

**SECOND AMENDMENT TO THE SECOND AMENDED AND RESTATED JOINT
EXERCISE OF POWERS AGREEMENT FOR THE DEVELOPMENT, OPERATION
AND MAINTENANCE OF THE GROUNDWATER REPLENISHMENT
SYSTEM AND THE GREEN ACRES PROJECT**

This Second Amendment to the Second Amended and Restated Joint Exercise of Powers Agreement for the Development, Operation and Maintenance of the Groundwater Replenishment System and the Green Acres Project ("Second Amendment") is entered into by and between the Orange County Water District (the "Water District") and the Orange County Sanitation District (the "Sanitation District"). The Water District and the Sanitation District are sometimes collectively referred to herein as the "Parties," and individually referred to as each "Party." This Second Amendment shall be effective as of the 27th day of March, 2019.

RECITALS

WHEREAS, on November 16, 2016, the Water District and the Sanitation District entered into the Second Amended and Restated Joint Exercise of Powers Agreement for the Development, Operation and Maintenance of the Groundwater Replenishment System and the Green Acres Project ("Agreement") to provide a complete expression of the Parties' respective rights and responsibilities related to the Groundwater Replenishment System ("System") and the operation of the Green Acres Project ("Project"); and

WHEREAS, the Water District is planning to further expand the System, at its own expense, by expanding the production capacity of the Advanced Water Treatment Facilities ("AWTF") and related post-treatment facilities (the "AWTF Final Expansion"). As currently planned, the AWTF Final Expansion will increase the System's production capacity from 100 mgd to 130 mgd. The AWTF Final Expansion was originally estimated to cost approximately one hundred and thirty million dollars (\$130,000,000).

WHEREAS, in order to increase the production capacity of the System to produce 130 mgd after the AWTF Final Expansion is complete, the Water District will require up to 175 mgd of Specification Influent from the Sanitation District. Currently, the Sanitation District provides up to 135 mgd of Specification Influent to the Water District, all of it from the Sanitation District's wastewater treatment facility designated as "Plant 1." Based on current flows and flow projections, specification water from the Sanitation District's wastewater treatment facility designated as "Plant 2" will need to be made available to the AWTF. Five major construction projects on Sanitation District property will be necessary to make this possible: (i) the Plant 2 Headworks Modifications project, at an estimated cost of thirty-eight million dollars (\$38,000,000); (ii) the Plant Water Pump Station Replacement, which is part of the Ocean Outfall System Rehabilitation Project J-117, at an estimated cost of twelve million dollars (\$12,000,000); (iii) the Plant 2 Effluent Pump Station project, at an estimated cost of eighteen million dollars (\$18,000,000); (iv) the Plant 2 Flow Equalization Tank project, at an estimated cost of twenty-three million dollars (\$23,000,000); and (v) the 66" Interplant Pipe Rehabilitation project, at an estimated cost of thirty-seven million dollars (\$37,000,000).

The estimated project costs included in this paragraph are based on SP-173 Effluent Reuse Study and are expected to change during the project design process. These projects are described in more detail in Exhibit "B" of the Agreement.

WHEREAS, the Sanitation District agreed at its own expense, to (i) construct those portions of the Ocean Outfall System Rehabilitation Project J-117 that will replace portions of the Ocean Outfall Booster Station pumping system with a low flow pump station, and (ii) reconfigure the piping at the Plant 2 primary and secondary facilities to allow segregation of non-reclaimable and less desirable wastewater streams from those streams that will ultimately be treated by the System. These projects are currently in the Sanitation District's Capital Improvement Program and will continue to be funded from that source.

WHEREAS, the Parties now wish to further clarify the terms and conditions governing the planning, design, construction, and operation of the System and the Project by the joint venture of the Parties.

AGREEMENT

NOW, THEREFORE, the Parties agree to amend the Second Amended and Restated Joint Exercise of Powers Agreement for the Development, Operation and Maintenance of the Groundwater Replenishment System and the Green Acres Project as follows:

1. The Recitals above are deemed true and correct, are hereby incorporated in this Second Amendment as though fully set forth herein, and the Parties acknowledge and agree that they are bound by the same.

2. Section II of the Agreement is hereby amended to read as follows to reflect additional financial contributions by the Sanitation District and clarify the application of any grant funds received by the Parties and relating to Sanitation District Managed Projects:

“II. Planning, Design, and Construction.

2. AWTF Final Expansion. The Water District shall, at its own expense, plan, design, and construct the AWTF Final Expansion as described in Exhibit B.

