visually inspected by sewer video taping after completion of acceptable leakage tests. The Contractor shall furnish all necessary labor and equipment to complete said video taping. Contractor shall provide video tape and video tape log to the District for review.

   For either inspection method, the District shall check for cracked or damaged pipe, excessive joint gap, and debris in line. The Contractor shall remove any debris. Any pipe which is cracked or damaged shall be removed and replaced.

6. Pipe Repair and Replacement - Where it is determined that pipe must be replaced due to damage or excessive leakage, said replacement may be performed by installing new pipe and connecting to existing pipe utilizing rubber Calder type couplings with stainless steel bands. For pipe larger than 12 inches, said couplings shall be encased in concrete as directed by the District.

   Upon approval of the District, pressure applied sealants may be used to repair joints where structural integrity of pipe is not altered; however, numerous leaking joints evidencing material or installation defects shall form basis for prohibiting repair with sealant. Under such circumstances, pipe shall be removed and replaced as necessary.

Q. DEFLECTION AND MANDREL TESTING FOR GRAVITY PVC SEWERS

The maximum long term deflection of the PVC sewer pipe shall not exceed 5% for 8 inch to 12 inch diameter sewers.

Following the placement, cleaning, and backfill and prior to placing permanent asphalt pavement, all sewers shall be cleaned and measured for obstructions or pipe deflections as set forth in Section 306-1.2.12 of the "Standard Specifications" and as summarized as follows:

A rigid mandrel shall be pulled through the pipe by hand. The mandrel shall be fabricated of steel and shall be non adjustable with a length of not less than its nominal diameter. The mandrel shall be certified by the District prior to use. The diameter of the mandrel shall be in accordance with Table 306-1.2.12 (B) of the "Standard Specifications" (PVC-ASTM D3034 (SDR 35)).
Deflection tests shall be performed no sooner than 30 days after placement and compaction of back fill.

Any PVC sewer pipe that is over deflected shall be uncovered, removed from the jobsite, and replaced with new pipe, all as approved by the District. Additional deflection tests shall be performed to the satisfaction of the District.

R. SPECIAL LINED DUCTILE IRON PIPE AND FITTINGS

Where "special lined" ductile iron pipe is specified on the Drawings, Special Requirements, or where ductile iron pipe is specified as gravity sewer; pipe and fittings shall be lined with a system to provide special corrosion resistance.

Pipe and fittings shall be as specified in Section J.2 herein, except lining system shall be as follows:

1. Protecto 401 Ceramic Epoxy, 40 mils thick as manufactured and applied by U.S. Pipe, Pacific States Cast Iron Pipe Company, or equal.

2. SewperCoat as manufactured by Lafarge Calcium Aluminates, 0.125" thick for pipe sizes 6" through 12" and 0.1875" thick for pipe sizes 14" through 24" as manufactured and applied by Griffin Pipe Products Company, or equal.

S. PVC PIPE WITH SPECIAL LINED FITTINGS

Where PVC pipe with "special lined" fittings is specified on the Drawings, Special Requirements, fittings shall be lined with a system to provide special corrosion resistance.

PVC Pipe and fittings shall be as specified in Section J.1 herein, except fittings shall be provided with special lining system as specified in Section O herein.

T. DISINFECTION OF PIPELINES AND APPURTENANCES (WATERLINES)

Contractor shall furnish all equipment, labor, and materials for the proper disinfection (chlorination and flushing) of all pipelines and appurtenances. As part of the Work, and unless specified otherwise, Contractor shall install, at no cost to the District, top outlets (service taps) or temporary Blow offs for required disinfection and sampling. Testing and disinfection must be completed before any pipelines are connected to the existing system.

The Contractor will disinfect pipelines and appurtenances after they have been subjected to hydrostatic and leakage tests.

Disinfection shall conform with provisions of AWWA C651. The chlorinating agent, liquid chlorine or chlorine gas, shall be applied or injected as approved by the District at locations no more than 10 feet from existing water system as selected by or designated by the District. Concentration of the dosage applied to the water within the pipeline shall be at least 50 ppm and it shall not exceed 200 ppm.

Chlorinated water must be retained in the pipeline long enough to destroy all non-spore-forming bacteria. Said period shall be at least 24 hours but not more than 72 hours. After the chlorine-treated water has been retained for the required time, the chlorine residual at the pipe extremities and at other representative locations shall be at least 25 ppm.

Following chlorination, Contractor shall flush all pipelines and appurtenances in the manner and with the procedure prescribed or approved by the District. Permission and permits from regulatory agencies for discharging water shall be obtained by the Contractor. During flushing, all valves shall be in full open free discharge position. Flushing shall continue until all chlorine, debris, and foreign materials have been removed from pipelines and appurtenances.

If so directed by the District, Contractor shall remove portions of certain appurtenances such as air valve installations, blowoff installations, and service installations in order to accomplish complete

flushing; Contractor shall replace same without adversely affecting disinfected pipelines and appurtenances.

Following flushing, water shall be maintained in the pipeline for at least twenty-four hours, thereafter, bacteriological samples shall be taken and analyzed by a certified independent laboratory as approved by the District. If initial treatment fails to produce satisfactory disinfection as evidenced by bacteriological analysis, chlorination and flushing shall be repeated until acceptable results have been obtained.

Contractor shall arrange and pay for chlorine residual and bacteriological quality tests. Contractor shall obtain the District's prior approval of the times, places, locations, and numbers of samples or tests. The District shall witness all sampling. Contractor shall provide an Affidavit of Compliance (in triplicate) to the District evidencing satisfactory disinfection.

Following disinfection, pipelines and appurtenances shall remain isolated from any operational water system facilities until evidence has been submitted to the District demonstrating that said pipelines and appurtenances have been adequately and properly disinfected. Said evidence shall consist of aforementioned Affidavits of Compliance together with said bacteriological test results, as submitted by the approved certified laboratory. Normally, said pipelines and appurtenances shall be isolated for at least 48 hours, longer if so determined by the District.

U. CONDUCTOR CASINGS AND CARRIER PIPES

Wherever required, conductor casings shall be installed. Said casings shall be continuously butt-welded sheets of steel conforming to ASTM A283 and have a minimum thickness of not less than 3/8 inch. Conductor casings shall be bored and jacked into place unless open trench installations are permitted; conductor casings shall not be sluiced or jetted into place. Conductor casings shall be bored and jacked into place from one direction only.

Conductor casings shall be installed to the lines, grades, and depths specified. Unless specified otherwise, Contractor will be permitted a tolerance from horizontal alignment and from vertical alignment of 0.5 percent of conductor length but no more than 1 foot maximum regardless of conductor length.

Unless specified otherwise, methods and equipment used shall be as selected by Contractor and as approved by the District. Said approval shall not relieve Contractor of any responsibility with regard to conductor casing construction. Conductor casings shall have minimum inside diameters at least 12 inches larger than maximum outside diameters of carrier pipes.

Prior to any boring and jacking operations, Contractor shall submit to the District a construction plan consisting of a schedule of operations, details of methods of construction, types of equipment to be used, details of boring and jacking pit including lengths, widths and depths, and shoring and bracing. Said construction plan shall be approved as to sufficiency by the District before any construction is commenced.

Boring and receiving pits shall be shored in accordance with OSHA standards. A 6 foot high chain link fence shall be erected around said pits and said pits shall be protected with Type K barriers. Barriers shall be placed to direct traffic around the pits.

Prior to constructing pits, Contractor shall excavate both sides of each crossing to determine exact locations of facilities to be crossed (horizontal and vertical). Contractor shall adjust casing locations to accommodate crossings based on Contractor's field measurements.

Contractor shall schedule construction to prevent pits from being open on weekends or holidays. Contractor shall provide traffic control around the pits in accordance with Contractor's approved traffic control drawings.

Contractor shall take all necessary precautions to prevent subsidence of or lifting of existing roadbeds, roadways, and pavements during or following installation of conductor casings. Material excavated during boring and jacking operations shall be removed carefully so as to avoid caving. Voids created during boring and jacking shall be grouted with an approved grout from within the casing once the casing has been installed. Couplings shall be welded to steel casing to permit grouting. Following grouting, threaded plugs shall be inserted into said couplings.

After conductor casing has been constructed, carrier pipe shall be equipped with approved plastic or steel casing insulators of uniform size and spacing and then installed in conductor casing in accordance with aforementioned construction plan as approved by the District. Annulus between conductor casing and carrier pipe shall be filled with sand and the ends shall be capped with plastic or steel end seals or plugged with brick and mortar. Weepholes shall be placed in the bottoms of the end seals or brick and mortar plugs.

Contractor shall backfill boring and jacking pits with material specified for pipeline backfill. Said backfill material shall be compacted to the relative compaction specified which shall be not less than 90%. Contractor shall remove conductor casing and carrier pipe remnants, shoring materials, asphalt, concrete and all other Work related debris. Contractor shall restore paved surfaces.

V. MISCELLANEOUS REQUIREMENTS

1. Connections to Existing Pipelines - The Contractor will make all connections to existing pipelines under the direction of the District, except where otherwise specified. No connections to existing pipelines will be allowed on Fridays.

   To safeguard against failure of the District's valve, Contractor may choose to install a test plate for the aforementioned test and, after satisfactory test, remove said test plate and replace it with a 1/8 inch thick minimum ring gasket. The use of any other test appurtenances shall be as approved by the District.

2. Field Painting - Contractor shall field paint all aboveground, bare, or exposed piping and appurtenances in accordance with the applicable specifications and drawings.

SECTION VIII-6
TECHNICAL SPECIFICATIONS - MISCELLANEOUS

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SECTION VIII-6
TECHNICAL SPECIFICATIONS - MISCELLANEOUS

A. CHAIN LINK FENCE AND GATES

1. General - The Contractor shall furnish all materials, labor, tools, and equipment required to completely construct the fencing, posts, gates, and miscellaneous material, including removal of trees, brush and other obstacles, as shown on the Drawings and as specified in these specifications.

2. Materials - All materials shall be newly manufactured and be free from defect. Posts, braces and top rail shall be new schedule 40 galvanized pipe manufactured in accordance with ASTM A53 and shall be of the following sizes and weights:

   i) Fence & Gate Posts

ITEM	OUTSIDE DIAMETER SIZE IN INCHES	MIN.WT. LBS/FT
Fencing:		
End and corner posts	2-7/8"	5.79
* Line posts	2-3/8"	3.65
Braces and top rail	1-5/8"	2.27
Bottom tension wire	7 Ga.	--

NOTES: A. Walk gateposts shall conform to the requirements specified above for end and corner posts.
B. Top rail shall run continuously throughout the length of the fence (see Standard Drawing numbers G110 & G120).
C. Changes in alignment where the angle of deflection is 30 degrees or more shall be considered as corners and corner posts, and braces shall be installed.
* Line post outside diameter shall be 1-7/8" for fencing less than 6' high.

GATE OPENINGS "A"	OUTSIDE DIAMETER GATE POST SIZE IN INCHES "B"	MIN.WT. LBS/FT
Single to 6' or Double to 12'	2-7/8"	5.79
Single >6' to 13' or Double >12' to 26'	3-1/2"	7.58
Single >13' to 18' or Double >26' to 36'	6-5/8"	18.97

   ii) Chain Link Fabric - Shall be No. 9 AFC gauge galvanized steel wire woven in a 2" mesh, manufactured in accordance with the requirements of ASTM A392. The fabric shall have a heavy zinc coating by hot dip galvanizing after weaving. The fabric shall have a barbed finish at the top and bottom.

   iii) Tension Wire - Shall be No. 7 gauge galvanized, hard drawn, steel spring wire and shall conform with the requirements of ASTM A227.

   iv) Tie Wire - Shall be No. 9 AWG gauge galvanized steel wire manufactured in accordance with the requirements of the equivalent to ASTM A112.

v) Barbed Wire - Shall be made of two strands of No. 12 1/2 AWG gauge galvanized steel wire twisted with two point No. 14 AWG gauge barbs spaced at not more than five inches, and manufactured in accordance with the requirements of ASTM A121, Class I.

vi) Truss Rods - Shall be made from 3/8" diameter galvanized steel rod, with drop forged turnbuckles, and galvanized in accordance with ASTM A153.

vii) Hardware & Misc – All hardware, hinges, clamps, fasteners, bolts, nuts, turn-buckles, fittings, post caps, stretcher bars, and other ferrous material not previously covered in these specifications, shall be manufactured of steel, malleable iron or wrought iron, and shall be galvanized in accordance with the requirements of ASTM A153. All of the above hardware and fittings shall be manufactured so as to allow and assemble in accordance with the drawings and these specifications. All ferrous materials shall have a heavy zinc coating by hot dip galvanizing, after fabrication or weaving, applied in accordance with the requirements of the ASTM A153. Concrete footings shall be concrete Class 500-C-2500 per the "Standard Specifications", Section 201.

3. Construction Work and Methods - All fencing shall be installed in a professional manner and shall be inspected by the District for compliance with these specifications.

Posts shall be spaced not more than ten feet center to center of posts and be set in a vertical position. Tops of the concrete foundations shall be troweled smooth sloping outward from the post. End, corner and gate posts shall be braced to the nearest line post. Line posts, at intervals not greater than 1,000 feet and at locations shown on the plans, shall be braced both ways. All posts shall have post caps. The minimum depth of footings shall be 2'-2" for fences of heights less than or equal to 5' and 2'-8" for fences of heights of over 5'. In cross sections, diameter of the footing shall be a minimum of 10" and not be less than three (3) times the outside diameter of the post.

Chain link fabric shall be fastened on the side of the posts as shown on the drawings and shall be stretched taut and securely fastened to the posts, the top rails and tension wires. The fabric shall be fastened to end, corner, and gate posts with 1/4" by 3/4" steel stretcher bars and not less than 1/4" by 3/4" steel stretcher bar bands, spaced not more than one foot apart. The fabric shall be fastened to line posts, rails, and tension wires with NO. 9 AWG gauge tie wires or equivalent metal bands spaced approximately at 14" on line posts and 18" on rails and tension wires. Bottom tension wires and fabric shall be stretched straight from post to post. Excavating at high places may be required and filling at low places will not be permitted.

Walk gates and drive gates shall be of the width as shown on the drawings. Gate frames shall be cross-trussed with 3/8" truss steel rods equipped with drop-forged turnbuckles.

The corners of gate frames shall be fastened together and reinforced with a malleable iron fitting designed for the purpose or welded securely. Surplus welding material shall be removed prior to galvanizing. Chain link wire fabric shall be of the same type as specified for the fence and shall be fastened to the frame by the use of stretcher bars, clamps and tie wire as specified for the fence, and suitable tension connectors spaced at approximately one foot intervals. Gates shall be hung by not less than two steel or malleable iron hinges not less than three inches in width so designed as to securely clamp to the gatepost and permit the gate to swing back against the fence. Hinges shall be of high-grade malleable iron of the ball and socket type, which will permit the gate to swing back against the fence. The lower hinges of the gate shall support the entire vertical load of the gates as well as provide for the resultant

horizontal reaction. Each gate shall be outfitted with approved latches and provisions for padlocking. Latches, hasps and bolts shall be accessible from either side of the gate.

Repair of any minor galvanized coating damage shall be made by thoroughly wire brushing the damaged areas and removing all loose and cracked coating, after which the cleaned areas shall be painted with 2 coats of paint, high zinc dust content, conforming to the requirements of Federal Specification: MIL-P-21035.

The Contractor shall provide written guarantees that the entire work constructed by him under the contract will fully meet all requirements thereof as to quality of workmanship, and of materials. The Contractor shall make at his own expense any repairs or replacements made necessary by defective materials or workmanship supplied by him which have become evident within one year after date of notice of completion and acceptance of the work is filed, and to restore to full compliance with the requirements of these specifications any part of the fencing, posts, gates, or miscellaneous materials which during said one year period is found to be deficient with respect to any provision of this specification. The Contractor shall make all repairs and replacements promptly upon receipt of written orders for same from the District. If the Contractor fails to make the repair and replacement promptly, the District may do the work, and the Contractor and his surety shall be liable to the District for the cost thereof.

B. DIRECT BURIED CABLE

1. General - The Contractor shall furnish and install Direct Burial Cable as specified on the drawings. The cable(s) shall be laid along with those pipelines as noted on the drawings. Direct Burial Cable shall be General Cable, #19 copper conductors; or approved equal and shall contain 6-pair conductors, unless specified otherwise by the District. The Contractor, with the District's inspector present, shall test for electrical continuity each wire of the cable on each reel, immediately before the Contractor begins to install the cable, to verify that the cable delivered to the job site is in satisfactory condition.

   The Contractor shall use a suitable cable reel-trailer to sag-off the cable in a straight non-kinking manner and lay the cable in open pipe trench next to pipe at the ten o'clock or two o'clock position, after all pipe work is finished and just before concrete pouring or backfilling is commenced. Soft earth containing no rocks shall be placed next to cable. Care shall be used to prevent damage to cable in trench. Cable shall have a minimum of 30" cover and shall be installed from the pipe trench to the location shown on the Drawings for the pedestal mounted terminal housing installation for Direct Burial Cable per District standard. The Contractor shall provide a 1" diameter P.E. tubing (unless indicated otherwise on Drawings), of adequate length to clear obstructions, at all locations along the pipeline where concrete thrust blocks, cutoff walls, etc., are required and the cable shall be installed within the P.E. tubing "sleeve". The sleeve shall be located to prevent unnecessary bending in the cable. In order to facilitate installation of the cable within the P.E. tubing sleeve, the Contractor shall cut each sleeve (lengthwise), place the sleeve around the cable at the location of concrete obstructions, tape to seal the cut portion of sleeve (lengthwise with Scotch No. 33, or equal, ¾" wide plastic tape), and pack ends of sleeve to seal with John-Mansville Duxseal, or approved equal, prior to pouring concrete.

   The Contractor shall make all splices required in the cable, including splices at ends of reels, cut or damaged cable, etc. All cable splices shall be made with a "Scotchcast 3M Communications Kit" with six (6) #UIB connectors for 6-pair cable, installed per manufacturer's installation recommendations.

Excessive splicing to correct Contractor's damage to cable will not be allowed; instead, new replacement cable will be required by the District.

2. Final Testing - After completing the installation of the Direct Burial Cable and the pedestal mounted terminal housings, the Contractor shall test each wire in the cable between consecutive housing installations for electrical continuity. The Contractor shall correct any deficiencies indicated by the final testing.

   The Contractor shall tape to waterproof the cable ends after testing, using Scotch No. 33, or equal, ¾" wide plastic tape. Each cable shall be identified by using taped wire markers, and suitable terminal strips shall be provided inside each housing installation.

   All splicing, testing, and taping shall be done by a competent journeyman telephone cable splicer.

   All electrical continuity tests of the Direct Burial Cable, alone and in series with the bonded pipeline, shall be made with low-voltage, battery operated self-contained test meter, to keep test voltage and current to minimum values.

C. SEWAGE LIFT STATION AND FORCE MAIN GUIDELINES

Sewage lift station and force mains shall be designed and constructed in accordance with the District's Design and Construction Manual as well as with the detailed design and construction guidelines contained in a separate document which will be provided upon request.

D. STORAGE TANK GUIDELINES

Storage tanks shall be designed and constructed in accordance with the District's Design and Construction Manual as well as with the detailed design and construction guidelines contained in a separate document which will be provided upon request.

E. PUMPING STATION GUIDELINES

Pumping Stations shall be designed and constructed in accordance with the District's Design and Construction Manual as well as with the detailed design and construction guidelines contained in a separate document which will be provided upon request.

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SECTION IX
RCSD STANDARD DRAWINGS

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SECTION IX-1
GENERAL STANDARD DRAWINGS

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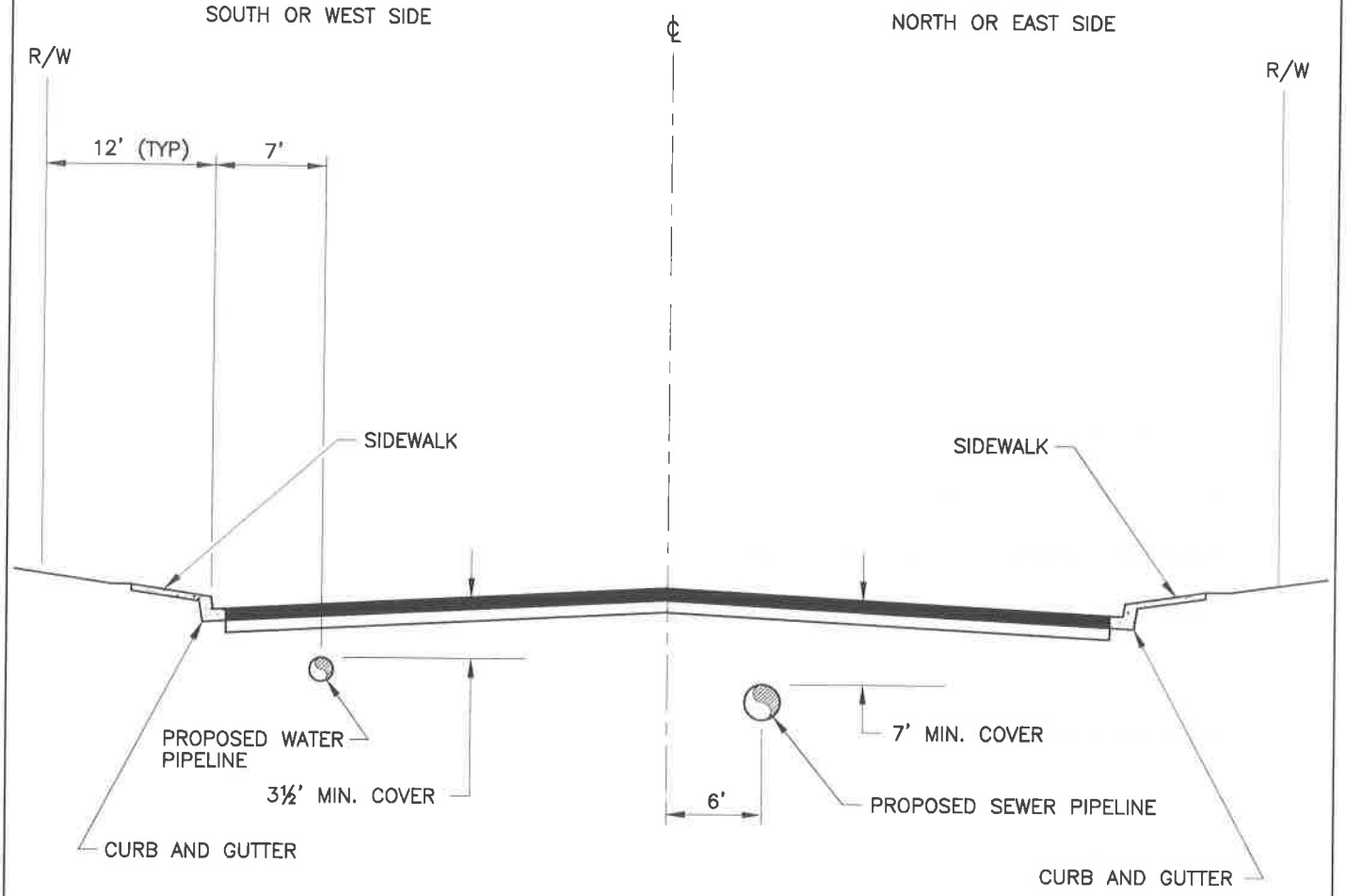
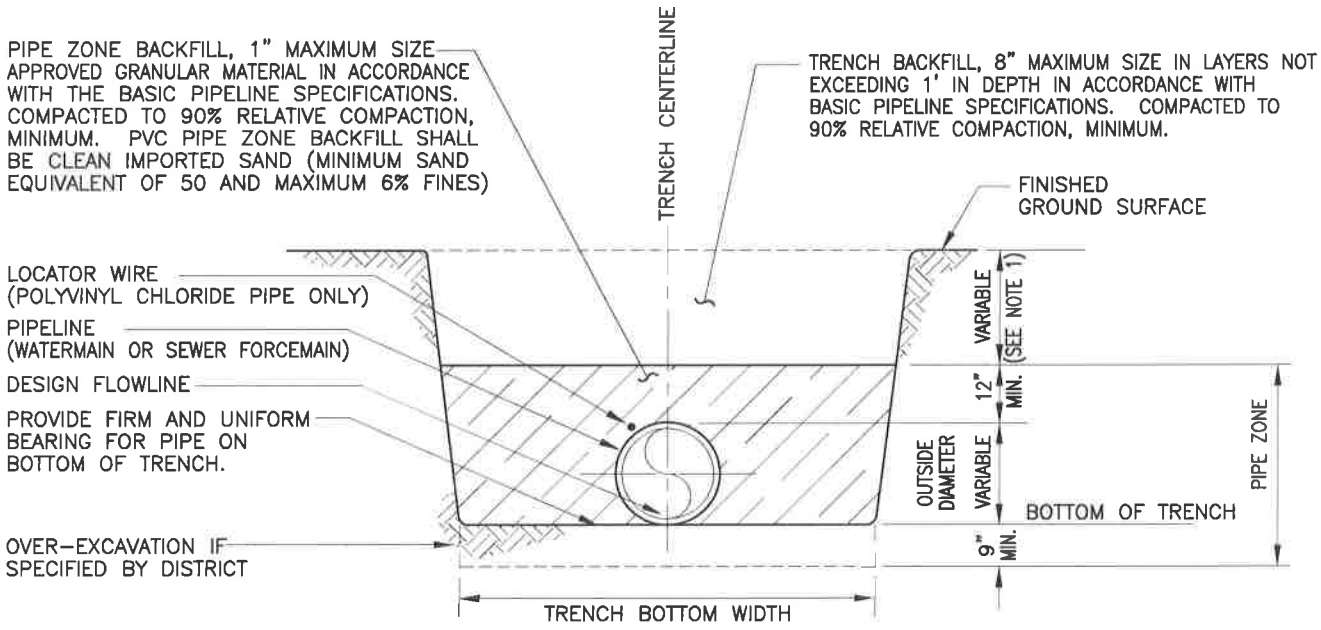


NOTES:

1) CONFORMS TO RIVERSIDE COUNTY STANDARD NO. 817.

2) CHANGES IN SEWER AND WATER LOCATIONS MAY BE PERMITTED IN CASES OF CONFLICTING FACILITIES.

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT TYPICAL WATER/SEWER LOCATIONS STANDARD DRAWING G10



PIPE DIAMETER (INCHES)	TRENCH BOTTOM WIDTH	
	MINIMUM (FEET)	MAXIMUM (FEET)
12 OR LESS	2.0	2.5
16	2.5	3.5

NOTES:

1) PIPELINE (WATERMAIN OR SEWER FORCEMAIN) COVER SHALL BE 42" MINIMUM UNLESS SPECIFIED OTHERWISE.

2) TRENCH SIDES SHALL BE SLOPED OR SHORED IN ACCORDANCE WITH CAL OSHA CONSTRUCTION SAFETY ORDERS FOR TRENCH DEPTHS 5' AND GREATER.

3) ALL EXISTING PAVEMENT SHALL BE SAWCUT PRIOR TO TRENCHING, AND WHERE TRENCH SIDES SLUFF AND PAVEMENT BREAKS AWAY, IT SHALL BE SAWCUT AGAIN PRIOR TO PERMANENT PAVEMENT REPAIR.

4) WHENEVER EXISTING CURBS ARE BEING USED FOR GRADE CONTROL, PIPELINES SHALL BE LAID ON PROJECTED CONTINUOUS SLOPES THROUGH LOCALIZED HILLS, HUMPS, AND MOUNDS SUCH AS STREET INTERSECTIONS AND CHANNEL BERMS. PIPELINE GRADES SHALL BE SELECTED TO MAINTAIN MINIMUM COVER WITH CONTINUOUS PIPELINE SLOPE. PIPELINE TRENCH DEPTHS SHALL BE INCREASED TO ACCOMPLISH SAME AND PIPELINE COVER SHALL BE INCREASED ACCORDINGLY.

5) FOR WATERMAINS, WHENEVER EXISTING UTILITY FACILITIES, EXCEPT SEWERS, ARE ENCOUNTERED, WATERMAIN SHALL CLEAR THEM BY 12" MINIMUM, BOTH HORIZONTALLY AND VERTICALLY. WATERMAINS SHALL CLEAR SEWERS IN ACCORDANCE WITH STANDARD DRAWING W1010. FOR SEWER FORCEMAINS, WHENEVER EXISTING UTILITY FACILITIES, EXCEPT WATERMAINS, ARE ENCOUNTERED, SEWER FORCEMAINS SHALL CLEAR THEM BY 12" MINIMUM, BOTH HORIZONTALLY AND VERTICALLY. SEWER FORCEMAINS SHALL CLEAR WATERMAINS IN ACCORDANCE WITH STANDARD DRAWING S2020. SPECIFIED CLEARANCES OR SEPARATIONS SHALL NOT BE REDUCED UNLESS ORDERED OR PERMITTED BY DISTRICT. PIPELINES (WATERMAINS AND SEWER FORCEMAINS) SHALL NOT BE IN CONTACT WITH OR REST AGAINST OTHER UTILITY FACILITIES.

6) WHERE BOTTOM OF EXCAVATION IS IN ROCK WHICH CANNOT BE EXCAVATED TO PROVIDE UNIFORM BEARING FOR THE PIPE, TRENCH SHALL BE OVER-EXCAVATED 9" MINIMUM AND REFILLED WITH SELECT EXCAVATED MATERIAL OR IMPORTED BACKFILL MATERIAL COMPACTED TO 90% MINIMUM RELATIVE COMPACTION.

7) LOCATOR WIRE FOR POLYVINYL CHLORIDE PIPE SHALL BE INSULATED 14 GAUGE COPPER WIRE. IT SHALL BE CONTINUOUS ALONG THE PIPELINE, LOOPED AROUND THE PIPE AT EACH JOINT, AND LOOPED INTO VALVE BOXES WITHIN 12" OF THE SURFACE AND WITH 3' OF SLACK.

APPROVED:

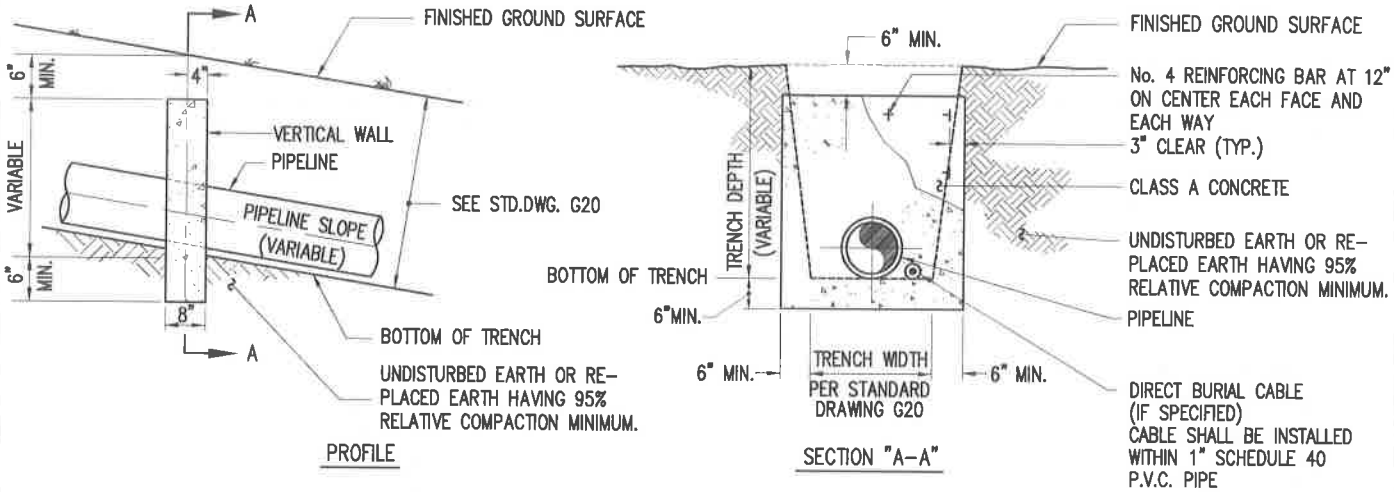
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

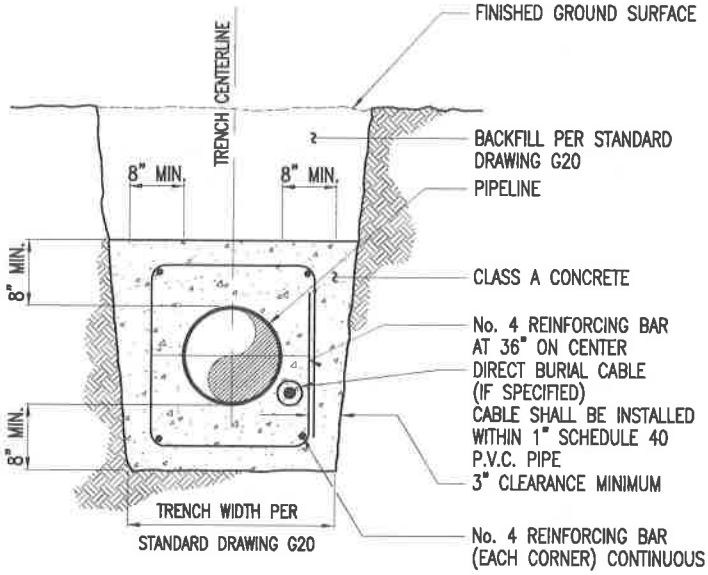
RUBIDOUX COMMUNITY SERVICES DISTRICT

PIPELINE TRENCH

STANDARD DRAWING G20



SLOPE PROTECTION CUT-OFF WALL

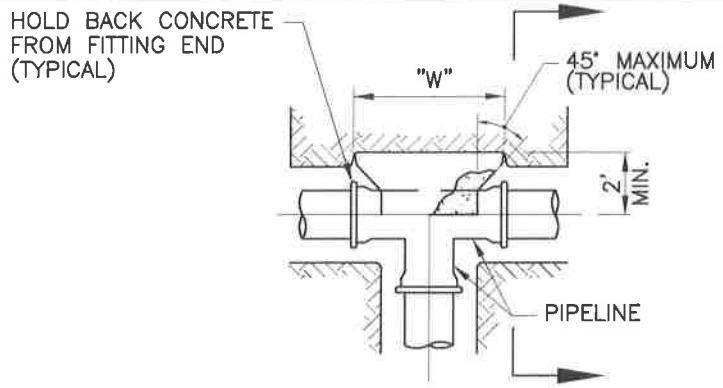


PIPE ENCASEMENT

NOTES:

1) CONCRETE SHALL BE FORMED WITH TRIMMED EARTH, SANDBAGS, OR LUMBER TO ACHIEVE REQUIRED CONFIGURATION.
2) DO NOT PLACE CUT-OFF WALL AT PIPE JOINTS.
3) PIPE ENCASEMENT SHALL BE PLACED ON UNDISTURBED OR COMPACTED EARTH AND AGAINST CLEAN PIPE.
4) ALL BARS SHALL BE DEFORMED, OVERLAP SHALL BE 20", MIN. ALL BARS SHALL BE FULLY ENCASED WITH 3" MINIMUM CLEARANCE ALONG RUN, AT BENDS, OR AT ENDS.
5) IF ANY APPURTENANCES ARE REQUIRED WITHIN LIMITS OF PIPE ENCASEMENT, ENCASEMENT SHALL BE FORMED (TIMBER OR SANDBAGS) SO THAT ACCESS IS AVAILABLE THERETO.
6) PIPE SHALL BE RESTRAINED AGAINST FLOTATION DURING PLACEMENT OF CONCRETE AND IT SHALL BE RELAID IF IT IS ALLOWED TO RISE ABOVE SPECIFIED GRADE.

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT PIPE ENCASEMENT/SLOPE PROTECTION CUT-OFF WALL STANDARD DRAWING G30



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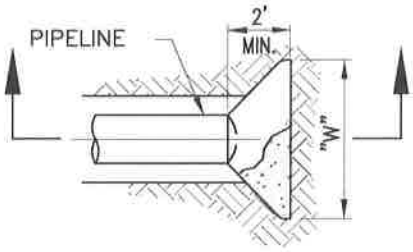

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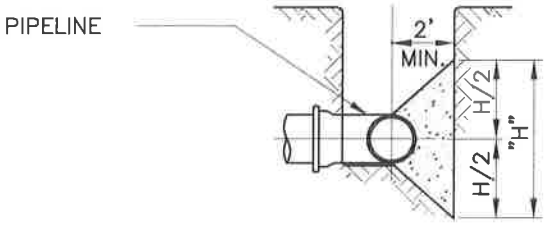
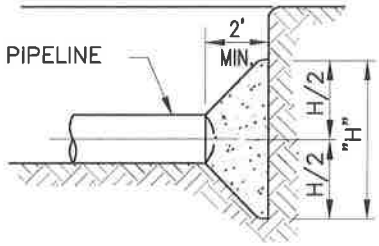


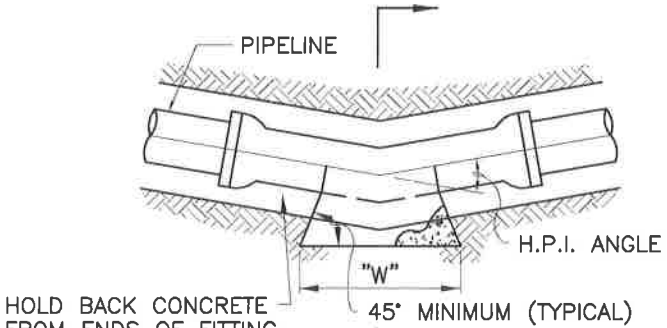
SECTION



SECTION

TEE THRUST PROTECTION

END THRUST PROTECTION



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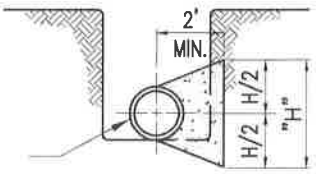


SECTION

HORIZONTAL BEND THRUST PROTECTION

NOTES:

1) THRUST BLOCK SIZES SHOWN ARE MINIMUM AND ARE BASED ON A HORIZONTAL BEARING CAPACITY OF 1500 PSF. CONTRACTOR SHALL RETAIN A REGISTERED GEOTECHNICAL ENGINEER TO DETERMINE ALLOWABLE HORIZONTAL BEARING CAPACITY. IF SAID CAPACITY IS LESS THAN 1500 PSF, THE CONTRACTOR SHALL FURNISH CONCRETE THRUST BLOCKS OF THE APPROPRIATE SIZE.
2) BLOCK CONCRETE SHALL BE CLASS C IN ACCORDANCE WITH BASIC CONCRETE SPECIFICATIONS.
3) BLOCKS SHALL BE FORMED WITH TRIMMED EARTH, SAND BAGS, OR LUMBER TO ACHIEVE REQUIRED CONFIGURATION. ALL LUMBER SHALL BE REMOVED PRIOR TO BACKFILLING.
4) BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH OR REPLACED EARTH HAVING 95% RELATIVE COMPACTION, MINIMUM.
5) BACKFILL AROUND AND OVER BLOCKS SHALL BE COMPACTED TO 95% RELATIVE COMPACTION, MINIMUM.
6) COMPACTED EARTH SHALL EXTEND TO DEPTH AND WIDTH (W) OF BLOCK AND TO DISTANCE W/2 BEFORE AND PAST BLOCK.
7) UNDER CERTAIN CIRCUMSTANCES, FULLY WELDED JOINTS FOR WELDED STEEL PIPE, FLANGED JOINTS OR RESTRAINED JOINTS FOR DUCTILE IRON PIPE, OR RESTRAINED JOINTS FOR POLYVINYL CHLORIDE PIPE MAY BE USED IN LIEU OF THRUST BLOCKS. SAID APPLICATION SHALL BE APPROVED BY DISTRICT.

APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

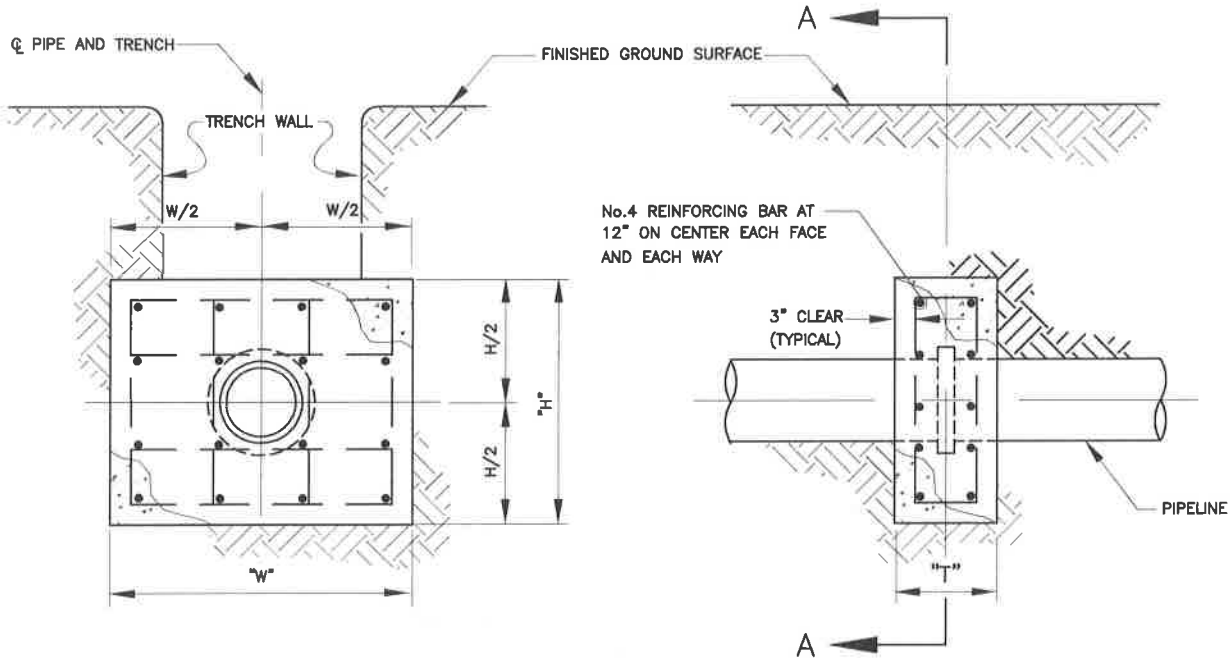
RUBIDOUX COMMUNITY SERVICES DISTRICT

CONCRETE THRUST PROTECTION

STANDARD DRAWING

G40
SHEET 1 OF 2

CONCRETE THRUST PROTECTION TABLE			
PIPE SIZE INCHES	TYPE OF FITTING	THRUST BLOCK DIMENSIONS	
		CL. 150 PIPE H'xW'	CL. 200 PIPE H'xW'
16	TEE & END	5.0x 7.0	5.0x 9.5
16	5°–25° H.P.I.	3.0x 5.0	4.0x 5.0
16	26°–45° H.P.I.	4.0x 7.0	5.0x 7.5
16	46°–70° H.P.I.	5.0x 8.0	6.0x 9.0
16	71°–90° H.P.I.	5.0x10.0	6.0x11.0
12	TEE & END	4.0x 5.0	4.5x 6.0
12	5°–25° H.P.I.	3.0x 3.0	3.0x 4.0
12	26°–45° H.P.I.	3.0x 5.0	4.0x 5.0
12	46°–70° H.P.I.	4.0x 5.5	4.5x 6.5
12	71°–90° H.P.I.	4.0x 7.0	4.5x 8.0
8	TEE & END	3.0x 3.0	3.5x 3.5
8	5°–25° H.P.I.	2.0x 2.0	2.0x 2.5
8	26°–45° H.P.I.	2.5x 3.0	3.0x 3.0
8	46°–70° H.P.I.	3.0x 3.5	3.5x 4.0
8	71°–90° H.P.I.	3.5x 4.0	4.0x 4.5
6	TEE & END	2.0x 3.0	2.5x 3.0
6	5°–25° H.P.I.	1.0x 2.5	1.5x 2.0
6	26°–45° H.P.I.	2.0x 2.0	2.0x 3.0
6	46°–70° H.P.I.	2.0x 3.0	2.5x 3.5
6	71°–90° H.P.I.	2.5x 3.0	3.0x 3.5
4	TEE & END	1.0x 2.5	1.5x 2.5
4	5°–25° H.P.I.	1.0x 1.0	1.0x 1.5
4	26°–45° H.P.I.	1.0x 2.0	1.5x 2.0
4	46°–70° H.P.I.	1.5x 2.0	1.5x 2.5
4	71°–90° H.P.I.	1.5x 2.5	2.0x 2.5



SECTION "A–A"

PROFILE

PIPE SIZE (INCHES)	"H" (FEET) MIN.	"W" (FEET) MIN.	"T" (FEET) MIN.	"T" (FEET) MAX.
8 OR LESS	2.0	4.5	1.0	1.5
12	3.0	5.0	1.0	1.5
16	3.8	6.0	1.3	1.8

NOTES:

1) CONCRETE SHALL BE CLASS C IN ACCORDANCE WITH BASIC CONCRETE SPECIFICATIONS.

2) FORMS SHALL BE TRIMMED EARTH, SAND BAGS, OR LUMBER TO ACHIEVE REQUIRED CONFIGURATION. ALL LUMBER SHALL BE REMOVED PRIOR TO BACKFILLING.

3) CONCRETE THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH OR REPLACED EARTH HAVING 95% RELATIVE COMPACTION, MINIMUM.

4) BACKFILL AROUND AND OVER CONCRETE THRUST BLOCKS SHALL BE COMPACTED TO 95% RELATIVE COMPACTION, MINIMUM.

5) COMPACTED EARTH SHALL EXTEND TO DEPTH AND WIDTH (W) OF CONCRETE THRUST BLOCK AND TO DISTANCE W/2 BEFORE AND PAST CONCRETE THRUST BLOCK.

6) UNDER CERTAIN CIRCUMSTANCES, FULLY WELDED JOINTS FOR WELDED STEEL PIPE, FLANGED JOINTS OR RESTRAINED JOINTS FOR DUCTILE IRON PIPE, OR RESTRAINED JOINTS FOR POLYVINYL CHLORIDE PIPE MAY BE USED IN LIEU OF CONCRETE THRUST BLOCKS. SAID APPLICATION SHALL BE APPROVED BY DISTRICT.

APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

THRUST PROTECTION SHEAR RING

STANDARD DRAWING G50

RUBIDOUX COMMUNITY SERVICES DISTRICT

PROJECT TITLE

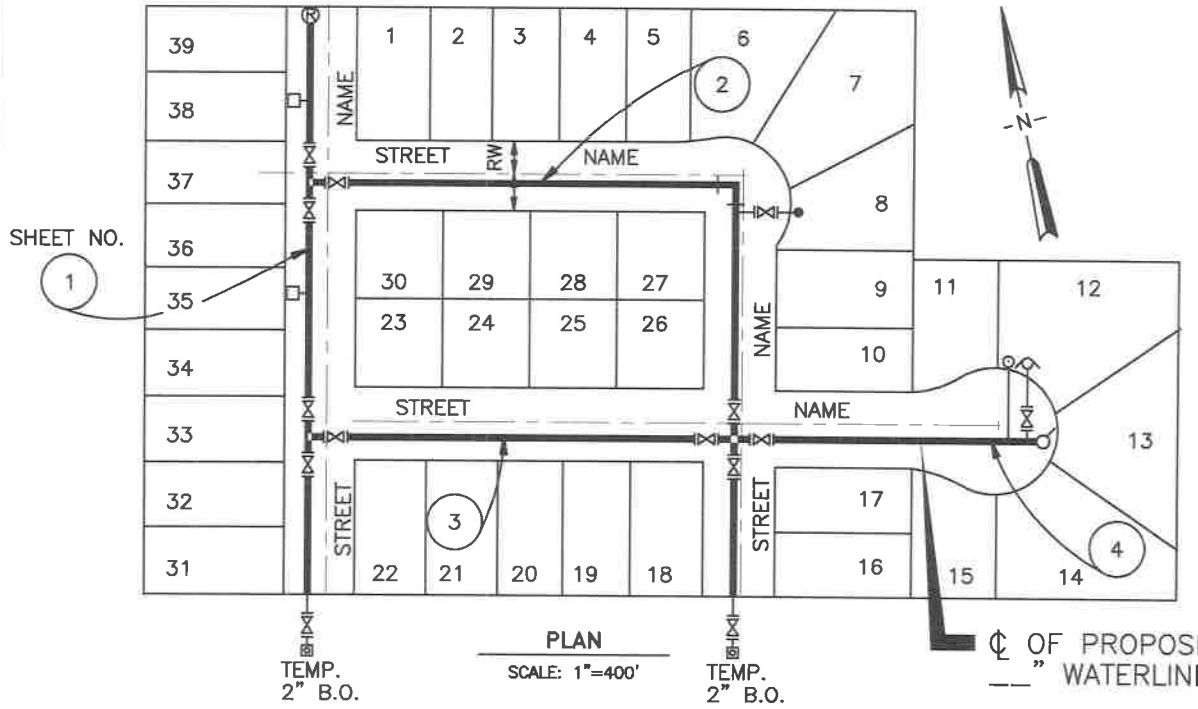
TYPICAL TITLE SHEET LAYOUT
WATER SYSTEMS

STANDARD DRAWING G60

APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005



PLAN

SCALE: 1"=400'

NOTES:

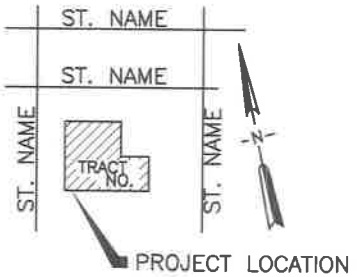
1. WATER NOTES IN APPENDIX "C".
2. DRAWING SIZE TO BE "D" (24"x36").

LEGEND:

SYMBOLS PER STANDARD DRAWING G80

BENCHMARK:

BASIS OF BEARING:



VICINITY MAP

N.T.S.

QUANTITY ESTIMATE:

____FEET OF ____INCH C-900 (DIP OR CML&C).
____EACH ____INCH FLANGED GATE VALVE ASSY. PER RCSD STD. DWG. W1020.
____EACH ____INCH BLOWOFF VALVE ASSY. PER RCSD STD. DWG. W1150.
____EACH ____ INCH AIR VALVE ASSY. PER RCSD STD. DWG. W1070.
____EACH RESIDENTIAL FIRE HYDRANT ASSY. PER RCSD STD. DWG. W1050.
____EACH SERVICE INSTALLATION PER RCSD STD. DWG. W1100.
____EACH WATER QUALITY SAMPLE STATION PER RCSD STD. DWG. W1120.

