

**AGENDA
IRVINE RANCH WATER DISTRICT
BOARD OF DIRECTORS
REGULAR MEETING**

July 22, 2019

PLEDGE OF ALLEGIANCE

CALL TO ORDER 5:00 p.m., Board Room, District Office
15600 Sand Canyon Avenue, Irvine, California

ROLL CALL Directors Reinhart, Matheis, Swan, and Withers and President LaMar

NOTICE

If you wish to address the Board on any item, including Consent Calendar items, please file your name with the Secretary. Forms are provided on the lobby table. Remarks are limited to three minutes per speaker on each subject. Consent Calendar items will be acted upon by one motion, without discussion, unless a request is made for specific items to be removed from the Calendar for separate action.

COMMUNICATIONS TO THE BOARD

1. A. Written:
- B. Oral:
2. ITEMS RECEIVED TOO LATE TO BE AGENDIZED
 Recommendation: Determine the need to discuss and/or take immediate action on item(s).

PUBLIC HEARING

Resolution No. 2019-24

3. SEWER TAXES IN THE IRWD NEWPORT NORTH AREA
 - a. Recommendation: Open the hearing.
 - b. Inquire of the Secretary how the hearing was noticed.
 - c. Receive and file the affidavit of posting and proof of publication.
 - d. Request legal counsel to describe the nature of the proceedings.
 - e. Inquire of the Secretary if there have been any written communications.
 - f. Inquire whether there is are any individuals who wish to speak regarding the proposed collection of sewer charges on the tax roll in the IRWD Newport North area.
 - g. Inquire of the Board if it has any comments or questions.
 - h. Close the hearing, and
 - i. Adopt a resolution by title.

Reso No. 2019-

CONSENT CALENDAR

Items 4-12

4. RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS

Recommendation: That the Board ratify/approve the meetings and events for Steve LaMar, Mary Aileen Matheis, Doug Reinhart, Peer Swan, and John Withers, as described.

5. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the July 8, 2019 Regular Board meeting be approved as presented.

6. MAY 2019 TREASURY REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report, the Summary of Fixed and Variable Rate Debt, and Disclosure Report of Reimbursements to Board members and staff; approve the June 2019 Summary of Payroll ACH payments in the total amount of \$\$2,014,590 and approve the June 2019 accounts payable Disbursement Summary of warrants 399226 through 400140, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$18,886,468.

7. IRVINE RANCH WATER DISTRICT STRATEGIC MEASURES DASHBOARD

Recommendation: Receive and file.

8. 2019 LEGISLATIVE AND REGULATORY UPDATE

Recommendation: That the Board adopt a "Watch" position on AB 217 (Garcia).

9. 2018-19 ORANGE COUNTY GRAND JURY REPORT RESPONSE TO "RE-OPENING TO IRVINE LAKE – A WIN-WIN FOR TAXPAYERS AND OUTDOOR ENTHUSIASTS

Recommendation: That the Board authorize the General Manager to provide the Presiding Judge of the Superior Court with the proposed response to Finding F4, Finding F5, Finding F6, Recommendation R4, and Recommendation R5 of the 2018-2019 Orange County Grand Jury report entitled "*Re-Opening Irvine Lake – A Win-Win for Taxpayers and Outdoor Enthusiasts.*"

CONSENT CALENDAR

Items 4-12

10. IRWD 2019 PROJECT MANUAL

Recommendation: That the Board adopt a resolution subject to non-substantive changes rescinding Resolution No. 2015-6 and revising Standard Form Construction Contract Documents

Reso. No. 2019-

11. 2019 VAULT LID REPLACEMENT CONSULTANT SELECTION

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement in the amount \$137,867 with RCE Consultants to provide engineering services for the 2019 Vault Rehabilitation, Project 10542.

12. FIRST AMENDMENT OF AMENDED AND RESTATED ENERGY MANAGEMENT SERVICES AGREEMENT WITH HYBRID-ELECTRIC

Recommendation: That the Board authorize the General Manager to execute the First Amendment of Amended and Restated Energy Management Services Agreement (DRES Portfolio B) with Hybrid-Electric Building Technologies West Los Angeles 1, Llc, (as assignee Hybrid-Electric Building Technologies West Los Angeles 2, LLC, a Delaware Limited Liability Company.

ACTION CALENDAR

13. CONSTRUCTION INSPECTION SERVICES AGREEMENTS

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with NV5 in the amount of \$1,332,800 for construction inspection services for two inspectors for a two-year period.

14. 2019 SHORT-TERM WATER EXCHANGE PROGRAM WITH CENTRAL COAST WATER AUTHORITY

Recommendation: That the Board authorize the General Manager to execute the Letter Agreement for a 2019 Short-Term Water Exchange Program with Central Coast Water Authority subject to substantive changes approved by the Supply Reliability Programs Committee and Special Legal Counsel.

15. SYPHON RESERVOIR IMPROVEMENTS PROJECT GEOTECHNICAL INVESTIGATION SERVICES CONSULTANT SELECTION

Recommendation: That the Board approve an Expenditure Authorization in the amount of \$2,500,000, and authorize the General Manager to execute a Professional Services Agreement with AECOM Technical Services, Inc. in the amount of \$2,388,838 for geotechnical investigation services for the Syphon Reservoir Improvements, Project 03808.

ACTION CALENDAR

16. JOINT POWERS AUTHORITY AGREEMENT FOR THE KERN FAN GROUNDWATER STORAGE PROJECT

Recommendation: That the Board authorize the General Manager to execute the Joint Powers Agreement between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District creating the Kern Fan Joint Powers Authority to develop and administer a Kern Fan Groundwater Storage Project subject to non-substantive changes and the General Manager's determination that reasonable assurances are in place that necessary agreements with the State of California related to the Kern Fan Project are feasible.

OTHER BUSINESS

Pursuant to Government Code Section 54954.2, members of the Board of Directors or staff may ask questions for clarification, make brief announcements, and make brief reports on his/her own activities. The Board or a Board member may provide a reference to staff or other resources for factual information, request staff to report back at a subsequent meeting concerning any matter, or direct staff to place a matter of business on a future agenda. Such matters may be brought up under the General Manager's Report or Directors' Comments.

- 17. General Manager's Report
- 18. Directors' Comments
- 19. Receive oral update(s) from District liaison(s) regarding communities within IRWD's service area and provide information on relevant community events.
- 19. Adjourn

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Irvine Ranch Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Board Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance to the Board of Directors Room of the District Office. The Irvine Ranch Water District Board Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5300 during business hours at least seventy-two (72) hours prior to the scheduled meeting. This agenda can be obtained in alternative format upon written request to the District Secretary at least seventy-two (72) hours prior to the scheduled meeting.

July 22, 2019
Prepared by: C. Carter / E. Lin
Submitted by: C. Clary
Approved by: Paul A. Cook



PUBLIC HEARING

SEWER CHARGES IN THE IRWD NEWPORT NORTH AREA

SUMMARY:

On June 24, 2019, the Board adopted Rates and Charges for Fiscal Year 2019-20, which included monthly sewer charges of \$26.10 for a residential single family home and \$19.55 per unit for multiple family dwelling units. IRWD's Newport North customers will have the same rate, but the method of collection differs in that they pay their sewer fees on an annual basis by means of the County tax rolls.