3. Sanitation District Managed Projects. The “Sanitation District Managed Projects” shall comprise the Plant 2 Headworks Modification Project and the Plant 2 Water Pump Station Relocation Project as described in subsections 3(a) and 3(b) below.

(a) Plant 2 Headworks Modifications Project. The Sanitation District shall plan, design and construct the Plant 2 Headworks Modifications project as described in Exhibit B. The Sanitation District shall meet and confer with the Water District regarding the design of the Plant 2 Headworks Modifications project prior to its finalization and approval by the Sanitation District. The Sanitation District will provide any necessary support and assistance to the Water District in its efforts to obtain loans

and grants to fund this project. Subject to subsection (c) below, the Water District shall reimburse the Sanitation District for the costs of planning, designing, and constructing the Plant 2 Headworks Modification project. Without limiting the foregoing, the Water District shall reimburse the Sanitation District for the costs of the design contract(s), the construction contract(s), and Sanitation District staff time spent on the Plant 2 Headworks Modification project (total salary and benefits, pro-rated based on hours worked). The Sanitation District shall send an invoice to the Water District quarterly, which the Water District shall pay within 60 days of receipt.

(b) Plant 2 Plant Water Pump Station Relocation Project. The Sanitation District shall plan, design and construct the relocation of the Plant 2 Plant Water Pump Station project as described in Exhibit B. The Plant 2 Plant Water Pump Station project shall be constructed as a part of Sanitation District's existing project Ocean Outfall System Rehabilitation, Project J-117 for efficiency and coordination purposes. The Sanitation District shall meet and confer with the Water District regarding the design of the Plant 2 Plant Water Pump Station Relocation project prior to its finalization and approval by the Sanitation District. The Sanitation District will provide any necessary support and assistance to the Water District in its efforts to obtain loans and grants to fund the Plant 2 Plant Water Pump Station project. Subject to subsection (c) below, the Water District shall reimburse the Sanitation District for the costs of planning, designing, and constructing the Plant 2 Plant Water Pump Station project. Without limiting the foregoing, the Water District shall reimburse the Sanitation District for the costs of the design contract(s), the construction contract(s), and Sanitation District staff time spent on the Plant 2 Plant Water Pump Station Relocation Project (total salary and benefits, pro-rated based on hours worked). The Sanitation District shall send an invoice to the Water District quarterly, which the Water District shall pay within 60 days of receipt.

(c) Sanitation District Managed Projects Reimbursement. The Water District agrees to contribute to the portions of the System identified in the above sections 3(a) and (b) in an amount not to exceed fifty million dollars (\$50,000,000).

(d) Grant Funding. In the event that the cost of the Sanitation District Managed Projects exceeds the amount provided in section 3(c), any grant funding received by the Parties and relating to the Sanitation District Managed Projects, will first be applied to the cost of the Sanitation District Managed Projects described in this section.

4. Other Projects. The Water District shall plan, design, and construct, at its own expense, the Plant 2 Effluent Pump Station project, the Plant 2 Flow Equalization Tank project, and the 66" Interplant Pipe Rehabilitation project, all as described in Exhibit B. The Water District shall meet and confer with the Sanitation District regarding the design of these facilities prior to the finalization and approval of the design of these facilities.

5. CEQA Review. The Parties acknowledge that the Water District has assumed the role of the lead agency under the California Environmental Quality Act ("CEQA") for *the System's Final Expansion*, including the construction and operation of the AWTF Final Expansion, the Plant 2 Headworks Modifications project, the Plant 2 Plant Water Pump Station Relocation project, the Plant 2 Effluent Pump Station project, the Plant 2 Flow Equalization Tank project, and the 66" Interplant Pipe Rehabilitation project, and at its expense has taken all actions required by CEQA for the construction and operation of these facilities, and the System. "

3. Section III, Paragraph 11 of the Agreement is hereby amended to add section 11.5 to read as follows to allow the Sanitation District's emergency use of the 66" Interplant Pipe leased to the Water District:

"11.5. Sanitation District Use of 66" Interplant Pipe in the Event of Emergency. The Sanitation District shall allow the Water District to operate and use those portions of the 66" Interplant Pipe depicted in Exhibit C3, a copy of which is attached hereto and incorporated herein by reference, in accordance with section 13 of the Agreement. However, in the event of an emergency, which includes, but is not limited to, situations when the Sanitation District needs to discharge secondary effluent from its Plant 1 facility to its ocean outfall system in an amount greater than the available online capacity of its interplant pipelines, the Sanitation District shall be allowed to use the 66" Interplant Pipe upon written notice to the Water District and receipt of the Water District's concurrence prior to any emergency usage of the 66" Interplant Pipe."