48 hours BEFORE excavation
(800) 227-2600
CALL Underground Service Alert

WATER CERTIFICATION BLOCK

APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:

DATE ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER, RCE 46108

VOID AFTER ONE YEAR FROM THIS DATE

SYM	REVISIONS	DATE	BY

ENGINEERING FIRM

APPROVED BY _____
REGISTERED ENGINEER No. _____ DATE _____

SCALE	N/S
FIELD BOOK	
DESIGN	
DRAWN	
CHECKED	

RUBIDOUX COMMUNITY SERVICES DISTRICT

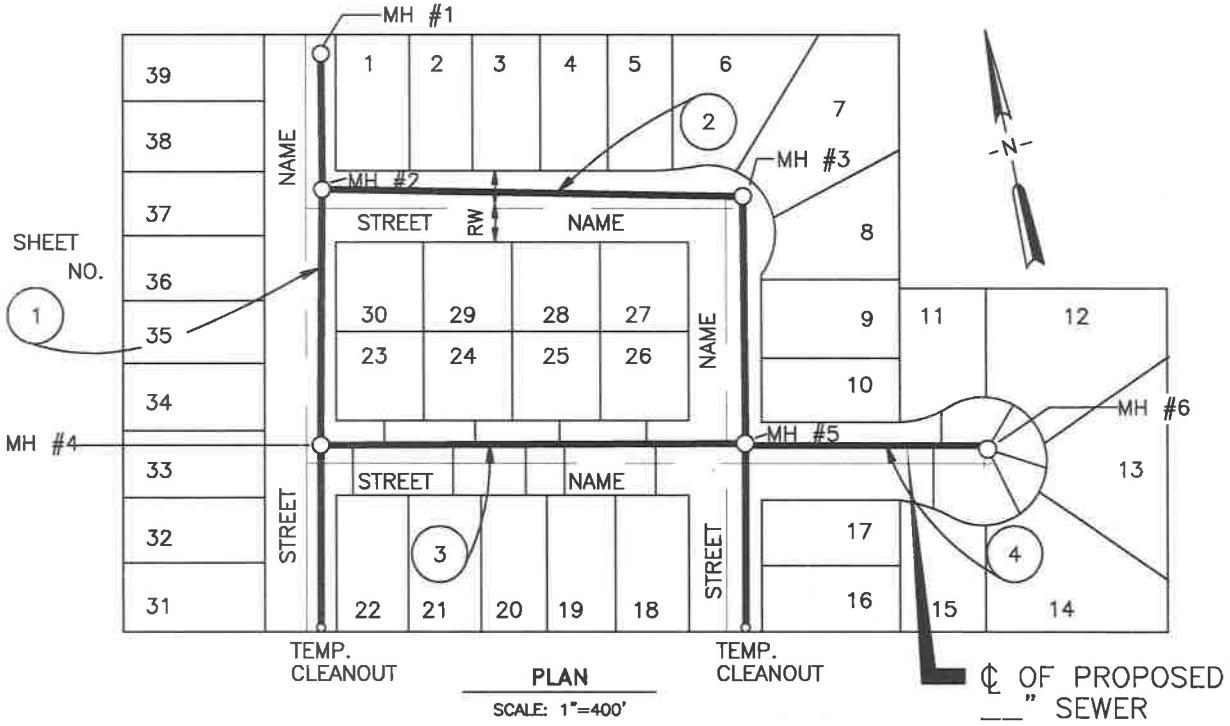
PROJECT TITLE

TITLE SHEET

SHEET 1 OF 3 SHEETS

R.C.S.D. PLAN No.

PROJECT TITLE



PLAN

SCALE: 1"=400'

NOTES:

1. SEWER NOTES IN APPENDIX "C" GIVEN AT FIRST PLAN CHECK.
2. DRAWING SIZE TO BE "D" (24"x36")
3. ALL MANHOLES SHALL BE NUMBERED AS SHOWN. (FROM DOWN STREAM SIDE UP.)

LEGEND:

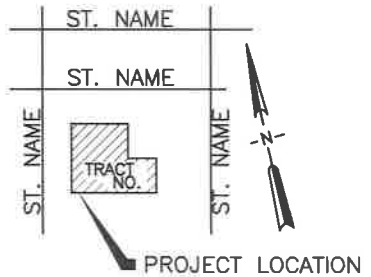
SYMBOLS PER STANDARD DRAWING G80

BENCHMARK:

BASIS OF BEARING:

QUANTITY ESTIMATE:

___ FEET OF ___INCH VCP SEWER.
___ EACH MANHOLES PER RCSD STD. DWG. S2030.
___ EACH SERVICE LATERALS PER RCSD STD. DWG. S2080.



VICINITY MAP

N.T.S.

48 hours BEFORE excavation
(800) 227-2600
CALL Underground Service Alert

SEWER CERTIFICATION BLOCK

APPROVED BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT FOR CONSTRUCTION:

DATE ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER, RCE 40150

VOID AFTER ONE YEAR FROM THIS DATE.

SYM	REVISIONS	DATE	BY

ENGINEERING FIRM

APPROVED BY: _____
REGISTERED ENGINEER No. _____ DATE _____

SCALE	N/A
FIELD BOOK	XXX
DESIGN	XXX
DRAWN	XXX
CHECKED	XXX

RUBIDOUX COMMUNITY SERVICES DISTRICT

PROJECT TITLE

TITLE SHEET

SHEET 1 OF 3 SHEETS

R.C.S.D. PLAN No.

APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

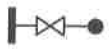
TYPICAL TITLE SHEET LAYOUT
SEWER SYSTEMS

STANDARD DRAWING G70

WATER SYMBOLS

PROPOSED WATERLINE

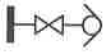
EXISTING WATERLINE


AIR VALVE ASSY. PER RCSD STD. DWG. W1070.


TEMPORARY BLOWOFF/AIR RELEASE ASSY. PER RCSD STD. DWG. W1150.


FLANGED GATE VALVE ASSY. PER RCSD STD. DWG. W1020.


REDUCER


FIRE HYDRANT ASSY. PER RCSD STD. DWG. W1050 OR W1060.


THRUST PROTECTION PER RCSD STD. DWG. G40.


SERVICE INSTALLATION PER RCSD STD. DWG. W1100.


WATER QUALITY SAMPLE STATION PER RCSD STD. DWG. W1120.


TEE


90° ELBOW


BLIND FLANGE


CROSS

SEWER SYMBOLS

PROPOSED SEWERLINE

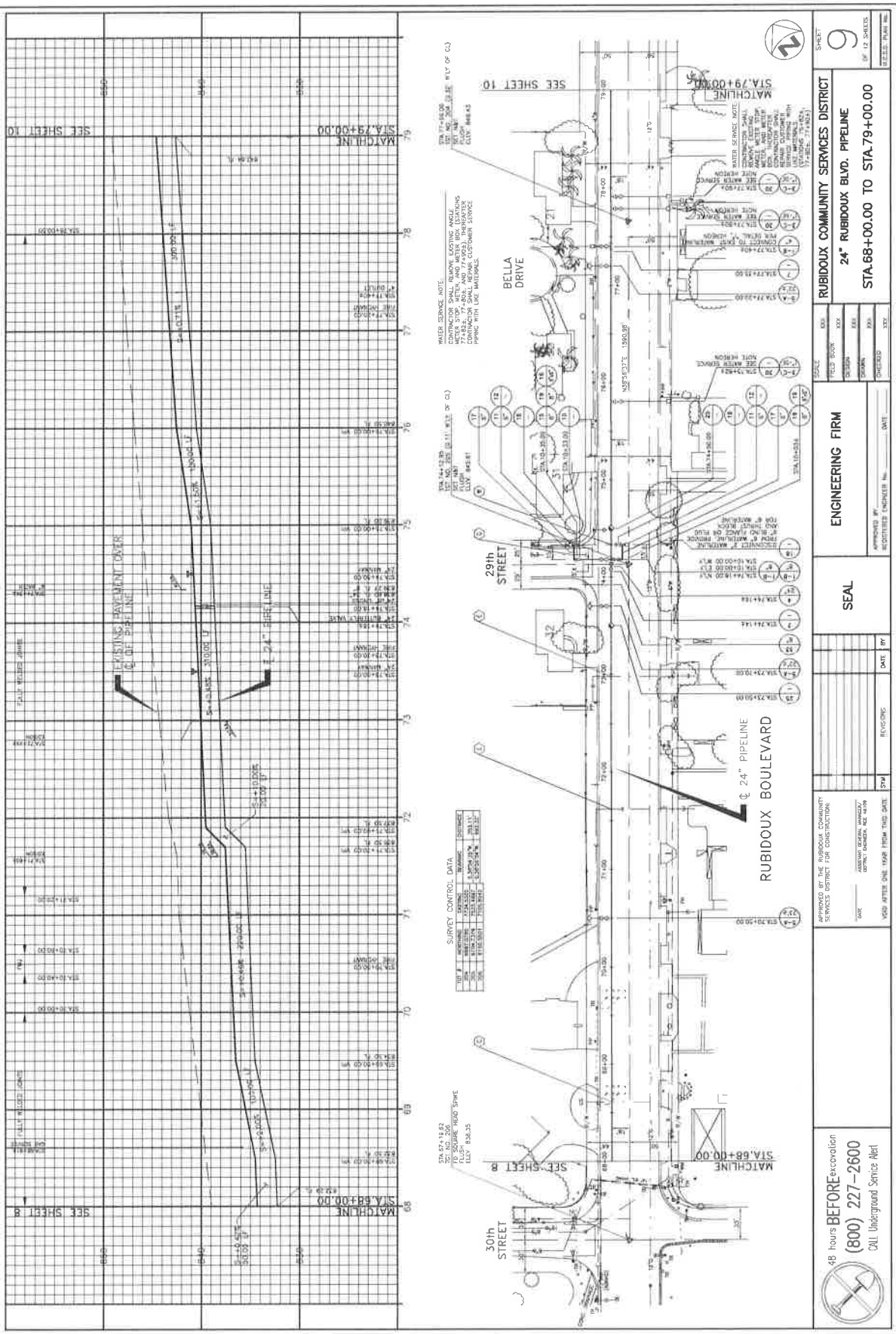
EXISTING SEWERLINE


CLEANOUT PER RCSD STD. DWG. S2070.


MANHOLE PER RCSD STD. DWG. S2030.


SERVICE LATERAL PER RCSD STD. DWG. S2080.

APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT SYMBOL LEGEND WATER AND SEWER SYSTEMS	
	STANDARD DRAWING	G80



APPROVED:

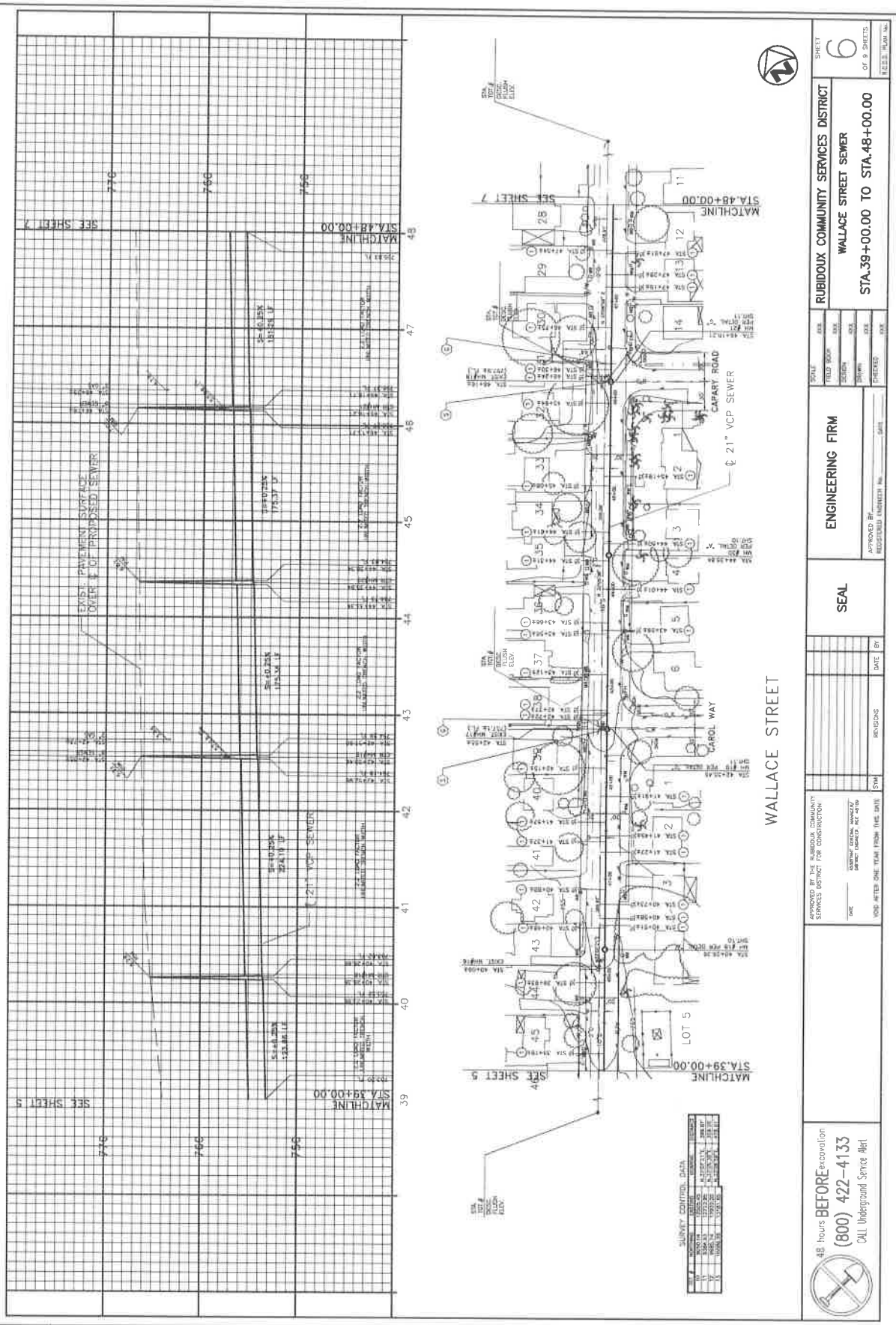
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

TYPICAL PLAN AND PROFILE LAYOUT WATER SYSTEMS

STANDARD DRAWING G90



APPROVED:

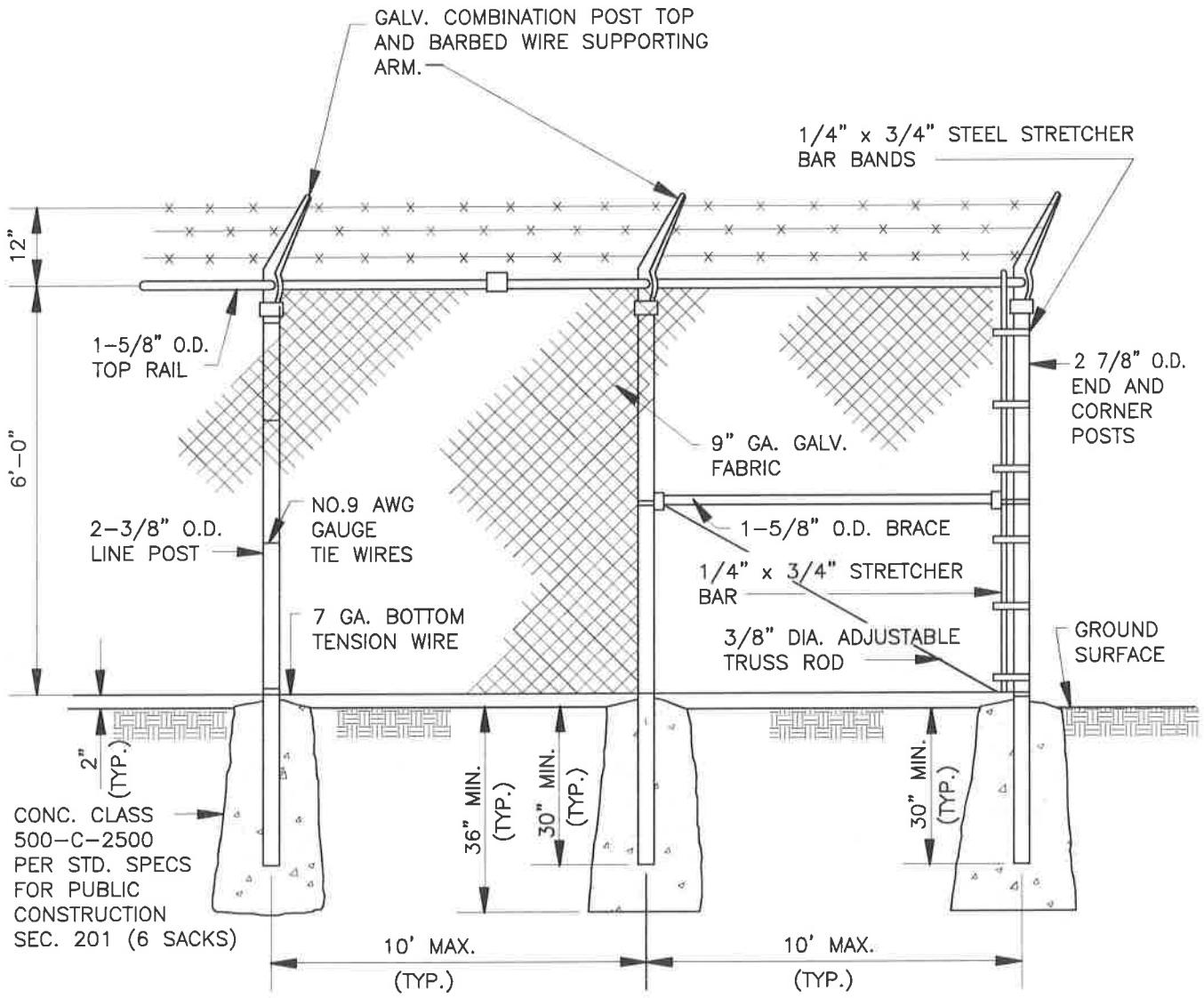
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

TYPICAL PLAN AND PROFILE LAYOUT SEWER SYSTEMS

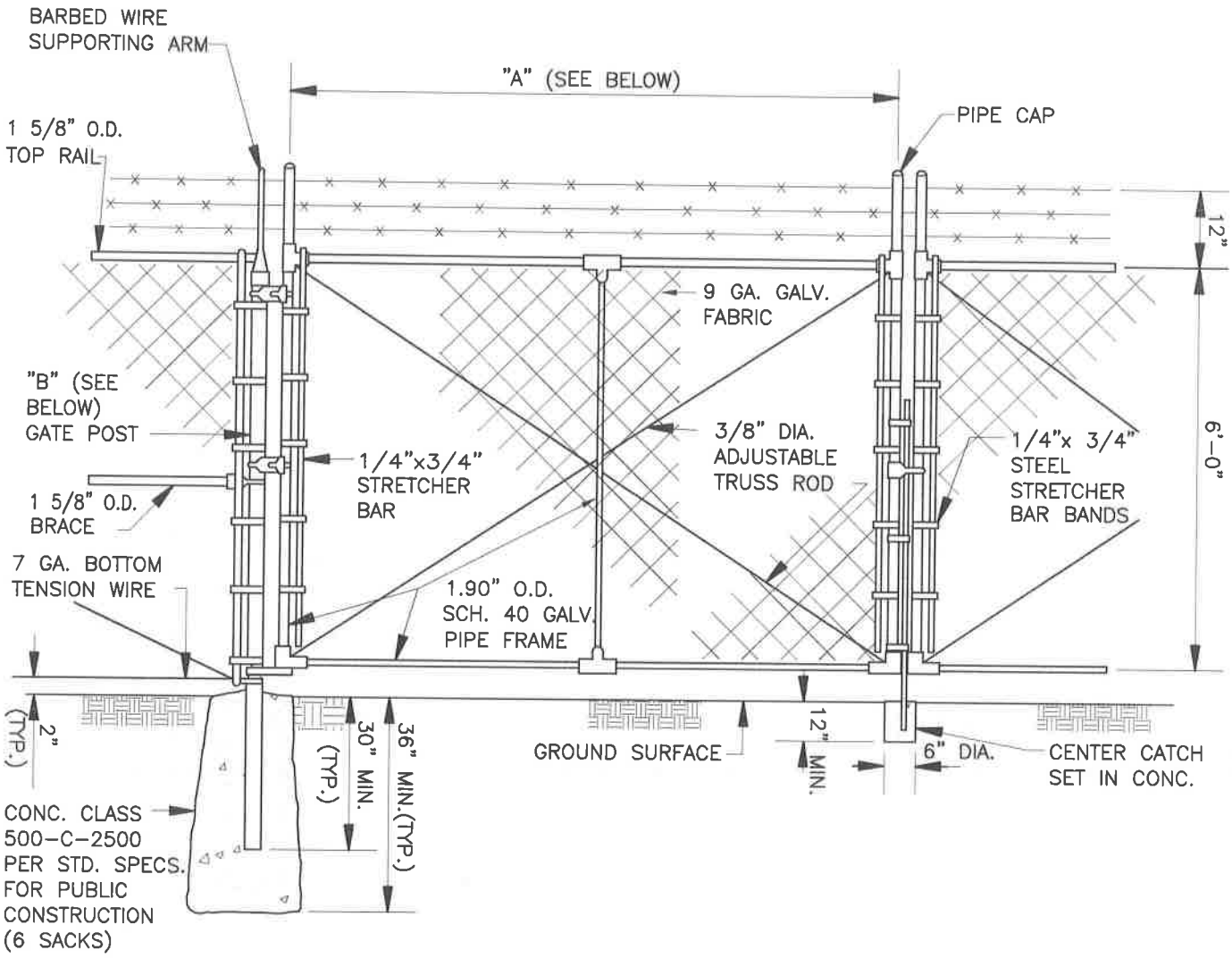
STANDARD DRAWING G100



NOTES:

1. DIAMETER OF CONC. FOOTING SHALL BE 3 TIMES O.D. OF POST (10" MIN)
2. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND SHALL BE APPROVED BY THE DISTRICT.

APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT CHAIN LINK FENCE DETAIL	
	STANDARD DRAWING	G110



GATE OPENINGS: "A"	OUTSIDE DIAMETER GATE POST SIZE IN INCHES "B"
SINGLE TO 6' OR DOUBLE 12' INCL.	2-7/8"
SINGLE OVER 6' TO 13' OR DOUBLE OVER 12' TO 26' INCL	3-1/2"
SINGLE OVER 13' TO 18' OR DOUBLE OVER 26' TO 36' INCL.	6-5/8"

APPROVED:

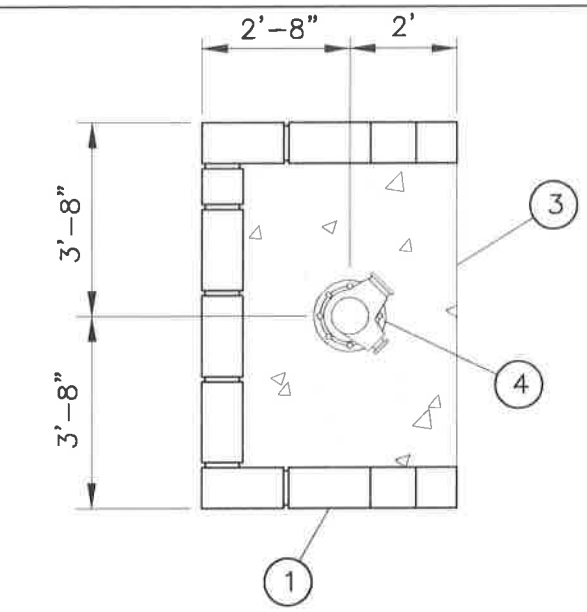
ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER

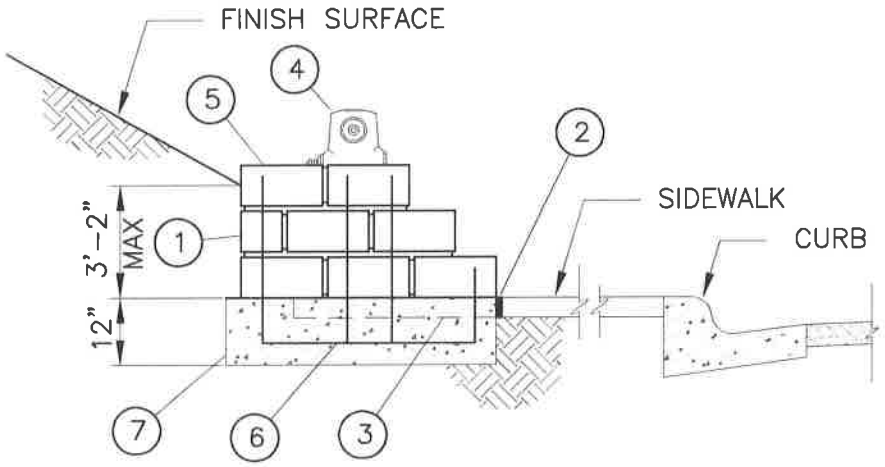
DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

CHAIN LINK GATE DETAIL

STANDARD DRAWING G120





APPURTENANCE RETAINING WALL

ITEM	NUMBER REQUIRED	DESCRIPTION
1	VARIES	8" x 8" x 16" CONCRETE, SLUMP STONE, OR SPLIT FACE BLOCK (GROUT ALL CELLS)
2	1	COLD JOINT STRIP
3	--	4' x 6' x 4" THICK CONCRETE PAD (CLASS A CONCRETE)
4	1	FIRE HYDRANT, AIR VALVE, OR OTHER APPURTENANCE
5	VARIES	8" x 8" x 16" CONCRETE, SLUMP STONE, OR SPLIT FACE CAP BLOCK (TO MATCH BLOCK)
6	VARIES	#4 REBAR (TYPICAL) SEE NOTE 3
7	--	12" x 12" CONCRETE FOOTING

NOTES:

1) REFER TO THE CONCRETE SPECIFICATION OF THE DESIGN MANUAL

2) RETAINING WALLS FOR USE IN CONJUNCTION WITH THE INSTALLATION OF FIRE HYDRANTS, AIR VALVES, SAMPLE STATIONS, AND OTHER APPURTENANCES SHALL BE INSTALLED WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE DISTRICT

3) VERTICAL BARS TO BE INSTALLED AT 16" ON CENTER. INSTALL 1-BAR IN THE CENTER OF THE FOOTING FOR WALL ONLY

4) RETAINING WALLS IN EXCESS OF 3'-4" IN HEIGHT SHALL BE DESIGNED BY THE ENGINEER OF RECORD

APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

RETAINING WALL FOR WATER APPURTENANCES

STANDARD DRAWING | G130

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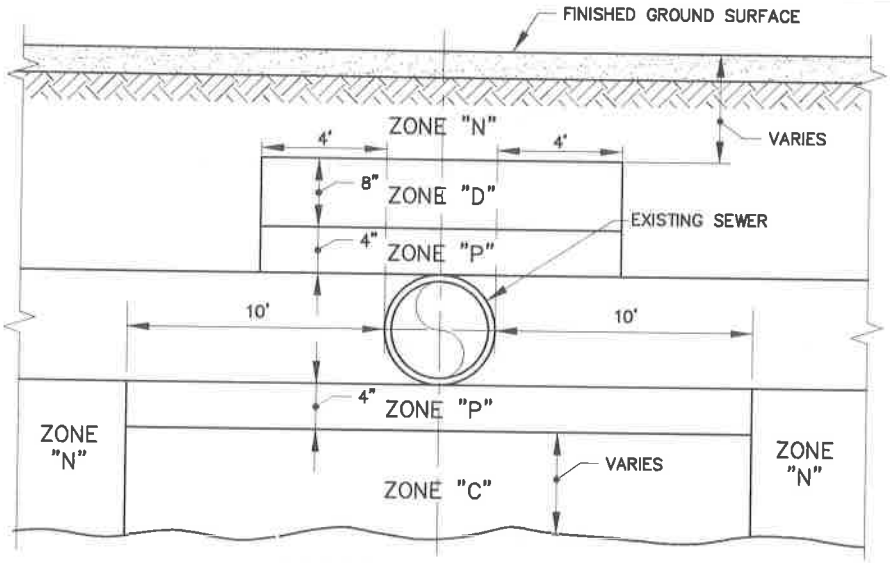
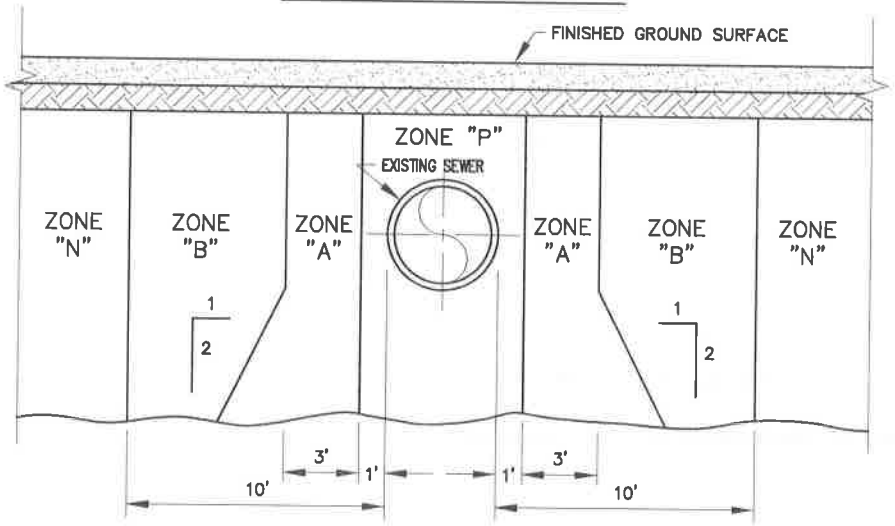
SECTION IX-2
WATER STANDARD DRAWINGS

TABLE OF CONTENTS



CROSSING CONDITION



PARALLEL CONDITION

LEGEND:

ZONE "A"
NO WATERMAINS SHALL BE CONSTRUCTED WITHOUT SPECIAL PERMISSION FROM STATE DEPARTMENT OF HEALTH SERVICES.

ZONE "B"
WATERMAINS SHALL BE WELDED STEEL PIPE (WITH A MINIMUM WALL THICKNESS OF ¼"), DUCTILE IRON PIPE, OR AWWA C900 CLASS 200 (DR14) POLYVINYL CHLORIDE PIPE. ALIGNMENT SHALL BE APPROVED BY THE STATE DEPARTMENT OF HEALTH SERVICES.

ZONE "C"
NO PIPE JOINTS PERMITTED. WATERMAIN SHALL BE WELDED STEEL PIPE (WITH A MINIMUM WALL THICKNESS OF ¼"), DUCTILE IRON PIPE, OR AWWA C900 CLASS 200 (DR14) POLYVINYL CHLORIDE PIPE. CROSSING SHALL BE APPROVED BY STATE DEPARTMENT OF HEALTH SERVICES.

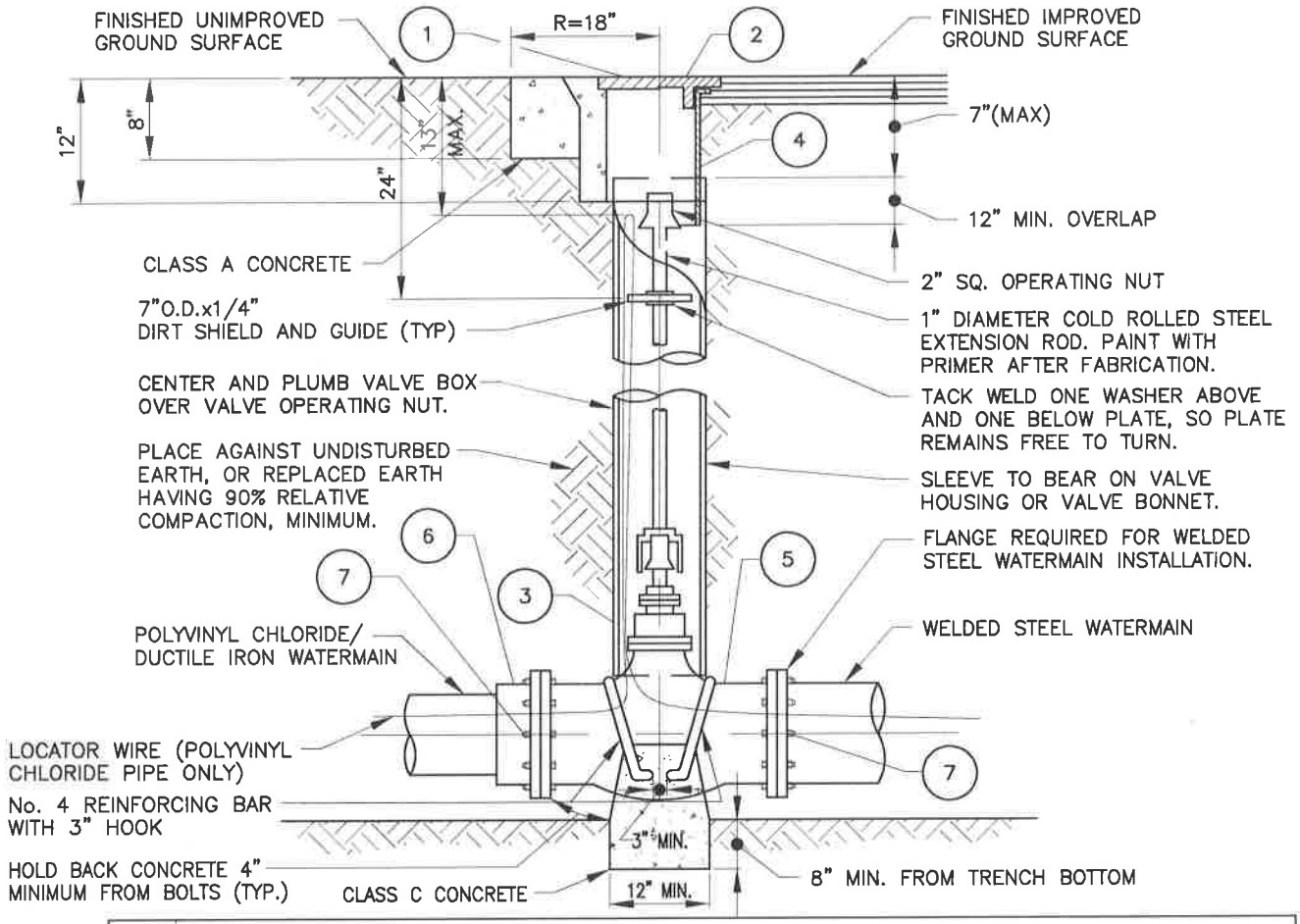
ZONE "D"
NO PIPE JOINTS PERMITTED. WATERMAIN SHALL BE WELDED STEEL PIPE (WITH A MINIMUM WALL THICKNESS OF ¼"), DUCTILE IRON PIPE, OR AWWA C900 CLASS 200 (DR14) POLYVINYL CHLORIDE PIPE.

ZONE "N"
NO SPECIAL REQUIREMENTS.

ZONE "P"
CONSTRUCTION PROHIBITED.

NOTES:
1) CROSSINGS AT OTHER THAN 90° ANGLES SHALL BE AS SPECIFIED BY DISTRICT.

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT WATERMAIN CROSSING / PARALLELING EXISTING SEWER STANDARD DRAWING W1010



ITEM	DESCRIPTION
1	TRAFFIC BOX COVER FOR UNIMPROVED SURFACE (TRIANGULAR COVER WITH FRAME) – COVER MARKED "RCSD".
2	TRAFFIC BOX COVER FOR IMPROVED SURFACE (CIRCULAR COVER WITHOUT FRAME) – COVER MARKED "RCSD".
3	VALVE BOX EXTENSION, 8"I.D. SDR 35 POLYVINYL CHLORIDE PIPE.
4	18 GAUGE x 18" LONG GALVANIZED STEEL SLEEVE WITH 1-1/2" OVERLAP AND 1/2" LIP (FLARE) ON ONE END.
5	GATE VALVE SHALL HAVE FLANGED DUCTILE IRON OR CAST IRON BODY WITH RESILIENT SEAT. VALVE STEM SHALL BE NONRISING WITH 2" SQUARE OPERATING NUT AND SHALL TURN COUNTER-CLOCKWISE TO OPEN. VALVE SHALL HAVE "O" RING SEALS AND NON-SHOCK COLD WATER WORKING PRESSURE OF 200 P.S.I..
6	FLANGE BY TYTON JOINT ADAPTER REQUIRED FOR POLYVINYL CHLORIDE OR DUCTILE IRON WATERMAIN.
7	BOLTS SHALL BE STANDARD HEX HEAD MACHINE PER ASTM A325. NUTS SHALL BE HEAVY HEX COLD-PRESSED SEMI-FINISHED STEEL PER ASTM A194-2, 2H. THREADS SHALL BE LUBRICATED WITH AN APPROVED ANTI-SEIZE COMPOUND. ALL EXPOSED STEEL SHALL BE FIELD COATED WITH AN APPROVED BITUMASTIC.

NOTES:

1) EXTENSION ROD REQUIRED WHENEVER TOP OF VALVE IS 3' OR MORE BELOW FINISHED GROUND SURFACE. REQUIRED LENGTH FOR EXTENSION ROD SHALL BE DETERMINED BY FIELD MEASUREMENT. EXTENSION ROD OPERATOR NUT SHALL BE 18" BELOW FINISHED GRADE. EXTENSION ROD SHALL BE SECURED TO VALVE OPERATING NUT BY WELDING A BEAD ON THE INSIDE OF THREE WALLS OF THE EXTENSION NUT CAP.

2) CHISEL 1-1/2" MINIMUM "V" ON ADJACENT CURB FACE WITH APPROXIMATE DISTANCE TO VALVE BOX, 2 LOCATIONS.

3) AIR VALVE VALVE BOX COVERS SHALL BE PAINTED TAN, FIRE HYDRANT VALVE BOX COVERS SHALL BE PAINTED YELLOW; ALL OTHER VALVE BOX COVERS SHALL BE PAINTED BLUE, ALL IN ACCORDANCE WITH BASIC PAINTING SPECIFICATIONS.

4) LOCATOR WIRE FOR POLYVINYL CHOLRIDE PIPE SHALL BE INSULATED 14 GAUGE COPPER WIRE. IT SHALL BE CONTINUOUS ALONG THE PIPELINE, LOOPED AROUND THE PIPE AT EACH JOINT, AND LOOPED INTO VALVE BOXES WITHIN 13" OF THE SURFACE AND WITH 3' OF SLACK.

APPROVED:

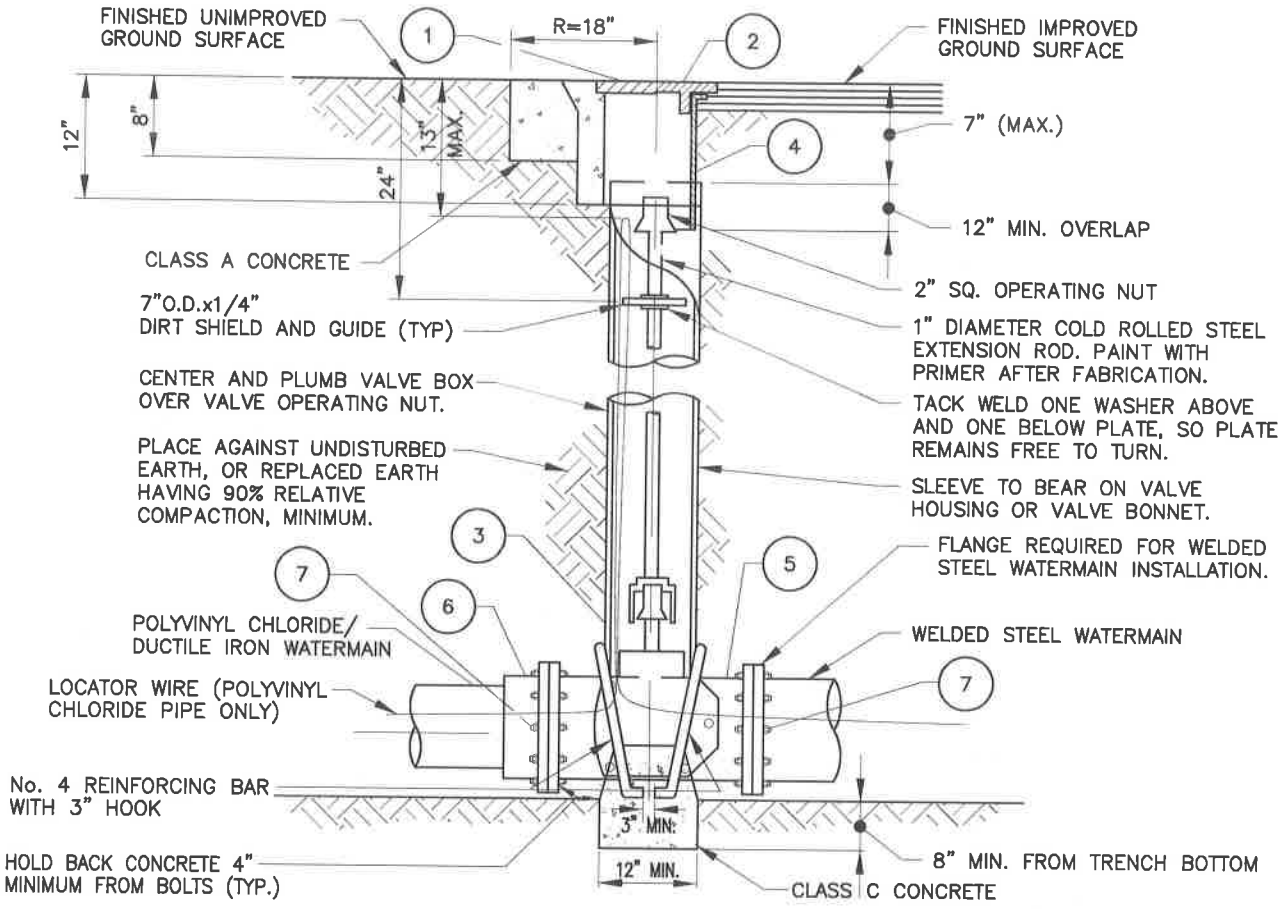
ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

GATE VALVE INSTALLATION

STANDARD DRAWING | W1020



ITEM	DESCRIPTION
1	TRAFFIC BOX COVER FOR UNIMPROVED SURFACE (TRIANGULAR COVER WITH FRAME) – COVER MARKED "RCSD".
2	TRAFFIC BOX COVER FOR IMPROVED SURFACE (CIRCULAR COVER WITHOUT FRAME) – COVER MARKED "RCSD".
3	VALVE BOX EXTENSION, 8"I.D. SDR 35 POLYVINYL CHLORIDE PIPE.
4	18 GAUGE x 18" LONG GALVANIZED STEEL SLEEVE WITH 1-1/2" OVERLAP AND 1/2" LIP (FLARE) ON ONE END.
5	FLANGED BUTTERFLY VALVE, SHORT BODY. VALVE STEM SHALL TURN COUNTER-CLOCKWISE TO OPEN. VALVE OPERATORS SHALL BE PLACED ON STREET OR EASEMENT CENTERLINE SIDE OF VALVE.
6	FLANGE BY TYTON JOINT ADAPTER REQUIRED FOR POLYVINYL CHLORIDE OR DUCTILE IRON WATERMAIN.
7	BOLTS SHALL BE STANDARD HEX HEAD MACHINE PER ASTM A325. NUTS SHALL BE HEAVY HEX COLD-PRESSED SEMI-FINISHED STEEL PER ASTM A194-2, 2H. THREADS SHALL BE LUBRICATED WITH AN APPROVED ANTI-SEIZE COMPOUND. ALL EXPOSED STEEL SHALL BE FIELD COATED WITH AN APPROVED BITUMASTIC.

NOTES:

1) EXTENSION ROD REQUIRED WHENEVER TOP OF VALVE IS 3' OR MORE BELOW FINISHED GROUND SURFACE. REQUIRED LENGTH FOR EXTENSION ROD SHALL BE DETERMINED BY FIELD MEASUREMENT. EXTENSION ROD OPERATOR NUT SHALL BE 18" BELOW FINISHED GRADE. EXTENSION ROD SHALL BE SECURED TO VALVE OPERATING NUT BY WELDING A BEAD ON THE INSIDE OF THREE WALLS OF THE EXTENSION NUT CAP.
2) CHISEL 1-1/2" MINIMUM "V" ON ADJACENT CURB FACE WITH APPROXIMATE DISTANCE TO VALVE BOX, 2 LOCATIONS.
3) VALVE BOX COVERS SHALL BE PAINTED BLUE, IN ACCORDANCE WITH THE BASIC PAINTING SPECIFICATIONS.
4) LOCATOR WIRE FOR POLYVINYL CHORIDE PIPE SHALL BE INSULATED 14 GAUGE COPPER WIRE. IT SHALL BE CONTINUOUS ALONG THE PIPELINE, LOOPED AROUND THE PIPE AT EACH JOINT, AND LOOPED INTO VALVE BOXES WITHIN 13" OF THE SURFACE AND WITH 3' OF SLACK.

APPROVED:

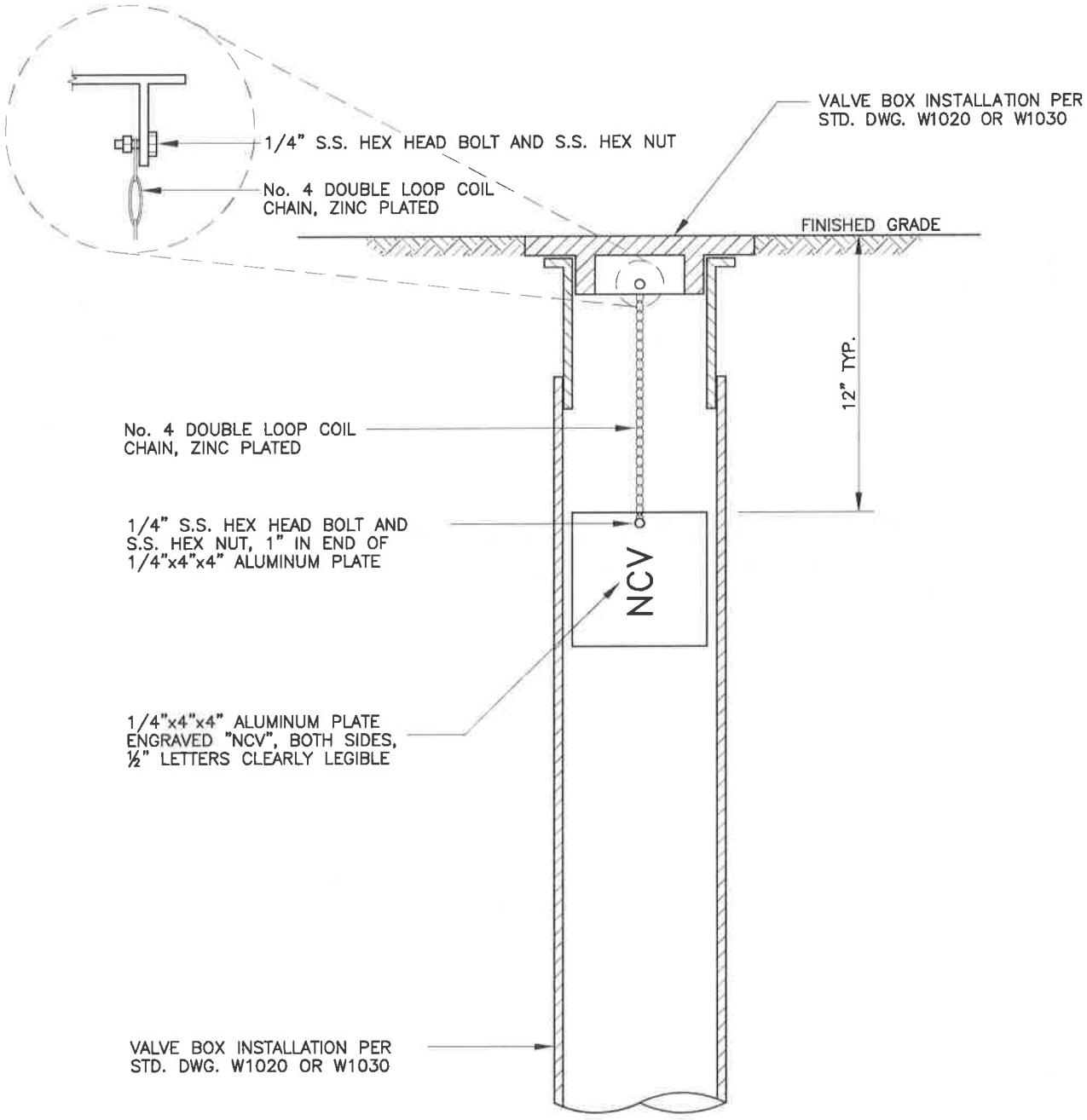
ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

BUTTERFLY VALVE INSTALLATION

STANDARD DRAWING W1030



APPROVED:

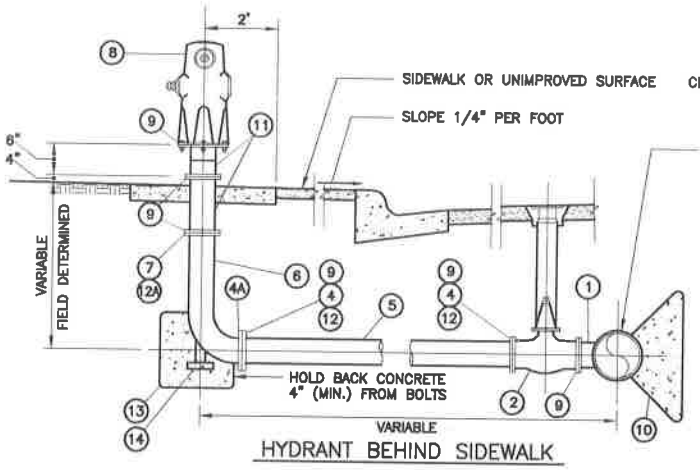
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

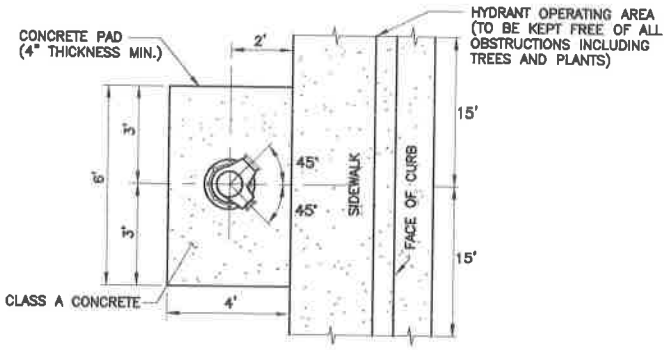
RUBIDOUX COMMUNITY SERVICES DISTRICT

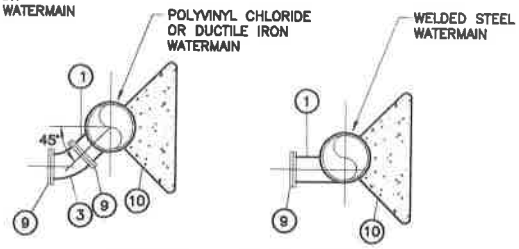
NORMALLY CLOSED VALVE BOX INSTALLATION

STANDARD DRAWING | W1040



HYDRANT BEHIND SIDEWALK





OPTIONAL COMBINATION
FIRE HYDRANT AND BLOWOFF INSTALLATION

ITEM	NUMBER REQUIRED	DESCRIPTION
1	1	6" FLANGED DUCTILE IRON TEE FOR POLYVINYL CHLORIDE OR DUCTILE IRON WATERMAINS, OR 6" FLANGED SIDE OUTLET FOR WELDED STEEL WATERMAIN. FOR COMBINATION FIRE HYDRANT AND BLOWOFF INSTALLATION, SIDE OUTLET SHALL BE TANGENTIAL ON WELDED STEEL WATERMAIN.
2	1	6" FLANGED GATE VALVE INSTALLATION PER STANDARD DRAWING W1020.
3	1	6" FLANGED 45° DUCTILE IRON ELBOW.
4	3	6" A.W.W.A. CLASS E RING FLANGE (NOT REQUIRED FOR POLYVINYL CHLORIDE PIPE OPTION).
4A	1	6" A.W.W.A. CLASS E RING FLANGE
5	VARIES	6" DIAMETER 10 GAUGE CEMENT MORTAR LINED AND CEMENT MORTAR COATED WELDED STEEL PIPE OR 6" C900 CLASS 200 POLYVINYL CHLORIDE PIPE WITH UNIFLANGE SERIES 900 ADAPTER FLANGE.
6	1	6" DIAMETER STANDARD WEIGHT CEMENT MORTAR LINED AND CEMENT MORTAR COATED WELDED STEEL PIPE WITH SMOOTH 90° ELBOW.
7	1	6" 6 BOLT FLANGE (1-5/16" THICK AND DRILLED TO MATCH 6 BOLT BREAKOFF CHECK VALVE ASSEMBLY FLANGE). SHIP FLANGE LOOSE.
8	1	WET BARREL FIRE HYDRANT WITH 6" 6 BOLT FLANGED INLET, ONE 4" PUMPER OUTLET AND ONE 2-1/2" HOSE OUTLET.
9	–	A325 BOLTS.
10	–	CONCRETE THRUST PROTECTION PER STANDARD DRAWING G40.
11	1	BREAK-OFF CHECK VALVE WITH 6 BOLT PATTERN FLANGES (DRILLED TO MATCH 6 BOLT HYDRANT FLANGE).
12	–	2' CUT-TO-FIT (NOT REQUIRED FOR POLYVINYL CHLORIDE PIPE). SHIP FLANGE LOOSE.
12A	–	2' CUT-TO-FIT. SHIP FLANGE LOOSE.
13	–	CONCRETE THRUST PROTECTION, 2-1/2' CUBE. CONCRETE SHALL BE CLASS C.
14	1	STEEL BASE (1/4" THICK).