By adoption of Resolution No. 1987-45, the IRWD Board of Directors elected to have sewer charges for certain parcels of land located in the Newport North area collected on the tax roll together with IRWD's general taxes. That resolution directs the filing of a report containing a description of such parcels and the corresponding charges for each fiscal year. Pursuant to the requirements of the Health and Safety Code of the State of California, a public hearing on the report is required. The District Secretary has noticed a hearing for this meeting for objections or protests to the report, if any.

OUTLINE OF PROCEEDINGS

President: Declare this to be the time and place for a hearing on the sewer charge report for the Newport North area, and declare the hearing open. Ask the Secretary how the hearing was noticed.

Secretary: The report was filed with the Secretary on July 5, 2019 and notice of the filing of the report and the time and place of this hearing was published in the Newport Beach-Costa Mesa Daily Pilot on July 6 and July 13, 2019. A notice was also posted in the District office on July 5, 2019.

Board: RECOMMENDED MOTION: "RECEIVE AND FILE THE AFFIDAVIT OF POSTING AND THE PROOF OF PUBLICATION PRESENTED BY THE SECRETARY."

President: Request Legal Counsel to describe the nature of the proceedings.

Legal

Counsel: A public hearing on the sewer charge report is an annual requirement of the Health and Safety Code, Section 5473 in order to collect the sewer charges on the tax roll.

President: Inquire of the Secretary whether there have been any written communications.

President: Inquire whether there is anyone present who wishes to address the Board regarding the proposed collection of sewer charges on the tax roll.

President: Inquire whether there are any comments or questions from members of the Board of Directors. State that the hearing will be closed.

Board: RECOMMENDED MOTION: THAT THE HEARING BE CLOSED AND THAT THE FOLLOWING RESOLUTION BE ADOPTED BY TITLE:

RESOLUTION NO. 2019 -

RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT ADOPTING THE
SEWER CHARGE REPORT AND AUTHORIZING COLLECTION OF SEWER CHARGES
ON THE TAX ROLL FOR THE IRWD NEWPORT NORTH AREA

FISCAL IMPACTS:

The sewer rates charged in Newport North are the same as any other area within IRWD, and therefore will be set at the equivalent of \$26.10 per month for residential single family home and \$19.55 per month for multiple family dwelling units for a total FY 2019-20 assessment of \$313.20 or \$234.60. Only the means of collection is different for IRWD's customers in Newport North.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act Code of Regulations, Title 14, Chapter 3, Section 15378.

FISCAL IMPACTS:

None.

COMMITTEE STATUS:

This is a routine annual item for Board consideration and was not reviewed by a Committee.

LIST OF EXHIBITS:

Exhibit "A" – Orange County Special Assessment Report
Exhibit "B" – IRWD Resolution

Exhibit "A"

**Irvine Ranch Water District
Orange County Special Assessment Report
Fiscal Year 2019/2020**

<u>Parcel #</u>	<u>Amount</u>	<u>Parcel #</u>	<u>Amount</u>	<u>Parcel #</u>	<u>Amount</u>	<u>Parcel #</u>	<u>Amount</u>	<u>Parcel #</u>	<u>Amount</u>	<u>Parcel #</u>	<u>Amount</u>
42734202	313.20	44204208	133,722.00	44204210	313.20	44205210	469.20	44205401	313.20	44205402	313.20
44205403	313.20	44205404	313.20	44205405	313.20	44205406	313.20	44205407	313.20	44205408	313.20
44205409	313.20	44205410	313.20	44205411	313.20	44205412	313.20	44205413	313.20	44205414	313.20
44205415	313.20	44205416	313.20	44205417	313.20	44205418	313.20	44205419	313.20	44205420	313.20
44205421	313.20	44205422	313.20	44205423	313.20	44205424	313.20	44205425	313.20	44205426	313.20
44205427	313.20	44205428	313.20	44205429	313.20	44205430	313.20	44205431	313.20	44205432	313.20
44205433	313.20	44205434	313.20	44205435	313.20	44205436	313.20	44205437	313.20	44205438	313.20
44205439	313.20	44205440	313.20	44205441	313.20	44205442	313.20	44205443	313.20	44205444	313.20
44205445	313.20	44205446	313.20	44205447	313.20	44205448	313.20	44205449	313.20	44205450	313.20
44205451	313.20	44205452	313.20	44205453	313.20	44205454	313.20	44205455	313.20	44205456	313.20
44205457	313.20	44205458	313.20	44205459	313.20	44205460	313.20	44205461	313.20	44205501	313.20
44205502	313.20	44205503	313.20	44205504	313.20	44205505	313.20	44205506	313.20	44205507	313.20
44205508	313.20	44205509	313.20	44205510	313.20	44205511	313.20	44205512	313.20	44205513	313.20
44205514	313.20	44205515	313.20	44205516	313.20	44205517	313.20	44205518	313.20	44205519	313.20
44205520	313.20	44205521	313.20	44205522	313.20	44205523	313.20	44205524	313.20	44205525	313.20
44205526	313.20	44205527	313.20	44205528	313.20	44205529	313.20	44205530	313.20	44205531	313.20
44205532	313.20	44205533	313.20	44205534	313.20	44205535	313.20	44205536	313.20	44205537	313.20
44205538	313.20	44205539	313.20	44205540	313.20	44205541	313.20	44205542	313.20	44205543	313.20
44205544	313.20	44205545	313.20	44205546	313.20	44205547	313.20	44205548	313.20	44205549	313.20
44205550	313.20	44205551	313.20	44205552	313.20	44205553	313.20	44205554	313.20	44205555	313.20
44205556	313.20	44205557	313.20	44205601	313.20	44205602	313.20	44205603	313.20	44205604	313.20
44205605	313.20	44205606	313.20	44205607	313.20	44205608	313.20	44205609	313.20	44205610	313.20
44205611	313.20	44205612	313.20	44205613	313.20	44205614	313.20	44205615	313.20	44205616	313.20
44205617	313.20	44205618	313.20	44205619	313.20	44205620	313.20	44205621	313.20	44205622	313.20
44205623	313.20	44205624	313.20	44205625	313.20	44205626	313.20	44205627	313.20	44205628	313.20
44205629	313.20	44205630	313.20	44205631	313.20	44205632	313.20	44205633	313.20	44205634	313.20
44205635	313.20	44205636	313.20	44205637	313.20	44205638	313.20	44205639	313.20	44205640	313.20
44205641	313.20	44206115	70,380.00	44228201	313.20	44231169	313.20	93180614	313.20	93180615	313.20
93180616	313.20	93180617	313.20	93180618	313.20	93180619	313.20	93180620	313.20	93180621	313.20
93180622	313.20	93180623	313.20	93180624	313.20	93180625	313.20	93180626	313.20	93180627	313.20
93180628	313.20	93180629	313.20	93180630	313.20	93180631	313.20	93180632	313.20	93180633	313.20