4. Section IV, Paragraph 14 of the Agreement is hereby amended to read as follows to clarify the Sanitation District's Operations and Maintenance Obligations:

"14. Operation and Maintenance. The Parties agree to maintain and operate the equipment and facilities associated with the System and Project as described herein. The equipment and facilities identified in the following subsections are depicted in Exhibits C, C1, C2, C3, E, and E1, copies of which are attached hereto and incorporated herein by reference.

(a) Water District Operation and Maintenance. The Water District shall, at its sole cost and expense, provide, or cause to be provided, all tools, equipment, vehicles, materials, supplies and qualified personnel necessary to operate and maintain the following equipment and facilities: screening facilities located on Sanitation District property, feed pipelines to the AWTF located on Sanitation District property, the AWTF, the GWRs Pipeline, the GAP Influent Pump Station, the seawater barrier injection wells, the Plant 2 Effluent Pump Station, the Plant 2 Flow Equalization Tank, the 66" Interplant Pipe Rehabilitation, and all other System facilities constructed within Plant 2 pursuant to this Agreement except as described in subsection (b) below.

(b) Sanitation District Operation and Maintenance. Notwithstanding subsection (a), the Water District shall not be obligated to operate or maintain the following equipment and facilities located on Sanitation District property: Plant 2 Headworks and Plant Water Pump Station facilities, GWRs Diversion and Weir Box, the two buried isolation butterfly valves on the 66" Interplant Pipe, the Sanitation District's

trickling filters, Steve Anderson Lift Station, *and* related diversion facilities within Sanitation District property.

(c) Transfer of Ownership. The Sanitation District hereby transfers ownership, operation and maintenance responsibilities for the Plant 1 trickling filter meter, valves, vault, and appurtenances on the Sanitation District property to the Water District, excluding the underlying property rights, as part of this Agreement. The Water District shall have the same rights to, and responsibilities for, the transferred facilities, which are depicted in Exhibit C1 attached hereto, as the other Water District facilities on Sanitation District property. “

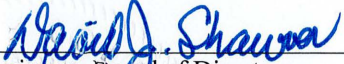
5. Agreement Exhibits “C” and “E” are hereby updated to reflect existing conditions and the terms of this Second Amendment. Revised versions of Exhibits “C” and “E” are attached hereto and are deemed to be attached to and incorporated in the Agreement by this reference.

6. Except as expressly provided herein, each and all of the terms and provisions of the Agreement shall remain in full force and effect.

7. This Second Amendment may be executed in one or more counterparts, all of which shall be considered one and the same agreement.


IN WITNESS WHEREOF, intending to be legally bound, the Parties hereto have caused this Second Amendment to be signed by the duly authorized representatives as of the day and year last signed below.

Orange County Sanitation District


Chairman, Board of Directors

3/27/19

Date


Clerk of the Board

3/27/19

Date

Orange County Water District



President, Board of Directors

Date


Clerk of the Board

Date

Approved as to Form:


Brad Hogin, General Counsel

Approved as to Form:


Joel Kuperberg, General Counsel

Exhibit B

Final Expansion Projects on Sanitation District Property

In order to produce 130 mgd of purified water for the Groundwater Replenishment System (GWRS) Final Expansion project, Orange County Water District (OCWD) will require up to 174 mgd of secondary effluent from the Orange County Sanitation District (SANITATION DISTRICT). Currently, the SANITATION DISTRICT provides up to 135 mgd of secondary effluent to OCWD, all of it from Plant 1. The balance of secondary effluent needed for the Advanced Water Treatment Facilities (AWTF) Final Expansion will come from SANITATION DISTRICT's Plant 2. Four major construction projects on SANITATION DISTRICT property will be necessary to make this possible:

1. Plant 2 Modification Projects

Currently, SANITATION DISTRICT Plant 2 receives domestic wastewater from the coastal and central Orange County trunk lines. In addition to the domestic wastewater, Plant 2 also receives flows from the Inland Empire Brine Line. The Inland Empire Brine Line, which is also known as the Santa Ana Regional Interceptor (SARI) pipeline, accepts brine wastes from utilities and industries in the Santa Ana Watershed. This water contains brine, concentrated waste streams, and effluent from the Stringfellow site in Riverside County and is currently not allowed to be used as source water for recycling through the AWTF by the Division of Drinking Water permit to operate GWRS.

This project will modify the existing SANITATION DISTRICT Plant 2 Headworks to dedicate the portion of south of the Headworks to reclaimable flows and the portion of north to SARI and sidestream flows. Each side of the Headworks will be isolated from each other by the installation of automated isolation gates at key locations. A new 72-inch pipeline will be constructed to bypass the SARI and sidestream flows around the existing screen influent channel to a segregated location upstream of the existing bar screens. This project will also reroute other sidestreams within Plant 2.