NOTES:

1) FIRE HYDRANT LOCATIONS NOTED HEREON ARE GENERAL. SPECIFIC LOCATIONS SHALL CONFORM TO THE REQUIREMENTS OF AGENCY HAVING FIRE PROTECTION RESPONSIBILITY (COUNTY OF RIVERSIDE). SAID AGENCY SHALL APPROVE ALL FIRE HYDRANT LOCATIONS.
2) PAINT ALL MATERIAL ABOVE GROUND WITH TWO COATS OF SAFETY YELLOW PAINT.
3) BLUE REFLECTORIZED STREET MARKER SHALL BE SET OPPOSITE FIRE HYDRANTS.
4) BOLTS SHALL BE STANDARD HEX HEAD MACHINE PER ASTM A325. NUTS SHALL BE HEAVY HEX COLD PRESSED, SEMI-FINISHED STEEL PER ASTM A194, 2H. THREADS SHALL BE LUBRICATED WITH AN APPROVED ANTI-SEIZE COMPOUND. ALL BURIED EXPOSED STEEL SHALL BE FIELD COATED WITH AN APPROVED BITUMASTIC.
5) CURB IN FRONT OF FIRE HYDRANT (15' EACH SIDE) SHALL BE PAINTED RED IN ACCORDANCE WITH BASIC PAINTING SPECIFICATIONS.
6) IF NO CURB EXISTS, HYDRANT SHALL BE INSTALLED 2' FROM PROPERTY LINE OR AS DIRECTED BY DISTRICT.

APPROVED:

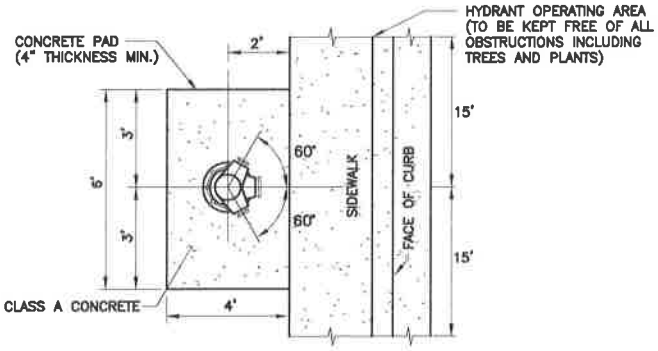
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

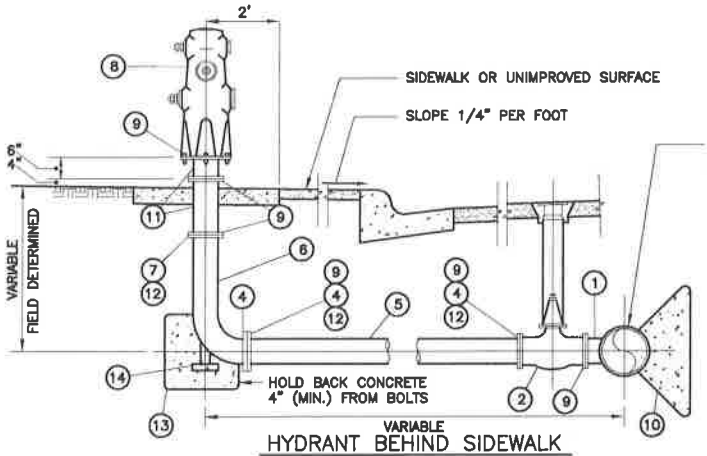
DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

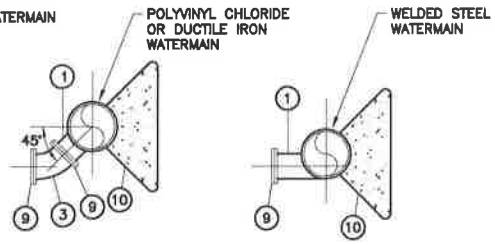
6" RESIDENTIAL FIRE HYDRANT INSTALLATION

STANDARD DRAWING W1050





HYDRANT BEHIND SIDEWALK



OPTIONAL COMBINATION
FIRE HYDRANT AND BLOWOFF INSTALLATION

ITEM	NUMBER REQUIRED	DESCRIPTION
1	1	6" FLANGED DUCTILE IRON TEE FOR POLYVINYL CHLORIDE OR DUCTILE IRON WATERMAINS, OR 6" FLANGED SIDE OUTLET FOR WELDED STEEL WATERMAIN. FOR COMBINATION FIRE HYDRANT AND BLOWOFF INSTALLATION SIDE OUTLET SHALL BE TANGENTIAL ON WELDED STEEL WATERMAIN.
2	1	6" FLANGED GATE VALVE INSTALLATION PER STANDARD DRAWING W1020.
3	1	6" FLANGED 45° DUCTILE IRON ELBOW.
4	3	6" A.W.W.A. CLASS E RING FLANGE.
5	VARIES	6" DIAMETER 10 GAUGE CEMENT MORTAR LINED AND CEMENT MORTAR COATED WELDED STEEL PIPE.
6	1	6" DIAMETER STANDARD WEIGHT CEMENT MORTAR LINED AND CEMENT MORTAR COATED WELDED STEEL PIPE WITH SMOOTH 90° ELBOW.
7	1	6" 6 BOLT FLANGE (1-5/16" THICK AND DRILLED TO MATCH 6 BOLT BREAKOFF CHECK VALVE ASSEMBLY FLANGE). SHIP FLANGE LOOSE.
8	1	WET BARREL FIRE HYDRANT WITH 6" 6 BOLT FLANGED INLET, ONE 4" PUMPER OUTLET AND TWO 2-1/2" HOSE OUTLETS.
9	–	A325 BOLTS.
10	–	CONCRETE THRUST PROTECTION PER STANDARD DRAWING G40.
11	1	BREAK-OFF CHECK VALVE WITH 6 BOLT PATTERN FLANGES (DRILLED TO MATCH 6 BOLT HYDRANT FLANGE).
12	–	2' CUT-TO-FIT (NOT REQUIRED FOR POLYVINYL CHLORIDE PIPE). SHIP FLANGE LOOSE.
13	–	CONCRETE THRUST PROTECTION, 2-1/2' CUBE. CONCRETE SHALL BE CLASS C.
14	1	STEEL BASE (1/4" THICK).

NOTES:

1) FIRE HYDRANT LOCATIONS NOTED HEREON ARE GENERAL. SPECIFIC LOCATIONS SHALL CONFORM TO THE REQUIREMENTS OF AGENCY HAVING FIRE PROTECTION RESPONSIBILITY (COUNTY OF RIVERSIDE). SAID AGENCY SHALL APPROVE ALL FIRE HYDRANT LOCATIONS.
2) PAINT ALL MATERIAL ABOVE GROUND WITH TWO COATS OF SAFETY YELLOW PAINT.
3) BLUE REFLECTORIZED STREET MARKER SHALL BE SET OPPOSITE FIRE HYDRANTS.
4) BOLTS SHALL BE STANDARD HEX HEAD MACHINE PER ASTM A325. NUTS SHALL BE HEAVY HEX COLD PRESSED, SEMI-FINISHED STEEL PER ASTM A194-2, 2H. THREADS SHALL BE LUBRICATED WITH AN APPROVED ANTI-SEIZE COMPOUND. ALL BURIED EXPOSED STEEL SHALL BE FIELD COATED WITH AN APPROVED BITUMASTIC.
5) CURB IN FRONT OF FIRE HYDRANT (15' EACH SIDE) SHALL BE PAINTED RED IN ACCORDANCE WITH BASIC PAINTING SPECIFICATIONS.
6) IF NO CURB EXISTS, HYDRANT SHALL BE INSTALLED 2' FROM PROPERTY LINE OR AS DIRECTED BY DISTRICT.

APPROVED:

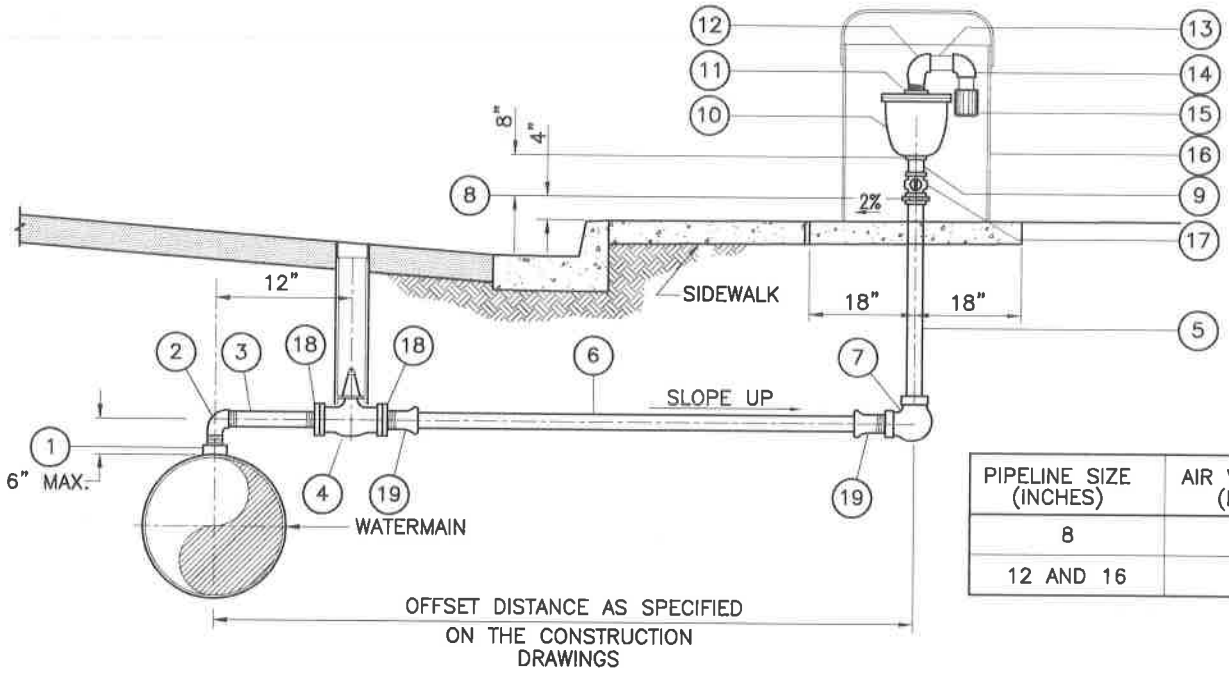
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

6" COMMERCIAL FIRE HYDRANT INSTALLATION

STANDARD DRAWING | W1060



PIPELINE SIZE (INCHES)	AIR VALVE SIZE (INCHES)
8	1
12 AND 16	2

ITEM	NO. REQ'D.	DESCRIPTION
1	1	2" TOP OUTLET PER STANDARD DRAWING W1090.
2	1	2" BRASS 90° STREET ELL.
3	1	2" BRASS NIPPLE.
4	1	2" FLANGED GATE VALVE INSTALLATION PER STANDARD DRAWING W1020.
5	1	2" BRONZE RISER (MALE IPT BOTH ENDS).
6	VARIES	2" TYPE "K" SOFT COPPER TUBING (WITHOUT INLINE COUPLINGS).
7	1	2" STANDARD WEIGHT BRONZE ELL.
8	1	2" STANDARD WEIGHT BRONZE UNION.
9	1	2"x 1" BRONZE BELL REDUCER AND 1" CLOSE NIPPLE (FOR 1" AIR VALVE ONLY).
10	1	COMBINATION AIR RELEASE AND VACUUM VALVE, SIZE AS SPECIFIED.
11	1	1" STANDARD WEIGHT GALVANIZED STEEL CLOSE NIPPLE AND 1"x2" STANDARD WEIGHT GALVANIZED STEEL INCREASER (FOR 1" AIR VALVE ONLY).
12	1	2" STANDARD WEIGHT GALVANIZED STEEL 90° STREET ELL.
13	1	2" STANDARD WEIGHT GALVANIZED STEEL NIPPLE.
14	1	2" STANDARD WEIGHT GALVANIZED STEEL 90° ELL.
15	1	2" AIR VALVE SCREEN.
16	1	AIR VALVE COVER AND CONCRETE PAD PER STANDARD DRAWING W1080.
17	1	2" CORPORATION STOP (MALE IPT BOTH ENDS).
18	2	2" THREADED FLANGE.
19	2	2" MALE IPT x COPPER TUBING COMPRESSION JOINT ADAPTER.

NOTES:

1) EXPOSED PIPING, AIR VALVE, AND AIR VALVE COVER SHALL BE PAINTED TAN IN ACCORDANCE WITH BASIC PAINTING SPECIFICATIONS.

2) PIPE THREADS SHALL BE CLEAN, SHARP, AND SEALED WITH APPROVED JOINT COMPOUND.

3) PIPE SHALL BE WRAPPED WITH BITUMASTIC TAPE (20 MIL THICK, 60% LAPPED).

4) IF NO CURB EXISTS, AIR VALVE SHALL BE INSTALLED 2' FROM PROPERTY LINE OR AS DIRECTED BY DISTRICT.

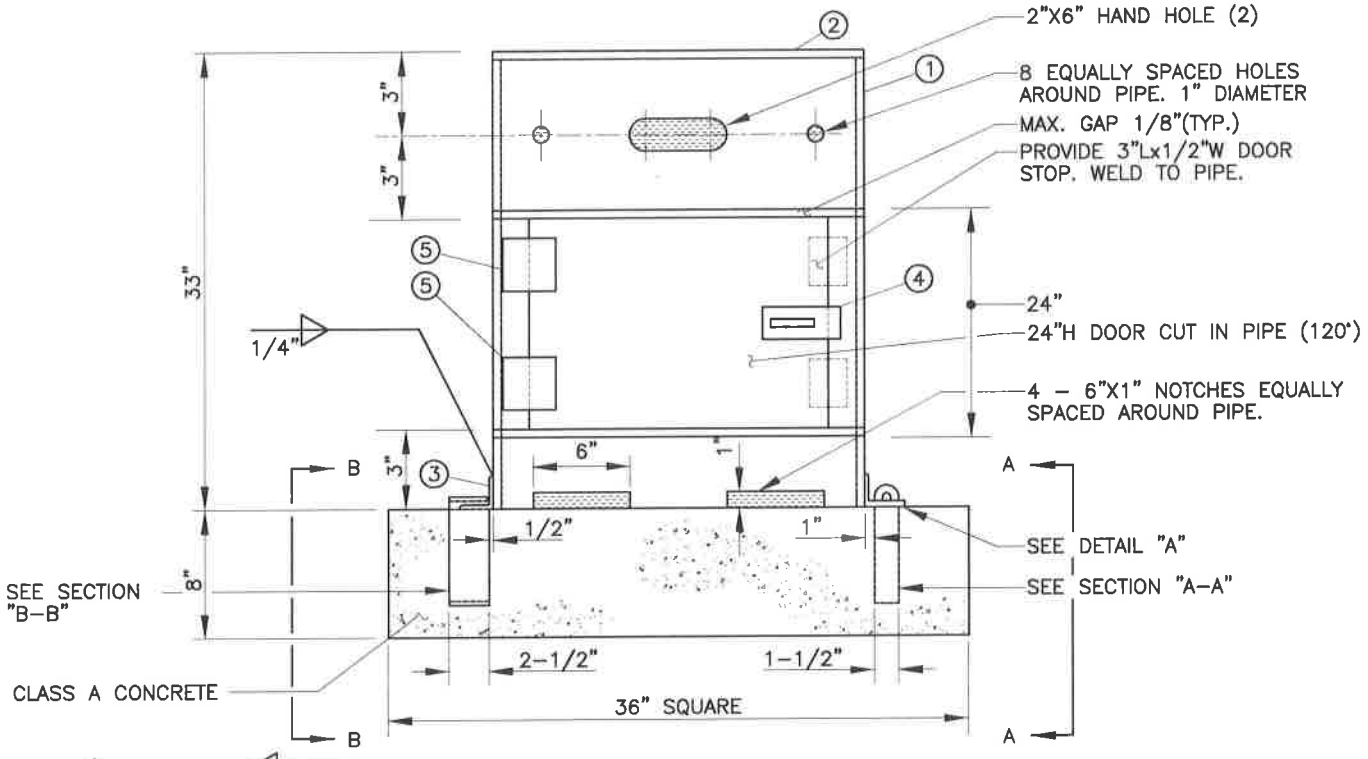
APPROVED:

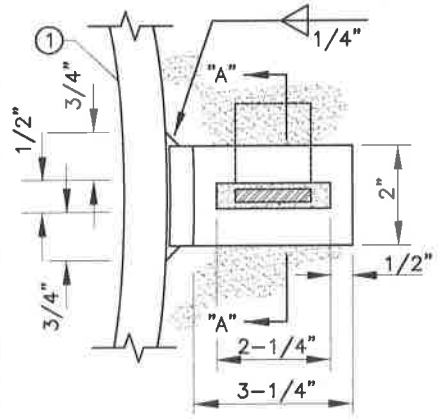
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

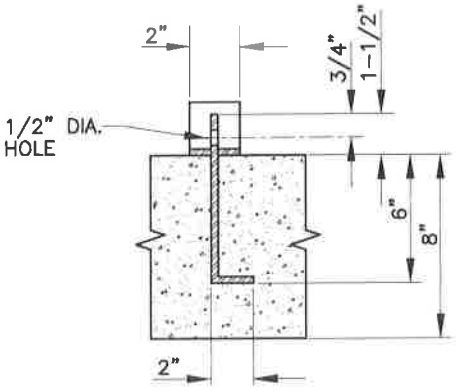
RUBIDOUX COMMUNITY SERVICES DISTRICT
1" OR 2"
AIR VALVE INSTALLATION

STANDARD DRAWING | W1070

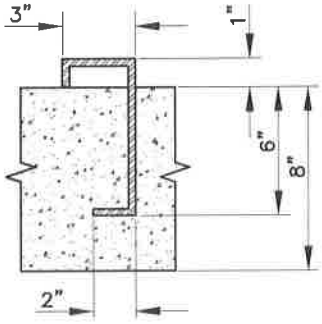




DETAIL "A"



SECTION "A–A"



SECTION "B–B"

ITEM	DESCRIPTION
1	20" DIAMETER–12 GA. STEEL PIPE.
2	3/16" PLATE WELDED TO 20" DIAMETER PIPE.
3	4"X2"X1/4" STEEL PLATE WELDED TO 20" DIAMETER PIPE.
4	3–15/16"Lx1–3/8"W S.S. LATCHING SAFETY HASP WELDED TO PIPE AND DOOR.
5	4"Hx4"W S.S. SURFACE HINGE WITH NON–REMOVABLE PIN HINGES WELDED TO PIPE AND DOOR.

NOTES:

1) COVER AND BRACKETS SHALL BE PAINTED TAN IN ACCORDANCE WITH BASIC PAINTING SPECIFICATIONS.
2) BRACKETS SHALL BE CONSTRUCTED OF 1/4" STEEL.

APPROVED:

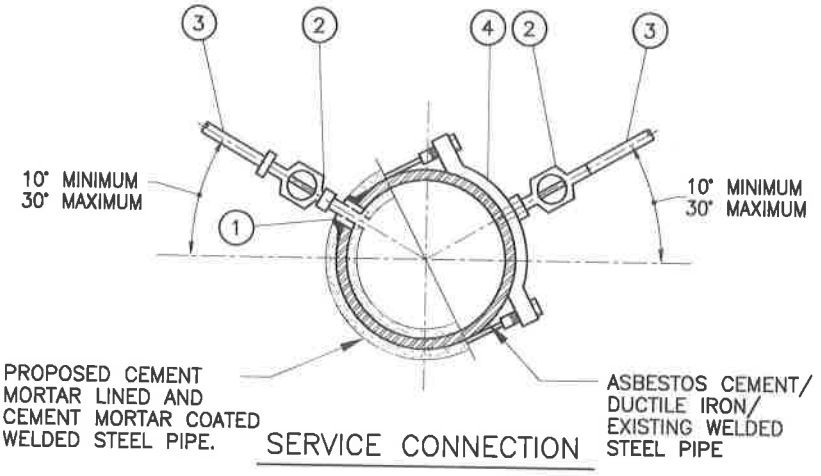
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

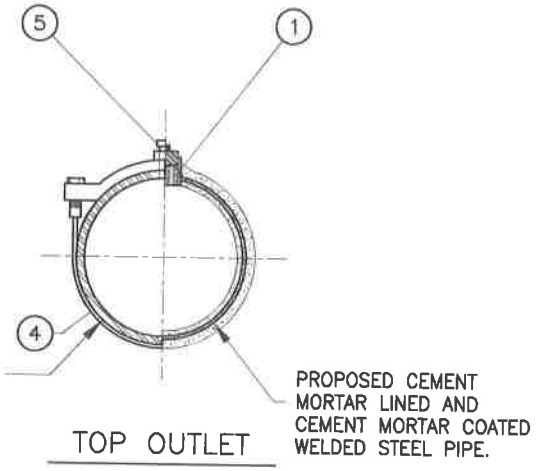
RUBIDOUX COMMUNITY SERVICES DISTRICT

1" AND 2" AIR VALVE COVER

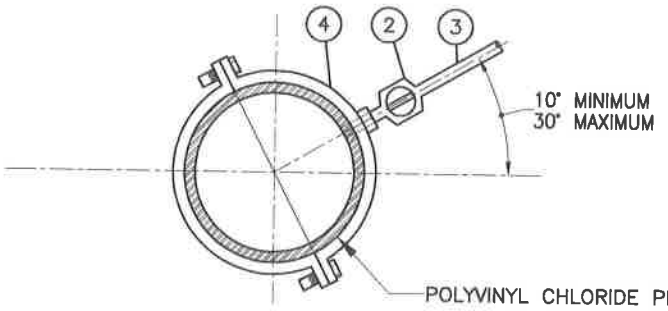
STANDARD DRAWING | W1080



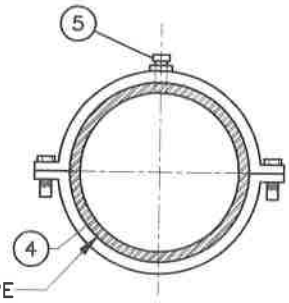
SERVICE CONNECTION



TOP OUTLET



SERVICE CONNECTION



TOP OUTLET

ITEM	NO. REQ'D.	DESCRIPTION
1	1	EXTRA HEAVY HALF COUPLING (IPT) WELDED TO PROPOSED STEEL WATERMAIN. REPAIR CEMENT MORTAR COATING AFTER INSTALLATION.
2	1	FOR 1" SERVICE CONNECTION, INSTALL INSULATED CORPORATION STOP (MALE IPT INLETxCOPPER TUBING COMPRESSION JOINT OUTLET). FOR 2" SERVICE CONNECTION INSTALL INSULATED BUSHING AND CORPORATION STOP (MALE IPT INLETxCOPPER TUBING COMPRESSION JOINT OUTLET).
3	1	TYPE "K" SOFT COPPER TUBING, ONE PIECE (VARIABLE LENGTH).
4	1	DOUBLE STRAP (IPT) BRONZE SERVICE SADDLE FOR DUCTILE IRON, ASBESTOS CEMENT, AND EXISTING WELDED STEEL WATERMAIN. FOR POLYVINYL CHLORIDE WATERMAIN, BRONZE SADDLE AND SILICON BRONZE BOLTS, "O" RING TYPE BUNA-N GASKET.
5	1	STANDARD WEIGHT BRASS SQUARE HEAD PLUG.

NOTES:

1) SERVICE AND OTHER TAPS SHALL NOT BE MADE CLOSER THAN 2 FEET TO A BELL, COUPLING, JOINT, FITTING, OR OTHER SERVICE.

2) PIPE THREADS SHALL BE CLEAN, SHARP, AND SEALED WITH AN APPROVED JOINT COMPOUND.

3) TOP OUTLET MAY BE USED BY CONTRACTOR FOR TESTING AND DISINFECTION AS SPECIFIED BY DISTRICT. PROVIDE CURB OR CORPORATION STOPS FOR TESTING AND DISINFECTION. CONTRACTOR SHALL REPLACE STOPS WITH PLUG AFTER SUCCESSFULLY TESTING AND DISINFECTING PIPELINE.

APPROVED:

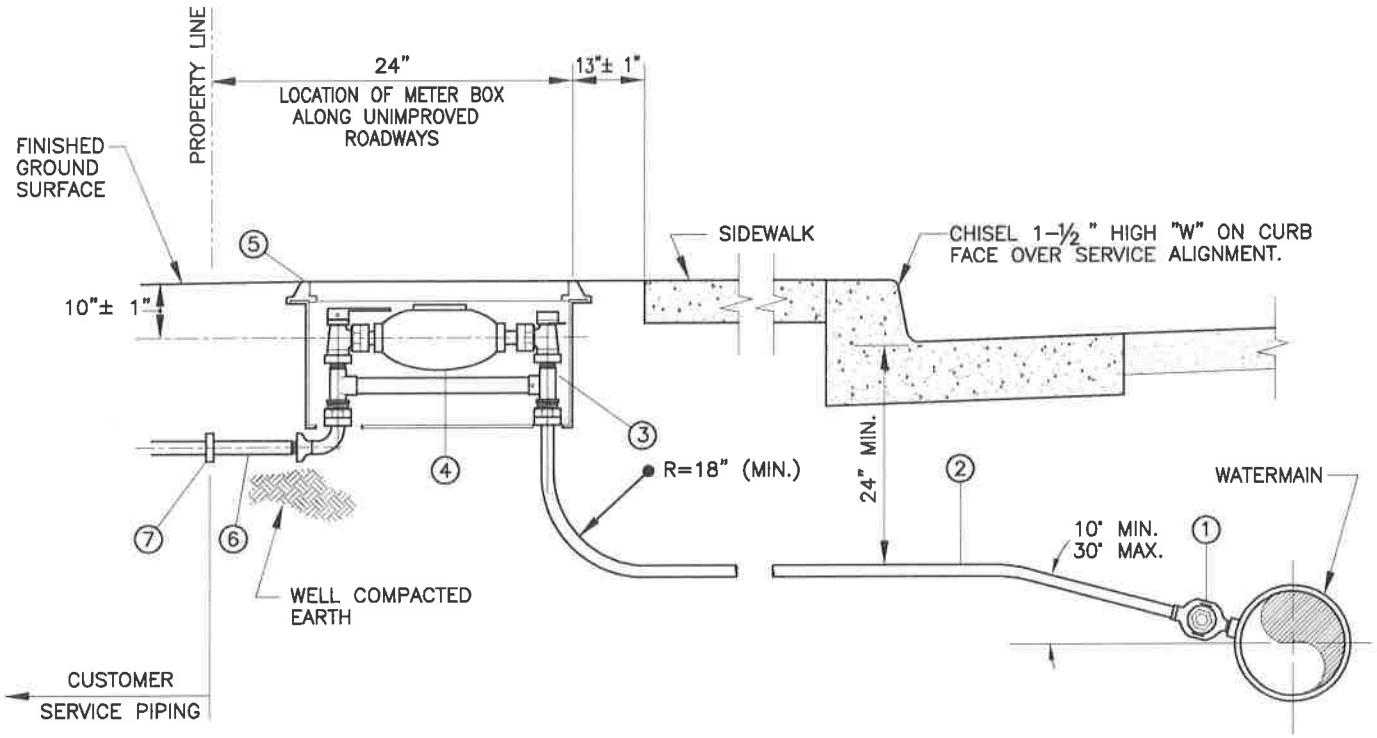
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

1" AND 2" SERVICE CONNECTION AND TOP OUTLET

STANDARD DRAWING W1090



ITEM	NO. REQ'D.	DESCRIPTION
1	1	1" SERVICE CONNECTION PER STANDARD DRAWING W1090.
2	1	1" TYPE "K" SOFT COPPER TUBING, ONE PIECE (VARIABLE LENGTH).
3	1	LINESETTER, ANGLE INVERTED KEY METER AND ANGLE BALL METER VALVES (SIZES SHALL MATCH METER SIZE OUTLETS). LINESETTER LENGTH SHALL BE AS REQUIRED.
4	1	METER (FURNISHED BY DISTRICT AND INSTALLED BY CONTRACTOR).
5	1	METER BOX (20"L x 10–1/2"W) WITH POLYMER CONCRETE COVER INCLUDING QUICK READ PORT AND CONCRETE BASEPLATE.
6	1	1" STANDARD WEIGHT BRASS NIPPLE (12" LONG).
7	1	1" BRASS COUPLING.

NOTES:

1) COPPER SERVICE TUBING SHALL BE LAID STRAIGHT AND AT RIGHT ANGLES TO THE WATERMAIN.
2) METER BOX SHALL BE AT LEAST 5' FROM EDGE OF DRIVEWAY (CURB DROP) OR FROM DRIVEWAY RADIUS.
3) PIPE THREADS SHALL BE CLEAN, SHARP, AND SEALED WITH AN APPROVED JOINT COMPOUND.
4) METER LOCATION SHALL CONFORM TO RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT STANDARDS.
5) FOR CONSTRUCTION WATER, CONTRACTOR SHALL FURNISH AND INSTALL A 1" JUMPER (APPROVED BY DISTRICT) IN LIEU OF METER.

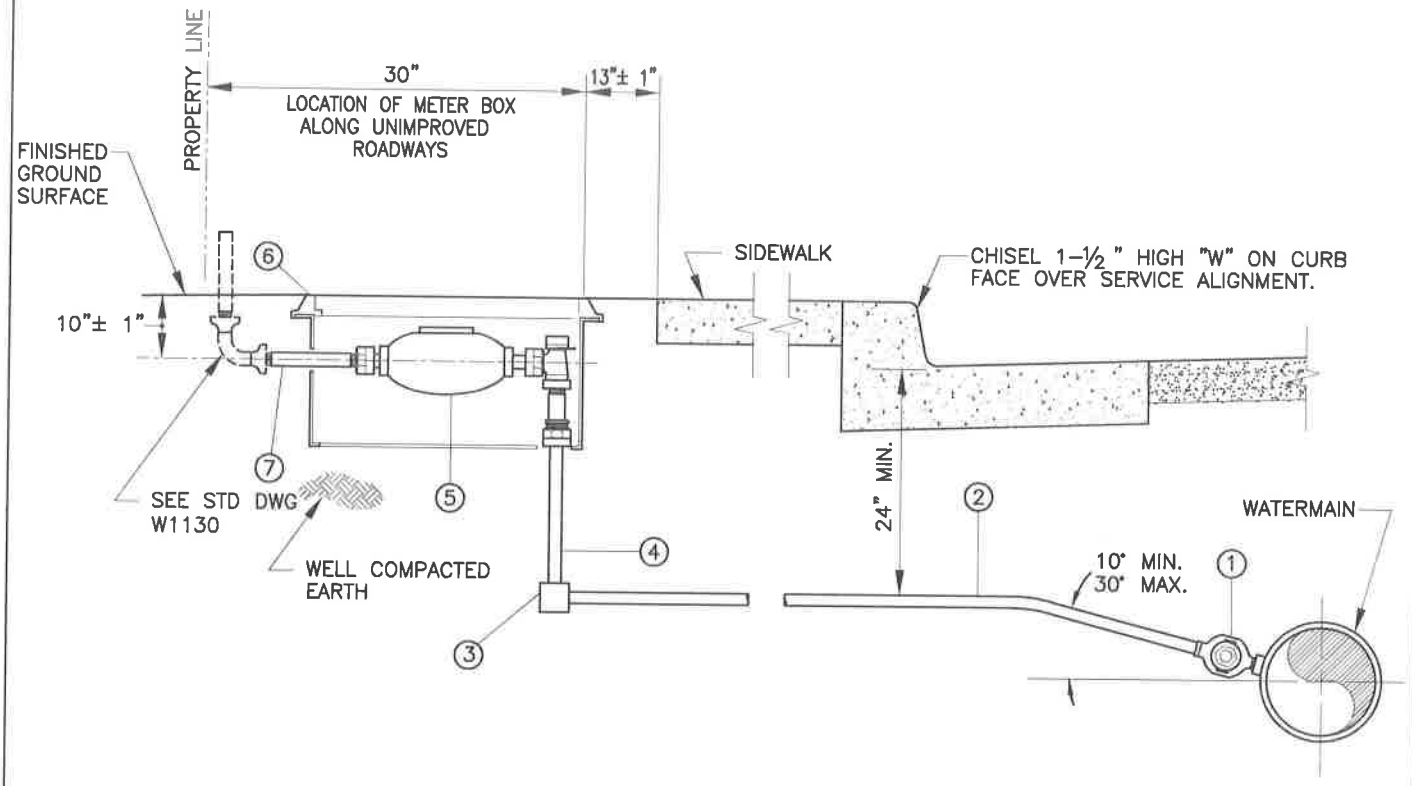
APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT
5/8", 3/4", OR 1"
SERVICE INSTALLATION

STANDARD DRAWING | W1100

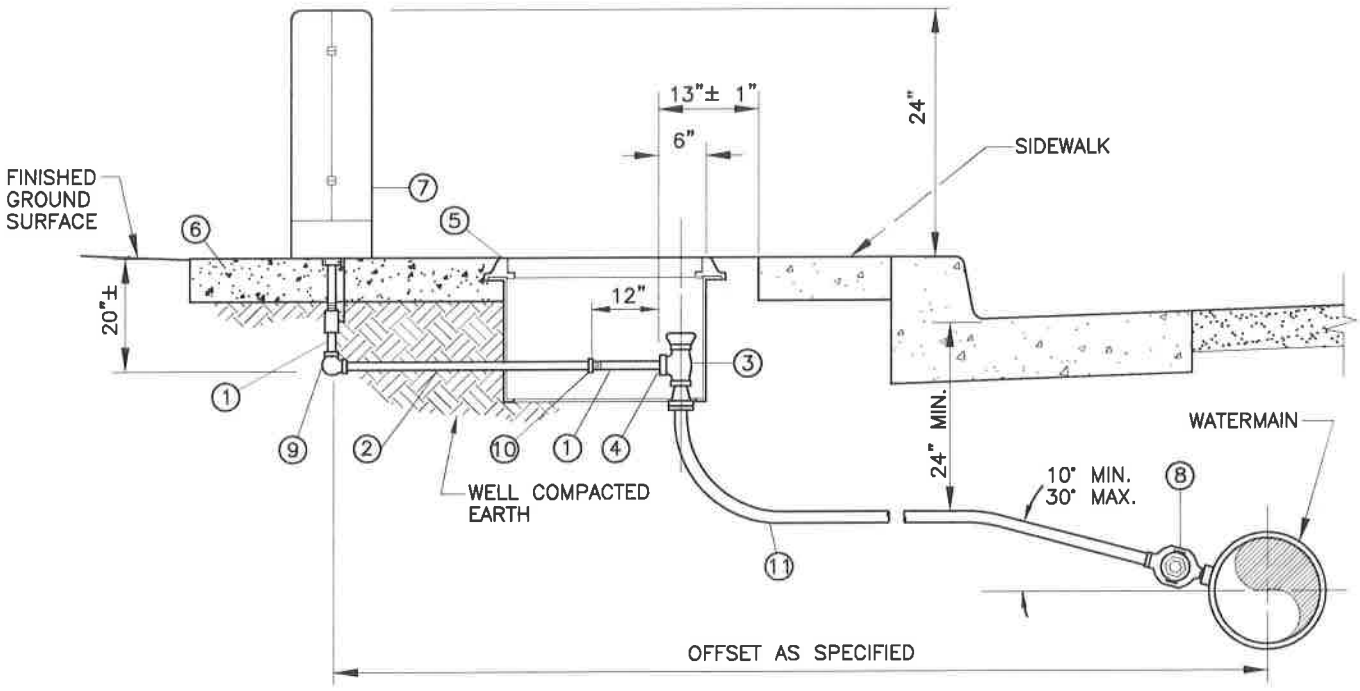


ITEM	NO. REQ'D.	DESCRIPTION
1	1	2" SERVICE CONNECTION PER STANDARD DRAWING W1090.
2	1	2" TYPE "K" SOFT COPPER TUBING, ONE PIECE (VARIABLE LENGTH).
3	1	2" COMPRESSION x IPT BRASS ELL.
4	1	2" THREADED BRASS RISER (24" LENGTH).
5	1	METER (FURNISHED BY DISTRICT AND INSTALLED BY CONTRACTOR).
6	1	METER BOX (28–3/8"L x 17"W) WITH POLYMER CONCRETE COVER INCLUDING QUICK READ PORT AND CONCRETE BASEPLATE.
7	1	2" STANDARD WEIGHT BRASS NIPPLE (12" LONG).

NOTES:

1) COPPER SERVICE TUBING SHALL BE LAID STRAIGHT AND AT RIGHT ANGLES TO THE WATERMAIN.
2) METER BOX SHALL BE AT LEAST 5' FROM EDGE OF DRIVEWAY (CURB DROP) OR FROM DRIVEWAY RADIUS.
3) PIPE THREADS SHALL BE CLEAN, SHARP, AND SEALED WITH AN APPROVED JOINT COMPOUND.
4) METER LOCATION SHALL CONFORM TO RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT STANDARDS.
5) FOR CONSTRUCTION WATER, CONTRACTOR SHALL FURNISH AND INSTALL A 2" JUMPER (APPROVED BY DISTRICT) IN LIEU OF METER.

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT 1 1/2" OR 2" SERVICE INSTALLATION STANDARD DRAWING W1110



ITEM	NO. REQ'D.	DESCRIPTION
1	2	3/4" BRASS NIPPLE.
2	1	3/4" BRASS PIPE.
3	1	1" ANGLE METER STOP.
4	1	1"x 3/4" BRASS BUSHING.
5	1	METER BOX (20"L x 10–1/2"W) WITH POLYMER CONCRETE COVER, EXTENSION (IF REQUIRED), AND CONCRETE BASEPLATE (COVER SHALL NOT INCLUDE QUICK READ PORT).
6	1	36" SQUARE, 4" THICK, CLASS A CONCRETE PAD.
7	1	WATER QUALITY SAMPLE STATION (FURNISHED BY DISTRICT AND INSTALLED BY CONTRACTOR).
8	1	1" SERVICE CONNECTION PER STANDARD DRAWING W1090.
9	1	3/4" BRASS 90° ELL.
10	1	3/4" BRASS COUPLING.
11	1	1" TYPE "K" SOFT COPPER TUBING, ONE PIECE (VARIABLE LENGTH).

NOTES:

1) ALL EXPOSED METAL SURFACES OF THE WATER QUALITY SAMPLE STATION COVER SHALL BE PAINTED TAN IN ACCORDANCE WITH BASIC PAINTING SPECIFICATIONS.
2) PIPE THREADS SHALL BE CLEAN, SHARP, AND SEALED WITH APPROVED JOINT COMPOUND.

APPROVED:

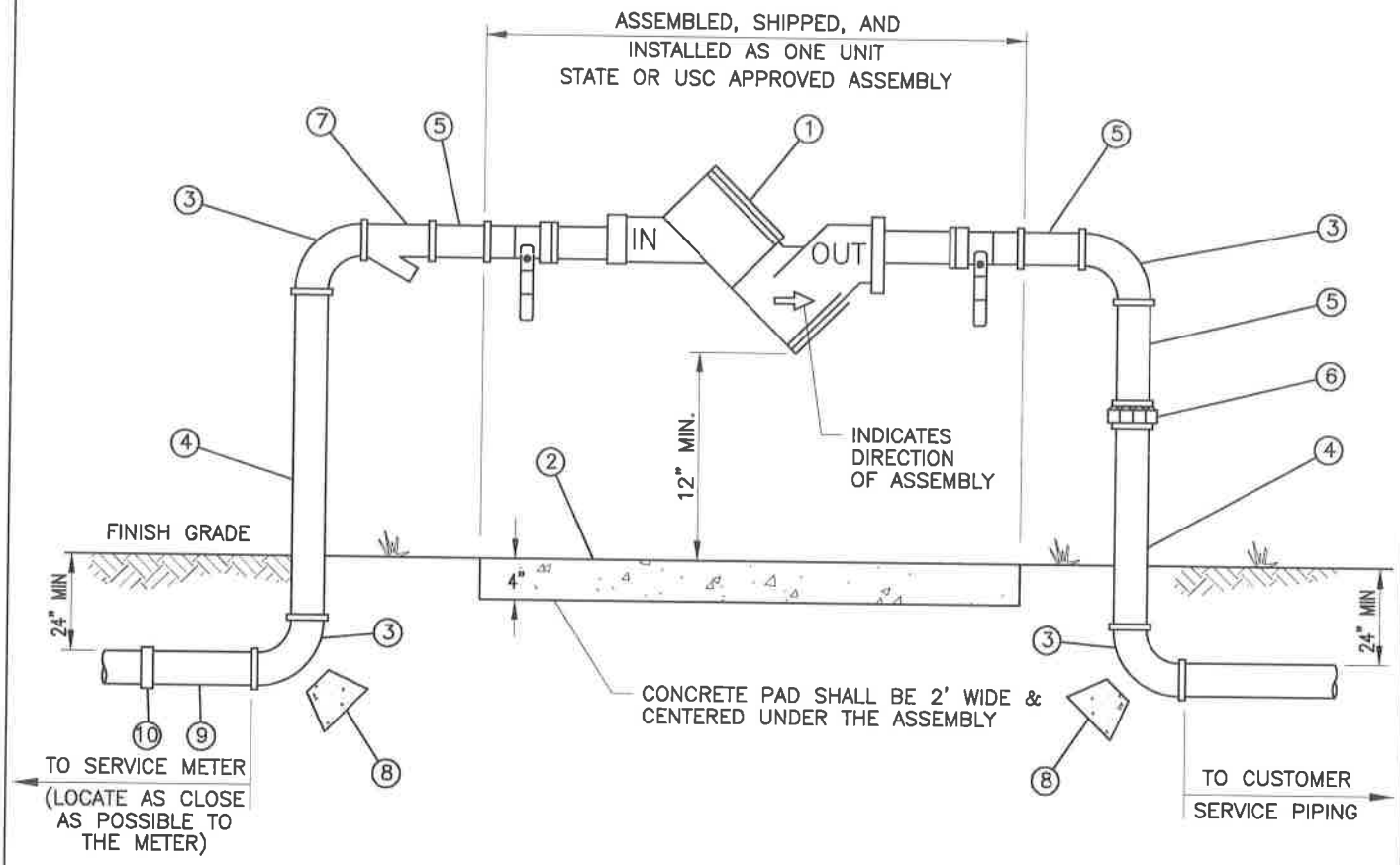
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

WATER QUALITY SAMPLING STATION

STANDARD DRAWING | W1120



ITEM	NO. REQ'D.	DESCRIPTION
1	1	REDUCED PRESSURE OR DOUBLE CHECK BACKFLOW PREVENTION DEVICE (AS SPECIFIED BY DISTRICT).
2	1	CONCRETE PAD. CONCRETE SHALL BE CLASS A.
3	4	STANDARD WEIGHT THREADED BRASS ELBOW.
4	2	THREADED BRASS PIPE.
5	3	6" THREADED BRASS NIPPLE.
6	1	BRASS UNION.
7	1	BRONZE WYE STRAINER, MALE IPT INLET x FEMALE IPT OUTLET.
8	–	CONCRETE THRUST PROTECTION, 1' CUBE. CONCRETE SHALL BE CLASS C.
9	1	STANDARD WEIGHT BRASS NIPPLE (12" LONG).
10	1	BRASS COUPLING.

NOTES:

1) ALL ABOVE GROUND PIPING AND FITTINGS EXCEPT TEST COCKS SHALL BE FIELD PAINTED IN ACCORDANCE WITH THE BASIC PAINTING SPECIFICATIONS. THE FINAL TWO COATS SHALL BE BLUE.

2) ALL PIPE, VALVE, AND FITTING SIZES SHALL MATCH THE BACKFLOW PREVENTION DEVICE SIZE.

3) 5/8"x3/4" AND 3/4" METERS SHALL USE A 1" BACKFLOW PREVENTION DEVICE.

4) PRIOR TO BEGINNING CONSTRUCTION, THE LOCATION OF THE BACKFLOW ASSEMBLY SHALL BE APPROVED BY THE RCSD CROSS CONNECTION INSPECTOR AND SHALL BE APPROVED BY THE INSPECTOR BEFORE BACKFILLING TRENCHES.

5) NOTIFY RCSD CROSS CONNECTION DEPARTMENT AT (909) 684–0641 PRIOR TO BEGINNING CONSTRUCTION.

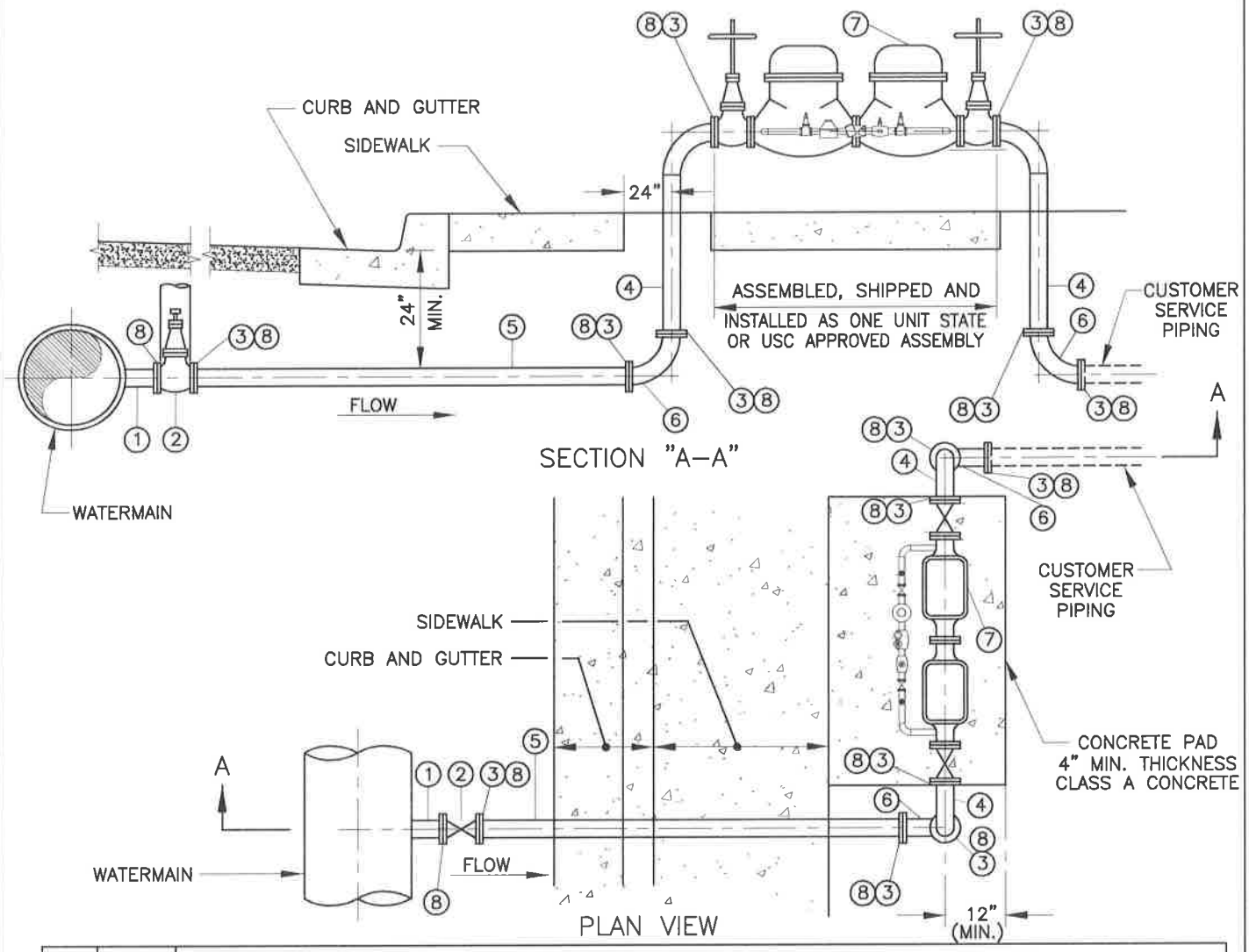
APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT
1", 1 1/2", AND 2"
BACKFLOW PREVENTION DEVICE

STANDARD DRAWING | W1130



ITEM	No. REQ'D.	DESCRIPTION
1	1	FLANGED DUCTILE IRON TEE ON DUCTILE IRON OR POLYVINYL CHLORIDE WATERMAINS, OR FLANGED OUTLET ON WELDED STEEL WATERMAIN.
2	1	FLANGED GATE VALVE INSTALLATION PER STANDARD DRAWING W1020.
3	7	A.W.W.A. CLASS E RING FLANGE.
4	VARIES	STANDARD WEIGHT CEMENT MORTAR LINED AND CEMENT MORTAR COATED WELDED STEEL PIPE AND FITTINGS WITH SMOOTH ELBOW.
5	VARIES	STANDARD WEIGHT CEMENT MORTAR LINED AND CEMENT MORTAR COATED WELDED STEEL PIPE AND FITTINGS.
6	2	STD. WT. CEMENT MORTAR LINED AND CEMENT MORTAR COATED FLANGED 90° ELBOW.
7	1	DETECTOR CHECK ASSEMBLY. TYPE AND SIZE AS SPECIFIED BY DISTRICT.
8	–	A325 BOLTS.

NOTES:

1) BOLTS SHALL BE STANDARD HEX HEAD MACHINE PER ASTM A325. NUTS SHALL BE HEAVY HEX COLD PRESSED, SEMI–FINISHED STEEL PER ASTM A194–2, 2H. THREADS SHALL BE LUBRICATED WITH AN APPROVED ANTI–SEIZE COMPOUND. ALL BURIED EXPOSED STEEL SHALL BE FIELD COATED WITH AN APPROVED BITUMASTIC.

2) ALL ABOVE GROUND PIPING, VALVES, AND FITTINGS (EXCEPT TEST COCKS) SHALL BE PAINTED IN ACCORDANCE WITH BASIC PAINTING SPECIFICATIONS. ABOVE GROUND PIPING SHALL NOT INCLUDE CEMENT MORTAR COATING.

3) ALL PIPE, VALVE, AND FITTING SIZES SHALL BE THE SAME AS DETECTOR CHECK.