93180634	313.20	93180635	313.20	93180636	313.20	93180637	313.20	93180638	313.20	93180639	313.20
93180640	313.20	93180641	313.20	93180642	313.20	93180643	313.20	93180644	313.20	93180645	313.20
93180646	313.20	93180647	313.20	93180648	313.20	93180649	313.20	93180650	313.20	93180651	313.20
93180652	313.20	93180653	313.20	93180654	313.20	93180655	313.20	93180656	313.20	93180657	313.20
93180658	313.20	93180659	313.20	93180660	313.20	93180661	313.20	93180662	313.20	93180663	313.20
93180664	313.20	93180665	313.20	93180666	313.20	93180667	313.20	93180668	313.20	93180669	313.20
93180670	313.20	93180671	313.20	93180672	313.20	93180673	313.20	93180674	313.20	93180675	313.20
93180676	313.20	93180677	313.20	93180678	313.20	93180679	313.20	93180680	313.20	93180681	313.20
93180682	313.20	93180683	313.20	93180684	313.20	93180685	313.20	93180686	313.20	93180687	313.20
93180688	313.20	93180689	313.20	93180690	313.20	93180691	313.20	93180692	313.20	93180693	313.20
93180694	313.20	93180695	313.20	93180696	313.20	93180697	313.20	93180698	313.20	93180699	313.20
93180700	313.20	93180701	313.20	93180702	313.20	93180703	313.20	93180704	313.20	93180705	313.20
93180706	313.20	93180707	313.20	93180708	313.20	93180709	313.20	93180710	313.20	93180711	313.20
93180712	313.20	93180713	313.20	93180714	313.20	93180715	313.20	93180716	313.20	93180717	313.20
93180718	313.20	93180719	313.20	93180720	313.20	93180721	313.20	93180722	313.20	93180723	313.20
93180724	313.20	93180725	313.20	93180726	313.20	93180727	313.20	93180728	313.20	93180729	313.20
93180730	313.20	93180731	313.20	93180732	313.20	93180733	313.20				

Total Parcels: 286
Total Assessment Amount: 293,206.80

EXHIBIT "B"

RESOLUTION NO. 2019-

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT ADOPTING THE
SEWER CHARGE REPORT AND AUTHORIZING COLLECTION
OF SEWER CHARGES ON THE TAX ROLL FOR THE
IRWD NEWPORT NORTH AREA

Resolution No. 1987-45 adopted August 10, 1987, the Board of Directors of Irvine Ranch Water District ("IRWD") elected to have sewer charges for certain parcels collected on the tax roll each year in the same manner, by the same persons, and at the same time as, together with and not separately from, its general taxes, pursuant to Section 5473 et seq. of the California Health and Safety Code.

Pursuant to said Resolution, a report has been filed with the Secretary containing a description of such parcels and the corresponding charges for fiscal year 2019-20 and notice was given as required by law of a hearing on the report to be held on Monday, the 22nd day of July, 2019, at 5:00 p.m. (or as soon thereafter as is reasonably practicable) in the Board of Directors meeting room of IRWD, 15600 Sand Canyon Avenue, Irvine, California.

The duly noticed public hearing was held and all persons interested were given an opportunity to be heard concerning the report and to submit any objections or protests to the report.

The Board of Directors of IRWD does hereby RESOLVE, DETERMINE and ORDER as follows:

Section 1. The Board of Directors hereby determines that protests to the report were not made by the owners of a majority of separate parcels of property described in the report.

Section 2. The Board of Directors hereby adopts the report containing a description of the parcels for which charges for sewer service shall be collected on the tax roll and containing the amount of the charges for each parcel for the fiscal year 2019-20, computed in conformity with the schedule of rates and charges adopted by Resolution No. 2019-___. The report is attached as Exhibit "A" and incorporated herein by this reference. Each charge set forth in Exhibit "A" is hereby determined to be adopted.

Section 3. The Secretary is hereby authorized and directed to endorse on the report a statement that the report was adopted by this Board on July 22, 2019, and to take whatever other action is required by the Auditor of the County of Orange in regard thereto in order to place the charges on the tax roll for the parcels described in the report.

Section 4. The Secretary is hereby authorized and directed to file a copy of such report with the Auditor of the County of Orange.

APPROVED, SIGNED and ADOPTED this 22nd day of July, 2019.

President, IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

Secretary, IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

APPROVED AS TO FORM;
Claire Hervey Collins
Lewis Brisbois Bisgaard & Smith LLP

By _____

July 22, 2019
Prepared and
submitted by: K. Swan
Approved by: Paul A. Cook



CONSENT CALENDAR

RATIFY/APPROVE BOARD OF DIRECTORS'
ATTENDANCE AT MEETINGS AND EVENTS

SUMMARY:

Pursuant to Resolution 2006-29 adopted on August 28, 2006, approval of attendance of the following events and meetings are required by the Board of Directors.

Events/Meetings

Steven LaMar

July 22 Monthly Discussion of District Activities with the General Manager
July 22 Community Leader Water Briefing with Congressman Harley Rouda
August 6 Monthly Discussion of District Activities with the General Manager
December 1 – 6 Association of California Water Agencies 2019 Fall Conference, San Diego

Mary Aileen Matheis

July 22 Community Leader Water Briefing with Congressman Harley Rouda
December 2 – 6 Association of California Water Agencies 2019 Fall Conference, San Diego

Doug Reinhart

December 3 – 6 Association of California Water Agencies 2019 Fall Conference, San Diego

Peer Swan

December 2 – 6 Association of California Water Agencies 2019 Fall Conference, San Diego

John Withers

July 17 Orange County Water Association Monthly Meeting & Luncheon
July 22 Community Leader Water Briefing with Congressman Harley Rouda
December 3 – 6 Association of California Water Agencies 2019 Fall Conference, San Diego

RECOMMENDATION:

THAT THE BOARD RATIFY/APPROVE THE MEETINGS AND EVENTS FOR STEVEN LAMAR, MARY AILEEN MATHEIS, DOUG REINHART, PEER SWAN, AND JOHN WITHERS AS DESCRIBED HEREIN.

LIST OF EXHIBITS:

None.

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July 22, 2019
Prepared and
Submitted by: L. Bonkowski
Approved by: Paul A. Cook



CONSENT CALENDAR

MINUTES OF BOARD MEETING

SUMMARY:

Provided are the minutes July 8, 2019 Regular Board meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE JULY 8, 2019 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – July 8, 2019 Minutes of Regular Board Meeting

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EXHIBIT "A"

MINUTES OF REGULAR MEETING – JULY 8, 2019

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by President LaMar on July 8, 2019 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

Directors Present: Reinhart, Matheis, Swan, Withers and LaMar.

Also Present: General Manager Cook, Executive Director of Finance and Administration Clary, Executive Director of Technical Services Burton, Executive Director of Water Policy Weghorst, Executive Director of Operations Chambers, Director of Public Affairs Beeman, Director of Human Resources Roney, General Counsel Collins, Director of Water Operations Zepeda, Director of Water Quality and Regulatory Compliance Colston, Director of Water Operations Roberts, Director of Treasury and Risk Management Jacobson, Director of Administrative Services Mossbarger, Director of Maintenance Mykitta, Government Relations Officer/Deputy General Counsel Compton, Secretary Bonkowski, Assistant Secretary Swan, and members of staff and the public.

WRITTEN COMMUNICATIONS: None.

ORAL COMMUNICATIONS: None.

ITEMS TOO LATE TO BE AGENDIZED: None.

PUBLIC HEARING

REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS

President LaMar declared this to be the time and place for the hearing on the Report on Water Quality Relative to Public Health Goals, and declared the hearing open. He asked Secretary Bonkowski to report the manner by which the Notice of Hearing was given.

Secretary Bonkowski said that the Notice of this hearing was published in the Orange County Register on June 23, 2019 and that a Notice was also posted in the District office on June 24, 2019. She presented an Affidavit of Posting and the Proof of Publication for the Board to receive and file.

On MOTION by Swan, seconded and unanimously carried, THE AFFIDAVIT OF POSTING AND THE PROOF OF PUBLICATION PRESENTED BY THE SECRETARY WAS RECEIVED AND FILED.