The Headworks Modifications Project will also relocate the existing Plant Water Pump Station, which takes its source water from the Activated Sludge treatment process and 144" SE pipe. After the Final Expansion of the GWRS, the Activated Sludge (AS) treatment process will be dedicated to the treatment of SARI and sidestream flows. Also, the 144" SE pipe will mainly contain brine from the GWRS reverse osmosis process. Therefore, the existing Plant Water Pump Station will be relocated to a location more suitable for receiving secondary effluent from the Trickling Filter-Solids Contact (TF-SC) treatment process, which will be used to treat domestic wastewater.

2. Plant 2 Effluent Pump Station Project

This project will construct the Plant 2 Effluent Pump Station to send approximately 40 - 85 MGD of secondary effluent from SANITATION DISTRICT Plant 2 TF-SC process to the GWRS facility.

The preliminary pump station layout is estimated to be approximately 47-feet by 100-feet with a four duty and one standby pump configuration. The five (5) pumps will be 500 HP vertical turbine pumps. The Plant 2 Effluent Pump Station will take secondary effluent from the 120-inch TF-SE pipeline and boost this flow into a new conveyance pipeline to GWRS.

3. Plant 2 Flow Equalization Tanks Project

Two 3 MG above-grade flow equalization tanks will be constructed to equalize secondary effluent being pumped from Plant 2 to Plant 1. The Plant 2 Effluent Pump Station will be filling these equalization tanks during peak flows and pumping the remaining TF-SC effluent to GWRS. There is a weir box and diversion box required to divert the TF-SC effluent to the pump station, the tanks and ultimately GWRS.

4. 66" Interplant Pipe Rehabilitation Project

SANITATION DISTRICT owns an existing unused 66-inch gravity reinforced concrete pipeline (RCP) that connects Plant 2 to Plant 1. This pipeline was constructed prior to 1965 and is no longer in service. The pipeline alignment is approximately 3.6 miles from Plant 2 to Plant 1. The SANITATION DISTRICT has surveyed the interior of this pipeline and determined that the pipeline is no longer usable with exposed rebar and deteriorating manholes.

For the conveyance of secondary effluent from Plant 2 to the GWRS facility, SANITATION DISTRICT will allow OCWD to use the 66-inch existing pipeline and construction easement. In order to convert this aging gravity RCP into a pressure pipeline to convey the effluent pump station discharge, it will be rehabilitated by slip-lining a smaller diameter (either Reinforced Fiberglass Pipe (FRP) or High-Density Polyethylene (HDPE) pipe) within the existing 66-inch pipeline. The new pipeline will be connected on the south to the Plant 2 Effluent Pump Station and to the north to the GWRS screening facility.