APPROVED:

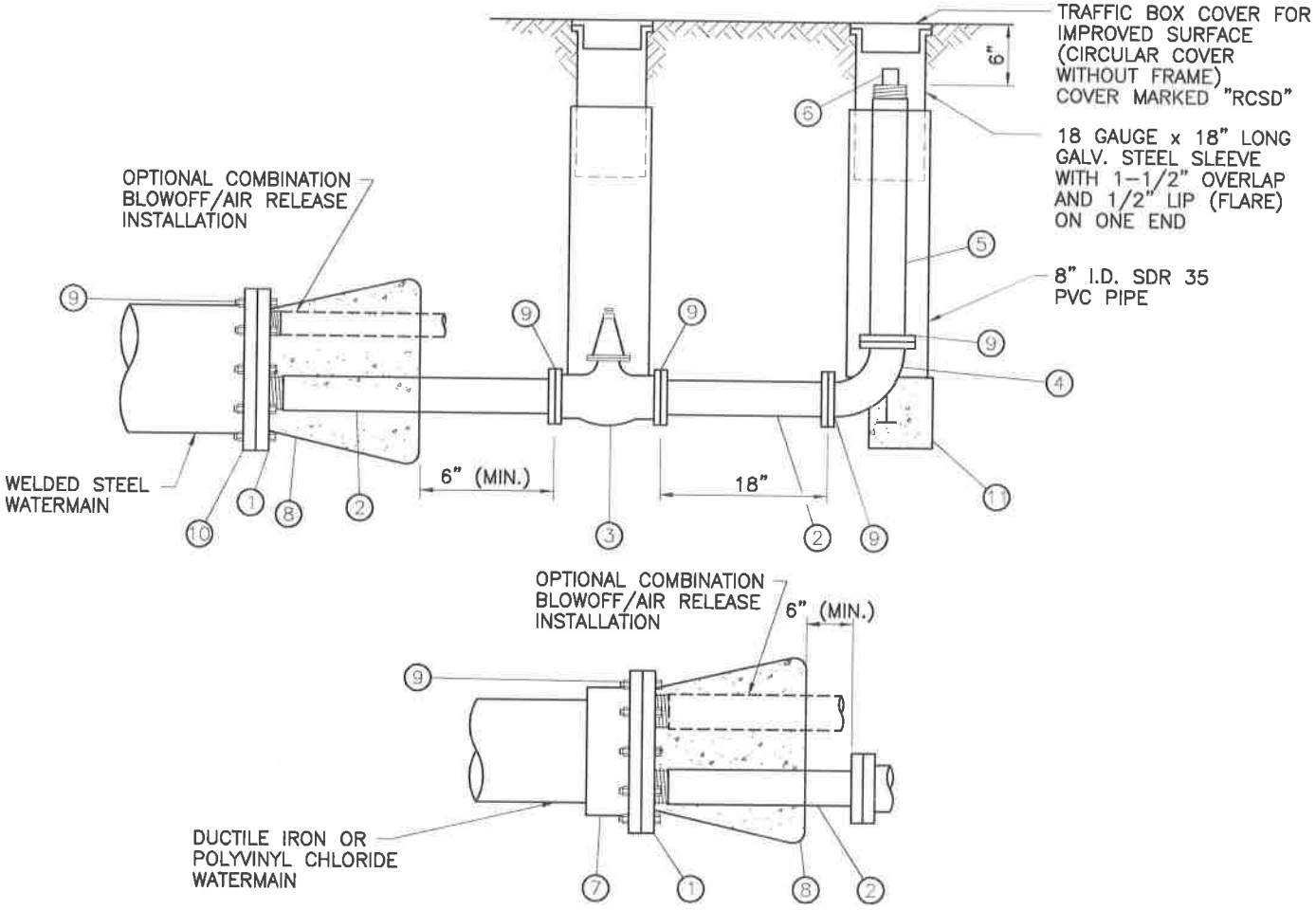
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

4" - 10" DETECTOR CHECK SERVICE INSTALLATION

STANDARD DRAWING | W1140



ITEM	No. REQ'D.	DESCRIPTION
1	1	ECCENTRIC REDUCING FLANGE WITH 2" THREADED OUTLET.
2	2	2" STD. WT. GALVANIZED STEEL NIPPLE (FLANGE x MALE IPT).
3	1	2" FLANGED GATE VALVE INSTALLATION PER STD. DWG. W1020.
4	1	2" STD. WT. FLANGED GALVANIZED STEEL 90° ELL.
5	1	2" STD. WT. GALVANIZED STEEL NIPPLE (FLANGE x FEMALE IPT).
6	1	2" GALVANIZED STEEL SQUARE HEAD THREADED PLUG.
7	1	FLANGE x TYTON JOINT ADAPTER.
8	1	CONCRETE THRUST PROTECTION PER STD. DWG. G40.
9	–	A325 BOLTS.
10	1	FLANGE.
11	1	CONCRETE THRUST PROTECTION, 1' CUBE. CONCRETE SHALL BE CLASS C.

NOTES:

1) OPTIONAL COMBINATION BLOWOFF/AIR RELEASE INSTALLATION SHALL BE INSTALLED AT PIPELINE HIGH POINTS.
2) PIPE THREADS SHALL BE CLEAN, SHARP, AND SEALED WITH AN APPROVED JOINT COMPOUND.
3) PIPE SHALL BE WRAPPED WITH BITUMASTIC TAPE (20 MIL THICK, 60% LAPPED).
4) BOLTS SHALL BE STANDARD HEX HEAD MACHINE PER ASTM A325. NUTS SHALL BE HEAVY HEX COLD PRESSED, SEMI-FINISHED STEEL PER ASTM A194-2, 2H. THREADS SHALL BE LUBRICATED WITH AN APPROVED ANTI-SEIZE COMPOUND. ALL BURIED EXPOSED STEEL SHALL BE FIELD COATED WITH AN APPROVED BITUMASTIC.

APPROVED:

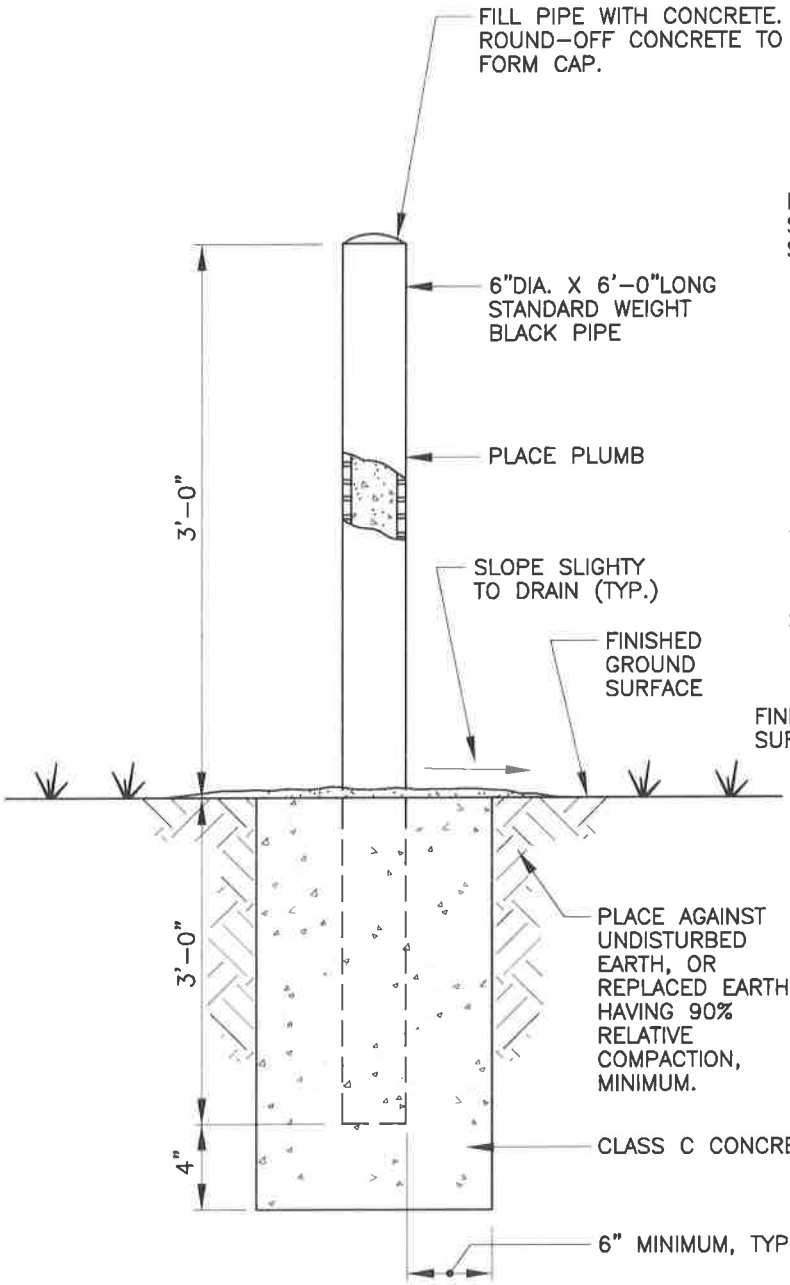
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

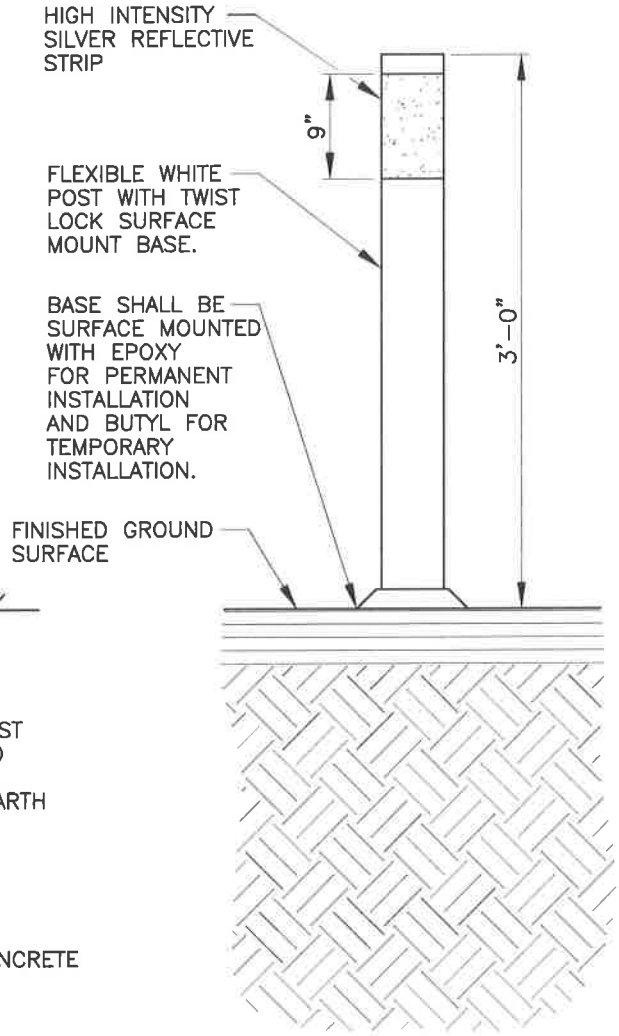
RUBIDOUX COMMUNITY SERVICES DISTRICT

TEMPORARY BLOWOFF / AIR RELEASE

STANDARD DRAWING W1150



GUARD POST



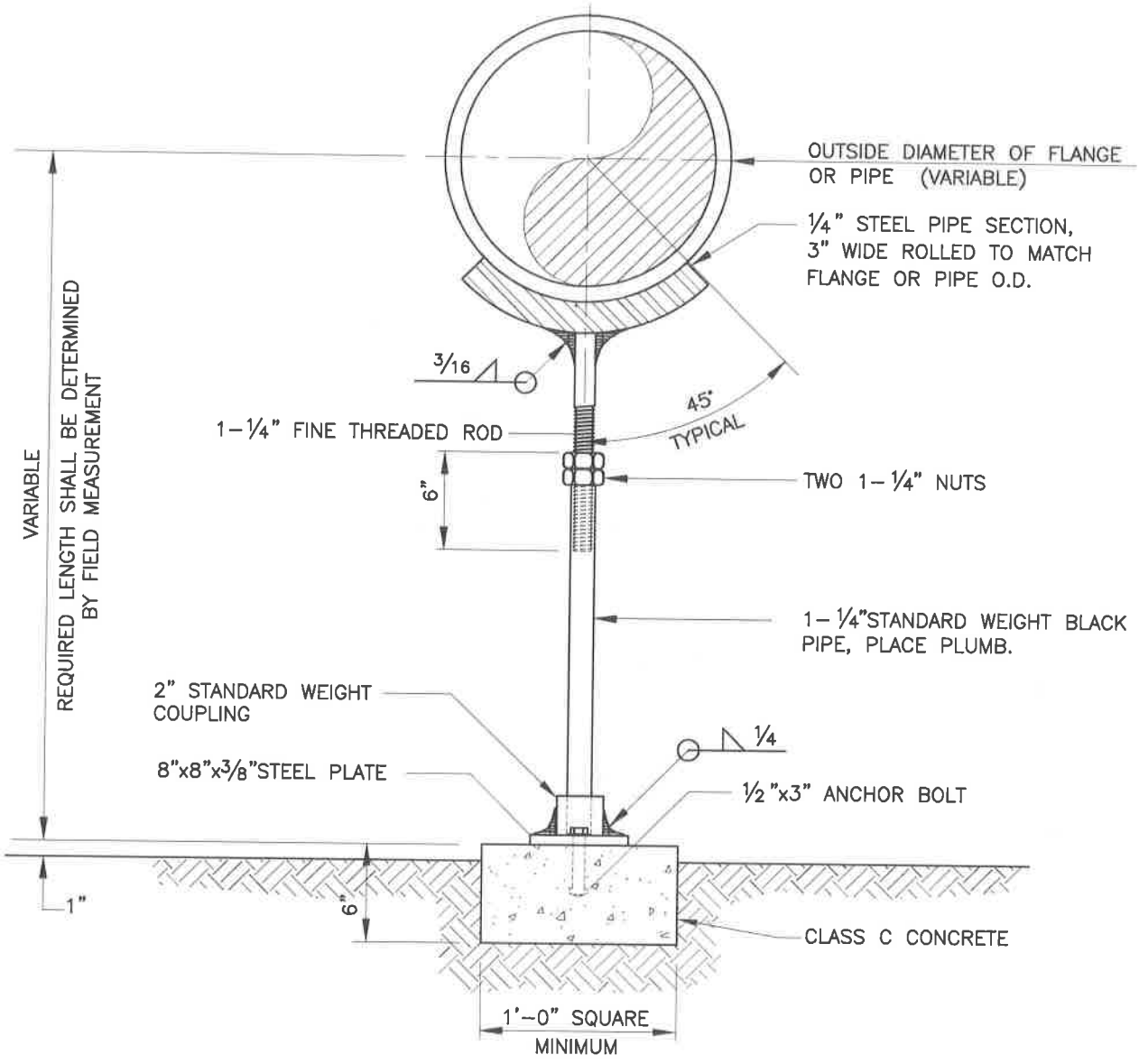
FLEXIBLE DELINEATOR

NOTES:

1) GUARD POST SHALL BE PAINTED YELLOW IN ACCORDANCE WITH THE BASIC PAINTING SPECIFICATIONS.

2) GUARD POST AND FLEXIBLE DELINEATOR SHALL BE LOCATED AS SPECIFIED BY DISTRICT.

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT GUARD POST / FLEXIBLE DELINEATOR INSTALLATION STANDARD DRAWING W1160

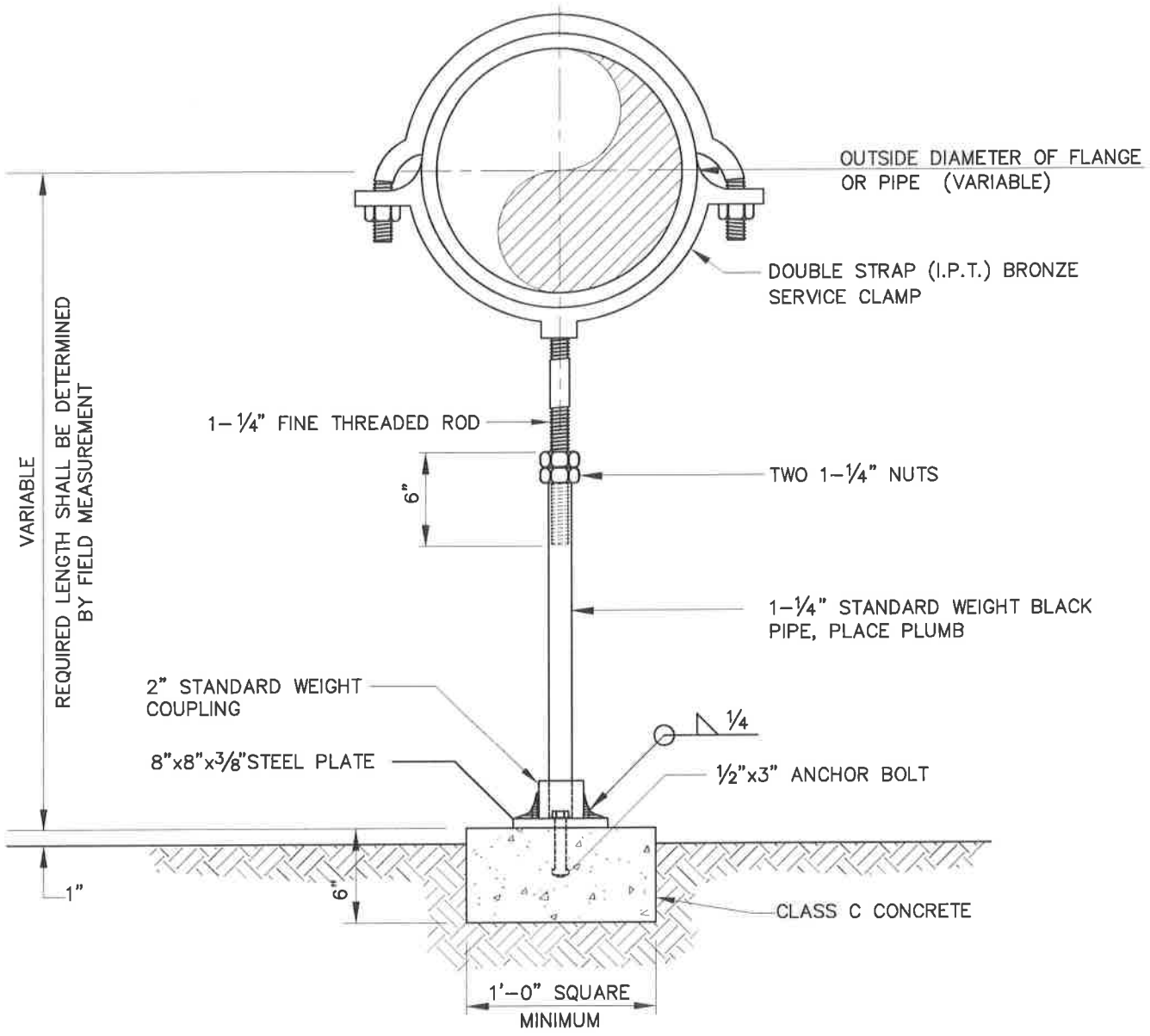


NOTES:

1) PAINT WITH PRIME COAT AND FINISH COAT AFTER FABRICATION IN ACCORDANCE WITH BASIC PAINTING SPECIFICATIONS. FINISH COAT SHALL BE SAME AS SUPPORTED PIPE, UNLESS OTHERWISE DIRECTED BY DISTRICT.

2) WHEN CLEARANCE BETWEEN TOP OF CONCRETE FOOTING AND BOTTOM OF FLANGE OR PIPE IS 6" OR LESS, A 2" STANDARD BLACK HALF COUPLING SHALL BE USED IN LIEU OF COUPLING SHOWN.

APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT CRADLED PIPE SUPPORT	
	STANDARD DRAWING	W1170



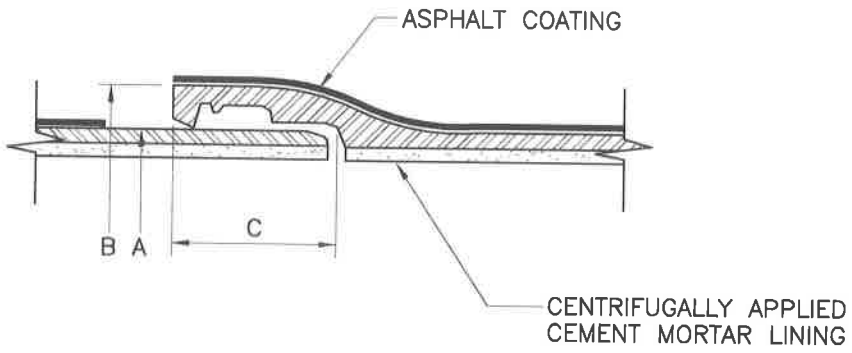
NOTES:

1) PAINT WITH PRIME COAT AND FINISH COAT AFTER FABRICATION IN ACCORDANCE WITH BASIC PAINTING SPECIFICATIONS. FINISH COAT SHALL BE SAME AS SUPPORTED PIPE, UNLESS OTHERWISE DIRECTED BY DISTRICT.

2) WHEN CLEARANCE BETWEEN TOP OF CONCRETE FOOTING AND BOTTOM OF FLANGE OR PIPE IS 6" OR LESS, A 2" STANDARD BLACK HALF COUPLING SHALL BE USED IN LIEU OF COUPLING SHOWN.

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT STRAPPED PIPE SUPPORT STANDARD DRAWING W1180

CEMENT MORTAR LINED AND ASPHALT COATED PIPE



NOMINAL DIAMETER (INCHES)	OUTSIDE PIPE DIAMETER (INCHES) A	OUTSIDE BELL DIAMETER (INCHES) B	MINIMUM SOCKET DEPTH (INCHES) C	MINIMUM LINING THICKNESS (INCHES)	MINIMUM WALL THICKNESS (INCHES)
4	4.80	6.52	3.15	0.1250	0.25
6	6.90	8.66	3.38	0.1250	0.25
8	9.05	10.82	3.69	0.1250	0.25
12	13.20	15.05	3.75	0.1250	0.28
16	17.40	19.74	5.00	0.1875	0.30

NOTES:

1) PIPE SHALL CONFORM TO AWWA C151 (ANSI A21.51) LATEST AND AS MODIFIED HEREIN.

2) NOMINAL DIAMETER SHALL CONSTITUTE MINIMUM INSIDE DIAMETER.

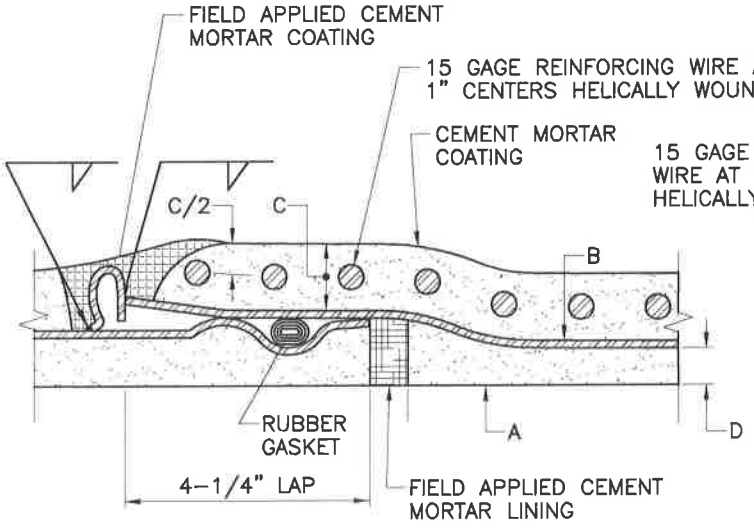
3) MAXIMUM NOMINAL LAYING LENGTH SHALL BE 18 FEET UP TO 16 INCH DIAMETER EXCEPT WHERE OTHERWISE SPECIFIED.

4) PIPE WALL THICKNESS SHALL BE NOT LESS THAN THE THICKNESS LISTED IN THE TABLE HEREON.

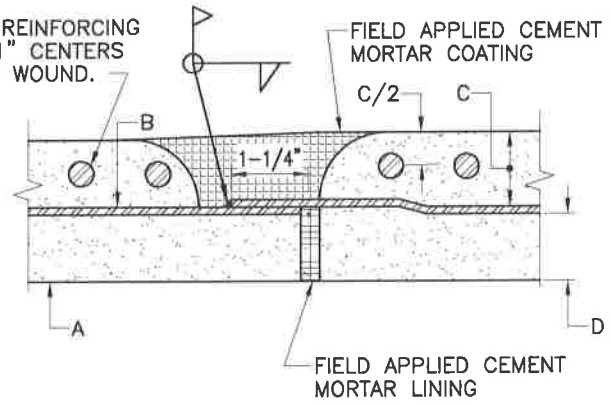
5) JOINTS SHALL BE RUBBER GASKETED PUSH-ON TYPE. WHERE RESTRAINED JOINTS ARE REQUIRED THEY SHALL BE "BOLTLESS" TYPE.

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT DUCTILE IRON PIPE DETAILS (CLASS 150 APPLICATION) STANDARD DRAWING W1190

CEMENT MORTAR LINED AND CEMENT MORTAR COATED PIPE



BELL AND SPIGOT JOINT



LAP WELDED BELL AND SPIGOT JOINT

NOMINAL DIAMETER (INCHES) A	MINIMUM OUTSIDE CYLINDER DIAMETER (INCHES) B	MINIMUM COATING THICKNESS (INCHES) C	MINIMUM LINING THICKNESS (INCHES) D	MINIMUM CYLINDER THICKNESS CLASS 150 (INCHES)
4	4.89 O.D.	3/4"	0.3125	0.1345
6	6.89 O.D.	3/4"	0.3125	0.1345
8	8.89 O.D.	3/4"	0.3125	0.1345
12	12.89 O.D.	3/4"	0.3750	0.1345
16	17.02 O.D.	3/4"	0.3750	0.1345

NOTES:

1) PIPE SHALL CONFORM WITH APPLICABLE PROVISIONS OF AWWA C200, C205, C206, C207, AND C208, LATEST, AND APPLICABLE PROVISIONS OF M11 "STEEL PIPE MANUAL", LATEST, AS MODIFIED HEREIN.
2) NOMINAL DIAMETER SHALL CONSTITUTE MINIMUM INSIDE DIAMETER.
3) CYLINDER DIAMETER SHALL BE AS SHOWN HEREON OR AS REQUIRED TO OBTAIN NOMINAL PIPE DIAMETER.
4) MAXIMUM NOMINAL LAYING LENGTH SHALL BE 40' EXCEPT WHERE OTHERWISE SPECIFIED.
5) STEEL CYLINDER WALL THICKNESS SHALL NOT BE LESS THAN THE THICKNESS LISTED IN TABLE HEREON, REGARDLESS OF YIELD POINT OF STEEL (YIELD POINT SHALL BE 30,000 P.S.I. MINIMUM).
6) JOINTS SHALL BE RUBBER GASKET BELL AND SPIGOT AS SHOWN HEREON OR LAP WELD BELL AND SPIGOT, UNLESS SPECIFIED OTHERWISE.
7) 2 BONDING CLIPS REQUIRED PER JOINT (NOT REQUIRED AT LAP WELDED BELL AND SPIGOT JOINT). STEEL BONDING CLIP MATERIAL SHALL BE ASTM A366 (COMMERCIAL QUALITY).

APPROVED:

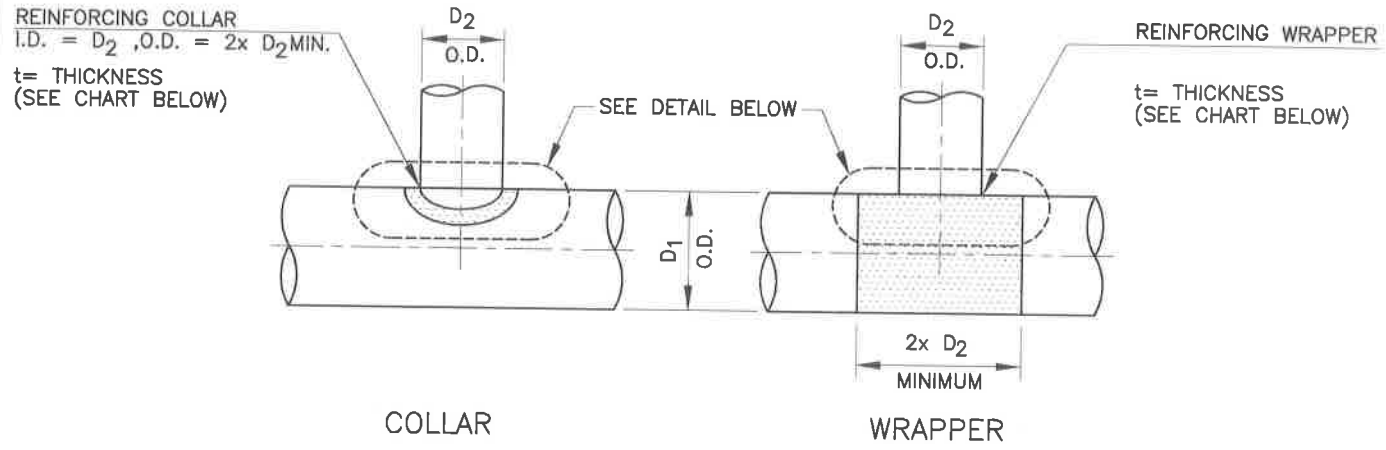
ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER

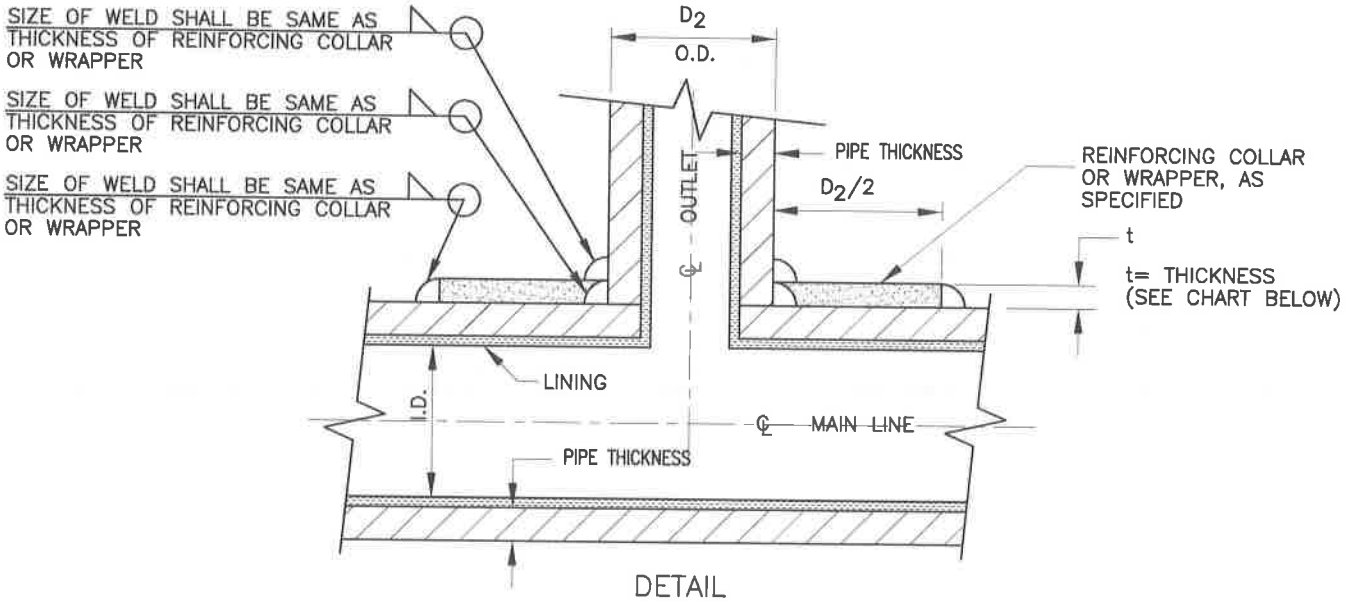
DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

WELDED STEEL PIPE DETAILS

STANDARD DRAWING | W1200





REINFORCING COLLAR		
D_1 (INCHES MIN.)	D_2 (INCHES MIN.)	t (INCHES MIN.)
12	4	0.1345
16	4–6	0.1345

REINFORCING WRAPPER		
D_1 (INCHES MIN.)	D_2 (INCHES MIN.)	t (INCHES MIN.)
4–8	4–8	0.1345
12	6–12	0.1345
16	8–16	0.1345

APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

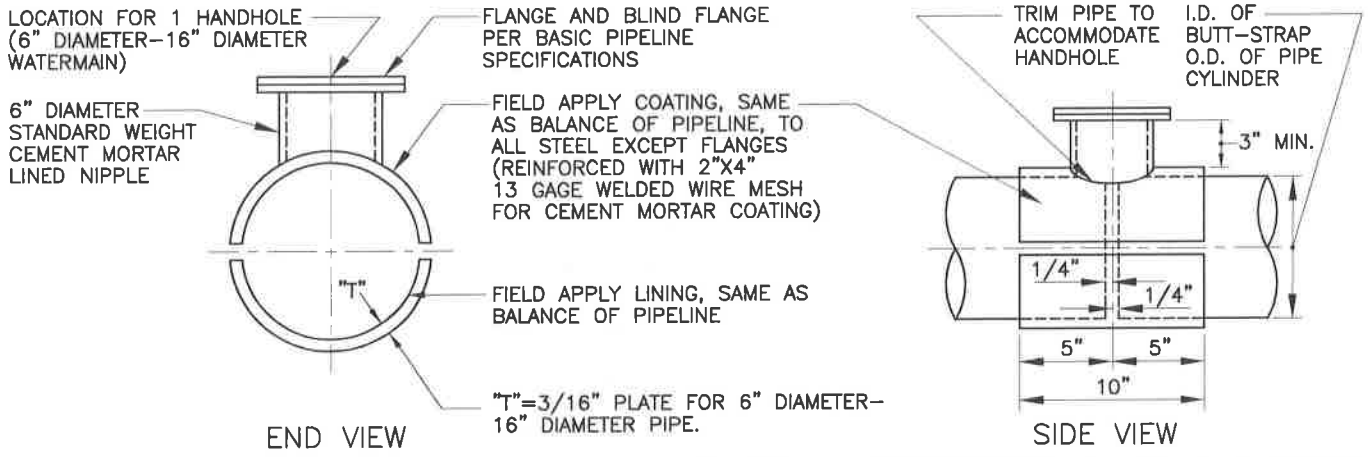
DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

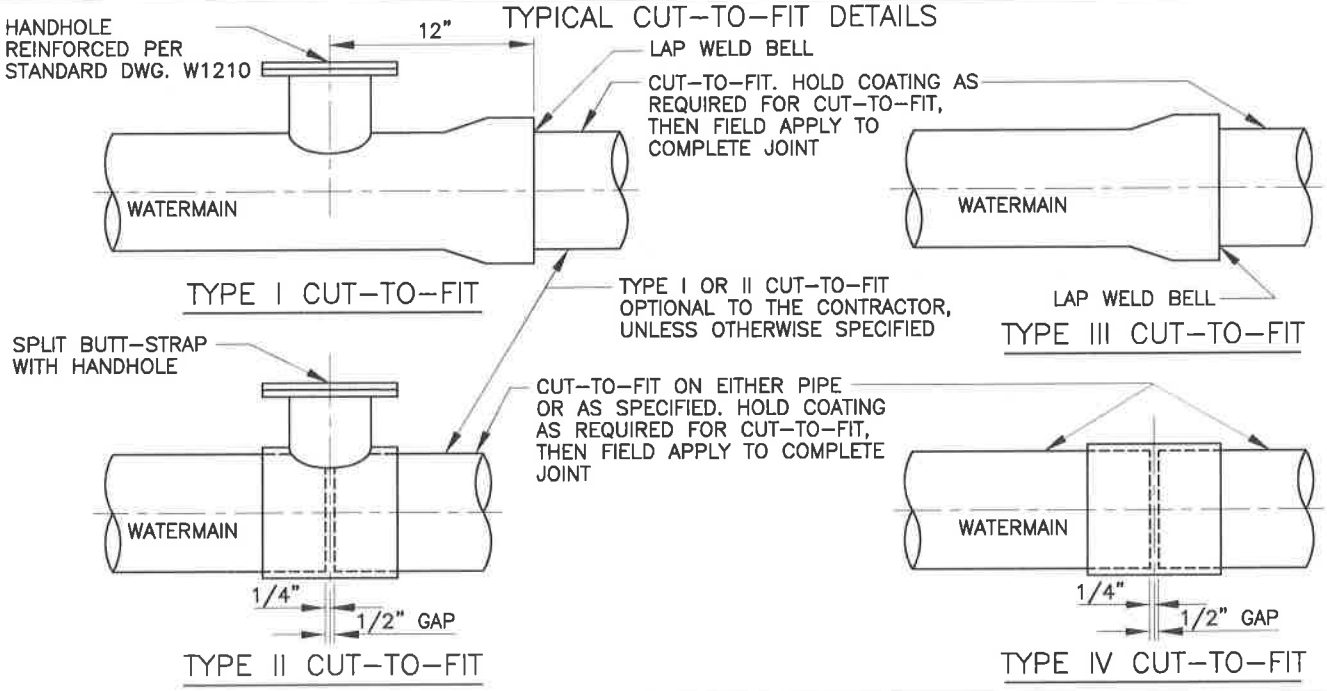
WELDED STEEL PIPE REINFORCING DETAIL

STANDARD DRAWING | W1210

TYPICAL BUTT-STRAP WITH HANDHOLE

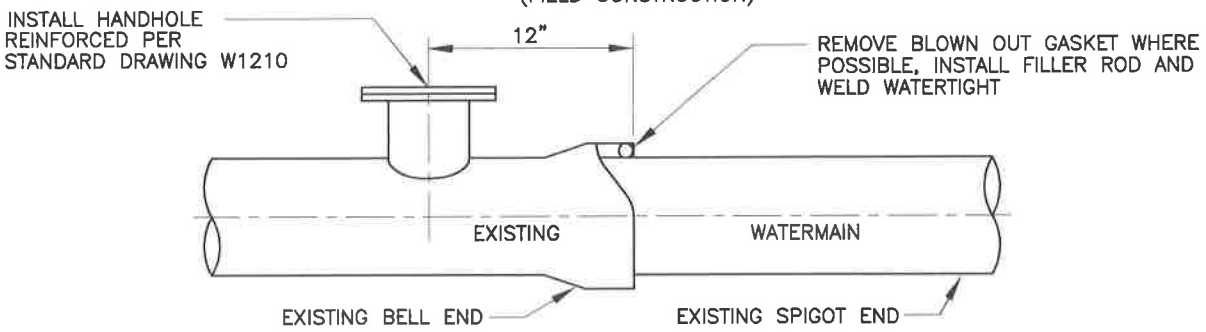


TYPICAL CUT-TO-FIT DETAILS



TYPICAL JOINT REPAIR DETAIL

(FIELD CONSTRUCTION)



APPROVED:

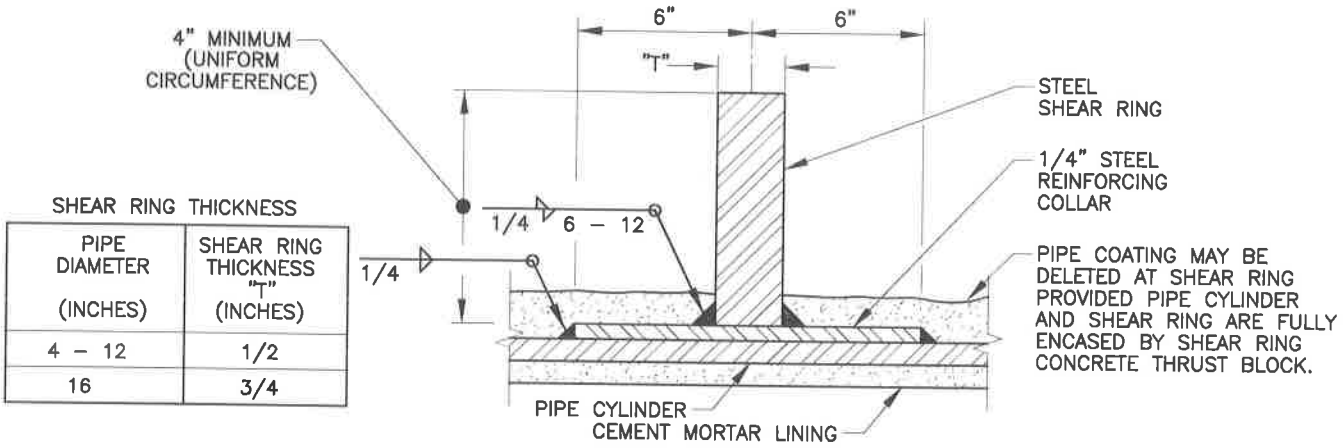
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

WELDED STEEL PIPE CUT-TO-FIT AND JOINT REPAIR DETAIL

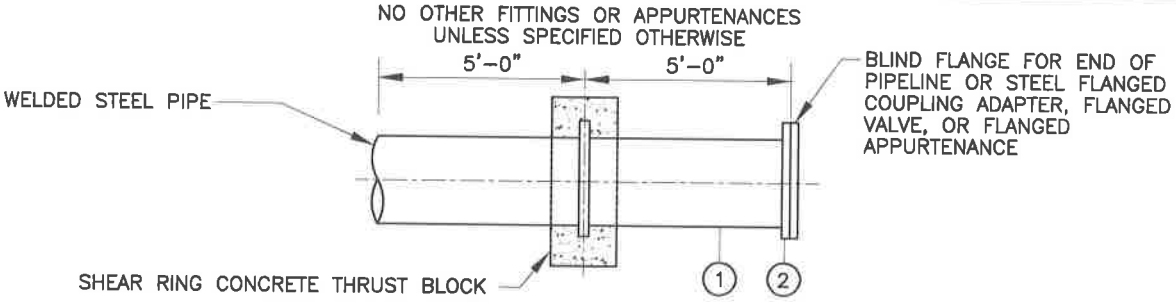
STANDARD DRAWING | W1220



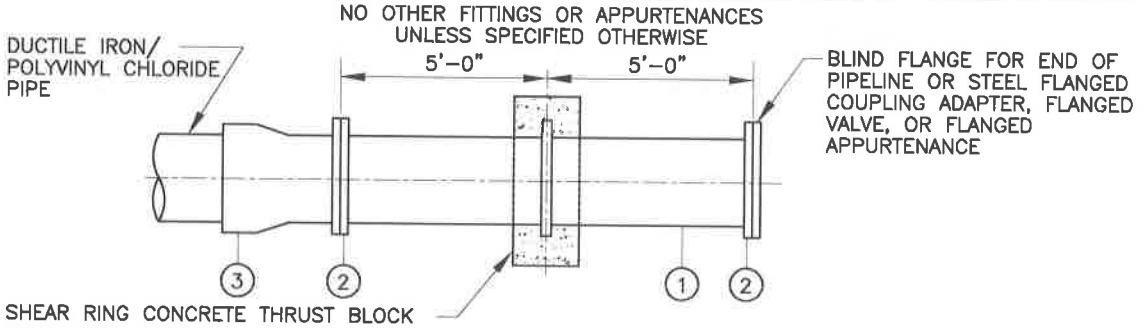
SHEAR RING THICKNESS

PIPE DIAMETER (INCHES)	SHEAR RING THICKNESS "T" (INCHES)
4 – 12	1/2
16	3/4

TYPICAL SHEAR RING DETAIL



SHEAR RING INSTALLATION – WELDED STEEL PIPE



SHEAR SPOOL INSTALLATION – DUCTILE IRON/POLYVINYL CHLORIDE PIPE

ITEM	DESCRIPTION
1	CEMENT MORTAR LINED AND CEMENT MORTAR COATED WELDED STEEL PIPE.
2	AWWA CLASS E RING FLANGE.
3	FLANGED x TYTON JOINT ADAPTER.

NOTES:

1) SHEAR RING CONCRETE THRUST BLOCK SHALL CONFORM TO STANDARD DRAWING G50.
2) ALL STEEL EXCEPT FLANGES OR ADAPTERS SHALL BE FULLY COATED OR ENCASED.

APPROVED:

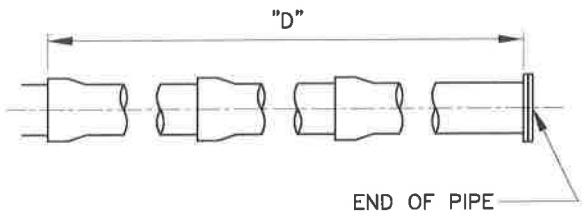
ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER

DATE: JANUARY 2005

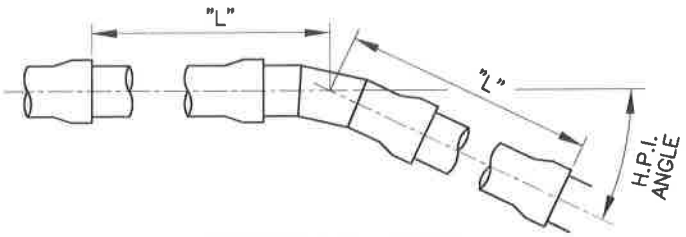
RUBIDOUX COMMUNITY SERVICES DISTRICT

WELDED STEEL PIPE SHEAR RING DETAIL

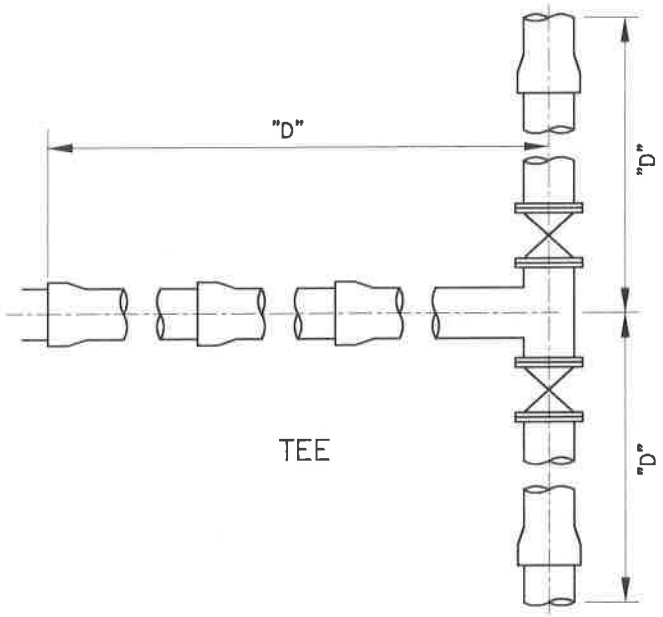
STANDARD DRAWING W1230



END



HORIZONTAL BEND



TEE

PIPE DIA.	CLASS 150 "L" (FEET)	CLASS 200 "L" (FEET)
6" & 8"	120	160
12"	140	200
16"	180	240

PIPE DIA.	H.P.I. (DEGREES)	CLASS 150 "L" (FEET)	CLASS 200 "L" (FEET)
6"	5–30	10	15
	31–60	40	60
	61–90	80	120
8"	5–30	15	20
	31–60	50	80
	61–90	100	140
12"	5–30	20	30
	31–60	80	120
	61–90	140	200
16"	5–30	30	40
	31–60	100	140
	61–90	200	280

NOTES:

1) WELDED STEEL PIPE SHALL HAVE FULLY WELDED JOINTS WITHIN LIMITS SHOWN ABOVE.
2) DUCTILE IRON PIPE SHALL HAVE BOLTLESS RESTRAINED JOINTS.

APPROVED:

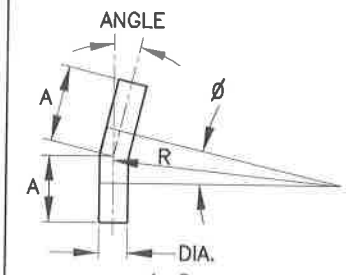
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

RESTRAINED JOINT AND WELDED JOINT THRUST PROTECTION

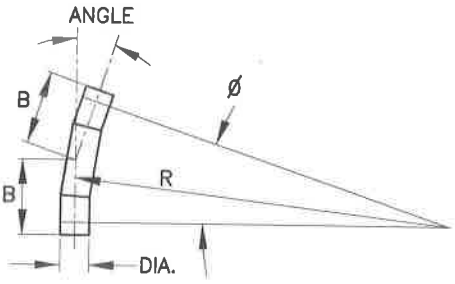
STANDARD DRAWING | W1240



$R = \frac{A-6}{\text{TAN } Ø / 2}$

TWO PIECE ELBOW

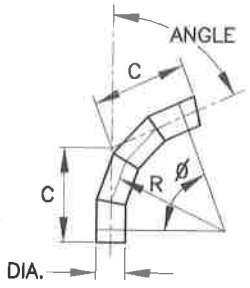
0–22.5 DEG.



$R = \frac{B-6}{\text{TAN } Ø / 2}$

THREE PIECE ELBOW

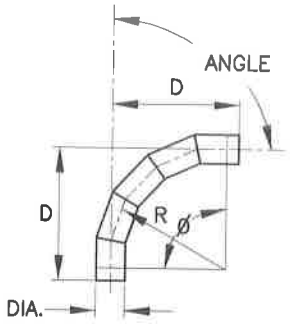
22.5–45 DEG.



$R = \frac{C-6}{\text{TAN } Ø / 2}$

FOUR PIECE ELBOW

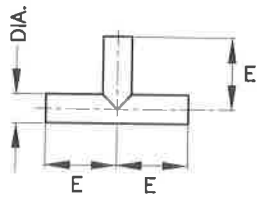
45–67.5 DEG.



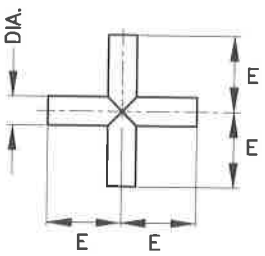
$R = \frac{D-6}{\text{TAN } Ø / 2}$

FIVE PIECE ELBOW

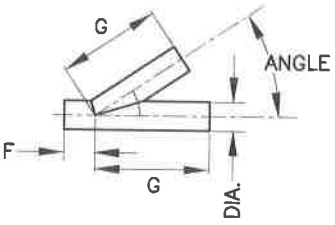
67.5–90 DEG.



TEE

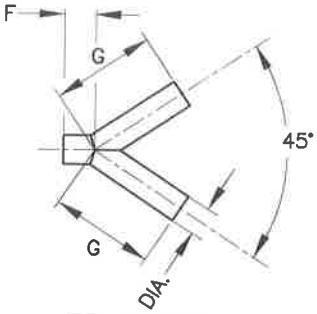


CROSS



LATERAL

30° MIN., 75° MAX.



TRUE WYE

45°

NOMINAL DIAMETER	ELBOWS				TEE AND CROSS	LATERAL AND TRUE WYE	
	TWO–PIECE (0–22.5°)	THREE–PIECE (22.5–45°)	FOUR–PIECE (45–67.5°)	FIVE–PIECE (67.5–90°)			
	A	B	C	D	E	F	G
4	9	12	15	19	11	8	30
6	9	13	16	21	12	10	32
8	10	14	18	24	13	10	36
12	11	16	22	29	22	10	44
16	12	18	26	34	26	10	52

NOTES:

1) ALL FITTINGS SHALL BE REINFORCED IN ACCORDANCE WITH STANDARD DRAWING W1210.

2) ALL DIMENSIONS ARE IN INCHES.

APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

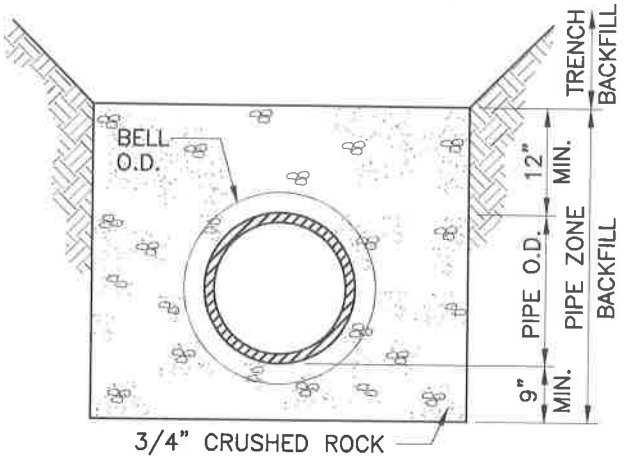
RUBIDOUX COMMUNITY SERVICES DISTRICT

WELDED STEEL PIPE FITTING DIMENSIONS

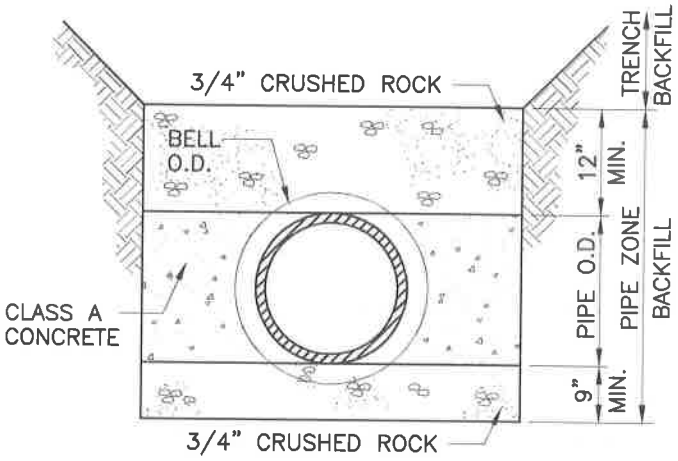
STANDARD DRAWING W1250

SECTION IX-3
SEWER STANDARD DRAWINGS

TABLE OF CONTENTS



LOAD FACTOR=2.2



LOAD FACTOR=2.8

MINIMUM LOAD FACTOR							
SEWER DIAMETER (INCHES)	DEPTH OF COVER (FEET)						
	7	8	10	12	14	16	18
8	2.2	2.2	2.2	2.2	2.2	2.2	2.2
10	2.2	2.2	2.2	2.2	2.2	2.2	2.8
12	2.2	2.2	2.2	2.2	2.2	2.8	2.8
15	2.2	2.2	2.2	2.2	2.8	2.8	2.8*
18	2.2	2.2	2.2	2.2	2.8	2.8	2.8*

* 42" MAXIMUM TRENCH WIDTH.

3/4" CRUSHED ROCK GRADATION	
SIEVE SIZE	% PASSING
1"	100
3/4"	90–100
3/8"	20–55
No. 4	0–10
No. 8	0–5

NOTES:

1) UNLIMITED TRENCH WIDTH, UNLESS OTHERWISE SPECIFIED.

2) ALL SEWERS SHALL BE CONSTRUCTED WITH A MINIMUM LOAD FACTOR OF 2.2.

APPROVED:

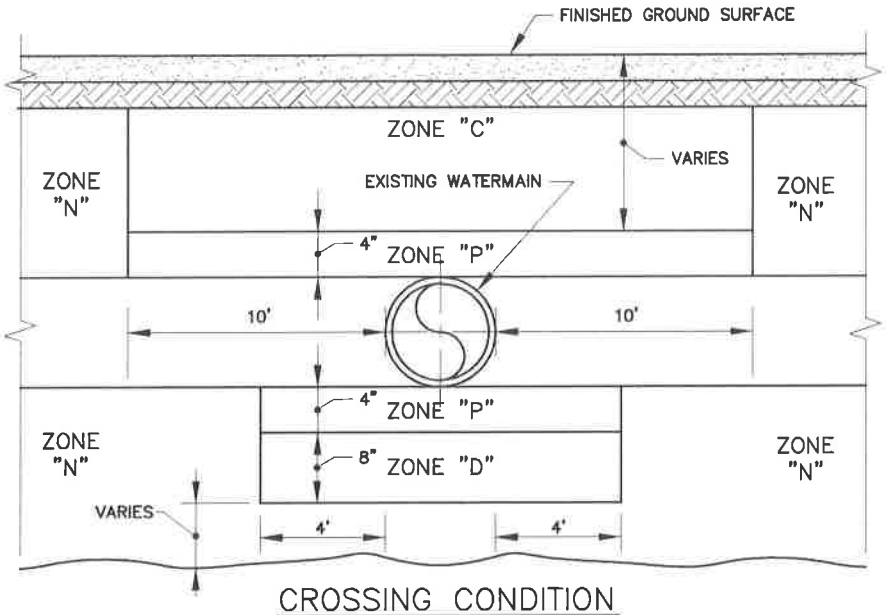
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

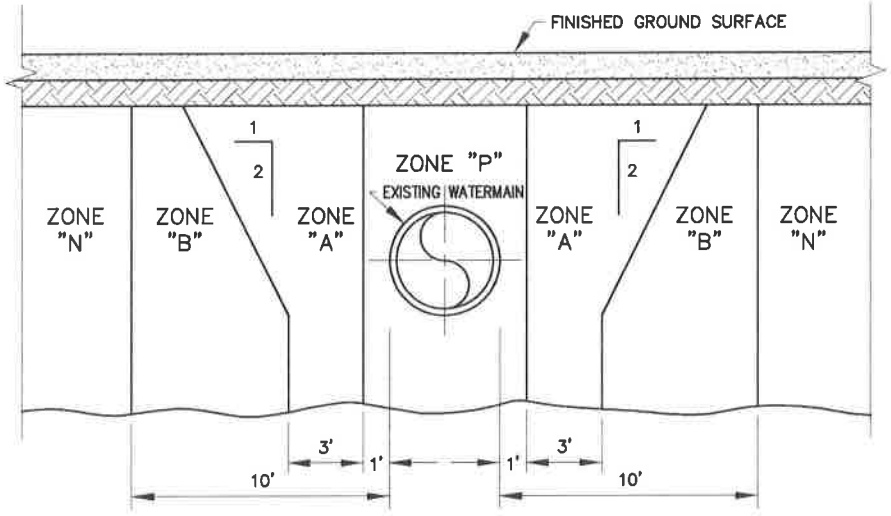
RUBIDOUX COMMUNITY SERVICES DISTRICT

PIPE BEDDING FOR VITRIFIED CLAY PIPE

STANDARD DRAWING S2010



CROSSING CONDITION



PARALLEL CONDITION

LEGEND:

ZONE "A"
NO SEWERS SHALL BE CONSTRUCTED WITHOUT SPECIAL PERMISSION FROM STATE DEPARTMENT OF HEALTH SERVICES.

ZONE "B"
SEWERS SHALL BE EXTRA STRENGTH VITRIFIED CLAY PIPE WITH COMPRESSION JOINTS. ALIGNMENT SHALL BE APPROVED BY STATE DEPARTMENT OF HEALTH SERVICES.

ZONE "C"
NO PIPE JOINTS PERMITTED. SEWERS SHALL BE EXTRA STRENGTH VITRIFIED CLAY PIPE WITH COMPRESSION JOINTS INSTALLED WITHIN A CONTINUOUS STEEL CONDUCTOR CASING. CROSSING SHALL BE APPROVED BY STATE DEPARTMENT OF HEALTH SERVICES.

ZONE "D"
NO PIPE JOINTS PERMITTED. SEWERS SHALL BE EXTRA STRENGTH VITRIFIED CLAY PIPE WITH COMPRESSION JOINTS INSTALLED WITHIN A CONTINUOUS STEEL CONDUCTOR CASING. CROSSING SHALL BE APPROVED BY STATE DEPARTMENT OF HEALTH SERVICES.

ZONE "N"
NO SPECIAL REQUIREMENTS.

ZONE "P"
CONSTRUCTION PROHIBITED.

NOTE:

1) CROSSINGS AT OTHER THAN 90° ANGLES SHALL BE AS SPECIFIED BY DISTRICT.

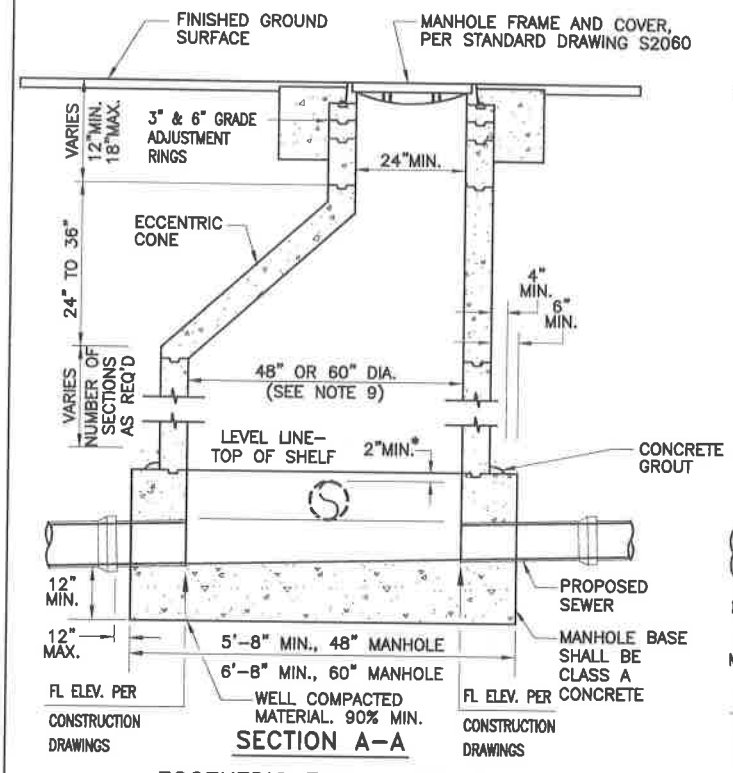
APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

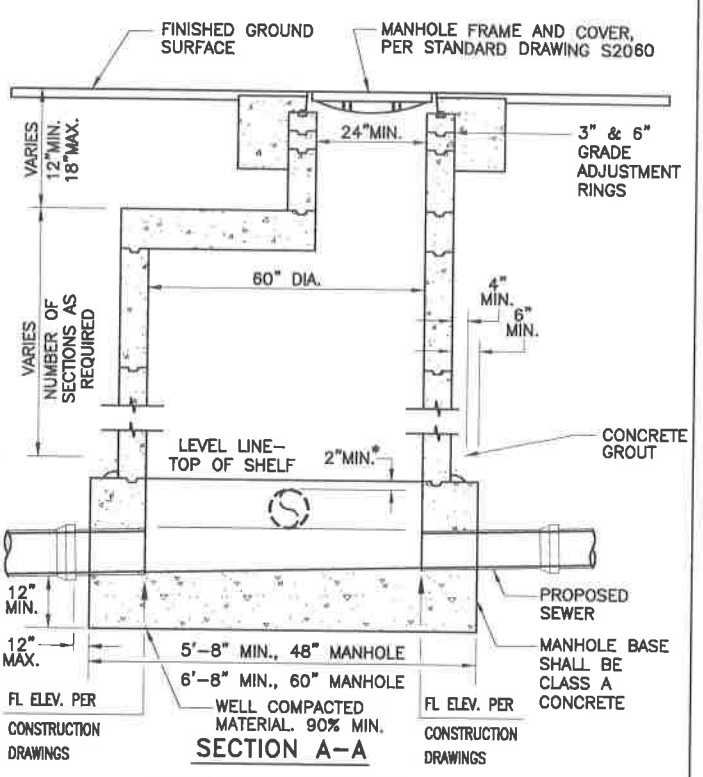
DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT
SEWER CROSSING /
PARALLELING EXISTING WATERMAIN

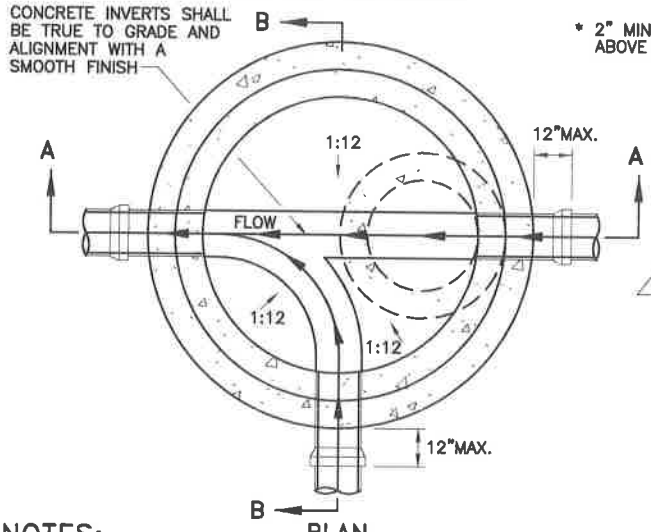
STANDARD DRAWING | S2020



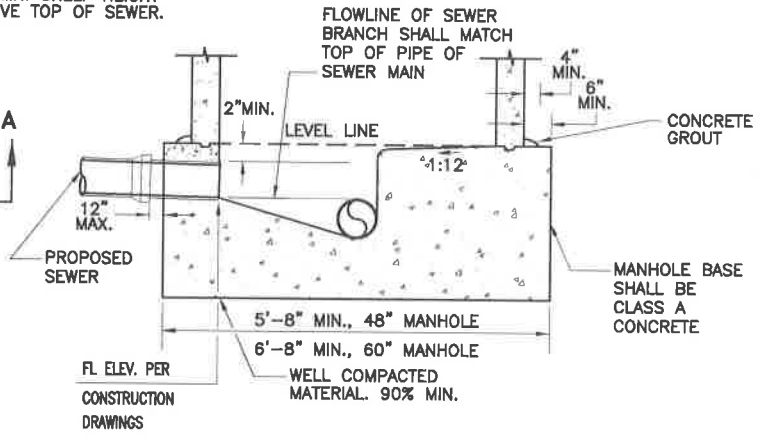
ECCENTRIC TOP MANHOLE



FLAT TOP MANHOLE



* 2" MIN. SHELF HEIGHT ABOVE TOP OF SEWER.



SECTION B-B

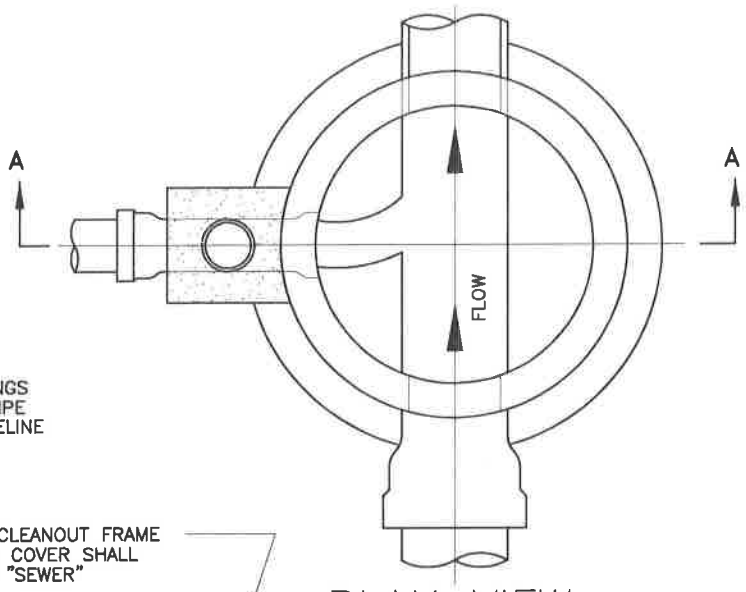
NOTES:

1) PRECAST REINFORCED CONCRETE MANHOLE SHALL CONFORM TO THE REQUIREMENTS OF ASTM C478 (LATEST) AND BE DESIGNED FOR H-20 LOADING.
2) MANHOLE STEPS SHALL NOT BE PROVIDED.
3) ALL MANHOLE SECTIONS SHALL BE JOINED WITH 3/8" THICK CEMENT MORTAR NEATLY STRUCK AND POINTED.
4) MANHOLE OPENING SHALL BE 24" DIA. AND BE LOCATED ON UPSTREAM SIDE OF MANHOLE.
5) ECCENTRIC CONE TOP SHALL BE PROVIDED WHERE MANHOLE DEPTH (TOP OF MANHOLE FRAME AND COVER TO TOP OF PIPE) IS 6 FEET OR GREATER. FLAT TOP SHALL BE PROVIDED WHERE DEPTH IS LESS THAN 6 FEET.
6) MANHOLE OPENING SHALL BE 24" DIA. UNLESS OTHERWISE NOTED.
7) AFTER FINAL STREET PAVEMENT IS COMPLETE, ADJUST MANHOLE FRAME AND COVER TO GRADE. TOP OF MANHOLE SHALL BE FLUSH WITH FINAL PAVEMENT.
8) FOR ALIGNMENT CHANGES LESS THAN 45°, GRADE AT MANHOLE OUTLET SHALL BE 0.1' LOWER THAN INLET GRADE. FOR ALIGNMENT CHANGES 45° AND LARGER, GRADE AT MANHOLE OUTLET SHALL BE 0.25' LOWER THAN INLET GRADE.
9) MANHOLE DIAMETER SHALL BE 48" FOR SEWER DIAMETERS 18" AND LESS AND 60" FOR SEWER DIAMETERS 21" AND LARGER.

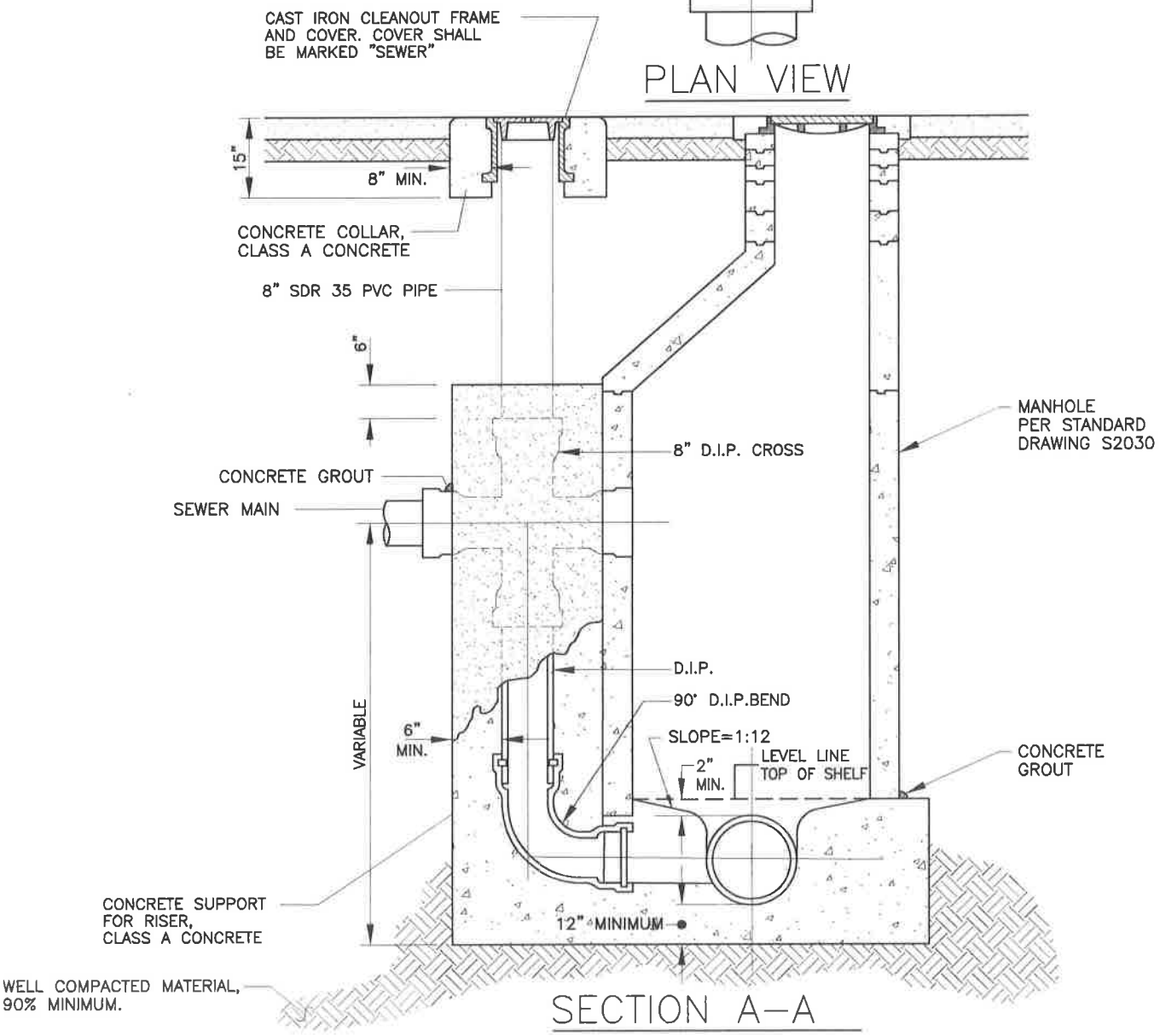
RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT MANHOLE STANDARD DRAWING S2030

NOTE:

1) INTERIOR OF D.I.P. AND FITTINGS SHALL BE "SPECIAL LINED" PIPE AND FITTINGS PER BASIC PIPELINE SPECIFICATIONS.

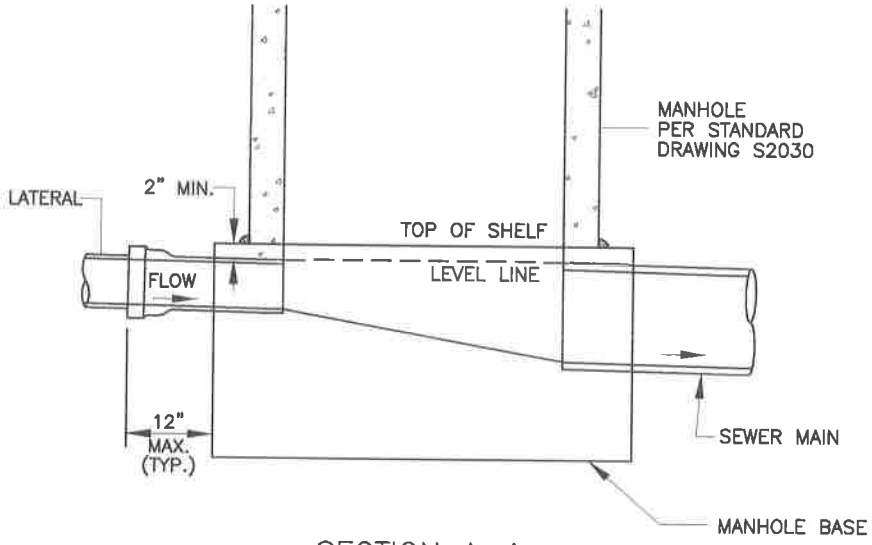


PLAN VIEW

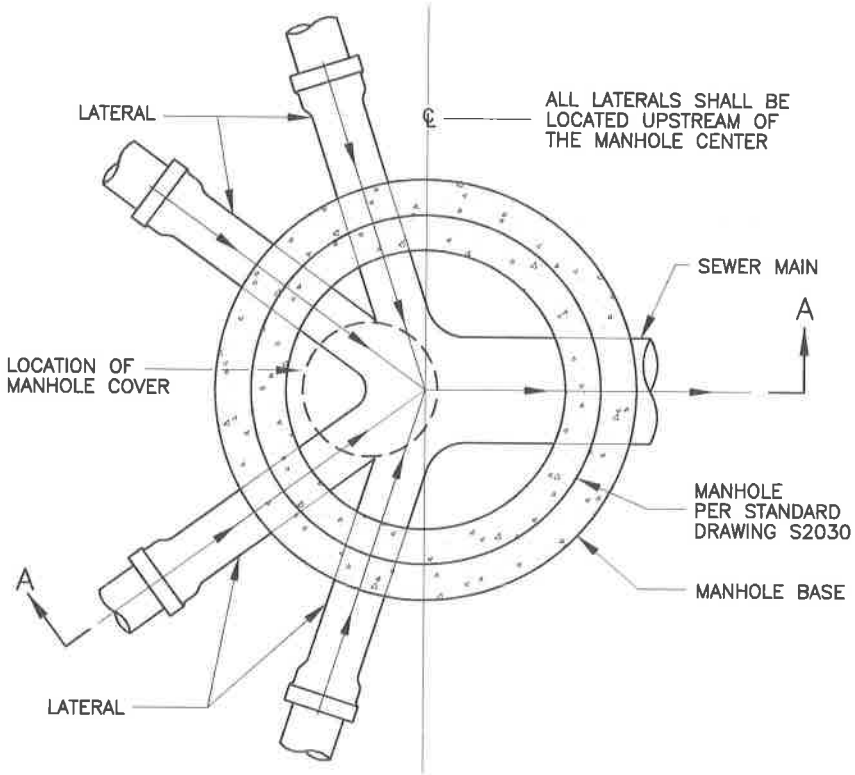


SECTION A–A

APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT DROP MANHOLE	
	STANDARD DRAWING	S2040



SECTION A–A



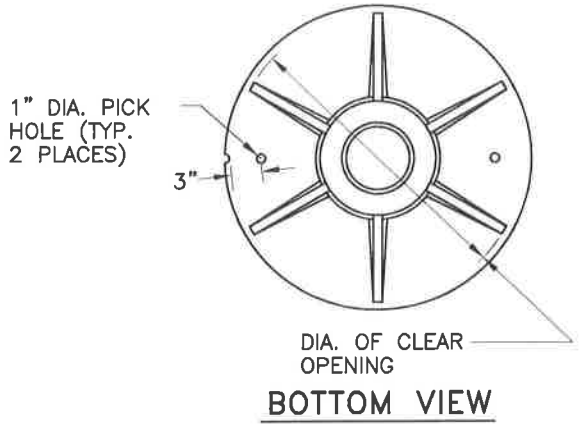
PLAN

CUL–DE–SAC MANHOLE
WITH HOUSE LATERALS

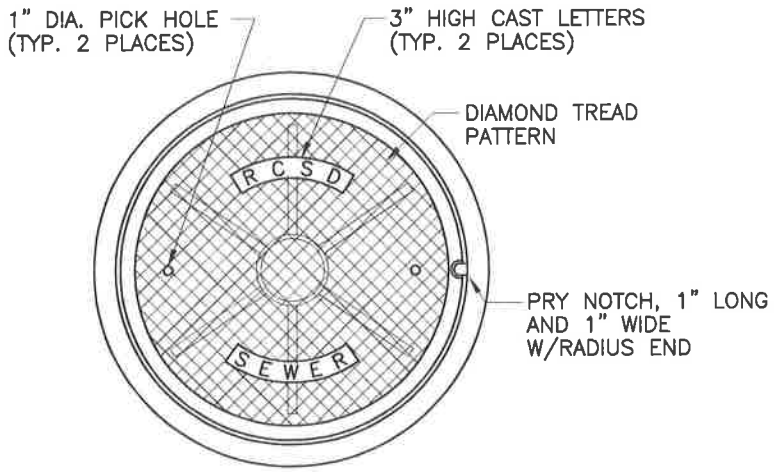
NOTES:

1) THE MAXIMUM NUMBER OF LATERALS INTO A CUL–DE–SAC MANHOLE SHALL BE FOUR.
2) THE MAXIMUM NUMBER OF LATERALS INTO A KNUCKLE MANHOLE SHALL BE TWO.

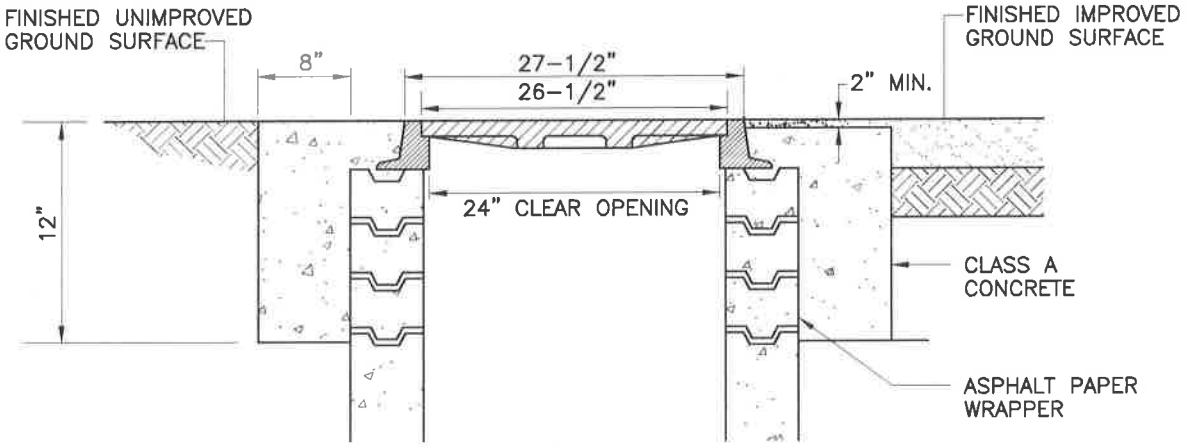
RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT MANHOLE AT STREET KNUCKLE OR END OF CUL-DE-SAC STANDARD DRAWING S2050



BOTTOM VIEW



TOP VIEW



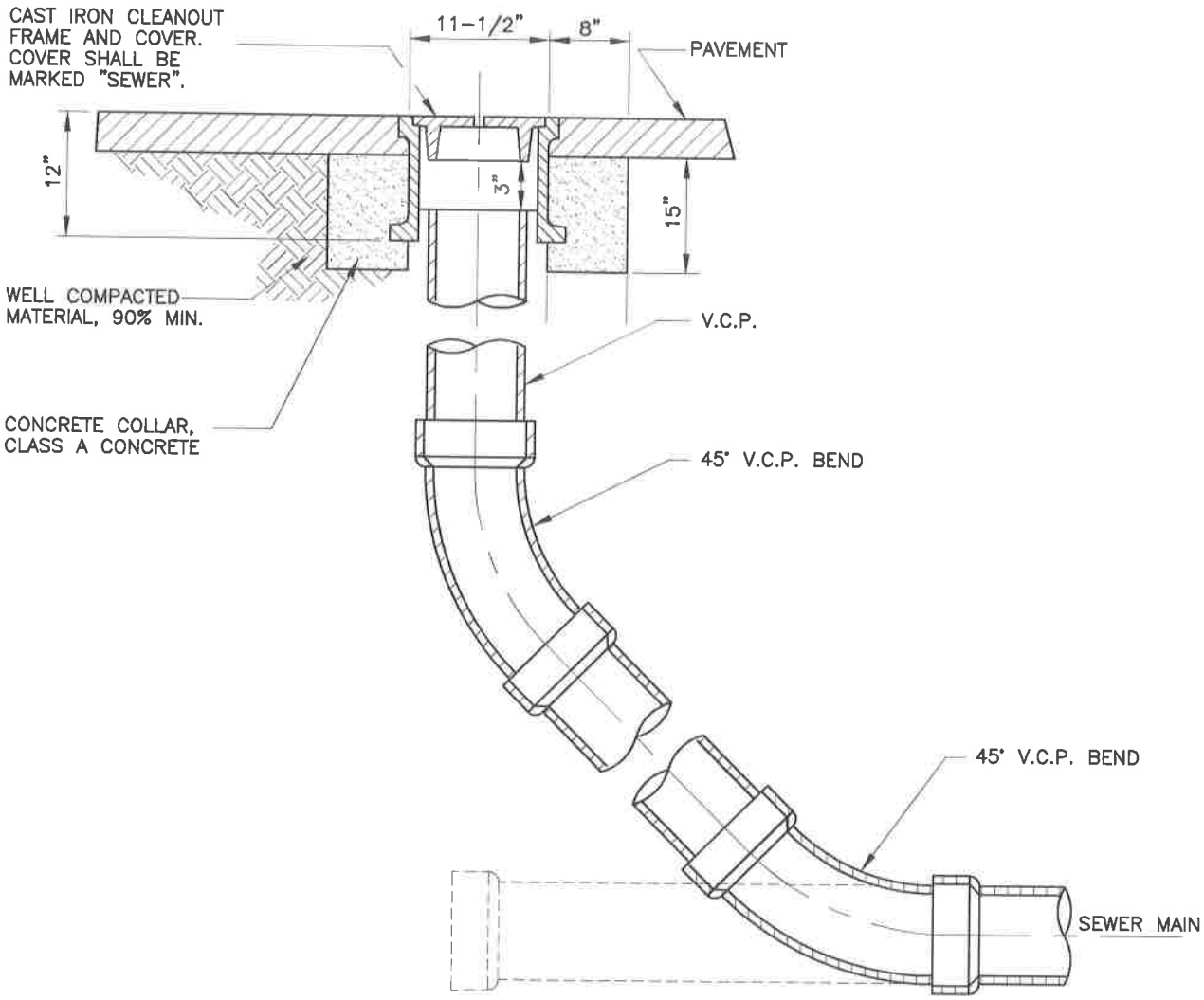
TYPICAL INSTALLATION SECTION

NOTES:

1) FRAME AND COVER SHALL BE CAST IRON WITH TENSILE STRENGTH OF 30,000 PSI.

   FOR MANHOLES IN UNIMPROVED LOCATIONS, MANHOLE FRAME AND COVER SHALL BE A WATER PROOF/BOLT DOWN COVER. GASKET MATERIAL SHALL BE ½"x½" NEOPRENE GASKET. BOLTS SHALL BE A325 (1½" STAINLESS STEEL), SIX EQUALLY SPACED.

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT MANHOLE FRAME AND COVER STANDARD DRAWING S2060

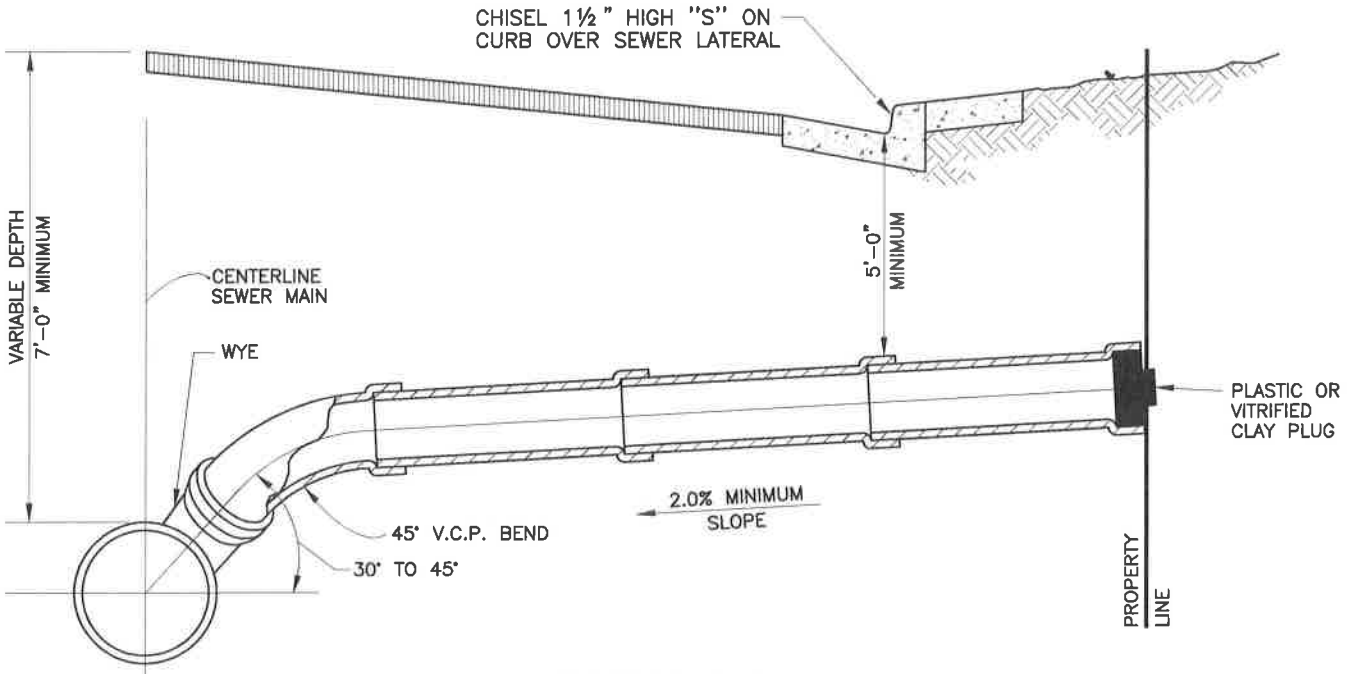


ELEVATION

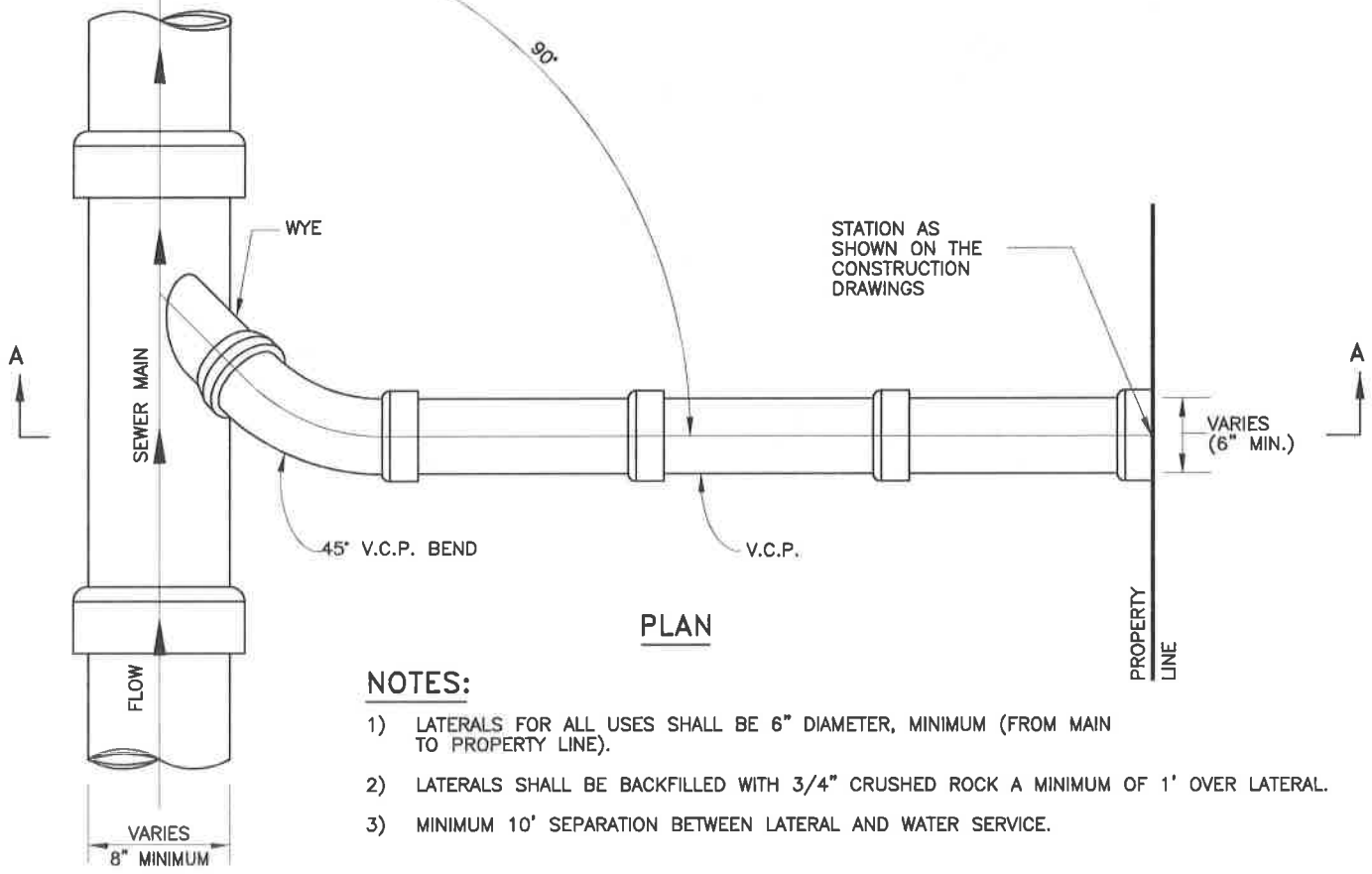
NOTES:

1) CLEANOUTS SHALL BE INSTALLED AT THE END OF THE SEWER MAIN IF WITHIN 200 FEET OF A MANHOLE, AND AS APPROVED BY DISTRICT.
2) CLEANOUT SIZE SHALL BE 4" DIA. (MIN.) FOR HOUSE LATERALS AND 6" DIA. (MIN.) FOR ALL OTHER LATERALS.
3) LETTERING SHALL BE CAST IN COVER.

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT CLEANOUT STANDARD DRAWING S2070



SECTION A–A



PLAN

NOTES:

1) LATERALS FOR ALL USES SHALL BE 6" DIAMETER, MINIMUM (FROM MAIN TO PROPERTY LINE).
2) LATERALS SHALL BE BACKFILLED WITH 3/4" CRUSHED ROCK A MINIMUM OF 1' OVER LATERAL.
3) MINIMUM 10' SEPARATION BETWEEN LATERAL AND WATER SERVICE.

APPROVED:

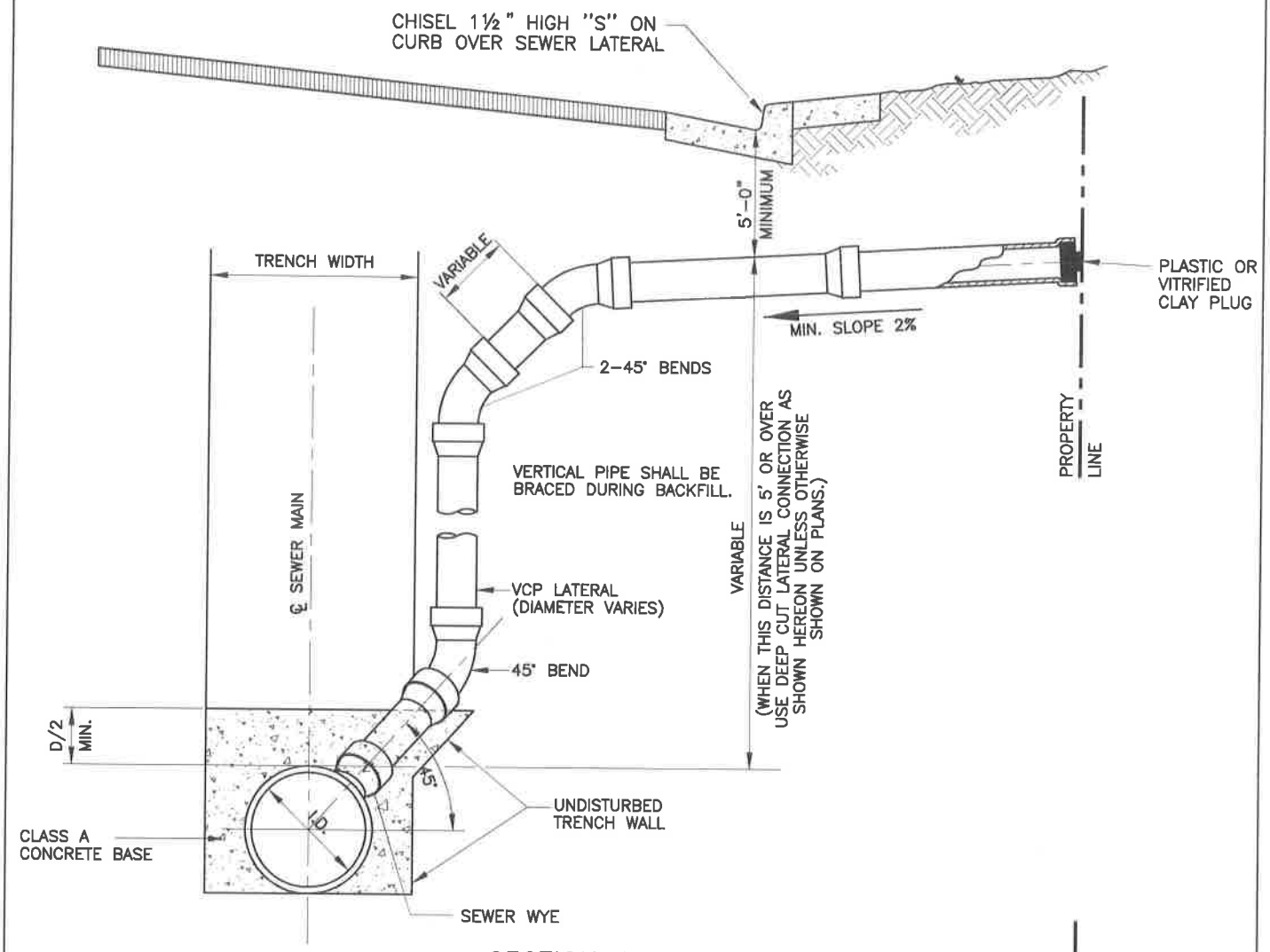
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

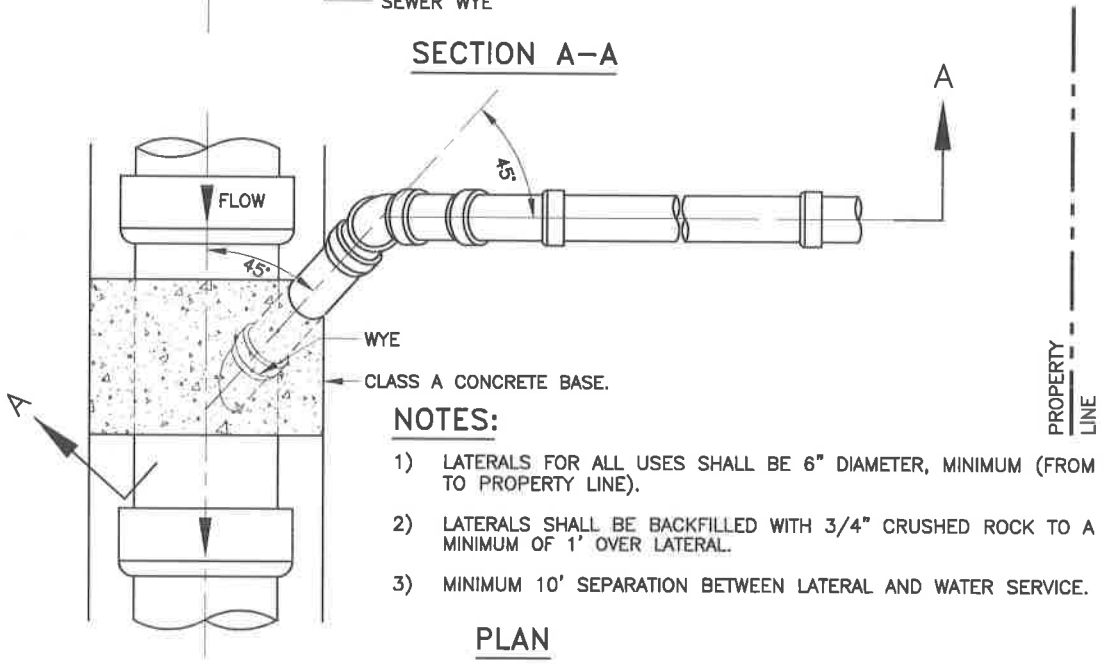
RUBIDOUX COMMUNITY SERVICES DISTRICT

LATERAL

STANDARD DRAWING | S2080



SECTION A-A



NOTES:

1) LATERALS FOR ALL USES SHALL BE 6" DIAMETER, MINIMUM (FROM MAIN TO PROPERTY LINE).
2) LATERALS SHALL BE BACKFILLED WITH 3/4" CRUSHED ROCK TO A MINIMUM OF 1' OVER LATERAL.
3) MINIMUM 10' SEPARATION BETWEEN LATERAL AND WATER SERVICE.

PLAN

APPROVED:

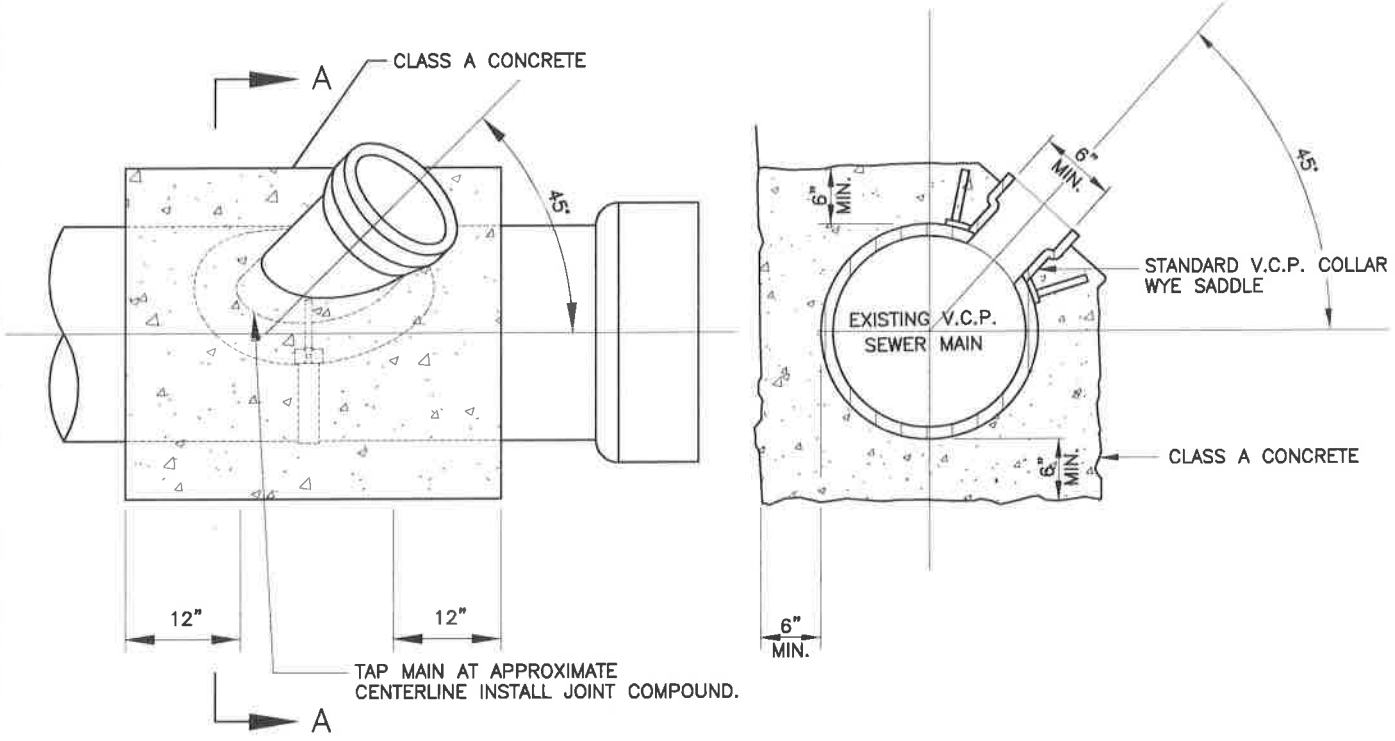
ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

DEEP CUT LATERAL

STANDARD DRAWING | S2090



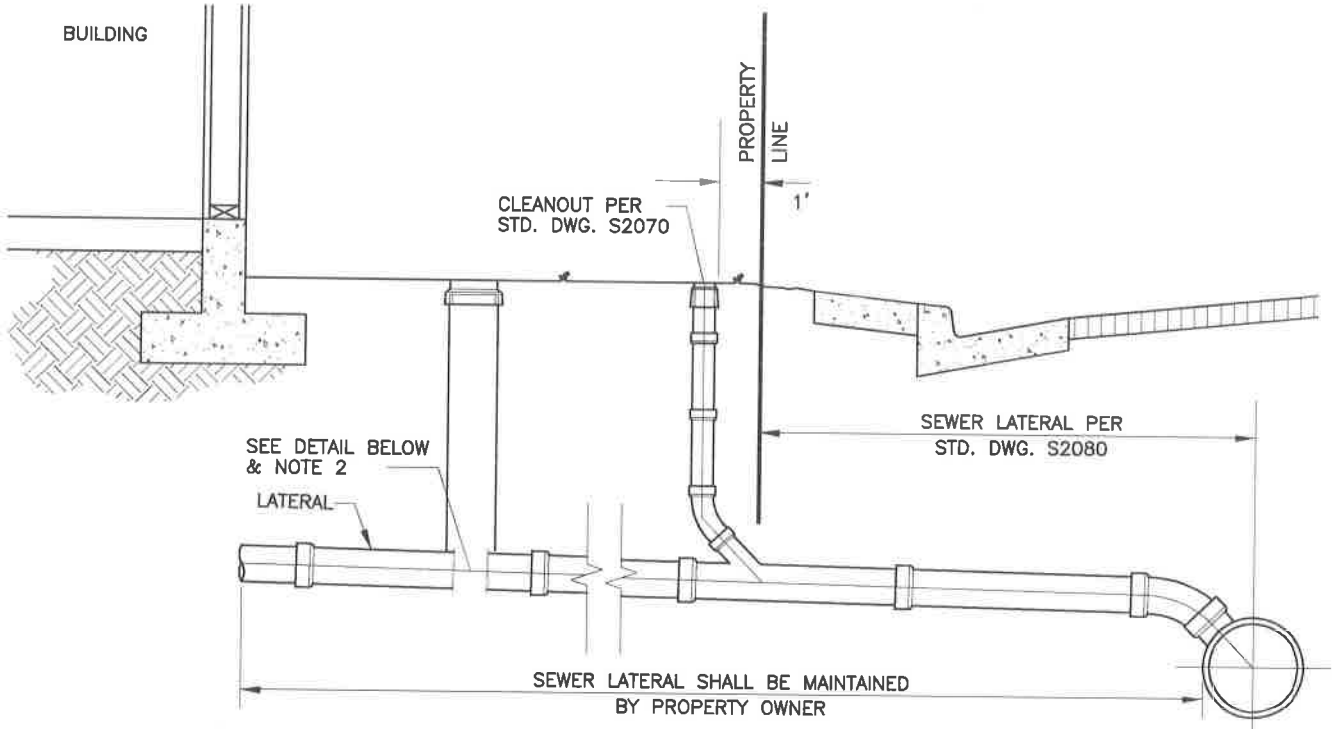
COLLAR WYE SADDLE

SECTION A–A

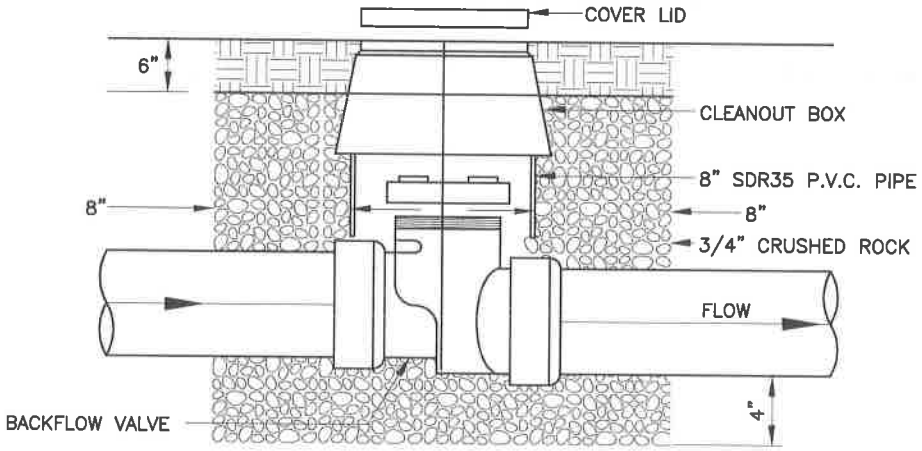
NOTES:

1) MACHINE TAP HOLE FOR THE COLLAR WYE. THE HOLE SHALL BE CLEANLY MACHINED AND, IF NECESSARY, WORKED BY HAND WITH A RASP OR SANDED TO ACCOMPLISH A TRUE AMD NEAT OPENING FOR THE COLLAR WYE.
2) ENCASE THE SADDLE CONNECTION WITH CLASS A CONCRETE AFTER THE CONNECTION IS APPROVED BY THE DISTRICT.
3) KEEP ALL CHIPS, DIRT, EPOXY, MORTAR, AND CONCRETE OUT OF THE SEWER SADDLE. PERFORM A CLEANING AND BALLING OF THE REACH SADDLED IF DIRECTED BY THE DISTRICT.
4) REPAIR OR REPLACE ANY DAMAGED PIPE AS DIRECTED BY THE DISTRICT.
5) INSTALL THE APPROPRIATE SEWER SADDLE FOR THE EXISTING SEWER MAIN (SIZE AND MATERIAL).