President LaMar asked Secretary Bonkowski whether there have been any written communications. She said there were none.

President LaMar asked legal counsel to describe the nature of the proceeding. Legal Counsel Collins said that the public hearings provides an opportunity for any person or persons to provide public comments on this report as required by the Health and Safety Code.

PUBLIC HEARING (CONTINUED)

President LaMar asked for a report from the Director of Water Quality and Regulatory Compliance.

Director of Water Quality and Regulatory Compliance Colston said that the 2019 Report on Water Quality Relative to Public Health Goals is a triennial report required by the California Health and Safety Code summarizing constituents detected in the District's water supply at levels exceeding applicable Public Health Goals or Maximum Contaminant Level Goals during calendar years 2016, 2017 and 2018.

President LaMar asked whether there was anyone present who wished to address the Board concerning the Report on Water Quality Relative to Public Health Goals. There was no one who wished to be heard.

President LaMar inquired whether there are any comments or questions from members of the Board of Directors. There were none. He further asked that the hearing be closed and the Board receive and file the report.

On MOTION by Swan, seconded by Matheis, and unanimously carried, THE HEARING WAS CLOSED AND THE 2019 REPORT ON WATER QUALITY RELATIVE TO PUBLIC HEALTH GOALS WAS RECEIVED AND FILED.

CONSENT CALENDAR

In response to Director Reinhart's inquiry relative to Agenda Item No. 8, PROPOSED CELL SITE AGREEMENT EXTENSION, General Manager Cook clarified that the agreement was nearing the expiration date. There being no further comments, on MOTION by Swan, seconded by Matheis, and unanimously carried, CONSENT CALENDAR ITEMS 4 THROUGH 9 WERE APPROVED AS FOLLOWS:

4. RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS

Recommendation: That the Board ratify/approve the meetings and events for Mary Aileen Matheis, Peer Swan, Douglas Reinhart, Steven LaMar and John Withers, as described.

5. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the June 24, 2019 Regular Board meeting be approved as presented.

6. LUMP SUM PAYMENT OPTION FOR EMPLOYER CONTRIBUTIONS FOR FY 2019-20 TO THE CALIFORNIA PUBLIC EMPLOYEES RETIREMENT SYSTEM

Recommendation: That the Board approve the lump sum payment for employer contributions to the California Public Employees Retirement System (CalPERS) by making a one-time contribution of \$5,246,805 for the District's FY 2019-20 employer contribution.

CONSENT CALENDAR (CONTINUED)

8. PROPOSED CELL SITE AGREEMENT EXTENSION

Recommendation: That the Board approve Amendment No. 2 to the Telecommunications Premises Master Lease Agreement between Irvine Ranch Water District and Crown Castle MU LLC.

9. MICHELSON FORCE MAIN IMPROVEMENTS BUDGET INCREASE, CONTRACT CHANGE ORDER, AND VARIANCE

Recommendation: That the Board authorize a budget increase in the amount of \$750,000, from \$2,217,300 to \$2,967,300, authorize the General Manager to execute Contract Change Order No. 7 in the amount of \$113,317.72 with Insituform Technologies, and authorize the General Manager to execute Variance No. 4 in the amount of \$46,370 with Kleinfelder for the Michelson Force Main Improvements, Project 07097.

ACTION CALENDAR

INFORMATION SERVICES PROFESSIONAL SERVICES SUPPORT CONTRACT RENEWALS

Director of Administration Services Mossbarger reported that the District requires additional resources to supplement existing staff to support and operate the Oracle Financial and Customer Care and Billing (CC&B) systems. Mr. Mossbarger said that staff has identified the need to continue these support services through Fiscal Year (FY) 2019-20 and recommends Infosys Ltd. for support services and one-time special projects; Outsource Technical for on-call programming, analysis, project management, and networking services; and Skoruz Technologies for on-call programming, analysis, and project management services.

Director Swan reported that this item was reviewed by the Finance and Personnel Committee on July 2, 2019 and the Committee concurs with the staff recommendation.

On MOTION by Swan, seconded and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE PROFESSIONAL SERVICES AGREEMENTS FOR THE PERIOD JULY 1, 2019 TO JUNE 30, 2020 WITH INFOSYS LTD FOR \$350,000 FOR MANAGED SUPPORT SERVICES AND ONE-TIME PROJECTS; OUTSOURCE TECHNICAL FOR \$225,000 FOR ON-CALL PROGRAMMING, ANALYSIS, PROJECT MANAGEMENT, AND NETWORKING SERVICES; AND SKORUZ TECHNOLOGIES FOR \$225,000 FOR ON-CALL PROGRAMMING, ANALYSIS, AND PROJECT MANAGEMENT SERVICES.

EMAIL MIGRATION PROJECT CONSULTANT SERVICES

Director of Administration Services Mossbarger reported that in 2016, IRWD hired NexLevel Information Technology, Inc. to perform an Information Technology Assessment for the District and that one of the recommendations from this assessment was that the District should implement Microsoft Exchange in lieu of GroupWise to better align with industry direction and improve user experience as well as taking advantage of cloud computing benefits.

ACTION CALENDAR (CONTINUED)

Mr. Mossbarger said that a Request for Proposal was issued in March 2019 to four consultants with experience performing GroupWise email migration to Microsoft Exchange including Agile IT, Novacoast, Planet Technologies, and Quest. Three of four consultants submitted proposals. He said that staff reviewed and ranked the proposals and selected the top two: Novacoast and Planet Technologies for interviews, and following interviews, staff determined that Novacoast has the best understanding of this project.

Director Swan reported that this item was reviewed by the Finance and Personnel Committee on July 2, 2019 and the Committee concurs with the staff recommendation. Following discussion, on MOTION by Swan, seconded by Matheis and unanimously carried, **THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH NOVACOAST TO IMPLEMENT THE EMAIL MIGRATION PROJECT IN THE AMOUNT OF \$180,000 AND APPROVE A BUDGET INCREASE IN THE AMOUNT OF \$58,500 EACH TO PROJECTS 10543 AND 10544 FOR A TOTAL AMOUNT OF \$117,000.**

IRVINE LAKE NATIVE WATER YIELD AGREEMENT AND IRVINE LAKE PIPELINE SETTLEMENT AGREEMENT

General Manager Cook reported that negotiating these agreements has been a long process and following input from Finance and Personnel Committee, staff has continued to work with IRWD's legal counsel and the Irvine Company to develop an updated agreement relating to the sale of native water. Mr. Cook said that staff has placed before each Director a copy of a depiction of IDs 153/253 Detachment as well as a parcel list for this detachment to be included as Exhibits A-34 and A-35, both of which will be included as part of Exhibit 6 to the Yield Agreement.