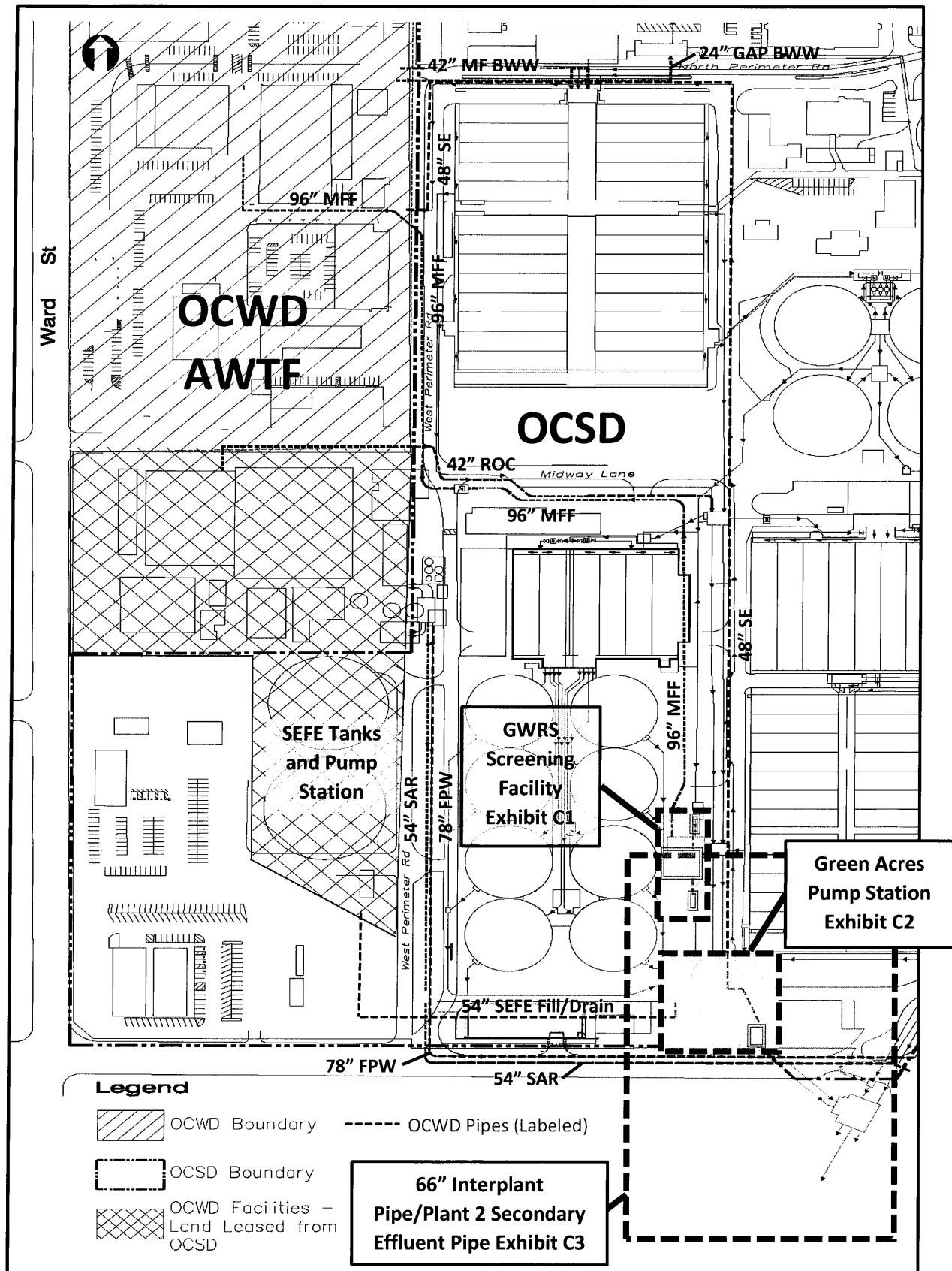


Exhibit C

Lease of Property – Plant 1

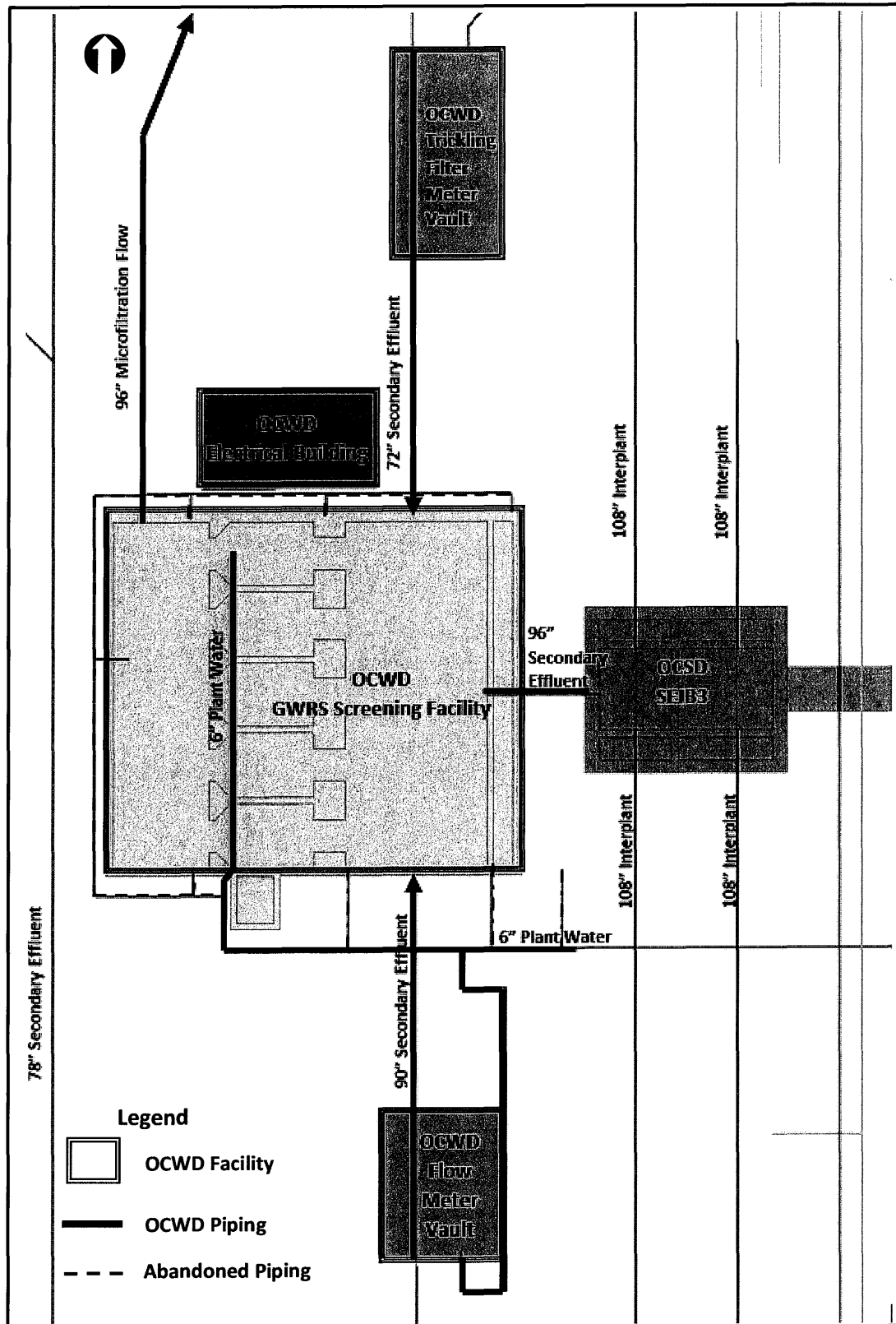


Exhibit C1

Water District Facilities on Sanitation District Property
GWRs Screening Facility