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT LATERAL SADDLE CONNECTION (EXISTING SEWER MAIN ONLY) STANDARD DRAWING | S2100



CLEANOUT AND BACKFLOW VALVE LOCATIONS



BACKFLOW VALVE DETAIL

NOTES:

1) A PLASTIC VALVE BOX AND LID (APPROVED BY DISTRICT) IS REQUIRED OVER THE BACKFLOW VALVE WHEN LOCATED IN NON-VEHICULAR TRAFFIC AREAS. IN VEHICULAR TRAFFIC AREAS (I.E. DRIVEWAYS) A CONCRETE VALVE BOX (TRAFFIC RATED) WITH CAST IRON LID (COVER MARKED "SEWER") IS REQUIRED.

2) THE BACKFLOW VALVE INSTALLATION SHALL BE INSTALLED WHERE: (a) PLUMBING FIXTURES ARE BELOW THE ELEVATION OF THE CURB AT THE POINT WHERE THE BUILDING SEWER CROSSES UNDER THE CURB, (b) PLUMBING FIXTURE LEVELS ARE BELOW THE ELEVATION OF THE UPSTREAM MANHOLE RIM, OR (c) REQUIRED BY COUNTY OR DISTRICT.

RUBIDOUX DISTRICT	APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT BACKFLOW VALVE STANDARD DRAWING S2110

APPENDICES

TABLE OF CONTENTS

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RUBIDOUX COMMUNITY SERVICES DISTRICT

FLOWCHART FOR CONSTRUCTION DRAWING APPROVAL

APPENDIX "A"

APPROVED:

ASSISTANT GENERAL MANAGER/
DISTRICT ENGINEER

DATE: JANUARY 2005

START

SUBMIT PLAN CHECK DEPOSIT

HYDRAULIC GRADE ELEVATION AND CONTRIBUTING SEWER FLOWS AT CONNECTIONS TO EXISTING SYSTEM PROVIDED BY THE DISTRICT

SUBMIT:

1. 1 COPY CONDITIONS OF APPROVAL
2. 2 COPIES TRACT WATER AND/OR SEWER SYSTEM WITH VALVES AND MANHOLES
3. 2 COPIES HYDRAULIC NETWORK ANALYSIS AND SEWER SYSTEM ANALYSIS
4. FIRE FLOW LETTER

REVIEW BY DISTRICT STAFF

SUBMIT:

1. 3 COPIES OF WATER AND/OR SEWER DWGS
2. 1 COPY STREET DWGS
3. 1 COPY GRADING PLAN
4. 1 COPY REVISED TRACT WATER AND/OR SEWER SYSTEM WITH HYDRAULIC AND SEWER ANALYSIS
5. 2 COPIES OF EASEMENT DOC'S
6. 1 COPY OF TENTATIVE TR OR PM
7. CORROSION SURVEY (CML&C, DIP)
8. 1 COPY OF COUNTY PLAN CHECK RECEIPT

REVIEW BY DISTRICT STAFF

SUBSEQUENT PLAN CHECKS:

1. PREV DISTRICT PLAN CHECK SET AND TRANSMITTAL
2. 3 COPIES OF REVISED WATER AND/OR SEWER DWGS
3. 2 COPIES OF EASEMENT DOCUMENTS
4. ADDITIONAL INFO AS REQUESTED

REVIEW BY DISTRICT STAFF

SUBMIT:

1. ORIGINAL WATER AND/OR SEWER CONSTRUCTION DWGS (AFTER ALL CORRECTIONS HAVE BEEN MADE)
2. PREVIOUS DISTRICT PLAN CHECK SET WITH 1 COPY OF REVISED REVISED WTR AND/OR SWR DWGS
3. COPY OF TENTATIVE TRACT/PARCEL MAP OR EXECUTED GRANT OF EASEMENT

ORIGINAL WATER AND/OR SEWER CONSTRUCTION DWGS SIGNED BY DISTRICT AFTER ALL REMAINING PLAN CHECK AND CAPACITY FEES HAVE BEEN PAID

ORIGINAL WTR AND/OR SWR CONSTR DWGS SIGNED:

1. HEALTH DEPARTMENT
2. FIRE DEPARTMENT
3. CO TRANS DEPT

RETURN TO DISTRICT:

1. ORIGINAL SIGNED MYLARS
2. 3 BLUELINE COPIES
3. DIGITAL GRAPHICS FILE

FINISH

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RUBIDOUX COMMUNITY SERVICES DISTRICT
WATER AND SANITARY SEWER SYSTEM
PLAN CHECK STATUS SHEET

RCSD Job No._____ Tract/Parcel Map No. _____

Name of Project:_____

Developer:_____

_

Location of
Project:_____

Engineer:_____ Phone:_____

ITEM	DATE	INITIAL
1. Received Plan Check Deposit (Developer)	_____	_____
2. Provide Hydraulic Grade Elevation and contributing Sewer Flows at Connections to existing system (District)	_____	_____
3. Received (Developer):		
- 1 copy of the Conditions of Approval	_____	_____
- 2 copies of the Tract Map with Proposed Water and/or Sewer system including valves (water) and Manholes (sewer)	_____	_____
- 2 copies of Hydraulic Network Analysis and Sewer system analysis	_____	_____
- Fire Flow Letter from County	_____	_____
4. Review Item 3 and Provide Comments (District)	_____	_____
5. Received First Plan Check (Developer)	_____	_____
- 3 copies of Water and/or Sewer Construction Drawings	_____	_____
- 1 copy of the Street Construction Drawings	_____	_____
- 1 copy of the Grading Plan	_____	_____
- 1 copy of revised Tract Map with Hydraulic Network Analysis and Sewer system analysis	_____	_____
- 2 copies of Easement documents	_____	_____
- 1 copy of Tract/Parcel Map	_____	_____
- Corrosion site study (Water: Steel or DIP only)	_____	_____
- 1 copy of County Plan Check Receipt	_____	_____

6. Review First Plan Check, Provide Comments (District) _____ _____

7. Received Second Plan Check (Developer) _____ _____
   - Previous District Plan Check set and transmittal _____ _____
   - 3 copies of revised water/sewer construction dwgs _____ _____
   - 2 copies of easement documents _____ _____
   - copies of additional information as requested _____ _____

   _____

   _____

   _____

8. Review Second Plan Check, Provide Comments (District) _____ _____

9. Received Third Plan Check (Developer) _____ _____
   - Previous District Plan Check set and transmittal _____ _____
   - 3 copies of revised water/sewer construction dwgs _____ _____
   - 2 copies of easement documents _____ _____
   - copies of additional information as requested _____ _____

   _____

   _____

   _____

10. Review Third Plan Check, Provide Comments (District) _____ _____

11. Received Original Construction Dwgs for for Signature (Engineer) _____ _____
    - Previous District plan check set and 1 copy of revised water/sewer construction dwgs _____ _____
    - All remaining Plan Check and Capacity Fees Paid _____ _____
    - Copy of Tentative Tract /Parcel Map _____ _____

      or

    - Executed Grant of Easement _____ _____

12. Construction Drawings Signed (District) _____ _____

13. Received 1 set of photo mylars and 3 sets of construction drawings (Developer) _____ _____

14. Received Digital Graphics File (Developer) _____ _____

RUBIDOUX COMMUNITY SERVICES DISTRICT
GENERAL CONSTRUCTION NOTES FOR WATER PIPELINES

1. ALL WORK SHALL CONFORM TO THE DESIGN AND CONSTRUCTION STANDARDS OF THE RCSD FOR WATER AND SANITARY SEWER FACILITIES.

2. WATER SYSTEM SHALL BE CONSTRUCTED BY THE DEVELOPER FOR DEDICATION TO THE RUBIDOUX COMMUNITY SERVICES DISTRICT. CONSTRUCTION, MATERIALS, TESTING AND INSPECTION SHALL COMPLY WITH RUBIDOUX COMMUNITY SERVICES DISTRICT STANDARDS. THE INSTALLATION SHALL MEET OR EXCEED THE REQUIREMENTS OF ALL PUBLIC AGENCIES HAVING JURISDICTION AND THE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS. FAILURE TO MEET THESE REQUIREMENTS WILL BE CAUSE FOR REJECTION.

3. CONSTRUCTION OF THE WATER SYSTEM SHALL NOT COMMENCE UNTIL A FINAL MAP HAS BEEN RECORDED BY RIVERSIDE COUNTY AND THE DEVELOPER'S ENGINEER HAS CERTIFIED THAT ALL STREETS ARE CONSTRUCTED TO FINAL GRADE. WATERLINES SHALL BE INSTALLED AFTER CONSTRUCTION OF CURB & GUTTER, SEWER, STORM DRAIN, AND PRIOR TO THE PLACEMENT OF CROSS-GUTTERS, SPANDRELS, AND PAVING.

4. PIPE, FITTINGS, VALVES AND APPURTENANCES SHALL BE OF THE PIPE PRESSURE CLASS (NOT W.W.P. CLASS) SHOWN ON THE PROFILE OF THESE PLANS. (NOTE: CAST IRON FITTINGS SHALL NOT BE ALLOWED.)

5. MINIMUM COVER OVER PIPE SHALL BE 42 INCHES. WHEN THE WATERLINE ENCOUNTERS AN OBSTRUCTION AND CROSSING OVER THE OBSTRUCTION WILL RESULT IN LESS THAN 42 INCHES OF COVER OVER THE WATERLINE, THE WATERLINE SHALL CROSS UNDER THE OBSTRUCTION (MIN. 12 INCHES CLEARANCE).

6. CONTRACTOR SHALL PROVIDE TRENCH PROTECTION AND CONDUCT ALL CONSTRUCTION IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS AND SHALL DETERMINE DEPTH AND LOCATION OF EXISTING UNDERGROUND FACILITIES PRIOR TO TRENCHING. OPEN TRENCH AT ANY ONE TIME SHALL BE LIMITED TO 500 FEET ALONG ROAD RIGHT OF WAY AND SHALL BE BACKFILLED AND COMPACTED AT THE CONCLUSION OF EACH DAY.

7. BACKFILL SHALL BE COMPACTED TO THE GREATER OF 90% RELATIVE DENSITY, EQUIVALENT TO THE SURROUNDING GROUND, OR TO THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION, WHICHEVER IS MORE STRINGENT. CONTACT UNDERGROUND SERVICE ALERT (800) 227-2600 PRIOR TO ANY EXCAVATION.

8. DEPTH AND LOCATION OF EXISTING UNDERGROUND FACILITIES SHALL BE DETERMINED BY THE CONTRACTOR BY POTHOLING PRIOR TO TRENCHING. THE CONTRACTOR SHALL ALSO CONTACT UNDERGROUND SERVICE ALERT (800) 227-2600 PRIOR TO ANY EXCAVATION.

9. WHERE THE WATER MAIN CROSSES STORM DRAINS, OTHER PIPELINES, TELEPHONE AND ELECTRIC DUCTS, OR SIMILAR INSTALLATIONS, A MINIMUM OF 12 INCHES OF CLEARANCE SHALL BE PROVIDED BETWEEN THE MAIN AND OTHER INSTALLATIONS. SEPARATION OF THE WATER AND SEWER LINES MUST COMPLY WITH THE RIVERSIDE COUNTY HEALTH DEPARTMENT STANDARDS AS SHOWN ON RIVERSIDE COUNTY STANDARD PLAN 609 AND RCSD STANDARD DRAWING W1010 AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DEPARTMENT OF HEALTH.

10. CONNECTIONS TO THE EXISTING RCSD WATERLINES SHALL BE IN ACCORDANCE WITH STANDARD RCSD PROCEDURES AND SHALL NOT BE ACCOMPLISHED UNLESS AN RCSD INSPECTOR IS PRESENT. NO CONNECTIONS TO EXISTING RCSD WATERLINES WILL BE ALLOWED ON FRIDAYS.

11. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR CONTRACTOR TO APPLY TO THE RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT, PERMIT SECTION, FOR AN ENCROACHMENT PERMIT, FOR ALL WORK ON EXISTING COUNTY MAINTAINED ROADS.

12. ALL SERVICE LATERALS SHALL BE LOCATED AT RIGHT ANGLES TO THE MAIN UNLESS OTHERWISE INDICATED ON THE PLANS AND APPROVED BY THE RCSD.

13. PIPE SHALL BE HANDLED SO AS TO PROTECT THE PIPE AT ALL TIMES AND SHALL BE CAREFULLY BEDDED TO PROVIDE CONTINUOUS BEARING AND TO PREVENT UNEVEN SETTLEMENT. PIPE SHALL BE PROTECTED AGAINST FLOTATION AT ALL TIMES. OPEN ENDS SHALL BE SEALED AT ALL TIMES WHEN CONSTRUCTION IS NOT IN PROGRESS.

14. PIPE JOINTS SHALL NOT BE DEFLECTED AT ANY ANGLE GREATER THAN THE MAXIMUM ANGLE RECOMMENDED BY THE PIPE MANUFACTURER. ALL WELDED JOINTS SHALL BE MINIMUM DOUBLE PASS.

15. TAPS ON PIPELINE SHALL BE INSTALLED PER DISTRICT STANDARDS AND AS APPROVED IN THE FIELD BY THE RCSD INSPECTOR. CONNECTIONS TO EXISTING RCSD PIPELINES SHALL NOT BE ACCOMPLISHED UNLESS AN RCSD INSPECTOR IS PRESENT. RCSD MAY ELECT TO MAKE THE CONNECTION AT THE DEVELOPERS EXPENSE. CONTRACTOR TO FIELD VERIFY BOTH HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING WATERLINES PRIOR TO CONSTRUCTION.

16. TEST PRESSURE SHALL BE 150% OF PIPE CLASS RATING (I.E.: 150 = 225 PSI TEST), SHALL BE UNDER CONTINUOUS INSPECTION, AND SHALL BE IN ACCORDANCE WITH DISTRICT STANDARD PROCEDURES.

17. SURFACE IMPROVEMENTS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE RECONSTRUCTED BY THE CONTRACTOR TO THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION.

18. FIRE HYDRANTS AND AIR VALVES TO BE LOCATED PER THE AGENCY HAVING JURISDICTION.

19. WATER METERS TO BE LOCATED PER PLAN, ANY RELOCATION SHALL BE APPROVED BY THE RCSD. A "W" SHALL BE IMPRINTED ON THE CURB FACE AT EACH SERVICE LATERAL (METER) LOCATION.

20. CONTRACTOR SHALL PLACE INSULATED 14 GA SOLID COPPER LOCATOR WIRE WITH ALL C-900 PVC PIPE TO ASSIST WITH FUTURE LOCATION.

21. THE DEVELOPER SHALL PROVIDE ONE SET OF PRINTS SHOWING ALL "AS-BUILT" CONDITIONS INCLUDING THE STATIONING OF SERVICE LATERAL CONNECTIONS AND PAD ELEVATIONS AS A CONDITION OF FINAL APPROVAL.

22. ANY REVISION TO THESE DRAWINGS MUST BE APPROVED IN WRITING BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT.

23. THE CONTRACTOR IS ADVISED THAT THE WORK ON THIS PROJECT MAY INVOLVE WORKING IN A CONFINED AIR SPACE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH "CONFINED AIR SPACE" ARTICLE 108, TITLE 8 CALIFORNIA ADMINISTRATIVE CODE.

24. ALL PIPE LARGER THAN 12" IN DIAMETER SHALL BE INSPECTED BY VIDEO CAMERA PRIOR TO BACTERIOLOGICAL TESTING.

25. CONTRACTOR SHALL WARRANTY ALL WORK FOR 12 MONTHS AFTER THE DATE OF FINAL INSPECTION.

RUBIDOUX COMMUNITY SERVICES DISTRICT
GENERAL CONSTRUCTION NOTES FOR SEWER PIPELINES

1. ALL WORK SHALL CONFORM TO THE DESIGN AND CONSTRUCTION STANDARDS OF RCSD FOR WATER AND SANITARY SEWER FACILITIES.

2. SEWER SYSTEM SHALL BE CONSTRUCTED BY THE DEVELOPER FOR DEDICATION TO THE RUBIDOUX COMMUNITY SERVICES DISTRICT. CONSTRUCTION, MATERIALS, TESTING AND INSPECTION SHALL COMPLY WITH RUBIDOUX COMMUNITY SERVICES DISTRICT STANDARDS. THE INSTALLATION SHALL MEET OR EXCEED THE REQUIREMENTS OF ALL PUBLIC AGENCIES HAVING JURISDICTION. FAILURE TO MEET THESE REQUIREMENTS WILL BE CAUSE FOR REJECTION. SEWER PIPE SHALL BE EXTRA STRENGTH VITRIFIED CLAY PIPE (VCP) UNLESS OTHERWISE APPROVED BY THE DISTRICT ENGINEER.

3. CONSTRUCTION OF THE SEWER SYSTEM SHALL NOT COMMENCE UNTIL A FINAL MAP HAS BEEN RECORDED BY RIVERSIDE COUNTY AND THE DEVELOPER'S ENGINEER HAS CERTIFIED THAT ALL STREETS ARE CONSTRUCTED TO FINAL GRADE FOR CURB AND GUTTER.

4. CONTRACTOR SHALL PROVIDE TRENCH PROTECTION AND CONDUCT ALL CONSTRUCTION IN ACCORDANCE WITH CAL-OSHA REQUIREMENTS AND SHALL DETERMINE DEPTH AND LOCATION OF EXISTING UNDERGROUND FACILITIES PRIOR TO TRENCHING. OPEN TRENCH AT ANY ONE TIME SHALL BE LIMITED TO 500 FEET ALONG ROAD RIGHT OF WAY AND SHALL BE BACKFILLED AND COMPACTED AT THE CONCLUSION OF EACH DAY.

5. PIPE SHALL BE HANDLED SO AS TO PROTECT THE PIPE AT ALL TIMES AND SHALL BE CAREFULLY BEDDED TO PROVIDE CONTINUOUS BEARING AND TO PREVENT UNEVEN SETTLEMENT. PIPE SHALL BE PROTECTED AGAINST FLOTATION AT ALL TIMES. OPEN ENDS OF INSTALLED SEWER SHALL BE SEALED AT ALL TIMES WHEN CONSTRUCTION IS NOT IN PROGRESS.

6. PIPE JOINTS SHALL NOT BE DEFLECTED AT ANY ANGLE GREATER THAN THE MAXIMUM ANGLE RECOMMENDED BY THE PIPE MANUFACTURER.

7. DEPTH AND LOCATION OF EXISTING UNDERGROUND FACILITIES SHALL BE DETERMINED BY THE CONTRACTOR BY POTHOLING PRIOR TO TRENCHING. THE CONTRACTOR SHALL ALSO CONTACT UNDERGROUND SERVICE ALERT (800) 227-2600 PRIOR TO ANY EXCAVATION.

8. WHERE THE SEWER MAIN CROSSES STORM DRAINS, OTHER PIPELINES, TELEPHONE AND ELECTRIC DUCTS, OR SIMILAR INSTALLATIONS, A MINIMUM OF 12 INCHES OF CLEARANCE SHALL BE PROVIDED BETWEEN THE MAIN AND OTHER INSTALLATIONS. SEPARATION OF THE WATER AND SEWER LINES MUST COMPLY WITH THE RIVERSIDE COUNTY HEALTH DEPARTMENT STANDARDS AS SHOWN ON RIVERSIDE COUNTY STANDARD PLAN 609 AND RCSD STANDARD DRAWING S2020 AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE STATE OF CALIFORNIA, DEPARTMENT OF HEALTH.

9. CONNECTIONS TO EXISTING RCSD SEWER PIPELINES SHALL NOT BE ACCOMPLISHED UNLESS THE DISTRICT INSPECTOR IS PRESENT. THE RCSD MAY ELECT TO MAKE THE CONNECTION AT THE DEVELOPERS EXPENSE. CONTRACTOR TO VERIFY BOTH HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SEWER LINES PRIOR TO CONSTRUCTION. NO CONNECTIONS TO EXISTING RCSD SEWERLINES WILL BE ALLOWED ON FRIDAYS.

10. BACKFILL SHALL BE COMPACTED TO THE GREATER OF 90% RELATIVE DENSITY, EQUIVALENT TO THE SURROUNDING GROUND, OR TO THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION, WHICHEVER IS MORE STRINGENT

11. SEWER LATERALS SHALL BE 4" VCP UNLESS OTHERWISE INDICATED. EXACT LOCATIONS OF WYES AND LATERALS ARE TO BE ESTABLISHED IN THE FIELD PRIOR TO INSTALLATION. AN "S" SHALL BE IMPRINTED ON THE CURB FACE AT EACH SERVICE LATERAL LOCATION AND A STEEL ROD OR STAKE SHALL BE INSTALLED AT THE END OF EACH SEWER LATERAL TO ASSIST IN LOCATING AT A LATER DATE.

12. UNLESS WAIVED BY THE RCSD, A 2" WIDE METALLIC LOCATOR TAPE SHALL BE PLACED WITH EACH SEWER AND EACH SEWER AND SERVICE LATERAL TO ASSIST IN FUTURE LOCATION. TAPE SHALL BE PLACED AT LEAST 6" ABOVE THE PIPE BUT NOT DEEPER THAN 4' FROM THE PROPOSED FINISHED GRADE.

13. ALL SEWERS SHALL BE BALLED, AIR TESTED AND VIDEO INSPECTED PRIOR TO ACCEPTANCE BY THE DISTRICT.

14. SURFACE IMPROVEMENTS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE RECONSTRUCTED BY THE CONTRACTOR TO THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION.

15. THE DEVELOPER SHALL PROVIDE ONE SET OF PRINTS SHOWING ALL "AS-BUILT" CONDITIONS INCLUDING THE STATIONING OF SEWER LATERAL CONNECTIONS AND PAD ELEVATIONS AS A CONDITION OF FINAL APPROVAL.

16. ANY REVISION TO THESE DRAWINGS MUST BE APPROVED IN WRITING BY THE RUBIDOUX COMMUNITY SERVICES DISTRICT.

17. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION OF BACKWATER VALVES, WHERE REQUIRED. PER UNIFORM PLUMBING CODE AND PER RCSD STANDARDS.

18. THE CONTRACTOR IS ADVISED THAT THE WORK ON THIS PROJECT MAY INVOLVE WORKING IN A CONFINED AIR SPACE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH "CONFINED AIR SPACE" ARTICLE 108, TITLE 8 CALIFORNIA ADMINISTRATIVE CODE.

19. CONTRACTOR SHALL WARRANTY ALL WORK FOR 12 MONTHS AFTER THE DATE OF FINAL INSPECTION.

RUBIDOUX COMMUNITY SERVICES DISTRICT
CONSTRUCTION DRAWING CHECKLIST

TRACT NO. _____ RCSD W.O. NO. _____

COVER SHEET

VICINITY MAP		
Scale _____	_____	_____
North Arrow	_____	_____
Street Names	_____	_____
Title and Location of Project	_____	_____
INDEX MAP		
Scale _____	_____	_____
North Arrow	_____	_____
Proposed Water/Sewer Line	_____	_____
Layout of Project	_____	_____
Appurtenances		
Fire Hydrants	_____	_____
Air Valves	_____	_____
Blow-offs	_____	_____
Tees & Crosses	_____	_____
Valves	_____	_____
Detector Checks	_____	_____
Water Services &/or Sewer Laterals	_____	_____
Manholes	_____	_____
Clean-outs	_____	_____
Pipeline	_____	_____
Quantities	_____	_____
Plan Layout/Sheet Reference	_____	_____
NOTES		
Water &/or Sewer System Certification	_____	_____
General Water &/or Sewer Notes	_____	_____
RCSD Signature Block	_____	_____
Legend	_____	_____

RUBIDOUX COMMUNITY SERVICES DISTRICT
CONSTRUCTION DRAWING CHECKLIST

TRACT NO. _____ RCSD W.O. NO. _____

PLAN

SHEET NO.	___	___	___	___	___	___	___
RCSD Signature Block	___	___	___	___	___	___	___
Title Block	___	___	___	___	___	___	___
Scale (Hor. 1"=40') (Vert. 1"=4')	___	___	___	___	___	___	___
North Arrow	___	___	___	___	___	___	___
Location and Width of right-of-way	___	___	___	___	___	___	___
Location and Width of Curb Separation	___	___	___	___	___	___	___
Location and Width of Easements	___	___	___	___	___	___	___
Street Names	___	___	___	___	___	___	___
Lot (Parcel) Lines & Numbers, All Adjacent Tracts Identified	___	___	___	___	___	___	___
Existing/Future Utilities	___	___	___	___	___	___	___
Existing/Proposed Improvements	___	___	___	___	___	___	___
Match Lines (Station & Sheet No.)	___	___	___	___	___	___	___
Existing Water and/or Sewer DWG Ref.	___	___	___	___	___	___	___
Pipeline Located per Riv Co Std 817	___	___	___	___	___	___	___
Water and sewer Separation	___	___	___	___	___	___	___
Stations and O.D. Elevations of Crossings (Water, Sewer, Storm Drain)	___	___	___	___	___	___	___
Centerline Offset to Proposed Pipeline and Other Utilities	___	___	___	___	___	___	___
Centerline Stationing (100' tick marks with Station)	___	___	___	___	___	___	___
Centerline Curve Data							
A. Street	___	___	___	___	___	___	___
B. Pipeline	___	___	___	___	___	___	___
Type and Size of Proposed Pipeline	___	___	___	___	___	___	___
Service Connections and/or Sewer Laterals (Size & Approx. Location)	___	___	___	___	___	___	___
Type, Size and Stationing for Appurtenances	___	___	___	___	___	___	___

RUBIDOUX COMMUNITY SERVICES DISTRICT
CONSTRUCTION DRAWING CHECKLIST

TRACT NO. _____ RCSD W.O. NO. _____

PROFILE

SHEET NO.	____	____	____	____	____	____	____
Type, Size, & Station:							
A. Tees, Crosses, Elbows, Blind Flanges, Plugs, Air Valves, Blowoffs, Fire Hydrants, Manholes, and Cleanouts	____	____	____	____	____	____	____
B. Connections to Existing Facilities	____	____	____	____	____	____	____
C. In-line Valves	____	____	____	____	____	____	____
Stations at Bottom of Profile	____	____	____	____	____	____	____
Elevations at side of Profile	____	____	____	____	____	____	____
Existing Ground Surface	____	____	____	____	____	____	____
Proposed Ground Surface	____	____	____	____	____	____	____
Proposed Finished Ground Surface or Pavement	____	____	____	____	____	____	____
Match Lines (Sta & Sht #)	____	____	____	____	____	____	____
Flowline of pipeline Identified	____	____	____	____	____	____	____
Stationing & Flowline Elevations for:							
A. Tees, Crosses, and Elbows	____	____	____	____	____	____	____
B. Grade Breaks	____	____	____	____	____	____	____
C. Hot Taps	____	____	____	____	____	____	____
D. EC's & BC's	____	____	____	____	____	____	____
E. Blow-offs	____	____	____	____	____	____	____
F. Air Valves	____	____	____	____	____	____	____
G. End of Pipe	____	____	____	____	____	____	____
H. Fire Hydrants	____	____	____	____	____	____	____
I. Manholes	____	____	____	____	____	____	____
J. Clean-outs	____	____	____	____	____	____	____
Pipe Slopes	____	____	____	____	____	____	____
Pipeline Lengths	____	____	____	____	____	____	____
Minimum Design Pressure (Water)	____	____	____	____	____	____	____
Maximum Trench Width/Bedding Factor (Sewer)	____	____	____	____	____	____	____
Restrained Joint Limits	____	____	____	____	____	____	____
Minimum Cover (42" Water, 84" Sewer)	____	____	____	____	____	____	____
Concrete Encasement Limits	____	____	____	____	____	____	____
Separation between Water and Sewer	____	____	____	____	____	____	____

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Recording requested by:

When recorded mail to:

Rubidoux Community Services District
P.O. Box 3098
Rubidoux, CA 92519-3098

Parcel No.

(Gov't Code 6103)
No tax due (Grantee is a public agency)

GRANT OF EASEMENT

FOR VALUABLE CONSIDERATION,

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

See Exhibits "A" (Description) and "B" (Plat) attached hereto and made a part hereof.

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

Grantor, and his successors and assigns, further agree that no trees, buildings, fences, walls or structures of any kind, and no trees, shrubs or other plants or vegetation, shall be installed, constructed, erected, placed, planted or maintained in the portion of the easement and right-of-way which is included within any road, and that no changes in the alignment or grading of any such road will be made without the prior written consent of the Grantee.

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

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

IN WITNESS WHEREOF, Grantor has executed this instrument this _____ day of _____, 20___.

GRANTOR:

_____

_____

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PRE-CONSTRUCTION PHASE

SUBMIT:
1. INSP DEP, CAPACITY FEES, ETC.
2. 3 COPIES OF APPROVED WATER AND/OR SEWER CONSTR DWGS

↓

SUBMIT:
1. CONTRACTOR INFO SHEET
2. MATERIAL LIST
3. 2 COPIES OF ENCROACHMENT PERMITS
4. 1 COPY OF RECORDED TRACT/ PARCEL MAP
5. WATER AND/OR SEWER SYSTEM CONSTRUCTION AGREEMENT

↓

DISTRICT APPROVAL:
1. CONTRACTOR
2. MATERIAL LIST

↓

SUBMIT:
1. WATER AND/OR SEWER CONSTRUCTION CONTRACT
2. CERTIFICATION OF STREETS TO FINAL GRADE
3. CERTIFICATE OF INSURANCE
4. FAITHFUL PERFORMANCE BOND

↓

SCHEDULE AND ATTEND PRE-CONSTRUCTION MTG

↓

DISTRICT ISSUE:
1. NOTICE TO PROCEED

↓

NOTIFY: DISTRICT IN WRITING REGARDING CONSTRUCTION START

↓

SUBMIT: CONSTRUCTION CUT SHEETS

↓

CONSTRUCTION PHASE (APPENDIX "F", PAGE 2)

APPROVED:

ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER

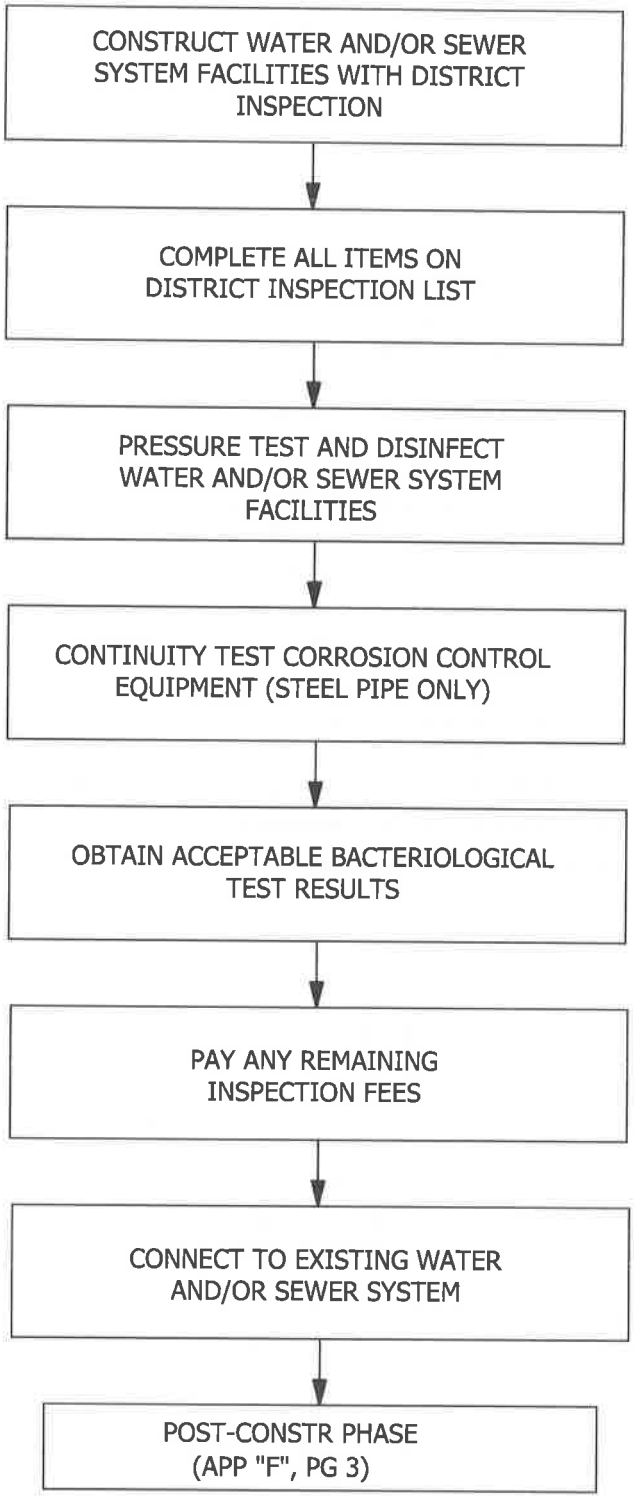
DATE: JANUARY 2005

RUBIDOUX COMMUNITY SERVICES DISTRICT

FLOWCHART FOR CONSTRUCTION OF WATER AND/OR SEWER FACILITIES

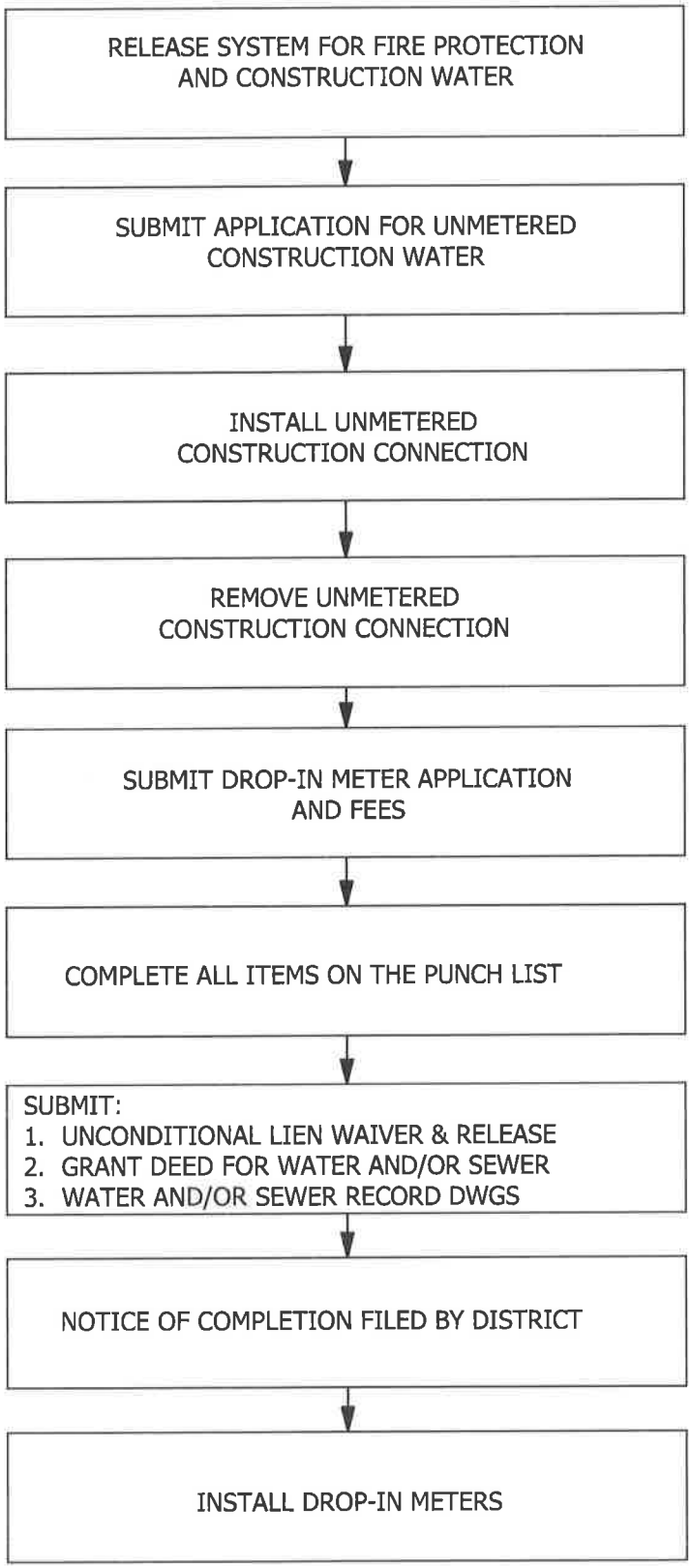
APPENDIX "F"

CONSTRUCTION PHASE



APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT FLOWCHART FOR CONSTRUCTION OF WATER AND/OR SEWER FACILITIES	
	APPENDIX "F"	SHEET 2 OF 3

POST-CONSTRUCTION PHASE



APPROVED: ASSISTANT GENERAL MANAGER/ DISTRICT ENGINEER DATE: JANUARY 2005	RUBIDOUX COMMUNITY SERVICES DISTRICT FLOWCHART FOR CONSTRUCTION OF WATER AND/OR SEWER FACILITIES	
	APPENDIX "F"	SHEET 3 OF 3

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RUBIDOUX COMMUNITY SERVICES DISTRICT
CONSTRUCTION STATUS SHEET

RCSD Job Number: _____ Inspector: _____

Location:

_____

Developer:

_____

Contractor: _____

RECEIVED	APPROVED	SUBMITTED
_____	_____	Inspection Deposit, etc.
_____	_____	Approved Water and/or Sewer Constr. Dwgs (3 Sets)
_____	_____	Contractor Information Sheet (Appendix "H")
_____	_____	Materials List
_____	_____	Encroachment Permit (2 Copies)
_____	_____	Recorded Tract/Parcel Map (1 Copy)
_____	_____	Water and/or Sewer System Constr. Agreement(s) (Appendix "I")
_____	_____	Contract for Water and/or Sewer System Construction
_____	_____	Certification of Streets to Final Grade (Appendix "J")
_____	_____	Certificates of Insurance (Appendix "K")
_____	_____	Faithful Performance Bond (Appendix "L")

DATE	
_____	Preconstruction Meeting Conducted
_____	Notice to Proceed issued by RCSD
_____	Received Cut Sheets
_____	Installed Water and/or Sewer facilities and all Appurtenances
_____	Completed all Items on Inspectors Deficiency List
_____	Received County Compaction Tests Sign-off
_____	Pressure Tested System (water)
_____	Video Sewer System

_____ Disinfected System

_____ Samples Taken for Bacteriological Tests

_____ Acceptable Bacteriological Tests

_____ All Remaining Fees and Charges Paid

_____ Connection(s) to Existing System(s) completed

_____ Water System Released for Fire Protection and Misc. Constr. Water

_____ Unmetered Construction Water Applications Signed

_____ Ready for Water Meters

_____ Received Water Meter Service Applications

_____ Received Water Meter Fees

_____ Signed Water Meter Applications

RECEIVED	**APPROVED**	**SUBMITTED**
_____	_____	Material and Labor Release
_____	_____	Water and/or Sewer System Grant Deed
_____	_____	Record Drawings

DATE

_____ Filed Notice of Completion

_____ Installed Water Meters

RUBIDOUX COMMUNITY SERVICES DISTRICT
CONTRACTOR QUALIFICATION
EXPERIENCE QUESTIONNAIRE

Name of Contractor or Organization:

_____

Principal Office Address: _____
Phone Number: _____

Corporation
Partnership
Individual

Names of Officers of Organization: _____
Name Title

_____
Name Title

License Number(s): _____
_____

Classification: Engineering Class "A"
C-34 Specialty

1. How many years has your organization been in business as a general contractor under your a) present business name? _____ and b) present license(s)? _____
2. How many years experience in water and/or sewer pipeline construction work has your organization had a) as a general contractor? _____ b) as a sub-contractor _____
3. List below the applicable projects your organization has completed most recently.

No.	Project Completed Year for	Pipe Sizes	Total Length	Type of Pipe	Contract Cost
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

(Use additional Sheets if Necessary)

4. List names and addresses of persons to be contacted for information on projects listed in Item 3.

No.	Name of Owner	Name, Address, Phone Number of Person to be Contacted
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

(Use additional Sheets if Necessary)

5. Have you ever failed to complete any work awarded to you? ___ If so, where, when and why? ____
_____
_____
6. Have you ever filed bankruptcy? _____ If so, state details on separate sheet.
7. Have you ever been cited for violation of CAL-OSHA regulations? _____ If so, state on separate sheet where, when, why, and whether a minor or major violation.
8. Have you ever had a lien against you? _____ Have you ever had to obtain a lien against someone? _____ If so, where, when and why? _____
_____
_____
_____
9. Can you provide letters of recommendation from previous contractual agreements? _____ If so, please attach letters to this form.

I hereby authorize RUBIDOUX COMMUNITY SERVICES DISTRICT of Riverside County to obtain information concerning me or my organization from any source including former clients. I certify that the foregoing information obtained in this Experience Questionnaire is true and correct to the best of my knowledge.

Date: _____ Signature: _____

DO NOT WRITE BELOW THIS LINE

Reviewed by: _____ Date: _____

	8" & 12"	16"	24" & Larger	Remarks
Accepted (1)				
Conditional (2)				
Preliminary (3)				
Not Approved (4)				

(1) Contractor license, experience record and references are accepted by District as qualified for work on water and/or sewer systems in size ranges indicated
(2) Conditional approval given when District has not fully accepted Contractors qualifications; usually for the reason that the Contractor lacks sufficient experience for work on water and/or sewer systems. Will require closer District inspection, may restrict Contractor from engaging in large or difficult jobs.
(3) Preliminary approval given when Contractor has proper license, but little experience in water and/or sewer systems. Requires close District inspection and is valid for only one main extension; at completion of which, will be reviewed and re-evaluated.
(4) Not approved for District work. Can resubmit in one year when additional experience is obtained.

Remarks _____
_____
_____
_____
_____

_____
Assistant General Manager/District Engineer

Date: _____

RUBIDOUX COMMUNITY SERVICES DISTRICT
WATER SYSTEM CONSTRUCTION AGREEMENT
(DEVELOPER INITIATED/CONTRACTOR INSTALLED)

THIS AGREEMENT is made on this _____ day of _____, 20___, by and between the RUBIDOUX COMMUNITY SERVICES DISTRICT OF RIVERSIDE COUNTY, a public agency of the State of California with its headquarters at Riverside, California, hereinafter designated as the "District" and _____ _____ located at _____, Phone No. _____, represented by _____ hereinafter designated as the "Developer", and _____ located at _____, Ph. No. _____, represented by _____ hereinafter designated as the "Contractor".

WHEREAS, Developer is planning a development of _____ lot(s) located within the development referenced within records of the County of Riverside and/or County of San Bernardino, State of California, as: _____ and is further identified on the map attached to and made a part of this Agreement; and

WHEREAS, said subdivision will require a water distribution system to provide domestic water service to the lands referenced above; and

WHEREAS, said Developer is desirous of having the District provide domestic water service to said lands and is willing to convey to the District the water distribution system 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. Developer will comply with the District's regulations for planning domestic water systems. These regulations, which may be amended from time to time, are incorporated herein by reference.

2. The Developer shall deposit with the District, costs to cover necessary engineering services, permits, inspection and water system connection costs in an amount estimated by the District.

3. The Developer shall contract for the design to be prepared by a California licensed engineer experienced in the design of similar systems.

4. The domestic water system to service said lands shall comply with the District's specifications and construction plans shall be approved by the District prior to the presentation thereof to contractors for bidding purposes. Such domestic water systems shall include all pipelines, valves, hydrants, and appurtenances.

5. The Developer will contract for the services of a licensed and qualified Contractor to construct the system. Said contract shall be signed by Developer and the licensed contractor. Said contractor shall be currently licensed by the State of California with a General Engineering Contractor, "A" license. Said contractor shall be experienced in the construction of domestic water systems and shall have been reviewed by the District and listed by the District as a qualified Contractor before a contract is signed and actual system construction begins.

6. The entire cost of the construction of such domestic water system shall be paid by the Developer. Such construction shall be inspected by District representatives for conformance with the approved plans and specifications. Whenever the Contractor desires to work outside the regular or specified work periods or to vary the work period during any particular day, the Contractor shall request permission from the District at least 24 hours in advance so that inspection services may be provided. If the District grants permission and if the work period includes hours outside the normal work hours of the District, the Contractor shall pay for the inspection services provided outside of normal work hours in accordance with established District rates. Construction shall not begin until the "Notice to Proceed" is given by the District inspector nor until the Developer, or other authorized party, completes a "CERTIFICATION OF STREETS TO FINAL GRADE" for the streets in which the water pipelines are to be constructed. District inspection is for the purpose of conformance of construction with District requirements, and not for compliance by the Contractor with safety requirements. Inspection or final acceptance shall not constitute a waiver by the District of any claims against Developer and/or Contractor for any defects in the work performed hereunder.

7. Developer shall guarantee the completion of construction within twelve (12) weeks from the time material is delivered to the jobsite, and to further guarantee that Developer shall comply with Paragraph 10 herein.

8. Developer agrees to pay all costs incurred by the District as may be necessary to complete construction, including administrative costs, or to secure compliance with the provisions of Paragraph 10.

9. Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors.

   A. Coverage shall be at least as broad as:

      (i) Insurance Service Office form number GL 0002 (Ed. 1/73) covering Comprehensive General Liability and Insurance Services Office form number GL 0404 covering Broad Form Comprehensive General Liability; or Insurance Services Office Commercial General Liability coverage ("occurrence" form CG 0001).

      (ii) Insurance Services Office form number CA 0001 (ed. 1/78) covering Automobile Liability, code 1, "any auto" and endorsement CA 0025.

      (iii) Workers' Compensation insurance as required by the Labor Code of the State of California and Employers Liability Insurance.

   B. Limits of Insurance shall be:

      (i) General Liability: $1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

      (ii) Automobile Liability: $1,000,000 combined single limit per accident for bodily injury and property damage.

(iii) Workers' Compensation and Employers Liability: Workers' Compensation limits as required by the Labor Code of the State of California and Employers Liability limits of $1,000,000 per accident.

C. Any deductibles or self-insured retentions must be declared to and approved by the District. At the option of the District, either: the insurer shall reduce or eliminate such deductibles or self-insurance retentions as respects the District, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

D. The Contractor shall provide endorsements on the forms attached hereto as exhibits A, B, and C to add the following provisions to the insurance policies:

(i) General Liability and Automobile Liability Coverages:

(1) The District, its officers, officials, employees, consultants, and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor, products and completed operations of the Contractor, premises owned, occupied or used by the Contractor, or automobile owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the District, its officers, officials, employees or volunteers.

(2) The Contractor's insurance coverage shall be primary insurance as respects the District, its officers, officials, employees, consultants, and volunteers. Any insurance or self-insurance maintained by the District, its officers, officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

(3) Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the District, its officers, officials, employees or volunteers.

(4) The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(ii) Workers' Compensation and Employers Liability Coverage:

(1) The insurer shall agree to waive all rights of subrogation against the District, its officers, officials, employees and volunteers for losses arising from work performed by the Contractor.

(iii) All Coverages:

(1) Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the District.

E. Contractor shall furnish the District with certificates of insurance and with original endorsements effecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be on forms provided by the District. Where by statute, the District's workers' compensation-related forms cannot be used, equivalent forms approved by the Insurance Commissioner are to be substituted. All certificates and endorsements are to be received and approved by the District before work commences. The District reserves the right to require complete, certified copies of all required insurance policies, at any time.

F. Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

10. Developer shall provide the District with bonds as follows:

    A. A Faithful Performance bond with corporate surety or sureties satisfactory to the District. Said performance bond being for not less than one hundred percent (100%) of the total contract price as referenced in Paragraph 11(E).