Using a PowerPoint presentation, Mr. Christopher Smithson said that staff is proposing a new agreement which replaces the Irvine Lake 1974 agreement and the 2002 and 2006

Amended and Restated Sub-Basin Agreements. Mr. Smithson reviewed the key terms and conditions in the agreement which include: 1) replacing ID 105 eliminated in the LTFP process with ID 153/253; 2) providing for the use of native water outside of ID 153/253 previously limited to use within ID 105; 3) standardizing assumptions of 3,800 acre-feet (AF) per year of native water sales at a rate of \$291 per AF in FY 2018-19, \$312 per AF in FY 2019-20, and \$327 per AF in FY 2020-21, increasing the rate by 3% annually thereafter; 4) providing for a reconciliation every five years in years 1 through 20 based on the difference between the assumed water yield of 3,800 AF and the actual water yield, plus annual interest at 3%; 5) providing for a final reconciliation in year 21 covering years 21 through 40 based on the average annual yield of the first 20 years; 6) terminating the Sub-Basin agreements with restatement of the remaining duties including quality and quantity of water supply for the Irvine Company's properties and the related rate tied to the low volume recycled rate; 7) agreeing to annex identified parcels into ID 153/253 with the Irvine Company agreeing to pay all third-party costs. No other annexations will occur within this ID; 8) agreeing to continue to include at least 12,000 acre-feet per year (AFY) (10,000 of potable and 2,000 of non-potable) for the Irvine Sub-basin in perpetuity; and 9) applying

ACTION CALENDAR (CONTINUED)

condemnation proceeds based on a partial or complete acquisition of Irvine Lake through eminent domain.

Mr. Smithson said that in addition, staff is proposing an Irvine Lake Pipeline (ILP) Settlement Agreement which provides payment to the Irvine Company of \$50,000 to replace booster pumps relating to lower pressure of water delivered to the Irvine Company's orchard properties as a result of converting to recycled water from the new ILP project.

Director Swan reported that this item was reviewed by the Finance and Personnel Committee on July 2, 2019 and the Committee concurs with the staff recommendation. Following discussion, on MOTION by Swan, seconded by Matheis, and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE THE IRVINE LAKE NATIVE WATER YIELD AGREEMENT AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE IRVINE LAKE PIPELINE SETTLEMENT AGREEMENT.

SETTING CONNECTION FEES AND PROPERTY TAXES FOR FISCAL YEAR 2019-20

Executive Director of Finance and Administration Clary reported that the District's Long-Term Capital Funding Plan (LTFP), completed in November 2013, established connection fees and formed new IDs for funding capital requirements and setting tax rates. A fundamental concept in the District's LTFP is that the costs of new capital facilities are shared equally between the connection fees paid by the developer and property taxes paid by property owners (a 50/50 split). Ms. Clary said that the staff uses a comprehensive financial model to incorporate capital costs, debt funding, future development, growth rates, inflation and other variables to determine connection fees. Connection fee increases were modeled along with a consolidated tax rate for both residential and commercial development. She said that staff updated the District's financial model for FY 2019-20 connection fees and tax rate-setting to include the following: 1) updated capital improvement program; 2) updated ENR estimated capital cost increase of 3.0%; 3) fund balance adjustments through May 2019 with assumptions through fiscal year end; 4) updated assessed valuations; and 5) updated development units.

Director Swan reported that this item was reviewed by the Finance and Personnel Committee on July 2, 2019 and the Committee concurs with the staff recommendation. On MOTION by Swan, seconded by Matheis, and unanimously carried, THE BOARD ADOPTED THE FOLLOWING RESOLUTIONS BY TITLE EFFECTIVE AUGUST 1, 2019:

RESOLUTION NO. 2019 - 21

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE
RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA
ADOPTING CHANGES TO CONNECTION FEES AS SET FORTH IN
THE SCHEDULE OF RATES AND CHARGES IN EXHIBIT "B" TO THE
RULES AND REGULATIONS OF IRVINE RANCH WATER DISTRICT
FOR WATER, SEWER, RECYCLED WATER, AND NATURAL
TREATMENT SYSTEM SERVICE

ACTION CALENDAR (CONTINUED)

AND ADOPT THE FOLLOWING RESOLUTIONS BY TITLE:

RESOLUTION NO. 2019 -22

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA
ESTABLISHING *AD VALOREM* TAX REVENUES FOR
FISCAL YEAR 2019-20

RESOLUTION NO. 2019 –23

RESOLUTION OF THE BOARD OF DIRECTORS OF
THE IRVINE RANCH WATER DISTRICT AMENDING
ALLOCATION OF *AD VALOREM* PROPERTY
TAXES TO DEBT SERVICE, SUBJECT TO PLEDGE

GENERAL MANAGER’S REPORT

General Manager Cook reported that the District received the second place award from the Southwest Membrane Operators for the “Best Tasting Water” at the Baker Water Treatment Plant and that Mr. Dave Paulson was also awarded “Operator of the Year” in the Large System Category.

DIRECTORS’ COMMENTS

Director Reinhart reported on his attendance at the District’s Business Outreach luncheon, an SWD/IRWD Committee meeting, and an ACC-OC summer reception.

Director Swan reported on his attendance at the District’s Business Outreach luncheon, a Watershed Stewardship in the Wildland Urban Interface Committee meeting, an SWD/IRWD Committee meeting, and a MWDOC Board and Committee meeting.

Director Matheis reported on her attendance at the District’s Business Outreach luncheon, and a Watershed Stewardship in the Wildland Urban Interface Committee meeting.

Director LaMar reported on his attendance at the District’s Business Outreach luncheon, a Watershed Stewardship in the Wildland Urban Interface Committee meeting, and a dinner last week at Scripps Institute relative to atmospheric rivers.

ADJOURNMENT

President LaMar adjourned the Board meeting at 5:45 p.m.

APPROVED and SIGNED this 22nd day of July, 2019.

President, IRVINE RANCH WATER DISTRICT

Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

Claire Hervey Collins, Legal Counsel
– Lewis Brisbois

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July 22, 2019

Prepared by: J. Davis / T. Fournier

Submitted by: R. Jacobson / C. Clary

Approved by: Paul A. Cook



CONSENT CALENDAR

JUNE 2019 TREASURY REPORTS

SUMMARY:

The following is submitted for the Board's information and approval:

- A. The Investment Summary Report for June 2019. This Investment Summary Report is in conformity with the 2019 Investment Policy and provides sufficient liquidity to meet estimated expenditures during the next six months, as outlined in Exhibit "A".
- B. The Summary of Fixed and Variable Debt as of June 30, 2019, as outlined in Exhibit "B".
- C. The Monthly Interest Rate Swap Summary as of June 30, 2019, as outlined in Exhibit "C".
- D. The June 30, 2019 Disbursement Summary of warrants 399226 through 400140, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$18,886,468 as outlined in Exhibit "D".
- E. The Summary of Payroll ACH payments in the total amount of \$2,014,590 as outlined in Exhibit "E".
- F. The Disclosure Report of Reimbursements to Board Members and Staff for June 2019, detailing payments or reimbursements for individual charges of \$100.00 or more per transaction, as outlined in Exhibit "F".

FISCAL IMPACTS:

As of June 30, 2019, the book value of the investment portfolio was \$373,884,449, with a 2.11% rate of return and a market value of \$375,004,441. Based on the District's June 30, 2019 quarterly real estate investment rate of return of 8.94%, the weighted average return for the fixed income and real estate investments was 4.10%.

As of June 30, 2019, the outstanding principal amount of fixed and variable rate debt was \$668,825,000. The monthly weighted average all-in variable rate was 1.76%. Including the District's weighted average fixed rate bond issues of 3.70% and the previous month's negative cash accruals from fixed payer interest rate swaps, which hedge a portion of the District's variable rate debt, the total average debt rate was 3.61%.

Three of the District's fixed payer interest rate swaps matured in June, representing \$70 million of the total \$130 million notional value of fixed payer swaps. The swaps were executed in 2004 to synthetically fix a portion of the District's then 100% variable rate debt portfolio. Since then,

the District has taken advantage of a low interest rate environment and has fixed approximately 60% of outstanding debt obligations. Currently there are two remaining interest rate swaps with a notional amount of \$60 million, which will mature in March 2029.