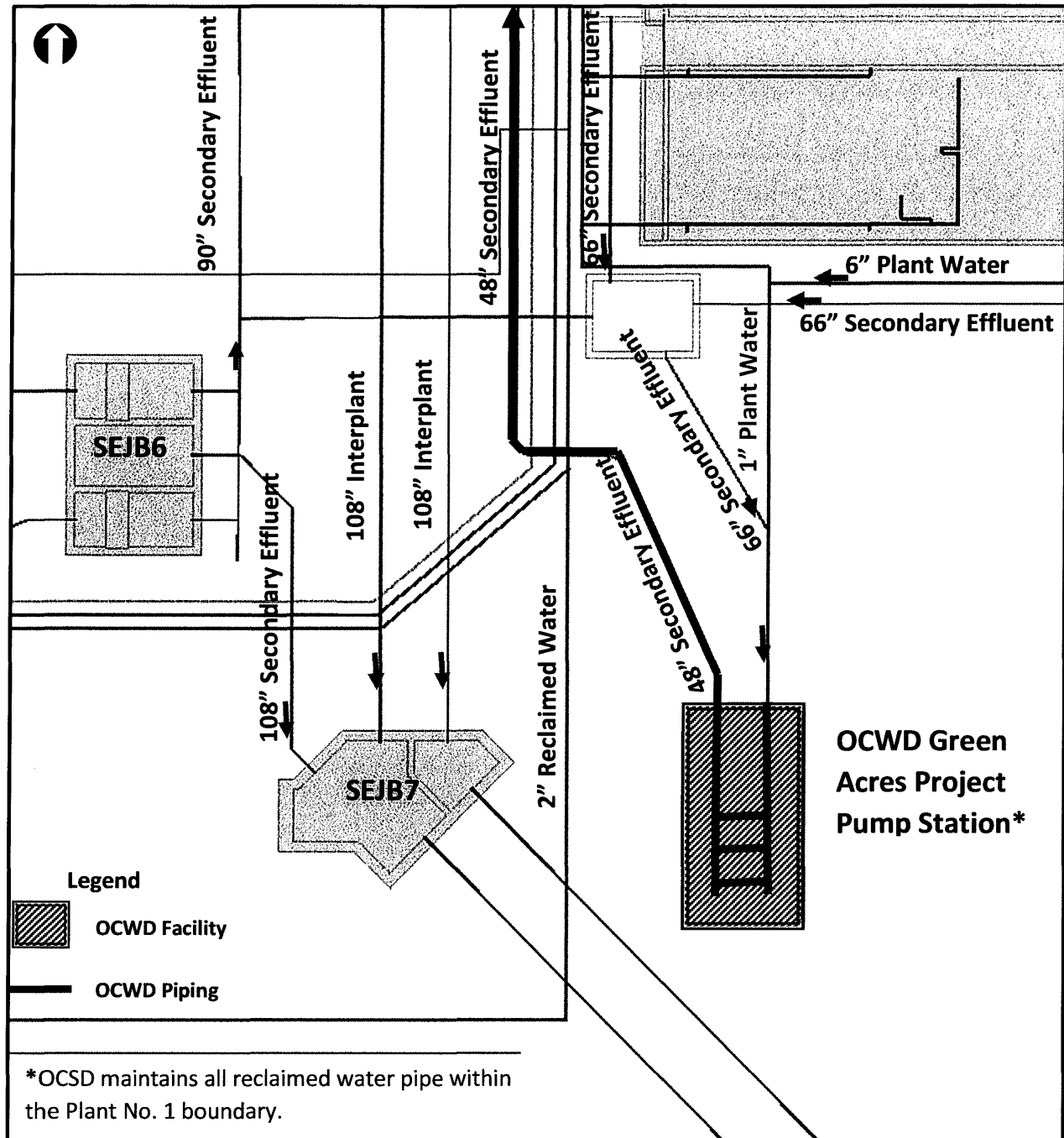


Exhibit C2

Water District Facilities on Sanitation District Property Green Acres Project Pump Station