    B. A labor and materials payment bond being for not less than one hundred percent (100%) of the total contract price as referenced in Paragraph 11(E).

11. The District's Inspector shall complete a "Notice of Final Inspection" when all work has been completed in accordance with District requirements, and prior to the Acceptance of said domestic water system by the District. Also, the Developer shall furnish to the District any and all requested documents including, but not limited to, the following:

    A. Easement Deed or Grant Deed to any rights-of-way or other real property interests necessary for roads, for ingress and egress, and for maintenance and operation of the domestic water system;

    B. A Declaration by the Contractor that he has been paid in full and that all persons employed by the Contractor or who have furnished material for the construction of the water system have been paid in full;

    C. The executed Notice of Completion to be filed by the District;

    D. A Grant Deed/Bill of Sale executed by the Developer vesting title of said water system and appurtenances to the District;

    E. A copy of the contract between Developer and Developer's contractor or other documents which verify the actual cost of the domestic water system as installed.

    F. Payment to the District by the developer of any and all applicable fees including, but not limited to Capacity and meter installation fees.

12. The Contractor shall guarantee that the entire work constructed and all materials furnished will meet all the requirements specified herein. This warranty shall include both the quality of the workmanship and the materials used as well as that of subcontractors and suppliers.

A. The Contractor shall agree to make any repairs or replacements made necessary by defective materials or workmanship in the pipe materials supplied which have become evident within one year after date of recording Notice of Completion, and to restore to full compliance with the requirements of these specifications, including the test requirements, any part of the water system, which during said one-year period, is found to be deficient with respect to any provision of this specification.

B. The Contractor shall make all repairs and replacements promptly upon receipt of written orders from the District or if in the event the repair work must be performed by the District , shall reimburse the District for actual labor, equipment and material expenses incurred to perform such corrective work. If the Contractor fails to make the repair and replacements promptly, the District may do the work, and the Contractor shall be liable to the District for the cost thereof as described above.

13. The District will not furnish water to the water system until the completed systems pass final inspection by the District, and Developer has fully complied with Paragraph 11. Following fulfillment of the terms and conditions herein and Acceptance by the District of said domestic water system, the District will provide service to said lands in accordance with the District's Rules and Regulations governing provisions of such service.

14. The District will allow jumper connections only after the water system has been pressure tested, chlorinated, and successfully tested for lack of bacteria and that all permanent meter fees and the jumper flat fee be paid prior to jumper installation.

15. District requires that a permanent meter must be installed prior to landscaping.

16. This Agreement is binding on the assigns of the District and on the assigns, successors and representatives of the Developer and the Contractor. Assignment of this agreement by the developer or the Contractor shall have prior written authorization by the District.

RUBIDOUX COMMUNITY SERVICES DISTRICT OF RIVERSIDE COUNTY

_____

Name: DAVID D. LOPEZ

Title: General Manager

Date: _____

_____

Name: STEVEN W. APPEL, P.E.

Title: Asst GM / Distr Engr

DEVELOPER:

Company: _____

By: _____

Name: _____

Title: _____

Date: _____

CONTRACTOR:

Company: _____

By: _____

Name: _____

Title: _____

Date: _____

RUBIDOUX COMMUNITY SERVICES DISTRICT
SEWER SYSTEM CONSTRUCTION AGREEMENT
(DEVELOPER INITIATED/CONTRACTOR INSTALLED)

THIS AGREEMENT is made on this _____ day of _____, 20___, by and between the RUBIDOUX COMMUNITY SERVICES DISTRICT OF RIVERSIDE COUNTY, a public agency of the State of California with its headquarters at Riverside, California, hereinafter designated as the "District" and _____ _____ located at _____, Phone No. _____, represented by _____ hereinafter designated as the "Developer", and _____ located at _____, Ph. No. _____, represented by _____ hereinafter designated as the "Contractor".

WHEREAS, Developer is planning a development of _____ lot(s) located within the development referenced within records of the County of Riverside and/or County of San Bernardino, State of California, as: _____ and is further identified on the map attached to and made a part of this Agreement; and

WHEREAS, said subdivision will require a sewer system to provide sewer service to the lands referenced above; and

WHEREAS, said Developer is desirous of having the District provide sewer service to said lands and is willing to convey to the District the sewer system 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. Developer will comply with the District's regulations for planning sewer systems. These regulations, which may be amended from time to time, are incorporated herein by reference.

2. The Developer shall deposit with the District, costs to cover necessary engineering services, permits, inspection and sewer system connection costs in an amount estimated by the District.

3. The Developer shall contract for the design to be prepared by a California licensed engineer experienced in the design of similar systems.

4. The sewer system to service said lands shall comply with the District's specifications and construction plans shall be approved by the District prior to the presentation thereof to contractors for bidding purposes. Such sewer systems shall include all pipelines, manholes, and appurtenances.

5. The Developer will contract for the services of a licensed and qualified Contractor to construct the system. Said contract shall be signed by Developer and the licensed contractor. Said contractor shall be currently licensed by the State of California with a General Engineering Contractor, "A" license. Said contractor shall be experienced in the construction of sewer systems and shall have been reviewed by the District and listed by the District as a qualified Contractor before a contract is signed and actual system construction begins.

6. The entire cost of the construction of such sewer system shall be paid by the Developer. Such construction shall be inspected by District representatives for conformance with the approved plans and specifications. Whenever the Contractor desires to work outside the regular or specified work periods or to vary the work period during any particular day, the Contractor shall request permission from the District at least 24 hours in advance so that inspection services may be provided. If the District grants permission and if the work period includes hours outside the normal work hours of the District, the Contractor shall pay for the inspection services provided outside of normal work hours in accordance with established District rates. Construction shall not begin until the "Notice to Proceed" is given by the District inspector nor until the Developer, or other authorized party, completes a "CERTIFICATION OF STREETS TO FINAL GRADE" for the streets in which the sewer pipelines are to be constructed. District inspection is for the purpose of conformance of construction with District requirements, and not for compliance by the Contractor with safety requirements. Inspection or final acceptance shall not constitute a waiver by the District of any claims against Developer and/or Contractor for any defects in the work performed hereunder.

7. Developer shall guarantee the completion of construction within twelve (12) weeks from the time material is delivered to the jobsite, and to further guarantee that Developer shall comply with Paragraph 10 herein.

8. Developer agrees to pay all costs incurred by the District as may be necessary to complete construction, including administrative costs, or to secure compliance with the provisions of Paragraph 10.

9. Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors.

   A. Coverage shall be at least as broad as:

      (i) Insurance Service Office form number GL 0002 (Ed. 1/73) covering Comprehensive General Liability and Insurance Services Office form number GL 0404 covering Broad Form Comprehensive General Liability; or Insurance Services Office Commercial General Liability coverage ("occurrence" form CG 0001).

      (ii) Insurance Services Office form number CA 0001 (ed. 1/78) covering Automobile Liability, code 1, "any auto" and endorsement CA 0025.

      (iii) Workers' Compensation insurance as required by the Labor Code of the State of California and Employers Liability Insurance.

   B. Limits of Insurance shall be:

      (i) General Liability: $1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

      (ii) Automobile Liability: $1,000,000 combined single limit per accident for bodily injury and property damage.

(iii) Workers' Compensation and Employers Liability: Workers' Compensation limits as required by the Labor Code of the State of California and Employers Liability limits of $1,000,000 per accident.

C. Any deductibles or self-insured retentions must be declared to and approved by the District. At the option of the District, either: the insurer shall reduce or eliminate such deductibles or self-insurance retentions as respects the District, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

D. The Contractor shall provide endorsements on the forms attached hereto as exhibits A, B, and C to add the following provisions to the insurance policies:

(i) General Liability and Automobile Liability Coverages:

(1) The District, its officers, officials, employees, consultants, and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor, products and completed operations of the Contractor, premises owned, occupied or used by the Contractor, or automobile owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the District, its officers, officials, employees or volunteers.

(2) The Contractor's insurance coverage shall be primary insurance as respects the District, its officers, officials, employees, consultants, and volunteers. Any insurance or self-insurance maintained by the District, its officers, officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

(3) Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the District, its officers, officials, employees or volunteers.

(4) The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(ii) Workers' Compensation and Employers Liability Coverage:

(1) The insurer shall agree to waive all rights of subrogation against the District, its officers, officials, employees and volunteers for losses arising from work performed by the Contractor.

(iii) All Coverages:

(1) Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the District.

E. Contractor shall furnish the District with certificates of insurance and with original endorsements effecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be on forms provided by the District. Where by statute, the District's workers' compensation-related forms cannot be used, equivalent forms approved by the Insurance Commissioner are to be substituted. All certificates and endorsements are to be received and approved by the District before work commences. The District reserves the right to require complete, certified copies of all required insurance policies, at any time.

F. Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

10. Developer shall provide the District with bonds as follows:

    A. A Faithful Performance bond with corporate surety or sureties satisfactory to the District. Said performance bond being for not less than one hundred percent (100%) of the total contract price as referenced in Paragraph 11(E).

    B. A labor and materials payment bond being for not less than one hundred percent (100%) of the total contract price as referenced in Paragraph 11(E).

11. The District's Inspector shall complete a "Notice of Final Inspection" when all work has been completed in accordance with District requirements, and prior to the Acceptance of said sewer system by the District. Also, the Developer shall furnish to the District any and all requested documents including, but not limited to, the following:

    A. Easement Deed or Grant Deed to any rights-of-way or other real property interests necessary for roads, for ingress and egress, and for maintenance and operation of the sewer system;

    B. A Declaration by the Contractor that he has been paid in full and that all persons employed by the Contractor or who have furnished material for the construction of the sewer system have been paid in full;

    C. The executed Notice of Completion to be filed by the District;

    D. A Grant Deed/Bill of Sale executed by the Developer vesting title of said sewer system and appurtenances to the District;

    E. A copy of the contract between Developer and Developer's contractor or other documents which verify the actual cost of the sewer system as installed.

    F. Payment to the District by the developer of any and all applicable fees including, but not limited to Capacity and meter installation fees.

12. The Contractor shall guarantee that the entire work constructed and all materials furnished will meet all the requirements specified herein. This warranty shall include both the quality of the workmanship and the materials used as well as that of subcontractors and suppliers.

A. The Contractor shall agree to make any repairs or replacements made necessary by defective materials or workmanship in the pipe materials supplied which have become evident within one year after date of recording Notice of Completion, and to restore to full compliance with the requirements of these specifications, including the test requirements, any part of the sewer system, which during said one-year period, is found to be deficient with respect to any provision of this specification.

B. The Contractor shall make all repairs and replacements promptly upon receipt of written orders from the District or if in the event the repair work must be performed by the District , shall reimburse the District for actual labor, equipment and material expenses incurred to perform such corrective work. If the Contractor fails to make the repair and replacements promptly, the District may do the work, and the Contractor shall be liable to the District for the cost thereof as described above.

13. The District will not furnish any sanitary sewer service until the completed systems pass final inspection by the District, and Developer has fully complied with Paragraph 11. Following fulfillment of the terms and conditions herein and Acceptance by the District of said sewer system, the District will provide service to said lands in accordance with the District's Rules and Regulations governing provisions of such service.

14. This Agreement is binding on the assigns of the District and on the assigns, successors and representatives of the Developer and the Contractor. Assignment of this agreement by the developer or the Contractor shall have prior written authorization by the District.

RUBIDOUX COMMUNITY SERVICES DISTRICT OF RIVERSIDE COUNTY

_____

Name: DAVID D. LOPEZ

Title: General Manager

Date: _____

_____

Name: STEVEN W. APPEL, P.E.

Title: Asst GM / Distr Engr

DEVELOPER:

Company: _____

By: _____

Name: _____

Title: _____

Date: _____

CONTRACTOR:

Company: _____

By: _____

Name: _____

Title: _____

Date: _____

RUBIDOUX COMMUNITY SERVICES DISTRICT
AGREEMENT FOR
ON-SITE WATER/SITE SYSTEM PARTICIPATION/REFUND WAIVER

THIS AGREEMENT is made by and between RUBIDOUX COMMUNITY SERVICES DISTRICT OF RIVERSIDE COUNTY, a public agency of the State of California with its headquarters in Riverside, California, hereinafter designated as the "District" and _____ hereinafter designated as the "Developer".

WHEREAS, Developer is planning a development of _____ lot(s) located within the development referenced within records of the County of Riverside and/or County of San Bernardino, State of California, as: _____ and is further identified on the map attached to and made a part of this Agreement; and

WHEREAS, Developer is desirous of having the District provide water and/or sewer service to this development and is willing to convey to the District the water and/or sewer system after the construction thereof, and

WHEREAS, Developer will comply with the District's rules and regulations for such water and/or sewer systems, and

WHEREAS, Developer has deposited with the District costs necessary to satisfy necessary financial arrangements in amounts estimated by the District, and

WHEREAS, Developer has arranged for the services of a licensed qualified Contractor evaluated by the District for the construction of said water and/or sewer system, and

WHEREAS, the entire cost of the construction of such water and/or sewer system shall be paid by the Developer;

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. Developer, hereby agrees to pay for all costs associated with the planning, development, construction and acceptance of the water and/or sewer system.

2. Developer agrees that the water and/or sewer system being installed will be for the benefit of the parcels shown on the map attached and made a part of this Agreement and for the benefit of others as deemed necessary by the District.

3. Developer agrees to waive refunds of any participation in this water and/or sewer system, and further agrees that continuation of the water and/or sewer system shall be initiated at any time by the District for the benefit of others.

4. This Agreement shall be binding on the heirs, successors, and assigns of the parties hereto. All rights, title and interest in the sewer extension and all the appurtenances, and other items as may be shown on the map or installed subsequently by the District shall become the property of the District upon their installation. The Developer agrees to hold the District harmless from any claim of right against the property so transferred.

RUBIDOUX COMMUNITY SERVICES DISTRICT OF RIVERSIDE COUNTY

Name: DAVID D. LOPEZ
Title: General Manager
Date: _____

Name: STEVEN W. APPEL, P.E.
Title: Asst GM / Distr Engr

DEVELOPER:

Company: _____
By: _____
Name: _____
Title: _____
Date: _____

CONTRACTOR:

Company: _____
By: _____
Name: _____
Title: _____
Date: _____

TO: RUBIDOUX COMMUNITY SERVICES DISTRICT
P.O. Box 3098
Rubidoux, CA 92519-3098

SUBJECT: CERTIFICATION OF STREETS TO FINAL GRADE
TRACT NO. _____
MAIN EXTENSION NO. _____

1. There has been executed a "WATER SYSTEM CONSTRUCTION AGREEMENT" and/or a "SEWER SYSTEM CONSTRUCTION AGREEMENT" for the systems described above; said Agreement being between the Rubidoux Community Services District, hereinafter designated as the "District"; _____ hereinafter designated as the "Developer"; and, _____ hereinafter designated as the Contractor.

2. Pursuant to Section 6 of said Agreement, the Developer certifies that all streets requiring water and/or sewer mains are to Final Grade and ready for installation of water and/or sewer mains; wherein the Final Grade shall be defined as the finished grade of the street base or sub-base required by the Riverside County Transportation Department or the District.

3. Developer agrees that if there is a change required in the alignment or final grade of the street which occurs prior to acceptance by the District (Grant Deed) of the water and/or sewer mains, and which requires the relocation of any District facilities, the developer will make full payment for all costs necessary to relocate said facilities.

Developer:

_____

_____

_____

_____

Authorized Agent:

(Sign) _____

(Type) _____

(Title) _____

Date: _____

Contractor:

_____

_____

_____

_____

Authorized Agent:

(Sign) _____

(Type) _____

(Title) _____

Date: _____

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ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY)

PRODUCER

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURERS AFFORDING COVERAGE

INSURED

Company A:
Company B,
Company C,
Company D,
Company E,

COVERAGES

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. AG6REGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY				GENERAL AGGREGATE	$ 2,000,000
	X COMMERCIAL GENERAL LIABILITY				PRODUCTS - COMP/OP AGG	$ 2,000,000
	CLAIMS MADE [X] OCCUR			Continuous Until Cancelled	PERSONAL & ADV INJURY	$ 1,000,000
					EACH OCCURRENCE	$ 1,000,000
					FIRE DAMAGE (Any one fire)	$
	GEN'L AGGREGATE LIMIT APPLIES PER:				MED EXP (Any one person)	$
	[ ] POLICY [ ] PRO-JECT [ ] LOC					
	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO					
	ALL OWNED AUTOS			Continuous Until Cancelled	BODILY INJURY (Per person)	$
	SCHEDULED AUTOS					
	X HIRED AUTOS				BODILY INJURY (Per accident)	$
	X NON-OWNED AUTOS					
					PROPERTY DAMAGE (Per accident)	$
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
	ANY AUTO				OTHER THAN AUTO ONLY: EA ACC	$
					AGG	$
	EXCESS LIABILITY				EACH OCCURRENCE	$
	[ ] OCCUR [ ] CLAIMS MADE				AGGREGATE	$
						$
	[ ] DEDUCTIBLE					$
	[ ] RETENTION $					$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				[ ] STATUTORY [ ] OTH-ER	
					E.L. EACH ACCIDENT	$
					E.L. DISEASE - EA EMPLOYEE	$
					E.L. DISEASE - POLICY LIMIT	$
	OTHER					

DESCRIPTION OF OPERATIONS/LOCATIONSIVEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

** Policy provides X, C, U coverages.

CERTIFICATE HOLDER

CITY
Rubidoux Community Services District
P.O. Box 3098
Riverside, CA 92519-3098

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT.

AUTHORIZED REPRESENTATIVE

GENERAL LIABILITY ENDORSEMENT

RUBIDOUX COMMUNITY SERVICES DISTRICT ("District")
P.O. Box 3098
Rubidoux, CA 92519-3098
ATTN: General Manager

A. POLICY INFORMATION

Endorsement # _____

1. Insurance Company _____;Policy Number _____
2. Policy Term (From) _____ (To) _____;Endorsement Effective Date _____
3. Named Insured _____
4. Address of Named Insured _____
5. Limit of Liability Any One Occurrence/Aggregate $_____ / _____
6. Deductible or Self-Insured Retention (Nil unless otherwise specified):$ _____
7. Coverage is equivalent to:

   Comprehensive General Liability form GL0002 (Ed. 1/73)_____

   Commercial General Liability "occurrence" form CG0001_____

8. Bodily Injury and Property Damage Coverage is:

   _____ "occurrence"

Note: The District's standard insurance requirements specify "occurrence" coverage. "Claims-made" coverage is not acceptable. If commercial general liability form or equivalent is used, the general aggregate must apply separately to this location/project or the general aggregate must be twice the occurrence limit.

9. Description of Project: _____

_____

B. POLICY AMENDMENTS

This endorsement is issued in consideration of the policy premium. Notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any other endorsement attached thereto, it is agreed as follows:

1. INSURED. As respects any work performed on the above-described Project, the District, its elected or appointed officers, officials, employees, consulting engineers, and volunteers are included as insureds with regard to damages and defense of claims arising from: (a) activities performed by or on behalf of the Named insured, (b) products and completed operations of the Named Insured, or (c) premises owned, leased or used by the Named Insured.

2. CONTRIBUTION NOT REQUIRED. As respects: (a) work performed by the Named Insured on the above-described Project for or on behalf of the District; or (b) products sold by the Named Insured to the District for use on the Project; or (c) premises leased by the Named Insured from the District, the insurance afforded by this policy shall be primary insurance as respects the District, its elected or appointed officers, officials, employees, consulting engineers, or volunteers; or stand in an unbroken chain of coverage excess of the Named Insured's schedule underlying primary coverage. In either event, any other insurance maintained by the District, its elected or appointed officers, officials, employees, consulting engineers, or volunteers shall be in excess of this insurance and shall not contribute with it.

3. SCOPE OF COVERAGE. This policy, if primary, affords coverage at least as broad as:

   (1) Insurance Services Office form number GL 0002 (Ed. 1/73), Comprehensive General Liability Insurance and Insurance Services Office form number GL 0404 Broad Form Comprehensive General Liability endorsement; or

   (2) Insurance Services Office Commercial General Liability Coverage, "occurrence" form CG 0001; or

   (3) If excess, affords coverage which is at least as broad as the primary insurance forms referenced in the preceding sections (1) and (2).

4. SEVERABILITY OF INTEREST. The insurance afforded by this policy applies separately to each insured who is seeking coverage or against whom a claim is made or a suit is brought, except with respect to the Company's limit of liability.

5. PROVISIONS REGARDING THE INSURED'S DUTIES AFTER ACCIDENT OR LOSS. Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the District, its elected or appointed officers, officials, employees or volunteers.

6. CANCELLATION NOTICE. The insurance afforded by this policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail return receipt requested has been given to the District. Such notice shall be addressed as shown in the heading of this endorsement.

C. INCIDENT AND CLAIM REPORTING PROCEDURE

Incidents and claims are to be reported to the insurer at:

ATTN: _____
(Title) (Department)

_____
(Company)

_____
(Street Address)

_____
(City) (State) (Zip Code)

( )_____
(Telephone Number)

D. SIGNATURE OF INSURER OR AUTHORIZED REPRESENTATIVE OF THE INSURED

I, _____, warrant that I have authority to bind the below listed insurance company
(print/type name)
and by my signature hereon do so bind this company.

_____
SIGNATURE OF AUTHORIZED REPRESENTATIVE
(original signature required on endorsement furnished to the District)

ORGANIZATION: _____ TITLE: _____

ADDRESS: _____ TELEPHONE: ( ) _____

AUTOMOBILE LIABILITY ENDORSEMENT

RUBIDOUX COMMUNITY SERVICES DISTRICT ("District")
P.O. Box 3098
Rubidoux, CA 92519-3098
ATTN: General Manager

A. POLICY INFORMATION

Endorsement # _____

1. Insurance Company _____;Policy Number _____
2. Policy Term (From) _____ (To) _____;Endorsement Effective Date _____
3. Named Insured _____
4. Address of Named Insured _____
5. Limit of Liability Any One Occurrence/Aggregate $ _____ / _____
6. Deductible or Self-Insured Retention (Nil unless otherwise specified): $ _____

B. POLICY AMENDMENTS

This endorsement is issued in consideration of the policy premium. Notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any other endorsement attached thereto, it is agreed as follows:

1. INSURED. The District, its elected or appointed officers, officials, consulting engineers, employees and volunteers are included with regard to damages and defense of claims arising from: the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the Named Insured, regardless of whether liability is attributable to the Named Insured or a combination of the Named Insured and the District, its elected or appointed officers, officials, employees or volunteers.

2. CONTRIBUTION NOT REQUIRED. As respects work performed by the Named Insured for or on behalf of the District, the insurance afforded by this policy shall: (a) be primary insurance as respects the District, its elected or appointed officers, officials, employees or volunteers; (b) stand in an unbroken chain of coverage excess of the Named Insured's primary coverage. In either event, any other insurance maintained by the District, its elected or appointed officers, officials, employees or volunteers shall be in excess of this insurance and shall not contribute with it.

3. SCOPE OF COVERAGE. This policy, if primary, affords coverage to the Named Insured at least as broad as:

   (1) Insurance Services Office form number CA 0001 (Ed. 1/78), Code 1 ("any auto") and endorsement CA 0025.

   (2) If excess, affords coverage which is at least as broad as the primary insurance forms referenced in the preceding section (1).

4. SEVERABILITY OF INTEREST. The insurance afforded by this policy applies separately to each insured who is seeking coverage or against whom a claim is made or a suit is brought, except with respect to the Company's limit of liability.

5. PROVISIONS REGARDING THE INSURED'S DUTIES AFTER ACCIDENT OR LOSS. Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the District, its elected or appointed officers, officials, employees or volunteers.

6. CANCELLATION NOTICE. The insurance afforded by this policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail return

receipt requested has been given to the District. Such notice shall be addressed as shown in the heading of this endorsement.

C. INCIDENT AND CLAIM REPORTING PROCEDURE

Incidents and claims are to be reported to the insurer at:

ATTN: _____
(Title) (Department)

_____
(Company)

_____
(Street Address)

_____
(City) (State) (Zip Code)

( )_____
(Telephone Number)

D. SIGNATURE OF INSURER OR AUTHORIZED REPRESENTATIVE OF THE INSURED

I, _____, warrant that I have authority to bind the below listed insurance company
(print/type name)
and by my signature hereon do so bind this company.

_____
SIGNATURE OF AUTHORIZED REPRESENTATIVE
(original signature required on endorsement furnished to the District)

ORGANIZATION: _____ TITLE: _____

ADDRESS: _____ TELEPHONE: ( )_____

WORKERS' COMPENSATION/EMPLOYERS LIABILITY ENDORSEMENT

RUBIDOUX COMMUNITY SERVICES DISTRICT ("District")
P.O. Box 3098
Rubidoux, CA 92519-3098
ATTN: General Manager

A. POLICY INFORMATION

Endorsement # _____

1. Insurance Company _____ ("the Company")

   Policy Number _____

2. Effective date of this Endorsement _____

3. Named Insured _____

4. Employer's Liability Limit (Coverage B) _____

B. POLICY AMENDMENTS

In consideration of the policy premium and notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any other endorsement attached thereto, it is agreed as follows:

1. CANCELLATION NOTICE. The insurance afforded by this policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail return receipt requested has been given to the District. Such notice shall be addressed as shown in the heading of this endorsement.

2. WAIVER OF SUBROGATION. The Insurance Company agrees to waive all rights of subrogation against the District, its elected or appointed officers, officials, agents and employees for losses paid under the terms of this policy which arise from work performed by the Named Insured for the District.

C. SIGNATURE OF INSURER OR AUTHORIZED REPRESENTATIVE OF THE INSURED

I, _____, warrant that I have authority to bind the below listed insurance company
(print/type name)
and by my signature hereon do so bind this company.

_____
SIGNATURE OF AUTHORIZED REPRESENTATIVE
(original signature required on endorsement furnished to the District)

ORGANIZATION: _____ TITLE: _____

ADDRESS: _____ TELEPHONE: ( ) _____

BOND NO. _____

FAITHFUL PERFORMANCE BOND
FOR
WATER AND/OR SEWER SYSTEM CONSTRUCTION AGREEMENT

KNOW ALL PERSONS BY THESE PRESENTS:

That WHEREAS, the RUBIDOUX COMMUNITY SERVICES DISTRICT, has entered into a Water and/or Sewer System Construction Agreement (All terms and conditions of said Agreement are hereby incorporated by reference) with _____ _____, as Principal, (hereinafter designated as the "Developer"), for construction of:

_____

_____

_____; and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a bond for the faithful performance of said contract.

NOW, THEREFORE, we, _____, as Developer, and _____, as Surety, are held and firmly bound unto the Rubidoux Community Services District (hereinafter called the "District"), in the sum of _____ DOLLARS ($_____) (this amount being not less than one hundred percent (100%) of the total price of the work), lawful money of the United States of America, for payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the hereby bonded Developer, its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by and well and truly keep and perform all the undertakings, terms, covenants, and conditions in said Agreement and any alteration thereof, made as herein provided, all within the time and in the manner therein designated in all respects according to their true intent and meaning, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect until Developer has completed construction of the facilities including repair of any damage of existing District facilities and provided District with an Unconditional Lien Waiver and Release and a Water and/or Sewer System Grant Deed and has paid all fees and charges.

As a condition precedent to the satisfactory completion of the work (including submission of the Unconditional Lien Waiver and Release, submission of the Water and/or Sewer System Grant Deed, payment of all fees and charges, and repair of any damage of existing District facilities), the above obligation shall hold good for a period of one (1) year after the completion of the work and filing of the Notice of Completion by the District, during which time if Developer shall fail to make full, complete, and satisfactory repair and replacement and totally protect the District from loss or damage made evident during the period of one (1) year from the date of filing of the Notice of Completion by the District, and resulting from or caused by defective materials or faulty workmanship, the above obligation in penal sum thereof shall remain in full force and effect. Notwithstanding anything in this paragraph to the contrary, the obligation of Surety hereunder shall continue so long as any obligation of Developer remains.

FURTHER, the said surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or modification of the Agreement, or of the work to be performed thereunder, shall in any way affect its obligation on this bond; and it does hereby waive notice of any change, extension of time, alteration or modification of the Agreement or of work to be performed thereunder.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Developer and Surety named therein, on the _____ day of _____, 20___, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

_____

Developer (seal)

Name: _____

Title: _____

Signature: _____

_____

Surety (seal)

Name: _____

Title: _____

Signature: _____

Address: _____

_____

_____

APPROVED AS TO FORM:
Harper and Burns
District Legal Counsel

By: _____

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

RUBIDOUX COMMUNITY SERVICES DISTRICT
PRECONSTRUCTION MEETING AND
NOTICE TO PROCEED

The following outlines the general requirements and the expectations of the Pre-construction Meeting and Notice to Proceed and shall apply to all developer paid water and/or sewer facility construction within the District's jurisdiction.

A. SEQUENCE OF EVENTS

A Pre-construction Meeting shall always be held prior to issuance of a Notice to Proceed. Prior to the Pre-construction Meeting, the District must have the following applicable items indicated as complete and checked off:

1. WATER AND/OR SEWER PLANS: Drawings, complete, signed by the District Engineer and Assistant General Manager for construction, and signed by the required officials of Riverside County (Health Depart, Transportation Dept, Fire Marshall, etc.).
2. Recorded Tract Map/Parcel Map and applicable street improvement plans and grading plans submitted to the District.
3. Applicable fees and deposits made to the District, and appropriate Work Order Numbers opened and assigned.
4. Environmental Assessment completed.
5. A fully signed construction Agreement with signatures of the Developer, Contractor, and the District's General Manager.
6. Streets shall have been constructed to final subgrade and Certification signed by the Developer that streets are to final subgrade.
7. Easements shall be properly obtained, if required, and dedicated to the District.
8. Property corners shall be surveyed and set by owner/ developer's surveyor to identify lot lines which will assist in proper location of mains and appurtenances.
9. District certification of Contractor for intended size job.
10. A copy of tentative Bid between Contractor and developer shall be submitted to the District.
11. Necessary permits have been obtained.
12. Required 100% Performance Bond must be posted and District approved.
13. Required Insurance form naming District as additionally insured must be executed and on file with the District.

B. PRECONSTRUCTION MEETING

A pre-construction meeting shall be scheduled by the District prior to issuance of Notice to Proceed and commencement of work. The Pre-construction meeting shall allow all parties to present their views and requirements, and provide a forum for satisfactory solution to all anticipated problems. Normally the meeting shall be scheduled by the District about one week in advance.

1. Parties to be invited:
   a. From Rubidoux: Inspector; Engineer; Utility System Manager; and Assistant General Manager
   b. Developer (and owner if different)
   c. Developer's Engineer

d. Contractor and Foreman

e. County Construction Inspector

f. Other affected utilities: (if their facilities are involved)
Southern California Edison Company
Southern California Gas Company
Pacific Telephone

g. Material Suppliers

h. Fire Department Representative

2. Items to be Discussed:

a. Review of plans. Verify main footage and location of fittings and appurtenances.

b. Material deliveries, quantities, and problems

c. Construction schedule

d. Connection to existing facilities

e. Street grading. Verification for final subgrade elevations and satisfactory subgrade compaction

f. Curb and gutter/berm placement

g. Project phasing

h. Temporary water services

i. Other Public Agency requirements. Check compliance with standard requirements of other public agencies.

j. Plans for testing and disinfection, bacterial samples

k. Clearance of other utilities

l. Blasting/rock removal

m. Traffic control

n. Dust control

o. Safety and OSHA requirements. (Contractor's responsibility)

p. Review of possible field conflicts and method of solution

q. As-built dimensions and drawings

C. NOTICE TO PROCEED

If all the District requirements have been met and no outstanding problems exist; the District shall issue a written Notice to Proceed to the Developer and Contractor with copy to District Inspector at the Pre-construction meeting.

If any requirements remain to be completed or any problem listed above still exists, such items shall be resolved by cognizant parties. When completed to District satisfaction, a written Notice to Proceed will be issued to the Developer and Contractor.

No water and/or sewer system construction shall commence until the written Notice to Proceed is issued.

After the Notice to Proceed is issued, the Developer may then finalize bid requirements with Contractor or sub-contractors, sign the acceptance of bid and forward a copy of the firm BID CONTRACT to the District.

RUBIDOUX COMMUNITY SERVICES DISTRICT
UNMETERED CONSTRUCTION WATER APPLICATION

Temporary connections for house construction are necessary during the drywall installation phase; therefore the service category of unmetered construction water is available.

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, standby charge, and periodic inspection by the meter reading or operations personnel.

Prior to connection by the builder, The Utility Systems Manager (or his representative) will verify the following:

(1) In-tract water system has been tested and disinfected;

(2) Service laterals have been installed in accordance with District's Standard Drawing No. W1100 or W1110, note 5.

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

After services have been accepted and approved by the Utility Services Manager, approximately two weeks is required before meters are issued.

In accordance with the Water System Construction Agreement (all terms and conditions of said Agreement are herein incorporated by reference), the District is not responsible and does not own the water system facilities until said system is transferred to the District. Until such time, Developer is responsible for the facilities and is liable for all damage to said facilities.

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

_____
Service Address or Tract and Lot Number

_____ _____
Service Applicant Signature Date

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RUBIDOUX COMMUNITY SERVICES DISTRICT
UNCONDITIONAL LIEN WAIVER AND RELEASE

DATE: _____

TO WHOM IT MAY CONCERN:

The undersigned has been paid in full for all labor, services, equipment or materials furnished to _____ ("Contractor") on the job for the Rubidoux Community Services District ("District") located at _____ in the County of Riverside, State of California ("Property").

The undersigned does hereby waive and release Contractor and District from any and all liability for liens for all materials delivered and labor performed by it, all Mechanic's Liens, including ones that have been recorded, Stop Noticed, or any right against a Labor and Material Bond, to or for the job and the Property on which it is located.

This Unconditional Lien Waiver and Release, Materials and Labor, is made in accordance with Civil Code Section 3262 and Section 11 of the Water and/or Sewer System Construction Agreement between Rubidoux Community Services District, Developer _____, and Contractor _____, dated _____.

NOTICE: THIS DOCUMENT WAIVES 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 RELEASE FORM.

_____ _____
Firms Name

_____ _____
Address

_____ _____
City, State

_____ By: _____
Authorized Representative

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RUBIDOUX COMMUNITY SERVICES DISTRICT
WATER AND/OR SEWER SYSTEM GRANT DEED

FOR VALUABLE CONSIDERATION paid and received,

_____ hereby grant(s) to RUBIDOUX COMMUNITY SERVICES DISTRICT all right, title and interest in the water system improvements for the entire water distribution and/or sewer collection system facilities for the development referenced with records of the County of Riverside, State of California as _____ and 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 facilities.

Said water and/or sewer system improvements are shown in detail on the construction drawings (Sheets ___ thru ___) for said development. This Grant Deed is in accordance with Section 11 of the Water and/or Sewer System Construction Agreement between the RUBIDOUX COMMUNITY SERVICES SDISTRICT and _____ _____, dated _____ 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 water and/or sewer system improvements.

SELLERS for his heirs, executors and administrators, covenants and agrees to warrant and defend this sale of property, goods and chattels, against all and every persons claiming the same.

DATE: _____

_____

By: _____

SEAL AND NOTARIAL ACKNOWLEDGMENT

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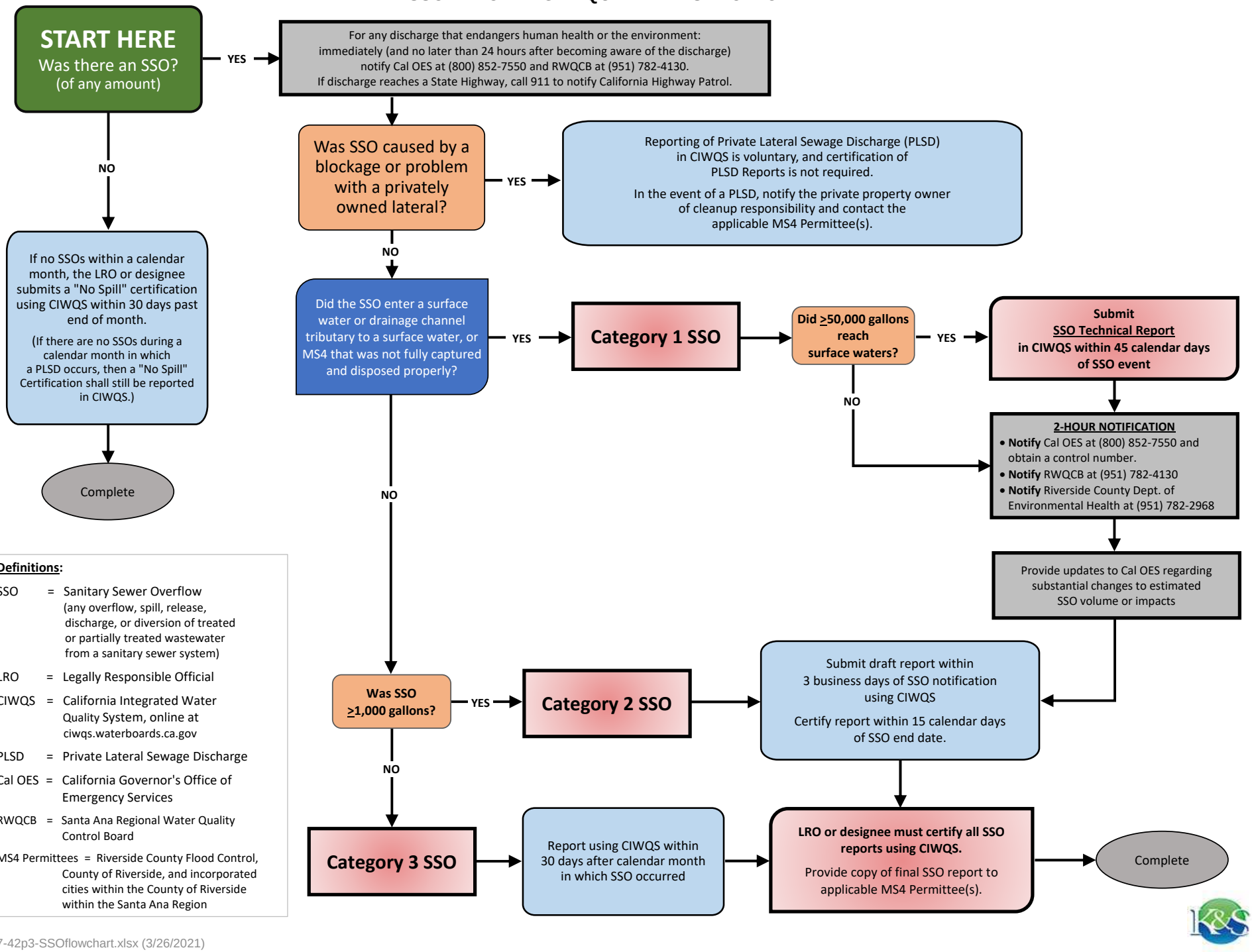
APPENDIX H

SSO REPORTING REQUIREMENTS FLOW CHART
AND
UNIFIED SANITARY SEWER SPILL
RESPONSE PROCEDURE

RUBIDOUX COMMUNITY SERVICES DISTRICT
SSO REPORTING REQUIREMENTS FLOW CHART



Definitions:

SSO = Sanitary Sewer Overflow (any overflow, spill, release, discharge, or diversion of treated or partially treated wastewater from a sanitary sewer system)

LRO = Legally Responsible Official

CIWQS = California Integrated Water Quality System, online at ciwqs.waterboards.ca.gov

PLSD = Private Lateral Sewage Discharge

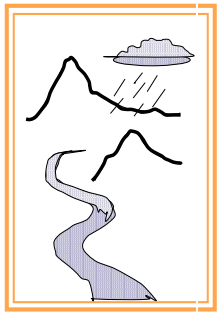
Cal OES = California Governor's Office of Emergency Services

RWQCB = Santa Ana Regional Water Quality Control Board

MS4 Permittees = Riverside County Flood Control, County of Riverside, and incorporated cities within the County of Riverside within the Santa Ana Region

RUBIDOUX COMMUNITY SERVICES DISTRICT
CONTACT INFORMATION FOR SSO REPORTING

• California Governor's Office of Emergency Services (Cal OES)	(800) 852-7550
• California Highway Patrol	911
• Santa Ana Regional Water Quality Control Board (RWQCB)	(951) 782-4130
• Riverside County Department of Environmental Health	(951) 358-5172
- If hazardous substances are involved	(951) 766-6524 / After Hours (951) 782-2968
• Riverside County Flood Control and Water Conservation District	(951) 955-1273 / (951) 955-1200
• City of Jurupa Valley	(951) 332-6464 x231 or x233
• City of Riverside	(951) 351-6140
• City of Riverside Alternate/After Hours:	
- Water Quality Control Plant Dispatch	(951) 351-6280
- City Call Center	(951) 826-5311



Unified Sanitary Sewer Spill Response Procedure

Submitted to the
SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

(SARWQCB ORDER NO. R8-2010-0033)

July 15, 2013

BY THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISRICT, COUNTY OF RIVERSIDE, AND CITIES OF RIVERSIDE COUNTY (SANTA ANA REGION)

NPDES

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Unified Sanitary Sewer Spill Response Procedure

1.0 Background

On January 29, 2010, the California Regional Water Quality Control Board – Santa Ana River Region (Regional Board) issued an area-wide Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (2010 MS4 Permit) to the Riverside County Flood Control and Water Conservation District (District), the County of Riverside (County), and the incorporated cities of Riverside County within the Santa Ana Region (collectively, Permittees).

The 2010 MS4 Permit requires the Permittees to control the discharge of Pollutants from the MS4s to Waters of the United States. Sewering agencies that own or operate sanitary sewer collection systems greater than one mile in length are regulated under State Water Resources Control Board Water Quality Order No. 2006-0003 and the accompanying amendment to its monitoring and reporting program (WQ 2008-0002-EXEC). This order, known as the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Sanitary Sewer Order) serves, among other purposes, to prevent and minimize Potential Pollutants from sanitary sewer overflows (SSOs) originating from these sewer collection systems from entering surface waters. Permittees that own or operate applicable sanitary sewer collection systems are required to obtain coverage under the Sanitary Sewer Order.

The Regional Board has found that effluent from SSOs that may enter the MS4 can ultimately have a negative impact on Beneficial Uses of Receiving Waters. The Permittees have developed this Sanitary Sewer Spill Response Procedure for containing and cleaning up effluent from SSOs that have or could impact an MS4.

2.0 Purpose

Sewering agencies, including Permittees that own or operate a sanitary sewer, are required to provide notification, documentation, spill response and reporting of SSOs from their sanitary sewer collection systems pursuant to established federal and state regulations (including the Sanitary Sewer Order), and individual NPDES permits. This Sanitary Sewer Spill Response Procedure provides a mechanism to ensure effective coordination between sewering agencies and the Permittees in the event that an SSO threatens to impact, or impacts, the MS4. This procedure will:

- Enhance communication between the Permittees, sewering agencies and the Regional Board;
- Clarify and streamline interagency SSO response procedures; and
- Provide additional protection of Receiving Waters.

This procedure incorporates elements of the Sanitary Sewer Order requirements and spill release notification guidance published by the California Emergency Management Agency (EMA) Hazardous

Materials Unit. As these documents are updated, this procedure will be revised to conform. This procedure is intended to address occurring or impending SSOs that may enter the MS4.

3.0 SSO Response Procedure

Upon determination by a sewering agency or Permittee, persons in charge, contractor or field crew that an SSO has occurred that may impact the MS4, the following notification, reporting, response, and sampling procedures will be implemented.

3.1 Notifications

3.1.1 Notification Requirements Applicable to Sewering Agencies:

In compliance with the Sanitary Sewer Order, the following notification requirements are applicable to sanitary sewer collection systems and other facilities owned or operated by sewering agencies:

- For any discharges of sewage that result in a discharge to a drainage channel or surface water, the sewering agency will as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the EMA, the County Department of Environmental Health, and the Regional Board.
- As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the sewering agency will submit to the Regional Board a certification that the EMA and the County Department of Environmental Health have been notified of the discharge.

In compliance with the 2010 MS4 Permit, the sewering agency with jurisdiction for the spill will provide notification immediately (within 24 hours of becoming aware of the circumstances) for all discharges that endanger human health or the environment as follows:

- By phone to the EMA at 800-852-7550 and to the Regional Board at 951-782-4130
- At a minimum:
  - Any sewage spill greater than 1,000 gallons
  - Any sewage spill that could impact water contact recreation
  - Any discharge of sewage into or on any Waters of the State (reportable to EMA[1])

In addition, the sewering agency will notify the Highway Patrol of SSOs affecting a State Highway in accordance with EMA guidance[2].

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1 "California Hazardous Material Spill/Release Notification Guidance." February 2012. California EMA. http://www.calema.ca.gov/HazardousMaterials/Pages/Spill-Release-Reporting.aspx

2 "California Hazardous Material Spill/Release Notification Guidance." February 2012. California EMA. http://www.calema.ca.gov/HazardousMaterials/Pages/Spill-Release-Reporting.aspx

Other spill incidents, including any unauthorized discharges that are not reportable to the EMA, are reported to the Regional Board's Executive Officer as part of the Annual Report as described in Section 3.3.

3.1.2 Notification Requirements Applicable to Permittees Not Owning or Operating a Sanitary Sewer Collection System

Should a Permittee discover an SSO or determine that sewage is entering the MS4, the Permittee shall immediately notify the appropriate sewering agency.

1. Where the sewering agency determines that the SSO originates from its sewer collection system or facilities, the sewering agency will follow the notification procedures described in Section 3.1.1 and established reporting procedures. No further notification or reporting is required by the Permittee.
2. Where the sewering agency determines that the SSO originates from a private lateral or private property, the sewering agency will contact the property owner for clean up responsibility and will contact the Permittee with jurisdiction of the spill. For more information on private property SSOs, see Section 6.0. The Permittee with jurisdiction for the spill will provide notification immediately (within 24 hours of becoming aware of the circumstances) for all discharges that endanger human health or the environment as follows:
    - By phone to the EMA at 800-852-7550 and to the Regional Board at 951-782-4130
    - At a minimum:
        - Any sewage spill greater than 1,000 gallons
        - Any sewage spill that could impact water contact recreation
        - Any discharge of sewage into or on any Waters of the State (reportable to EMA[3])
    - In addition, the Permittee with jurisdiction for the spill will notify the Highway Patrol of SSOs affecting a State Highway in accordance with EMA guidance[4].

Should a Permittee discover discharges of sewage in an area not served by a sewering agency, the Permittee with jurisdiction for the spill will follow the notification requirements described above for SSOs originating from a private lateral or private property.

Other spill incidents, including any unauthorized discharges that are not reportable to the EMA, are reported to the Regional Board's Executive Officer as part of the Annual Report as described in Section 3.3.

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3 "California Hazardous Material Spill/Release Notification Guidance." February 2012. California EMA. http://www.calema.ca.gov/HazardousMaterials/Pages/Spill-Release-Reporting.aspx

4 "California Hazardous Material Spill/Release Notification Guidance." February 2012. California EMA. http://www.calema.ca.gov/HazardousMaterials/Pages/Spill-Release-Reporting.aspx

3.1.3 Agency Contact Information

To identify sewering agency with jurisdiction in the spill area, **see Attachment A**. A list of the current contact phone numbers for various agencies is provided below:

CONTACT:	**PHONE NUMBER:**
County Department of Environmental Health / Environmental Resources Management	951-955-8980
Governor's Emergency Management Agency (EMA)	800-852-7550
Permittee Staff (whose MS4 may be affected by spill)	**See Attachment C**
Regional Water Quality Control Board: Santa Ana Region	951-782-4130
District NPDES Section	951-955-1200
Sewering agency with jurisdiction in spill area	**See Attachment A**
California Highway Patrol (if highway affected by spill)	**911**

3.2 Minimum Information for Notification

Permittee staff providing notice should make reasonable attempts to reach sewering agency contacts during and after normal working hours. In cases where sewering agency contacts are not available, messages shall be left. The following minimum information should be conveyed by Permittee staff as appropriate:

- Identity of caller
- Location, date and time of SSO, status of the SSO (actual or threatened release)
- Quantity of sewage released (estimate of flow or volume)
- Need for public safety or traffic control measures
- Cause of the SSO, if known
- Description of immediate measures taken to contain/mitigate SSO
- Estimate of additional containment and/or clean-up options
- Determination if sewage was discharged to MS4 or areas otherwise impacting the MS4 **(Refer to Attachment A)**
- Determination if SSO reached a state highway

A copy of a sample SSO reporting form is included in **Attachment D**.

3.3 Reporting Requirements

Each agency responsible for the SSO shall file reports as required under federal and state law, including any applicable NPDES or other permits. Sewering agencies are required to report any discharges to the Department of Environmental Health immediately, per the requirements of Health and Safety Codes Section 5411.5. Permittees shall additionally follow specific reporting requirements as described in Section 4 of the Riverside County Drainage Area Management Plan for the Santa Ana Region.

The Person in Charge at the responsible sewering agency must CC: the final SSO Report provided to the Regional Board to the affected Permittees via hard copy or electronic means.

3.4 Response Requirements

Responsible sewering agencies will lead response to SSOs and will assume Person-in-Charge responsibilities in most cases. Person-in-Charge of spill response:

- Will take all immediate measures necessary to contain release or potential release of sewage and prevent/minimize impacts to water quality and the MS4.

- May cut locks, open manholes, or otherwise enter MS4 as necessary to contain and clean up SSOs.

- Will contact the maintenance/public works department of the appropriate Permittee as necessary, and as soon as possible, to notify them of actions within their MS4. Contact numbers are included in **Attachment C**. If necessary, Permittee staff will support spill response by providing MS4 maps or other support if available.

- Will coordinate with Permittee staff as necessary to ensure that the clean up adequately remedies impacts of the sewage released to the MS4. It should be noted that the Regional Board prefers that MS4 facilities not be sanitized with disinfectant where not immediately impacting public health (i.e. no chlorine shall be used when discharge is within 1,500 feet of a waterway).

- Will coordinate with local fire, police, and traffic departments as necessary to ensure the safety of the response effort, and to manage traffic and local residents.

3.5 Sampling/Monitoring

Monitoring may be required by the Regional Board for spills that reach surface waters. Testing of soils may also be required.

4.0 Training Requirements

Sewering Agencies and Permittee staff will ensure that training for this procedure is incorporated into appropriate training programs related to SSO response.

5.0 Detection Involving Infiltration into MS4

In the event that Permittees encounter evidence of potential sewage infiltration into the MS4 due to water quality monitoring or field observation, the Permittees will notify the relevant sewering agency (**see Attachment A**) to coordinate a response.

6.0 Private Property SSOs

Sewering agencies and their contractors will respond to all SSOs within their service area. If a private property is the source of an SSO, agencies and their contractors shall assist in the control and containment to ensure that the sewage does not enter the MS4. If the SSO was a result of a private lateral, the private property owner will be informed of the blockage, and will be responsible to remove the blockage. If the SSO was a result of the sewer trunk line blockage, the response crew will correct the problem.

Glossary

MS4 (Municipal Separate Storm Sewer System) - An MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, natural drainage features or channels, modified natural channels, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to Waters of the U.S.;
(ii) Designated or used for collecting of conveying stormwater;
(iii) Which is not a combined sewer; and
(iv) Which is not part of the POTW as defined at 40 CFR 122.2.

Receiving Waters – The Waters of the United States within the Santa Ana Region.

Region - Either the Santa Ana, Santa Margarita, or Whitewater River watershed regions of Riverside County. These regions are regulated by the Santa Ana, San Diego and Colorado River Region Regional Water Quality Control Boards, respectively.

Sanitary Sewer Overflow (SSO) - A sanitary sewer overflow is any overflow, spill, release, discharge or diversion of wastewater from a sanitary sewer system. SSOs include:

(i) Overflows or releases of wastewater that reach Waters of the U.S.;
(ii) Overflows or releases of wastewater that do not reach Waters of the U.S.; and
(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions in a sanitary sewer, other than a building lateral. Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned is an SSO when sewage is discharged off private property into streets, stormdrains, or Waters of the U.S.