Payroll ACH payments totaled \$2,014,590, and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for June totaled \$18,886,468.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act Code of Regulations, Title 14, Chapter 3, Section 15378.

COMMITTEE STATUS:

This item was not submitted to a Committee; however, the investment and interest rate swap reports are submitted to the Finance and Personnel Committee on a monthly basis.

RECOMMENDATION:

THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT, THE SUMMARY OF FIXED AND VARIABLE RATE DEBT, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF; APPROVE THE JUNE 2019 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$2,014,590 AND APPROVE THE JUNE 2019 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 399226 THROUGH 400140 WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$18,886,468.

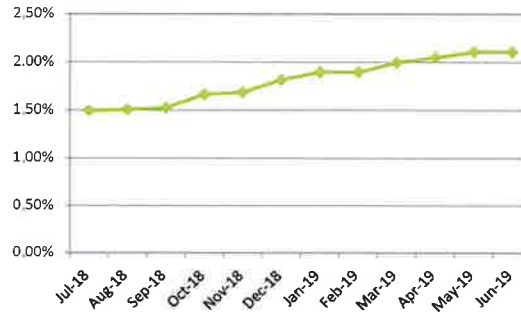
LIST OF EXHIBITS:

- Exhibit "A" – Investment Summary Report
- Exhibit "B" – Summary of Fixed and Variable Debt
- Exhibit "C" – Monthly Interest Rate Swap Summary
- Exhibit "D" – Monthly Summary of District Disbursements
- Exhibit "E" – Monthly Payroll ACH Summary
- Exhibit "F" – Disclosure of Reimbursements to Board Members and Staff

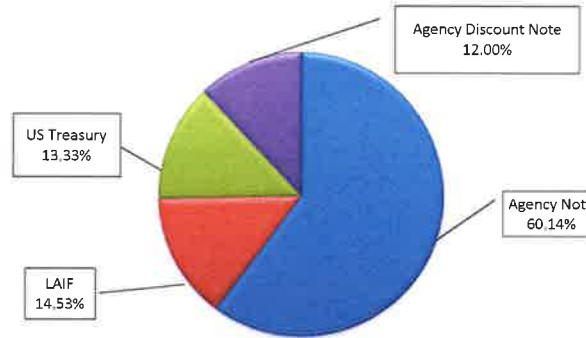
Exhibit "A"

Irvine Ranch Water District Investment Portfolio Summary June 2019

Monthly Fixed Income Yield



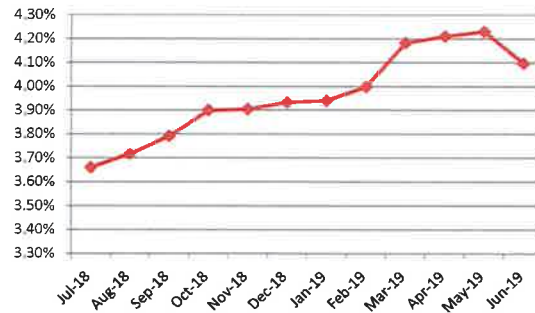
Portfolio Distribution



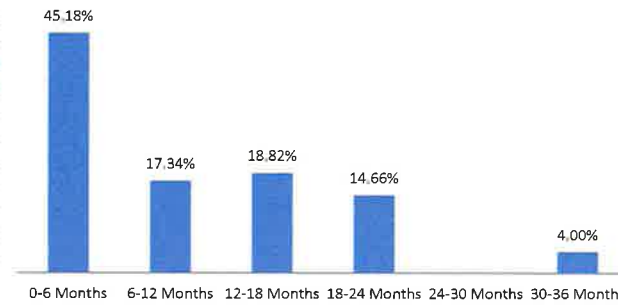
Investment Summary

Type	PAR	Book Value	Market Value
Agency Note	225,550,000	225,212,388	225,662,932
LAIF	54,500,000	54,500,000	54,508,009
US Treasury	50,000,000	49,389,576	50,034,650
Agency Discount Note	45,000,000	44,782,484	44,798,850
Grand Total	375,050,000	373,884,449	375,004,441

Weighted Average Return
Including Real Estate Portfolio



Maturity Distribution



Top Issuers

Issuer	PAR	% Portfolio
Fed Home Loan Bank	85,000,000	22.66%
Fed Farm Credit Bank	80,000,000	21.33%
Fed Natl Mortgage Assoc	75,550,000	20.15%
State of California Treasury - LAIF	54,500,000	14.53%
US Treasury	50,000,000	13.33%
Fed Home Loan Mortgage Corp	30,000,000	8.00%
Grand Total	375,050,000	100.00%