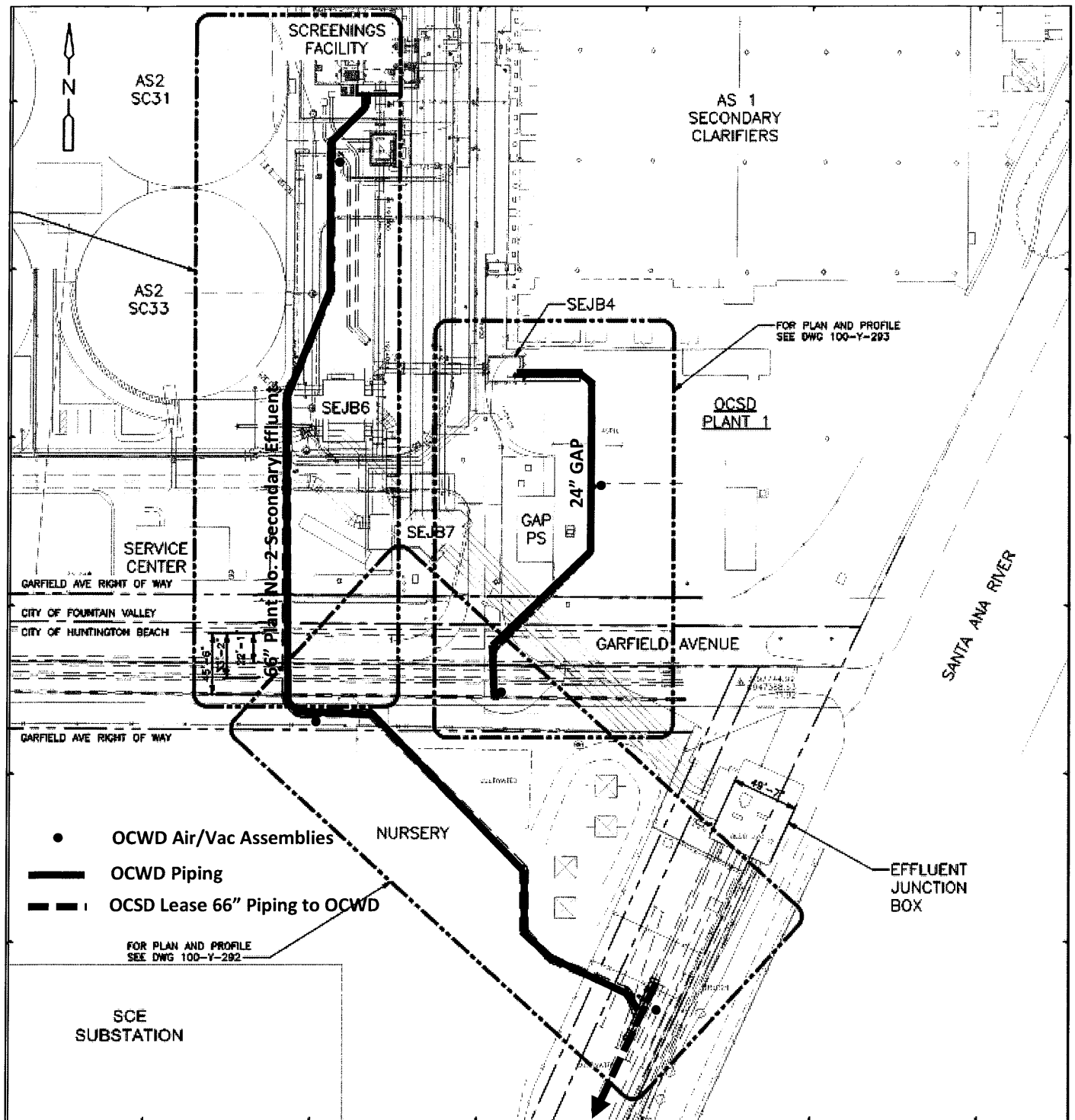


Exhibit C3

Water District Facilities on Sanitation District Property
66" Interplant Pipe/Plant 2 Secondary Effluent Pipe