Sanitary Sewer System - Any system of pipes, pump stations, sewer lines, or other conveyances upstream of a wastewater treatment plant headworks used to collect and convey sewage to a treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, highlines, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not SSOs.

Sewage - The waste and wastewater produced by residential and commercial establishments and discharged into sewers.

Waters of the State – Any water, surface or underground, including saline waters within the boundaries of the State.

Waters of the United States – Waters of the United States can be broadly defined as the navigable surface waters and all tributary waters to navigable surface waters. Groundwater is not considered to be Waters of the United States. See 40 CFR 122.2 for a more expansive definition.

Attachment A

Sewering Agency Contact Roster

Unified Sanitary Sewer Spill Response Procedure

Attachment A (Sewering Agency Contact Roster)

City of Beaumont/Utility Partners
Mr. Dan Friou
715 W. 4th Street
Beaumont, CA 92223
951.769.8534, After Hours: 951.531.3923
Fax: 951.769.0914
dfriou@utilitypartnersllc.com

City of Corona
Department of Water and Power
Mr. Ed Lockhart 951.736.2443, After Hours: 951.736.2330
400 S. Vicentia Avenue
Corona, CA 92882
Fax: 951.735.3786
ed.lockhart@ci.corona.ca.us

Eastern Municipal Water District
Integrated Operations Center or
Mr. Mark Chamberlin
Post Office Box 8300
Perris, CA 92572
951.928.3777 ext. 6265 (During & After Work Hours)
Fax: 951.928.6177
chamberm@emwd.org

Edgemont Community Services District
Mr. Joe Teague 951.653.5120, 951.233.8860 cell
After Hours: 951.656.1234 home
Post Office Box 2024
Riverside, CA 92516-2024
Sam.Gershon@webbassociates.com

Elsinore Valley Municipal Water District
Mr. Dennis McBride
Post Office Box 3000
Lake Elsinore, CA 92531-3000
951.674.3146 ext. 8203, After Hours:
Fax: 951.245.5946
dmcbride@evmwd.net

City of Hemet Water/Wastewater Dept.
Mr. Ron Proze
3777 Industrial Avenue
Hemet, CA 92545
951.765.3710, Cell: 951.634.3103, Police Dispatch: 951.765.2400
Fax: 951.765.2493
rproze@cityofhemet.org

Jurupa Community Services District
Mr. Steve Jaynes
11201 Harrel Street
Mira Loma, CA 91752
951.681.1482 ext.136, Cell: 951.830.1517
Fax: 951.685.1153
info@jcsd.org OR sjaynes@jcsd.us

Lake Hemet Municipal Water District
Mr. Mitch Freeman (Sr. W. Operator) 951.658.3241 ext. 247
Mr. Mike Gow (Chief Engineer) 951.658.3241 ext. 238
After Hours: 951.956.4836; 951.230.5491
Post Office Box 5039
Hemet, CA 92544
Fax 951.766.7031
mfreeman@lhmwd.org

Lee Lake Water District
Mr. Ken Codwell (Plant Super.) 951.277.1414
Mr. Jeff Pape (GM) 951.277.1414
After Hours: 951.830.3651; 760.473.4120; 760.250.9658
22646 Temescal Canyon Road
Corona, CA 91719
Fax 951.277.1419
jp@llwd.org

City of Riverside – Waste Water Operations Dispatch
5950 Acorn Street
Riverside, CA 92504
951.826.5311, (Call Center)
callcenter@riversideca.gov

Rubidoux Community Services District
Mr. Dan Ballow
Post Office Box 3098
Riverside, CA 92519
951.684.7580, After Hours: 951.684.7580
Fax: 951.369.4061
dballow@rcsd.org

Santa Ana Watershed Project Authority
Mr. Rich Haller
11615 Sterling Avenue
Riverside, CA 92503
951.354.4240
Fax: 951.785.7076
rhaller@sawpa.org

Western Municipal Water District
Mr. Greg Snyder
14205 Meridian Parkway
Riverside, CA 92518
951.789.5131, After Hours: 951.789.5109
Fax: 951.780.0272
gsnyder@wmwd.com

Yucaipa Valley Water District
Mr. John Wrobel
12770 Second Street
Yucaipa, CA 92399
909.797.5117, After Hours: 909.208.6347
Fax: 909.797.5937
jwrobel@yvwd.dst.ca.us

Attachment B

Wastewater Treatment Plants and Service Area

Attachment C

MS4 Permittee Contact Roster

Unified Sanitary Sewer Spill Response Procedure

Attachment C (MS4 Permittee Contact Roster)

City of Beaumont
Mr. Kishen Prathivadi
550 E. 6th Street
Beaumont, CA 92223
951.769.8520, Fax: 951.676.2054
kprathivadi@urbanlogicgroup.com

City of Calimesa
Mr. Bob French
908 Park Avenue
Calimesa, CA 92320
909.795.9801, Fax: 909.795.4399
bfrench@cityofcalimesa.net

City of Canyon Lake
Mr. Richard Rowe31516 Railroad Canyon Road
Canyon Lake, CA 92587
951.244.2955, Fax: 951.246.2022
rrowe@cityofcanyonlake.com

City of Corona
Ms.Michelle Hindersinn
400S. Vicentia Avenue
Corona, CA 92882
951.736.2248, Fax: 951.736-2496
Michele.Hindersinn@ci.corona.ca.us
After Hours:
(951)736-2330

City of Eastvale
Mr. Jon Crawford
6080 Hamner Avenue Ste., 103
Eastvale. CA 91752
951.505.1068
jcrawford@ci.eastvale.ca.us

City of Hemet
Ms. Linda Nixon
3777 Industrial Avenue
Hemet, CA 92545
951.765.3880, Fax: 951.765.2493
lnixon@cityofhemet.org

City of Jurupa Valley
Mr.Don Allison
8304 Limonite Avenue, Suite M
Jurupa Valley, CA 92509
Dallison@jurupavalley.org

City of Lake Elsinore
Ms. Nicole McCalmont or Mr. Ken Seumalo
130 South Main Street
Lake Elsinore, CA 92530
951.674.3124 ext. 244, Fax: 951.674.8761
nmccalmont@lake-elsinore.orgOR kseumalo@lake-elsinore.org

City of Menifee
Ms. Lori Wolf
29683 New Hub Drive, Suite C
Menifee, CA 92586
951.672.6777
lwolfe@cityofmenifee.us

City of Moreno Valley
Mr. Kent Wegelin
14177 Frederick Street
Moreno Valley, CA 92552-0805
951.413.3120, Fax: 951.413.3158
After Hours: Emergency Stand-by group
Cell: 951.442.5208
kentw@moval.org

City of Murrieta
Mr. Bill Woolsey
1 Town Center
Murrieta, CA 92562Direct 951.461.6073,
Main (951)304-2489
Fax: 951.698.3416
wwoolsey@murrieta.org

City of Norco
Mr. William Thompson
1281 Fifth Street
Norco, CA 92860
951.270.5607, Fax: 951.270.5619
Emergency: 951.371.1143
bthompson@ci.norco.ca.us

City of Perris
Mr. Daryl Hartwill
101 N. "D" Street
Perris, CA 92570
951.657.3280, Fax: 951.943.1871, After Hours: 951.359.2987
dhartwill@cityofperris.org

City of Riverside
Mr. Kevin Street
5950 Acorn Street
Riverside, CA 92504
951.351.6140, Fax: 951.351.6267
Alternate/after Hours-
WQCP Dispatch: 951-351-6280
City Call Center: 951-826-5311
kstreet@riversideca.gov

Riverside County Environmental Health
Mr. John Watkins
4065 County Circle DriveRiverside, CA 92503
951.3585055, Fax: 951.358-5017
JWatkins@rivcocha.org

Riverside County Executive Office
Mr. Steven Horn
4080 Lemon Street, 4th Floor
Riverside, CA 92501
951.955.1110, Fax: 951.955.1105
schorn@rceo.org

Riverside County Flood Control District
951-955-1200
Mr. David Ortega, Senior Engineering Technician
1995 Market Street

City of San Jacinto
Mr. Mike Emberton, Assistant City Manager
Mr. Dan Mudrovich, Utilities Super.
201 E. Main Street
San Jacinto, CA 92583

Riverside, CA 92501
951.955.4390, Cell: 951-961-9574 Fax:
951.788.9965
DavidJOrtega@rcflood.org
After Hours:
Mark Biloki, Maintenance Superintendent,
mbiloki@rcflood.org
951.955.1310, Cell: 951.288.5254

951.453.7381, After Hours: 951.453.5318, Pager: 951.765.8197
Fax: 951.487.7382
Memberton@sanjacintoca.us OR Dmudrovich@sanjacintoca.us

City of Temecula
Mr. Aldo Licitra
43200 Business Park Drive, Temecula, CA 92589-9033
951.308.6387, Field: 951.541.7850, Fax: 951.694.6475
Aldo.licitra@cityoftemecula.org
After Hours: Rodney Tidwell, Public Works Maint. Supervisor
951.302.4102, Field: 951.303.5497
Rodney.tidwell@cityoftemecula.org

City of Wildomar
Mr. Tim D'Zmura
23873 Clinton Keith Road, Suite 201
Wildomar, CA 92595
951.677.7751, Fax: 951.698.1463
tdzmura@cityofwildomar.org

Attachment D

Sample SSO Reporting Form

SANITARY SEWER OVERFLOW REPORT FORM

This report is: ☐ Preliminary ☐ Final ☐ Revised Final

Sanitary Sewer Overflow Sequential Tracking Number: _____

Reported to: _____
(Enter Fax #, Voicemail #, or Name of Regional Board Staff)

Date Reported: ____/____/____ (MM/DD/YY)

Time Reported: _____ (24 Hour Clock)

Reported By: _____

Phone: _____

Reporting Sewer Agency: _____

Responsible Sewer Agency: _____

Overflow Start Date: ____/____/____ (MM/DD/YY) Overflow Start Time: _____ (24 Hour Clock)

Overflow End Date: ____/____/____ (MM/DD/YY) Overflow End Time: _____ (24 Hour Clock)

Estimated Overflow Flow Rate: _____ (gallons per minute)

Total Overflow Volume: _____ (gallons)

Overflow Volume Recovered: _____ (gallons)

Overflow Volume Released to Environment: _____ (gallons)

SANITARY SEWER OVERFLOW LOCATION AND DESCRIPTION:

Street Address _____
(or Cross Streets)

City: _____ Zip Code: _____

County: Riverside

Sanitary Sewer Overflow Structure ID: _____

Overflow Cause - - Short Description (Check as applicable)

☐ Roots	☐ Grease	☐ Line Break	☐ Infiltration
☐ Rocks	☐ Blockage	☐ Power Failure	☐ Pump Station Failure
☐ Debris	☐ Vandalism	☐ Flood Damage	☐ Manhole Failure
☐ Other	☐ Unknown	☐ Construction	☐ Private Property

Overflow Cause - - Detailed Description:

_____

SANITARY SEWER OVERFLOW REPORT FORM

Sanitary Sewer Overflow Correction - - Description of all Preventative and Corrective Measures Taken or Planned:

_____

Was there measurable precipitation during 72-hour period prior to the overflow?

☐ Yes ☐ No

Initial and Secondary Receiving Waters:

Did the sanitary sewer overflow enter a storm drain?

☐ Yes ☐ No

Did the sanitary sewer overflow reach surface waters other than a storm drain?

☐ Yes ☐ No

Name or description of secondary receiving waters. (If none, state such)

_____

If the sanitary sewer overflow did not reach surface waters, describe the final destination of sewage.

_____

Notification:

Was the local health services agency notified?

☐ Yes ☐ No

If the overflow was over 1,000 gallons, was the Office of Emergency Services (OES) notified?

☐ Yes ☐ No ☐ Not applicable

Affected Area Posting:

Were signs posted to warn of contamination?

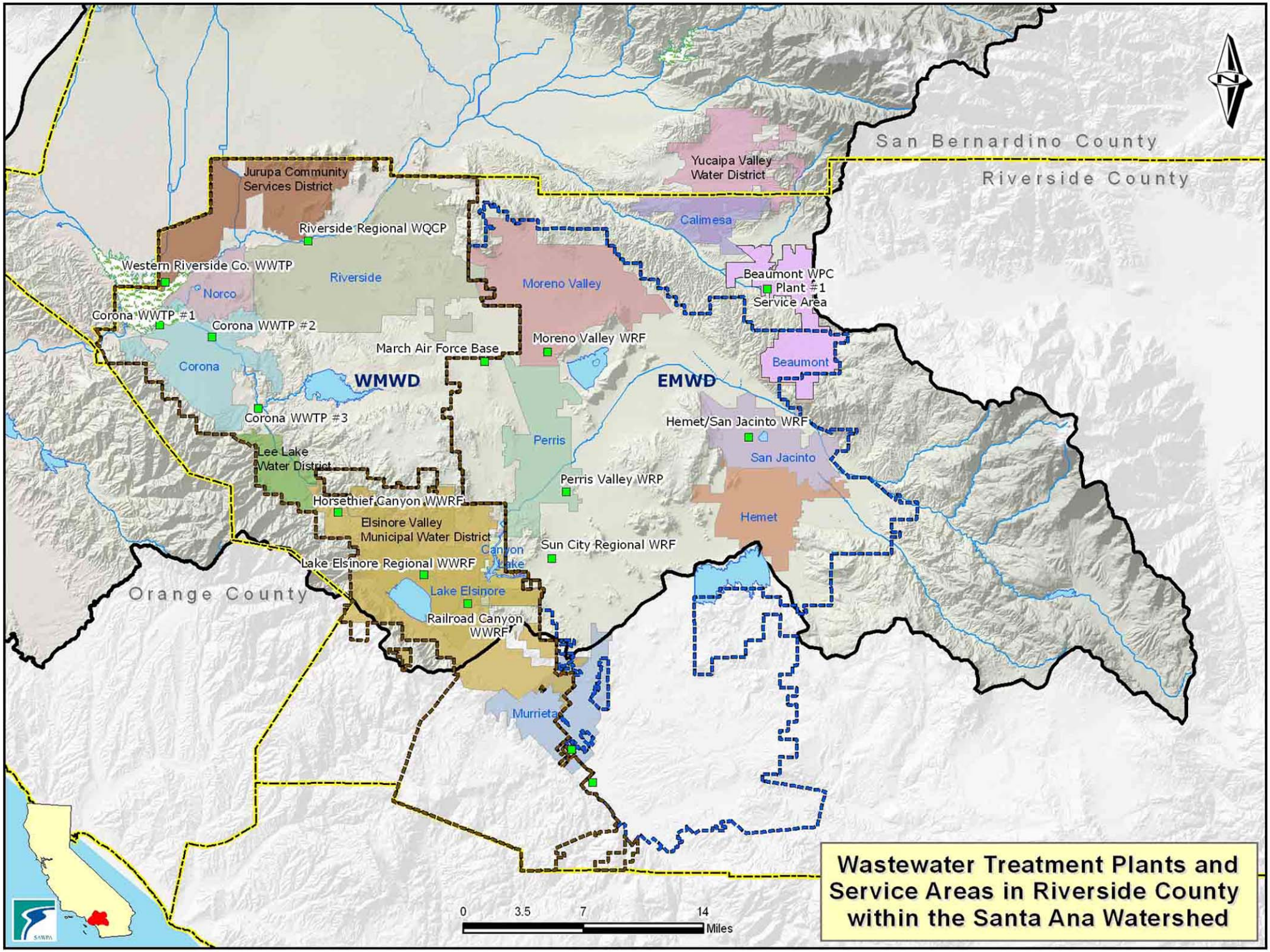
☐ Yes ☐ No

Location of Posting (if Posted): _____

How many days were the warning signs posted?: _____

Remarks:

_____



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APPENDIX I

SANITARY SEWER OVERFLOW (SSO) INCIDENT REPORT FORM

Sanitary Sewer Overflow (SSO) Incident Report Form

Submit completed form to Director of Engineering.

Date of SSO spill: _____ Identify the SSO category (check one):

☐Category 1 SSO – Spills of any volume that reach surface water
☐Category 2 SSO – Spills greater than or equal to 1,000 gallons that do not reach surface water
☐Category 3 SSO – Spills less than 1,000 gallons that do not reach surface water

Name *(person completing this form)*:_____Phone: _____

Exact spill location: _____

Latitude:_____Longitude: _____

Spill location description: _____

Date/time spill was first discovered or reported to Facilities Management:

Date:_____Time:_____am/pm

Estimated spill start date/time: Date:_____Time:_____am/pm

Estimated first responder arrival date/time: Date:_____Time:_____am/pm

Estimated spill end date/time: Date:_____Time:_____am/pm

Final spill destination *(Check all that apply)*:

☐ Building/Structure☐Street Curb/Gutter ☐Paved Surface ☐Unpaved Surface
☐ Storm Drain ☐Surface Water ☐Drainage Channel
☐ Storm Water Infiltration/Retention Structure/Field ☐Other *(specify)*: _____

Number of spill appearance points: _____

Spill appearance point *(Check all that apply. See page 3 complete list)*:

☐ Gravity Mainline ☐Inside Building or Structure ☐Manhole
☐ Other Sewer System Structure *(specify)*: _____

Spill cause *(Check all that apply. See page 3 complete list of options)*:

☐ Debris - General ☐Debris – Rags ☐Root Intrusion ☐Debris from Construction
☐ Construction Diversion Failure ☐Collection System Maintenance Caused Spill/Damage
☐ Damage by Others Not Related to Collection System ☐Other *(specify)* _____

Where did failure occur? *(Check all that apply. See page 3 complete list of options)*:

☐ Gravity Mainline ☐Manhole ☐Inside Building or Structure ☐Other *(specify)*: _____

Was this spill associated with a storm event? ☐Yes ☐No

Diameter of sewer pipe at the point of blockage or failure:_____inches

Material of sewer pipe at the point of blockage or failure: _____

Estimated age of sewer asset at the point of blockage or failure:_____years

Sanitary Sewer Overflow (SSO) Incident Report Form

Spill Volume Estimation

Did spill discharge to land? *(Includes discharges directly to land and discharges to a storm drain system or drainage channel that flows to a storm water infiltration/retention structure, field, or other non-surface water location)*	If Yes, estimated spill volume discharged to land:	gallons
	Estimated spill volume recovered from discharge to land: *(Do not include water used for clean-up)*	- gallons
	Total discharge to land:	= **gallons**
Did spill reach storm drain?	If Yes, estimated spill volume that reached storm drain :	gallons
	Estimated spill volume recovered from storm drain:	- gallons
	Total discharge to storm drain	= **gallons**
Did spill reach drainage channel?	If Yes, estimated spill volume that reached discharge channel:	gallons
	Estimated spill volume recovered from drainage channel:	- gallons
	Total discharge to drainage channel:	= **gallons**
	Total SSO Discharge	= **gallons**

Methods used to estimate spill volumes *(Check all that apply. Use attached Volume Estimation Forms to document spill dimensions, shapes and other volume estimation information)*:

☐ Eyeball Method ☐ Calculations from Spill Dimensions ☐ Duration and Flow Rate
☐ Open Channel Spill Estimation ☐ Drop Bucket Method ☐ Calculations Based on Pipe Size
☐ Flow from Vent or Pick Holes ☐ Flow around Manhole Cover ☐ Flow from Manhole w/o a Cover

Spill response activities *(Check all that apply)*:

☐ Cleaned-up ☐ Contained All or Portion of Spill ☐ Mitigated Effects of Spill ☐ Restored Flow
☐ Returned All of Spill to Sanitary Sewer System ☐ Other Enforcement Agency Notified
☐ Other *(specify):* _____

Spill response completion date: _____

Spill corrective action taken: *(Check all that apply. See page 3 complete list of options):*

☐ Added Sewer to Preventive Maintenance Program ☐ Adjusted Schedule/Method of Preventive Maintenance
☐ Inspected Sewer Using CCTV to Determine Cause ☐ Plan Rehabilitation or Replacement of Sewer
☐ Repaired Facilities or Replaced Defect ☐ Other *(specify)* _____

Cal OES notification information *(required for Category 1 SSOs **over 1,000 gallons**):*

Control Number: _____ Date: _____ Time: _____ am/pm

Sanitary Sewer Overflow (SSO) Incident Report Form

CIWQS SSO Online Database Dropdown Lists:

Spill Appearance Point

Force Main
Gravity Mainline
Inside Building or Structure
Lateral Clean-Out
Lower Lateral
Manhole
Other Sewer System Structure
Pump Station
Upper Lateral

Spill Cause

Air relief valve (ARV) Failure
Blow-off Valve (BOV) Failure
Construction Diversion Failure
CS Maintenance Caused Spill/ Damage
Damage by Others Not Related to CS Construction/ Maintenance (specify type below)
Debris from Construction
Debris from Lateral
Debris-General
Debris- Rags
Flow Exceeded Capacity (Separate CS only)
Grease Deposition (FOG)
Inappropriate Discharge to CS
Natural Disaster
Non-Dispersible Operator Error
Other (specify)
Pipe Structural Problem/ Failure Installation
Pump Station Failure- Controls
Pump Station Failure- Mechanical
Pump station Failure- Lower
Rainfall Exceeded Design, Inflow and Infiltration (Separate CS Only)
Root Intrusion
Siphon Failure
Surcharged Pipe (Combined CS Only)
Vandalism

Where Did Failure Occur

Air Relief Valve (ARV)
Blow- off Valve (BOV)
Force Main
Gravity Mainline
Lower Lateral (Public)
Manhole
Other (specify below)
Pump Station- Controls
Pump Station- Mechanical
Pump Station- Power
Siphon
Upper Lateral (public)

Spill Response Activities

Cleaned-Up
Mitigated Effects of Spill
Contained All or Portion of Spill
Other (specify below)
Restored Flow
Returned All of Spill to Sanitary Sewer System
Property Owner Notified
Other Enforcement Agency Notified

Spill Corrective Action Taken

Added Sewer to Preventative Maintenance Program
Adjusted Schedule/ Method of Preventative Maintenance
Enforcement Action Against FOG Source
Inspected Sewer Using CCTV to Determine Cause
Other (specify below)
Plan Rehabilitation or Replacement of Sewer Repaired Facilities or Replaced Defect

Method 1: Eyeball Estimate

- Imagine amount of water that would spill from a 1-gallon jug, 5-gallon bucket or 50-gallon barrel
- Method can be used to estimate the volume of spills on asphalt, concrete, sloped surfaces, and flat surfaces
- Only useful for spills up to 200 gal

One gallon spill on a sloped surface
(with a point of reference)

Two gallon vs. one gallon spill on a slope
(Two gallons left, one gallon right).

Two gallon spill on a very slight slope

Five gallon spill-forty feet in length.

Method 1: Eyeball Method Volume Measurement Worksheet

Manhole/ Pipe Number: _____

Date: _____

Name of Estimator: _____ **Telephone:** _____

Exact Location of Spill (address): _____

Exact Latitude: _____ **Exact Longitude:** _____

Picture taken? YES NO

Dimensions of spill (in ft. or paces): Length _____ Width _____ Depth _____

Shape of spill: RECTANGLE TRIANGLE CIRCLE

Estimated spill volume: _____gal

One gallon on sloped surface

Two gallon spill on sloped surface

Five gallon spill on sloped surface

Estimated volume of spill recovered: _____gal

Please sketch spill with dimensions:

Was a reference image used? YES NO

Additional Notes and Documentation (please describe how the spill volume was calculated/ measured.):

_____

_____

_____

_____

_____

_____

_____

Method 2: Duration and Flow Rate

If area/ depth are impossible to measure, use duration and flow rate estimate

Duration: time elapsed from start to end of SSO

- To estimate **start time**, use one of the following methods:
    1. Compare hourly data on a downstream flow meter to find changes in flow.
    2. Local residents can be used to establish start time. Observations like odors or sounds (e.g. water running in a normally dry creek bed) can be used to estimate the start time.
    3. Observe conditions at the SSO site. Initially there will be limited deposits of sewage solids and toilet paper. After a few days to a week, the quantity of toilet paper and other materials of sewage origin increase in amount. These changes with time can be used to estimate the start time in the absence of other information. Taking photographs to document the observations can be helpful if questions arise later in the process.

- To estimate **end time**, field crews observe and record time of the "blow down" that occurs when blockage is removed or observe "blow down" on flow meters.

Flow Rate: The flow rate is the average flow that left the sewer system during the time of the spill. There are three common ways to estimate the flow rate.

1. Use data from **flow meter** to estimate flow rate for the spill (better for large SSOs). Changes in flows in downstream flow meters can be used to estimate the flow rate during the spill
2. Estimate based on **up-stream connections**. Once the location of the SSO is known, the number of upstream connections can be determined from system maps. Multiply the number of connections by average hourly or daily water use per connection.
3. Refer to the **Flow Rate Charts for Estimating Sewer Spills** to estimate flow rate based on images of sewage flowing from manholes at varying flow rates.

Volume of SSO is the product of the duration (in hours or days) x flow rate (in gallons per hour or gallons per day). (ft3= 7.48 gal)

Method 2: Spill Volume Estimation Based on Duration and Flow Rate

Manhole/ Pipe Number: _____
Date: _____

Name of Estimator: _____ **Telephone: _____**

Exact Location of Spill (address): _____
Exact Latitude: _____ **Exact Longitude: _____**

Estimated spill start date/time: _____ (MM/DD/YY) _____ (HR:MIN)

Estimated spill end date/time: _____ (MM/DD/YY) _____ (HR:MIN)

Spill duration: _____min

Flow rate: _____gal/min

How was flow rate determined? Flow Meter Upstream Connections Reference Sheet

Estimated spill volume (duration x flow rate): _____gal

Estimated volume of spill recovered: _____gal

Picture taken? YES NO

Dimensions of spill (in ft. or paces): Length _____ Width _____ Depth _____

Shape of spill: RECTANGLE TRIANGLE CIRCLE

Please Sketch Spill with Dimensions:

Additional Notes and Documentation (please describe how the spill volume was calculated/ measured. Please show calculations.):

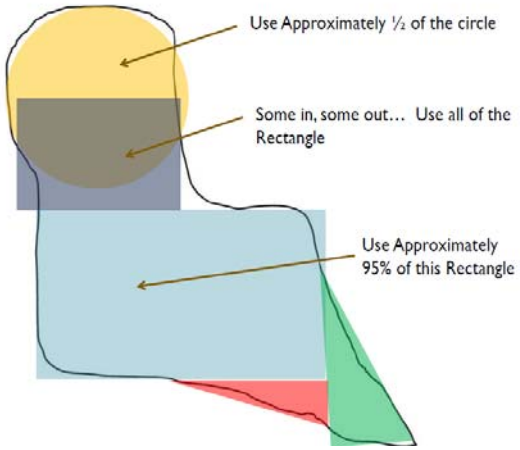
_____
_____
_____
_____
_____
_____

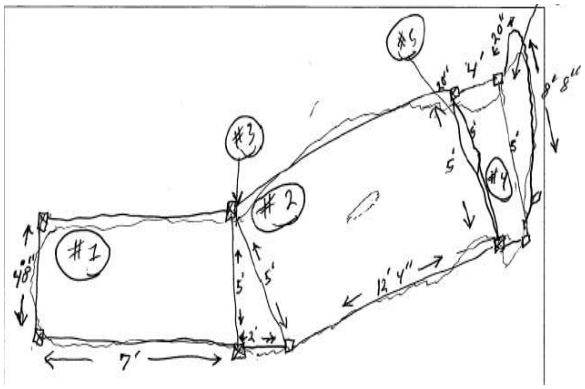
Method 3: Estimating Volume Based on Spill Dimensions

If not raining, the shape, dimensions, and depth of spill may be used to estimate volume

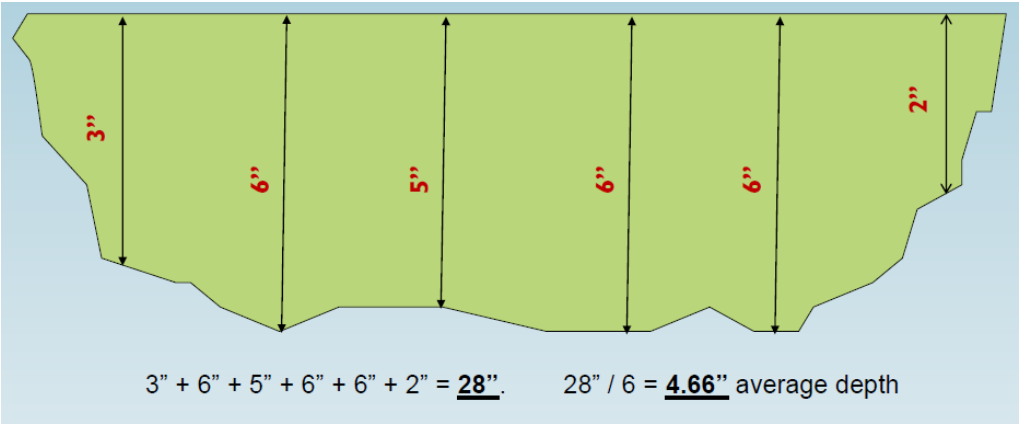
1. Sketch shape of spill
2. Measure/pace off dimensions
3. Measure depth in several locations; take average
4. Convert all dimensions to feet
5. Calculate area of spill based on approximate shape:
   - Rectangle: Area = length x width
   - Circle: Area = diameter x diameter x 0.785
   - Triangle: Area = base x height x 0.5
6. Multiply area x depth to get volume
7. Multiply volume x 7.5 to convert into gallons

- Using a spill footprint to get surface area and sample sketch





- Calculate average depth to get a depth measurement



Method 3: Spill Volume Estimation Worksheet Based on Spill Dimensions

Manhole/ Pipe Number: _____
Date: _____

Name of Estimator: _____ **Telephone:** _____

Exact Location of Spill (address): _____
Exact Latitude: _____ **Exact Longitude:** _____

Picture taken? YES NO
Shape of spill: RECTANGLE TRIANGLE CIRCLE

Please sketch spill in zones with dimensions:

Area # 1_____ % Wet_____
Area # 2_____ % Wet_____
Area # 3_____ % Wet_____
Area # 4_____ % Wet_____
Area # 5_____ % Wet_____
Area # 6_____ % Wet_____

Please Calculate Average Depth:

Estimated Spill Surface Area _____square feet
Number of Depth Measurements Used _____ **Average Depth** _____inches
Estimated Spill Volume: _____gal
Estimated volume of spill recovered: _____gal

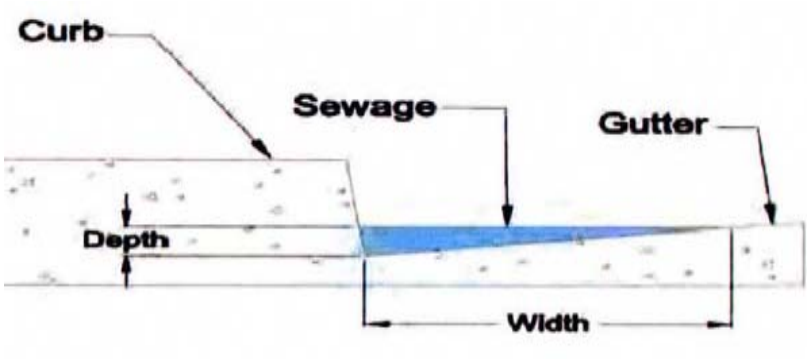
Additional Notes and Documentation (please describe how the spill volume was calculated/ measured. Please show calculations.):

_____
_____
_____
_____
_____

Method 4: Open Channel Spill Estimation

- For ditches, channels, gutters, etc.

1. Measure the cross sectional dimensions (to determine the area) of the channel and determine the velocity of the flow.
2. Velocity can be measured by dropping a floating object into the flow and timing the object over a measured distance.
3. Flow (Q), ft3/sec = Velocity (V), ft/sec X Area (A),ft2
4. Flow times duration equals amount of spill
5. Multiply by 7.48 (number of gallons in one cubic foot) to convert to gallons



Method 4: Spill Volume Estimation Based on Open Channel Spills

Manhole/ Pipe Number: _____
Date: _____

Name of Estimator: _____ **Telephone: _____**

Exact Location of Spill (address): _____
Exact Latitude: _____ **Exact Longitude: _____**

Estimated spill start date/time: _____ (MM/DD/YY) _____ (HR:MIN)

Estimated spill end date/time: _____ (MM/DD/YY) _____ (HR:MIN)

Spill duration: _____min **Velocity:_____** ft./min

Cross Sectional Area of Ditch, Channel, or Gutter:
Depth: _____ ft. **Width:_____** ft. **Area:_____**ft2

Flow rate (velocity x Area): _____ft3/min

Estimated spill volume (duration x flow rate x 7.48): _____gal

Estimated volume of spill recovered: _____gal

Picture taken? YES NO
Dimensions of spill (in ft. or paces): Length _____ Width _____ Depth _____

Shape of spill: RECTANGLE TRIANGLE CIRCLE

Please Sketch Spill with Dimensions:

Additional Notes and Documentation (please describe how the spill volume was calculated/ measured. Please show calculations.):

_____
_____
_____
_____
_____
_____

APPENDIX J

RUBIDOUX COMMUNITY SERVICES DISTRICT
PRETREATMENT PROGRAM
REVISED ENFORCEMENT RESPONSE PLAN

DFS

RECEIVED

AUG 0 8 1991

KRIEGER & STEWART

RUBIDOUX COMMUNITY SERVICES DISTRICT
3590 RUBIDOUX BOULEVARD
P. O. BOX 3098
RUBIDOUX, CALIFORNIA 92519
RIVERSIDE COUNTY

TELEPHONES:

Area Code: 714

District
684-7580

Water Department
684-7321

Fire Department
683-4561

Fax
369-4061

Fire Protection
Water Service
Water Quality Control
Refuse Collection
Street Lights
Weed Abatement

587-3.11

August 5, 1991

Gerard J. Thibeault, Executive Officer
California Regional Water Quality Control Board
Santa Ana Region
6809 Indiana Avenue, Suite 200
Riverside, CA 92506

Subject: Rubidoux Community Services District
Pretreatment Program
Revised Enforcement Response Plan

Dear Mr. Thibeault:

In accordance with recent revisions in the District Wastewater Ordinance, the District has prepared the attached revised Enforcement Response Plan. The attached revised plan is based on EPA Guidance for Developing Control Authority Enforcement Response Plans dated September 1989.

The District's revised plan is hereby submitted for your approval. If there are any questions, please call me or David Scriven of Krieger & Stewart, District Engineer at (714) 684-6900.

Sincerely,

David D. Lopez
Secretary-Manager

DFS/blt
3P11GJT3

cc: Don Perrin, State Water Resources Control Board
David F. Scriven, Krieger & Stewart

Attachment: Enforcement Response Plan

RUBIDOUX COMMUNITY SERVICES DISTRICT
PRETREATMENT PROGRAM
ENFORCEMENT RESPONSE PLAN
AUGUST 1991

This plan identifies types of violations, indicates initial and follow-up responses, and designates personnel and time frames for these responses. Several alternative enforcement options are designated for each type (or pattern) of noncompliance. District personnel who detect noncompliance should select an appropriate response (or combination thereof) from the short list of enforcement options indicated on attached table. There are a number of factors to consider when selecting the most appropriate response.

a. Good faith of the Industry

b. Compliance history of the Industry

c. Volume of the Industry's permitted discharge

d. Previous success of enforcement actions taken against the Industry (e.g., if Notices and Letters of Violation have not previously succeeded in returning the Industry to compliance, a Cease and Desist Order is more appropriate)

e. Potential contribution of violation to a violation of Exhibit "H" limits by the District

f. Potential effect of violation on the POTW

Since the remedies designated in the table are all considered appropriate, District personnel must weigh each of the above factors in deciding whether to use a more or less stringent response.

District personnel should consistently follow the response plan. To do otherwise would send a signal to Industries and the public that the District is not acting in a predictable manner and may subject the District to charges of arbitrary enforcement decision making, thereby jeopardizing future enforcement.

Using the Enforcement Response Plan

The plan is used as follows:

1. Locate the type of noncompliance in column one and identify the most accurate description of the violation in column two.

2. Assess the appropriateness of the recommended response option(s) in column three. Enforcement response options are presented in order of increasing stringency. First offenders or Industries demonstrating good faith efforts may merit a more lenient response. Repeat offenders or those demonstrating negligence may require a more stringent response.

3. Apply the enforcement response to the Industry. Specify corrective action or other responses required of the Industry, if any. Column four indicates personnel to take each response. Response time frames are specified at the end of the table (Section F).

4. Follow-up with more stringent enforcement action if the Industry's response is not received or repeated violation occurs.

5. Maintain all supporting documentation regarding the violation and enforcement actions in the Industry's file.

Description of Terms

Terms and abbreviations used in the plan are defined below.

Cease & Desist Order	-	Formal administrative enforcement order which requires the Industrial User to cease violating or threatening to violate Categorical Standards or pretreatment requirements immediately or in accordance with a Compliance Time Schedule. Cease and Desist Orders are to be issued after review by, and meeting with, the Industry. Fee of $500 for issuance. Requirements of a Cease and Desist Order are enforceable by the assessment of Civil Penalties or by termination of service.
City	-	City of Riverside
Civil Action	-	Civil litigation against the Industry seeking injunctive or equitable relief, monetary penalties and/or actual damages.
Civil Penalties	-	Monetary penalties for noncompliance assessed against a violator by the District, subject to appeal and review by the Civil Courts.
Criminal Investigation	-	Pursuit of punitive measures against an individual and/or organization through a court of law.
Compliance Order	-	Formal administrative enforcement order which requires the Industrial User to comply with Categorical Standards or Pretreatment Requirements immediately or in accordance with a Compliance Time Schedule. Fee of $250 for issuance. Requirements of a Compliance Order are enforceable by the issuance of a Cease and Desist Order.
Compliance Time Schedule	-	Formal schedule adopted by the Manager which includes a final compliance date and intermediate milestone dates.
District	-	Rubidoux Community Services District (RCSD).
Engineer	-	RCSD District Engineer.
Hearing	-	Formal meeting between Industry and Manager to discuss any proposed enforcement action more stringent than a Cease and Desist Order.
Industry	-	Industrial User.
Inspection	-	Inspection of the Industrial User's facility by the RCSD Pretreatment Inspector. Fee of $100 for any inspection in excess of two per calendar year.

Inspector	-	RCSD Pretreatment Inspector.
Manager	-	RCSD Secretary-Manager or Assistant Manager.
Meeting	-	Informal compliance meeting with the Industry to resolve recurring noncompliance.
Noncompliance Monitoring Program	-	A special program of increased self monitoring established by the District to assess noncompliance and return to compliance, which includes a fee of $100 for each failure to sample or report according to schedule and for each reported violation.
Notice of Violation (NOV)	-	Letter or form letter documenting violations, and advising of consequences of continued noncompliance. Response is required by a set deadline. For violations of pollutant limits, repeat analysis is required within 30 days (see attached form).
Ordinance	-	RCSD Wastewater Ordinance 80 as revised and amended, or successor.
Phone Call	-	Informal notification of minor violations. State nature of violation, actions required, and deadlines.
POTW	-	RCSD Sewer Collection System and City of Riverside Wastewater Treatment Facilities.
RCSD	-	Rubidoux Community Services District.
Significant	-	A violation which conforms to the definition of Significant Noncompliance contained in the Ordinance.
Termination of Service	-	Formal administrative enforcement order which requires an Industrial User to cease all discharge of nondomestic wastewater or service will be terminated by the District. Fee of $500 for issuance.

RUBIDOUX COMMUNITY SERVICES DISTRICT
PRETREATMENT PROGRAM
ENFORCEMENT RESPONSE PLAN
AUGUST 1991

CONTENTS

RUBIDOUX COMMUNITY SERVICES DISTRICT
PRETREATMENT PROGRAM
ENFORCEMENT RESPONSE PLAN
AUGUST 1991

A. UNAUTHORIZED DISCHARGES (No permit)

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
1. Unpermitted discharge	Industry unaware of requirement; no harm to POTW or environment	- Phone call followed by Notice of Violation (with permit application form)	Inspector
	Industry unaware of requirement; harm to POTW or environment	- Notice of Violation (with permit application form)	Inspector
		- Inspection	Inspector
		- Meeting	Manager, Engineer, Inspector
		- Compliance Order	Engineer
	Failure to apply for permit continues after notification by District	- Compliance Order	Engineer
		- Cease and Desist Order	Manager
		- Hearing	Manager
		- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager
2. Permitted discharge (failure to renew permit)	Industry has not submitted completed permit application at least 170 days prior to permit expiration date	- Phone call	Inspector
		- Notice of Violation	Inspector
		- Compliance Order	Engineer

B. PERMIT LIMIT VIOLATIONS

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
1. Exceeds District or Federal Standard (pollutant limit)	Isolated, Not Significant	- Phone call	Inspector
		- Notice of Violation, Resample	Inspector
		- Meeting	Manager, Engineer, Inspector
		- Compliance Order	Engineer
	Isolated, Significant (no harm to POTW or environment)	- Notice of Violation, Resample	Inspector
		- Meeting	Manager, Engineer, Inspector
		- Compliance Order	Engineer
		- Cease and Desist Order with Compliance Time Schedule to develop a prevention plan	Manager
	Isolated, Significant (harm to POTW or environment)	- Compliance Order, Inspection	Engineer, Inspector
		- Cease and Desist Order	Manager
		- Hearing	Manager
		- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager
		- Immediately terminate sewer service	Manager
	Recurring, Not Significant	- Meeting	Manager, Engineer, Inspector
		- Noncompliance Monitoring Program	Engineer
		- Compliance Order	Engineer
		- Cease and Desist Order	Manager
	Recurring, Significant	- Noncompliance Monitoring Program	Engineer
		- Compliance Order	Engineer
		- Cease and Desist Order	Manager
		- Hearing	Manager
		- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager
		- Immediately terminate sewer service	Manager

B. PERMIT LIMIT VIOLATIONS (Continued)

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
2. Exceeds District flow limit	Isolated	- Phone call	Inspector
		- Notice of Violation	Inspector
		- Meeting	Manager, Engineer, Inspector
		- Compliance Order	Engineer
	Recurring, no harm to POTW or environment	- Notice of Violation	Inspector
		- Meeting	Manager, Engineer, Inspector
		- Compliance Order	Engineer
		- Cease and Desist Order	Manager
	Recurring, harm to POTW or	- Compliance Order	Engineer
		- Cease and Desist Order	Manager
		- Hearing	Manager
		- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager
		- Immediately terminate sewer service	Manager

C. MONITORING AND REPORTING PROGRAM VIOLATIONS

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
1. Reporting violation	Report improperly signed or certified	- Phone call - Notice of Violation	Inspector Inspector
	Report improperly signed or certified after notice by POTW	- Notice of Violation - Meeting - Compliance Order - Cease and Desist Order	Inspector Manager, Engineer, Inspector Engineer Manager
	Isolated, Not Significant (e.g., less than 30 days late)	- Phone call - Notice of Violation	Inspector Inspector
	Isolated, Significant (e.g., report 30 days or more late)	- Notice of Violation - Meeting - Compliance Order - Cease and Desist Order	Inspector Manager, Engineer, Inspector Engineer Manager
	Report always late or no reports submitted	- Compliance Order - Cease and Desist Order - Hearing - Civil Action	Engineer Manager Manager Manager, District Counsel, Engineer
	Failure to report spill or changed discharge (no harm to POTW or environment)	- Notice of Violation, Inspection	Inspector
	Failure to report spill or changed discharge (harm to POTW or environment)	- Notice of Violation - Meeting - Compliance Order - Cease and Desist Order - Hearing - Civil Action	Inspector Manager, Engineer, Inspector Engineer Manager Manager Manager, District Counsel, Engineer
	Repeated failure to report spills	- Terminate sewer service - Criminal Investigation	Manager Manager, District Counsel, Engineer

C. MONITORING AND REPORTING PROGRAM VIOLATIONS (Continued)

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
	Falsified report	- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager
2. Failure to monitor correctly	Failure to monitor all pollutants as required by permit	- Phone call	Inspector
		- Notice of Violation	Inspector
	Recurring violation	- Meeting	Manager, Engineer, Inspector
		- Compliance Order	Engineer
		- Cease and Desist Order	Manager
		- Hearing	Manager
		- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate Sewer Service	Manager
3. Improper sampling (incorrect location, sample type, or collection technique)	No evidence of intent	- Notice of Violation	Inspector
		- Inspection	Inspector
		- Meeting	Manager, Engineer, Inspector
	Recurring violation, or Evidence of intent	- Cease and Desist Order	Manager
		- Hearing	Manager
		- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager

D. COMPLIANCE TIME SCHEDULE VIOLATIONS

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
1. Failure to start construction, complete construction, or attain final compliance per Compliance Time Schedule in Permit or Compliance Order	Delay of less than 30 days	- Notice of Violation	Inspector
	Delay of 30 days or more	- Notice of Violation - Meeting - Compliance Order	Inspector Manager, Engineer, Inspector Engineer
	Delay of 60 days or more	- Cease and Desist Order	Manager
	Delay of 90 days or more	- Hearing - Civil Penalties	Manager Manager
	Recurring violation	- Hearing - Civil Action	Manager Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager
2. Other violations of Compliance Time Schedules in Permit or Compliance Order	Delay of less than 30 days or will not affect final milestone	- Notice of Violation	Inspector
	Delay of 30 days or more, or will affect final milestone	- Notice of Violation - Meeting - Compliance Order	Inspector Manager, Engineer, Inspector Engineer
	Delay of 90 days or more	- Compliance Order - Cease and Desist Order	Engineer Manager
	Recurring violation	- Hearing - Civil Action	Manager Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager

D. COMPLIANCE TIME SCHEDULE VIOLATIONS (Continued)

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
3. Violation of Compliance Time Schedule in a Cease and Desist Order		- Hearing	Manager
		- Civil Penalties	Manager
		- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager

E. OTHER PERMIT VIOLATIONS

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
1. Wastestreams are diluted in lieu of treatment	Initial violation	- Notice of Violation	Inspector
		- Inspection	Inspector
		- Meeting	Manager, Engineer, Inspector
		- Compliance Order	Engineer
		- Cease and Desist Order	Manager
	Recurring violation	- Cease & Desist Order	Manager
		- Hearing	Manager
		- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager
2. Failure to mitigate noncompliance or halt production	No harm to POTW or environment	- Phone call	Inspector
		- Notice of Violation	Inspector
	Harm to POTW or environment	- Compliance Order, Inspection	Engineer
		- Cease and Desist Order	Manager
		- Hearing	Manager
		- Civil Action	Manager, District Counsel, Engineer
3. Failure to properly operate and maintain pretreatment or monitoring facilities	No harm to POTW or environment	- Phone call	Inspector
		- Notice of Violation, Inspection	Inspector
	Harm to POTW or environment	- Compliance Order, Inspection	Engineer, Inspector
		- Cease and Desist Order	Manager
		- Hearing	Manager
		- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager

E. OTHER PERMIT VIOLATIONS (Continued)

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
	Recurring violation	- Compliance Order	Engineer
		- Cease & Desist Order	Manager
		- Hearing	Manager
		- Civil Action	Manager, District Counsel, Engineer
		- Criminal Investigation	Manager, District Counsel, Engineer
		- Terminate sewer service	Manager

F. VIOLATIONS DETECTED DURING INSPECTIONS

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
1. Entry denial	Entry denied or consent withdrawn; copies of records denied	- Compliance Order - Obtain warrant and return to Industry	Engineer Inspector
	Recurring violation	- Cease and Desist Order - Hearing - Civil Action - Terminate sewer service	Manager Manager Manager, District Counsel, Engineer Manager
2. Illegal discharge	No harm to POTW or environment	- Notice of Violation - Meeting - Compliance Order - Cease and Desist Order	Inspector Manager, Engineer, Inspector Engineer Manager
	Harm to POTW or environment, evidence of intent/negligence	- Compliance Order - Cease and Desist Order - Hearing - Civil Action - Criminal Investigation - Terminate sewer service - Immediately terminate sewer service	Engineer Manager Manager Manager, District Counsel, Engineer Manager, District Counsel, Engineer Manager Manager
	Recurring violation	- Cease and Desist Order - Hearing - Civil Action - Criminal Investigation - Terminate sewer service	Manager Manager Manager, District Counsel, Engineer Manager, District Counsel, Engineer Manager
3. Improper sampling (incorrect location, sample type, or collection technique)	No evidence of intent	- Notice of Violation	Inspector
	Recurring violation, or evidence of intent	- Compliance Order - Cease and Desist Order - Hearing - Civil Action - Criminal Investigation - Terminate sewer service	Engineer Manager Manager Manager, District Counsel Manager, District Counsel, Engineer Manager

F. VIOLATIONS DETECTED DURING INSPECTIONS (Continued)

NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSE OPTIONS	RESPONSIBLE PERSONNEL
4. Inadequate record-keeping	Files incomplete or missing (no evidence of intent)	- Notice of Violation	Inspector
	Recurring violation	- Meeting - Compliance Order - Cease and Desist Order	Manager, Engineer, Inspector Engineer Manager
5. Failure to report additional monitoring	Additional monitoring records discovered	- Notice of Violation	Inspector
	Recurring violation	- Meeting - Compliance Order - Cease and Desist Order	Manager, Engineer, Inspector Engineer Manager

G. RESPONSE TIMES:

A. All violations shall be identified and documented within ten (10) days of receiving compliance information.

B. Initial enforcement responses [involving contact with the Industry and requesting information on corrective or preventative action(s)] shall occur within 20 days of violation detection.

C. Follow-up actions for continuing or recurring violations shall be taken within 20 days of determination of violation. For continuing violations, the response will include a compliance schedule.

D. Violations which threaten health, property or environmental quality are considered emergencies and shall receive immediate (same day) responses such as requiring Industry to immediately cease discharge or immediate termination of sewer service.

R DOUX COMMUNITY SERVICES DISTI
P. O. BOX 30. * RUBIDOUX, CALIFORNIA 92519 * (7 ., 684-7580

NOTICE OF VIOLATION

USER:_____ PERMIT #:_____

ADDRESS:_____ DATE:_____

_____

ATTENTION:_____

THIS IS TO NOTIFY YOU OF NONCOMPLIANCE WITH THE RUBIDOUX COMMUNITY SERVICES DISTRICT WASTEWATER ORDINANCE 89

OUTFALL #:_____ DATE(S) OF VIOLATION:_____

FAILURE TO:

____Adhere to Pollutant Limitations *(User must collect a repeat sample, have it analyzed for violated constituent(s), and have results submitted to the District within 30 days).*
____Adhere to Flow Limitations *(User must submit a letter of explanation within 14 days).*
____Comply with time schedule *(User must submit written request for time extension within 14 days).*
____Submit required wastewater analyses *(analyses must be submitted within 30 days).*
____Submit periodic monitoring report *(report must be submitted within 14 days).*
____Wastewater flow or water use records (as specified in permit).
____Copies of hazardous waste manifests or statement that no hazardous or liquid wastes were hauled.
____Other information:_____.

____Other: _____
_____
_____

DESCRIPTION: _____
_____
_____
_____
_____

Continued noncompliance will result in escalated enforcement actions, which may include an administrative order with a compliance time schedule. Violation of the terms of an administrative order may result in revocation of wastewater discharge permit, termination of sewer service, civil penalties of up to $1,000 per day per violation, court action, or criminal prosecution.

Significant violators will be included in a list published annually in the largest daily newspaper in the District Service Area. All noncompliant Users are liable to the District for any damages or excess costs, including fines by regulatory agencies, which result from the User's noncompliance.

If you have questions regarding this notice, please call David Scriven with Krieger & Stewart, District Engineer, at (714) 684-6900.

David D. Lopez, Secretary-Manager
by

_____
David F. Scriven
KRIEGER & STEWART
District Engineer

cc: Joe Zoba, RCSD