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

06/30/19

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 6/30/2019	UNREALIZED ⁽²⁾ GAIN/(LOSS)
08/23/17			07/01/19		LAIF	State of California Tsy.	\$54,500,000		2.440%	\$54,500,000.00	\$54,500,000.00	54,508,008.99 ⁽⁴⁾	8,008.99
10/12/16	NA	NA	07/19/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.875%	1.098%	4,969,652.90	4,998,858.23	4,995,950.00	(2,908.23)
09/01/16	NA	NA	07/26/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.180%	4,995,700.00	4,999,898.39	4,995,800.00	(4,098.39)
04/18/19	NA	NA	07/31/19	NR	FHLB - Discount Note	Fed Home Loan Bank	10,000,000	2.375%	2.425%	9,931,389.00	9,980,208.37	9,981,700.00	1,491.63
05/28/19	NA	NA	08/16/19	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	2.335%	2.380%	4,974,055.50	4,985,081.91	4,985,900.00	818.09
09/01/16	N/A	N/A	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.160%	4,998,500.00	4,999,920.26	4,991,300.00	(8,620.26)
09/01/16	NA	NA	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.132%	4,999,000.00	4,999,946.84	4,991,100.00	(8,846.84)
03/29/19	NA	NA	08/29/19	NR	FHLB - Discount Note	Fed Home Loan Bank	10,000,000	2.400%	2.460%	9,898,000.00	9,960,666.67	9,963,800.00	3,133.33
09/28/16	Quarterly	03/09/17	09/09/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.142%	4,997,500.00	4,999,830.86	4,990,550.00	(9,280.86)
04/10/18	NA	NA	09/13/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.375%	2.288%	5,006,000.00	5,000,852.21	5,001,550.00	697.79
09/28/16	Continuous after	12/27/16	09/27/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.250%	1.189%	5,001,500.00	5,000,120.66	4,989,800.00	(10,320.66)
04/18/19	NA	NA	10/01/19	NR	FHLB - Discount Note	Fed Home Loan Bank	10,000,000	2.370%	2.429%	9,890,717.00	9,939,433.52	9,945,600.00	6,166.48
10/12/16	Continuous after	10/03/17	10/03/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.125%	1.160%	9,989,780.00	9,998,927.18	9,974,300.00	(24,627.18)
10/12/16	Continuous after	10/11/17	10/11/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.120%	1.205%	9,975,000.00	9,997,212.07	9,969,800.00	(27,412.07)
06/14/19	NA	NA	11/05/19	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	2.130%	2.178%	4,957,400.00	4,962,429.17	4,962,950.00	520.83
11/08/16	Quarterly	05/08/17	11/08/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.250%	1.245%	5,000,750.00	5,000,089.04	4,985,650.00	(14,439.04)
11/28/16	NA	NA	11/15/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.375%	1.440%	4,990,550.00	4,998,803.47	4,986,300.00	(12,503.47)
05/30/19	NA	NA	11/19/19	NR	FFCB - Discount Note	Fed Farm Credit Bank	5,000,000	2.315%	2.374%	4,944,375.69	4,954,664.58	4,958,900.00	4,235.42
11/28/16	Quarterly	05/25/17	11/25/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.400%	1.503%	4,985,000.00	4,997,980.77	4,984,700.00	(13,280.77)
12/12/16	NA	NA	12/12/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.450%	1.440%	5,001,450.00	5,000,216.04	4,990,700.00	(9,516.04)
12/21/16	NA	NA	12/19/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.500%	1.621%	4,982,350.00	4,997,238.66	4,985,350.00	(11,888.66)
12/20/17	NA	NA	01/17/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.500%	1.932%	4,956,250.00	4,982,569.26	4,982,300.00	(269.26)
10/16/17	NA	NA	02/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.612%	4,987,025.00	4,996,370.00	4,980,800.00	(15,570.00)
12/19/18	NA	NA	02/29/20	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	1.250%	2.672%	9,833,593.76	9,902,517.17	9,947,700.00	45,182.83
12/20/17	NA	NA	03/13/20	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	4.125%	1.940%	5,237,200.00	5,104,321.38	5,071,450.00	(32,871.38)
12/20/18	NA	NA	03/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	2.250%	2.665%	9,948,000.00	9,968,154.18	10,016,800.00	48,645.82
10/03/17	NA	NA	04/20/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.375%	1.630%	4,968,350.00	4,989,994.52	4,974,600.00	(15,394.52)
06/29/18	NA	NA	04/23/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.500%	2.544%	4,996,000.00	4,998,279.50	5,021,900.00	23,620.50
06/29/18	NA	NA	05/15/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.550%	2.566%	4,998,450.00	4,999,279.23	5,022,250.00	22,970.77
11/21/17	Continuous after	02/20/18	05/20/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.830%	1.930%	4,987,500.00	4,987,669.11	4,993,700.00	6,030.89
06/11/18	NA	NA	06/11/20	Aaa/NR/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.550%	2.570%	4,997,100.00	4,998,627.36	5,020,550.00	21,922.64
11/10/17	NA	NA	06/22/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.750%	4,968,000.00	4,995,705.27	4,974,500.00	(21,205.27)
04/19/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	2.535%	4,886,000.00	4,945,942.38	4,975,050.00	29,107.62
06/08/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	2.559%	4,890,100.00	4,944,558.75	4,975,050.00	30,491.25
12/20/17	Quarterly	11/10/16	08/10/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.450%	2.052%	4,923,000.00	4,959,423.24	4,970,650.00	11,226.76
09/14/18	NA	NA	08/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.680%	2.789%	4,989,700.00	4,993,907.04	5,037,700.00	43,792.96
05/21/18	Continuous after	12/01/17	09/01/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.680%	2.735%	4,884,250.00	4,940,598.32	4,983,750.00	43,151.68
09/14/18	NA	NA	09/04/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.690%	2.794%	4,990,050.00	4,994,052.08	5,040,600.00	46,547.92
12/12/17	One Time	09/28/18	09/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	2.000%	2.000%	5,000,000.00	5,000,000.00	4,998,500.00	(1,500.00)

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

06/30/19

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 6/30/2019	UNREALIZED ⁽²⁾ GAIN/(LOSS)
10/31/17	One Time	10/30/18	10/30/20	Aaa/NR/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,550,000	1.850%	1.850%	5,550,000.00	5,550,000.00	5,534,682.00	(15,318.00)
09/28/18	NA	NA	10/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1.750%	2.847%	4,889,453.13	4,849,517.35	4,991,400.00	141,882.65
12/13/17	Continuous after	08/23/17	11/23/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.770%	2.060%	4,958,750.00	4,976,231.41	4,979,300.00	3,068.59
12/13/17	Quarterly	05/24/18	11/24/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.900%	2.023%	4,982,500.00	4,989,909.47	5,000,100.00	10,190.53
11/30/17	NA	NA	11/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.850%	1.964%	4,983,550.00	4,992,273.03	4,997,650.00	5,376.97
12/20/17	NA	NA	12/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.875%	2.023%	4,978,400.00	4,987,321.74	4,999,200.00	11,878.26
11/09/18	NA	NA	12/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.375%	2.958%	4,939,843.75	4,957,821.48	5,039,450.00	81,628.52
10/12/18	NA	NA	01/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	1.375%	2.890%	9,664,843.76	9,769,132.28	9,929,700.00	160,567.72
12/14/18	NA	NA	02/16/21	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.375%	2.806%	4,954,750.00	4,965,052.20	5,043,300.00	78,247.80
12/14/18	NA	NA	02/28/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2.000%	2.755%	4,919,515.95	4,937,567.52	5,015,050.00	77,482.48
02/12/19	NA	NA	03/12/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	2.500%	2.516%	9,996,500.00	9,997,140.97	10,099,600.00	102,459.03
02/25/19	NA	NA	03/12/21	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.375%	2.549%	4,982,700.00	4,985,621.98	5,038,300.00	52,678.02
06/17/19	NA	NA	03/17/21	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.950%	1.938%	5,001,050.00	5,001,027.00	5,007,250.00	6,223.00
06/14/19	NA	NA	04/30/21	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.750%	1.913%	4,985,000.00	4,985,371.72	4,988,200.00	2,828.28
03/08/19	NA	NA	01/15/22	Aaa/AA+/NR	Treasury - Note	US Treasury	5,000,000	2.500%	2.460%	5,005,468.75	5,004,866.35	5,094,550.00	89,683.65
03/21/19	NA	NA	02/03/22	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.030%	2.361%	4,954,350.00	4,958,784.57	5,028,300.00	69,515.43
03/08/19	NA	NA	03/11/22	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.500%	2.549%	5,002,750.00	5,002,462.24	5,090,850.00	88,387.76

TOTAL INVESTMENTS \$375,050,000 \$373,178,664.19 \$373,884,448.96 \$375,004,440.99 \$1,119,992.04

Petty Cash 3,400.00
 Ck Balance 273,413.00
Bank of America \$373,455,477.19

⁽¹⁾ LAIF market value is as of the most recent quarter-end as reported by LAIF Security market values are determined using Bank of New York ("Trading Prices"), Bloomberg and/or broker dealer pricing ⁽²⁾ Gain (loss) calculated against carry value using the trading value provided by Bank of New York/or Brokers ⁽³⁾ Real estate rate of return is based on most recent quarter end return ⁽⁴⁾ LAIF market value not available as 07/16/19 This Investment Summary Report is in conformity with the 2019 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures. *S - Step up	Outstanding Variable Rate Debt \$271,700,000 Net Outstanding Variable Rate Debt (Less \$60 million fixed-payer swaps) \$211,700,000 Investment Balance: \$373,455,477 Investment to Variable Rate Debt Ratio: 176% Portfolio - Average Number of Days To Maturity 279															
	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>Investment Portfolio</th> <th>Real Estate⁽³⁾ Portfolio</th> <th>Weighted Avg. Return</th> </tr> </thead> <tbody> <tr> <td>June</td> <td>2.11%</td> <td>8.94%</td> <td>4.10%</td> </tr> <tr> <td>May</td> <td>2.11%</td> <td>9.42%</td> <td>4.23%</td> </tr> <tr> <td>Change</td> <td></td> <td></td> <td>-0.13%</td> </tr> </tbody> </table>		Investment Portfolio	Real Estate ⁽³⁾ Portfolio	Weighted Avg. Return	June	2.11%	8.94%	4.10%	May	2.11%	9.42%	4.23%	Change		
	Investment Portfolio	Real Estate ⁽³⁾ Portfolio	Weighted Avg. Return													
June	2.11%	8.94%	4.10%													
May	2.11%	9.42%	4.23%													
Change			-0.13%													