Exhibit E

Lease of Property – Plant 2

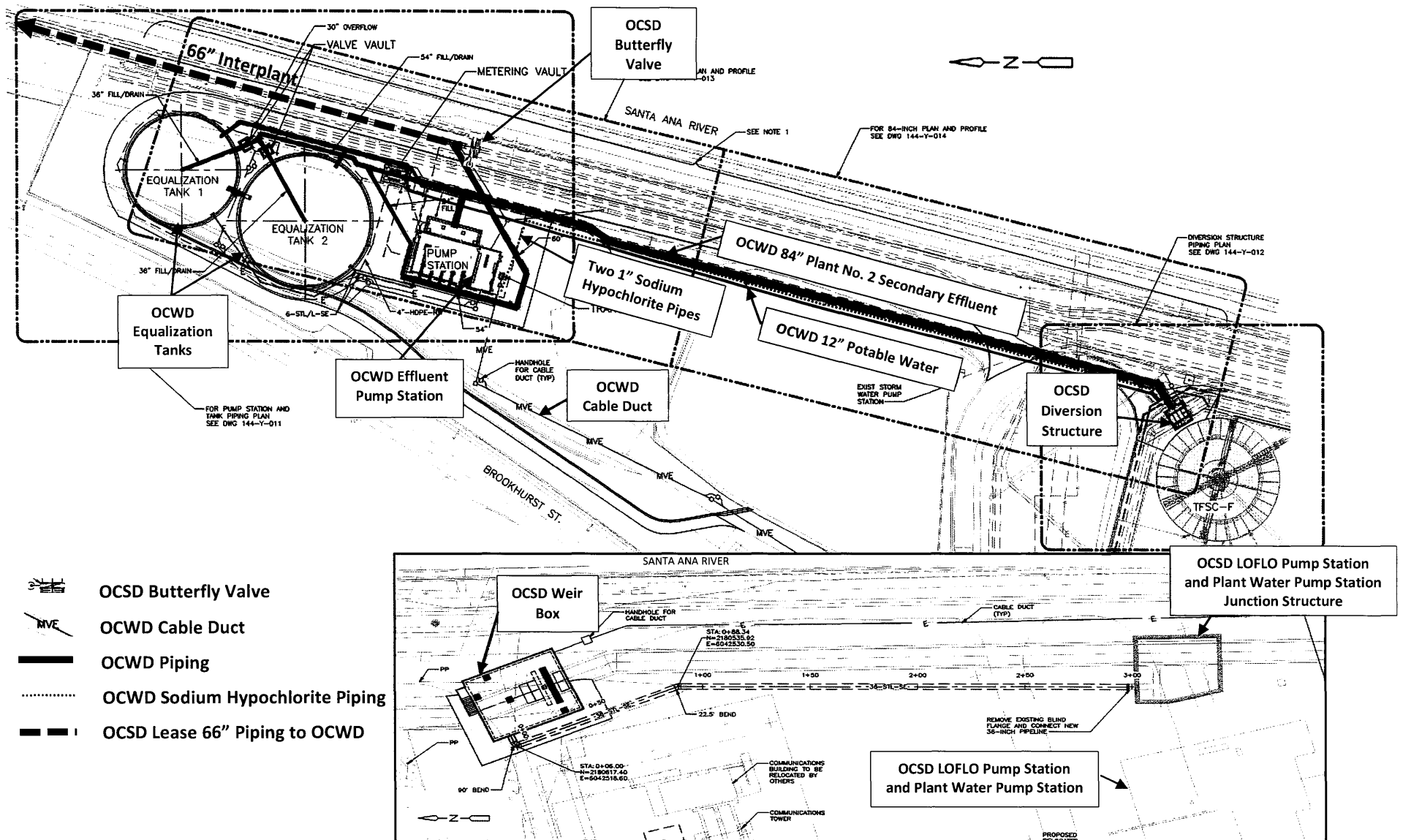


Exhibit E1

Water District Facilities on Sanitation District Plant No. 2 Property

Effluent Pump Station and Equalization Tanks