IRVINE RANCH WATER DISTRICT
SUMMARY OF MATURITIES

06/30/19

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Collateral Deposit	US Treasury
06/19	\$54,500,000	14.53%	\$54,500,000				
07/19	20,000,000	5.33%		10,000,000	10,000,000		
08/19	25,000,000	6.67%		10,000,000	15,000,000		
09/19	15,000,000	4.00%		15,000,000			
10/19	30,000,000	8.00%		20,000,000	10,000,000		
11/19	25,000,000	6.67%		15,000,000	10,000,000		
12/19	10,000,000	2.67%		10,000,000			
01/20	5,000,000	1.33%		5,000,000			
02/20	15,000,000	4.00%		5,000,000			10,000,000
03/20	15,000,000	4.00%		5,000,000			10,000,000
04/20	10,000,000	2.67%		10,000,000			
05/20	10,000,000	2.67%		10,000,000			
SUB-TOTAL	\$234,500,000	62.52%	\$54,500,000	\$115,000,000	\$45,000,000		\$20,000,000
13 Months - 3 YEARS							
6/30/2020 - 08/31/2020	30,000,000	8.00%		30,000,000			
9/01/2020 - 11/30/2020	40,550,000	10.81%		35,550,000			5,000,000
12/01/2020 - 2/28/2021	30,000,000	8.00%		10,000,000			20,000,000
03/01/2021 - 05/31/2021	25,000,000	6.67%		25,000,000			
6/01/2021 - 8/31/2021	-						
9/01/2021 - 11/31/2021	-						
12/01/2022 - 03/31/2022	15,000,000	4.00%		10,000,000			5,000,000
02/01/2022 - 05/31/22	-						
	-						
TOTALS	\$375,050,000	100.00%	\$54,500,000	\$225,550,000	\$45,000,000		\$50,000,000

% OF PORTFOLIO

14.53%

60.14%

12.00%

13.33%

IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT
INVESTMENT ACTIVITY
Jun-19

MATURITIES/SALES/CALLS

PURCHASES

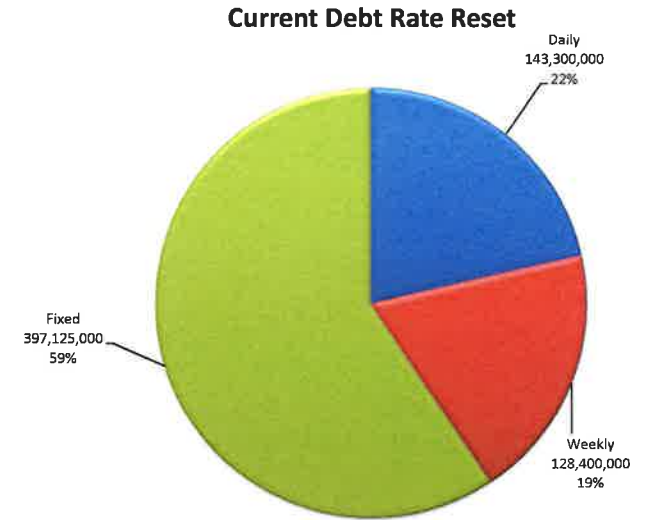
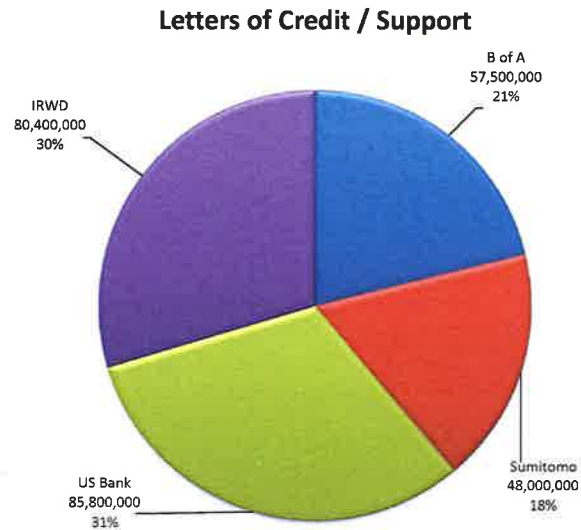
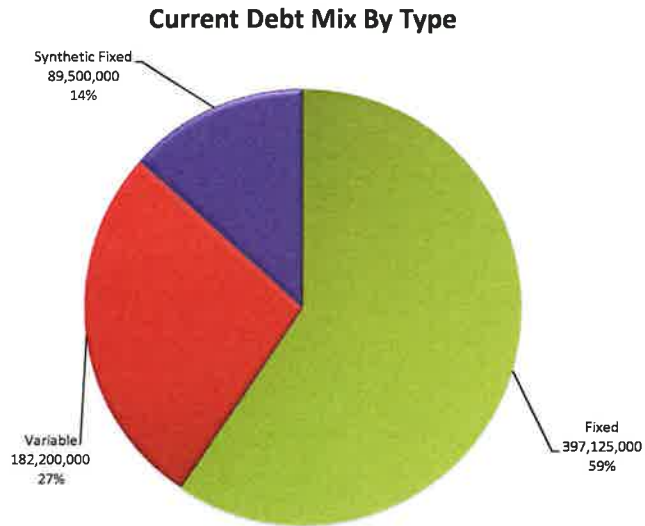
DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
6/14/2019	FHLB - Note	\$5,000,000	0.99%	6/14/2019	11/5/2019	FHLB - Discount Note	\$5,000,000	2.18%
6/14/2019	FHLB - Note	\$5,000,000	1.10%	6/14/2019	4/30/2021	FNMA - Note	\$5,000,000	1.91%
				6/17/2019	3/17/2021	FFCB - Note	\$5,000,000	1.94%

Irvine Ranch Water District
 Summary of Real Estate - Income Producing Investments
 6/30/2019

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	MARKET VALUE 6/30/2019	ANNUALIZED RATE OF RETURN QUARTER ENDED 6/30/2019
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 148,625,000	18.69%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 28,710,327	8.53%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 11,730,000	9.45%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 9,180,000	6.48%
Sand Canyon Professional Center	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 11,220,000	8.89%
Total - Income Properties				\$ 72,569,826	\$ 209,465,327	14.50%
OTHER REAL ESTATE						
DESCRIPTION						
Serrano Summit - Promissory Note	Sep-17	NA	NA	\$ 81,600,000	\$ 81,600,000	4.00%
Total - Income Producing Real Estate Investments				\$ 154,169,826	\$ 291,065,327	8.94%

Exhibit "B"

Irvine Ranch Water District Summary of Fixed and Variable Rate Debt June 2019



Outstanding Par by Series

Series	Issue Date	Maturity Date	Remaining Principal	Percent	Letter of Credit/Support	Rmkt Agent	Mode	Reset
Series 1993	05/19/93	04/01/33	\$28,300,000	4.23%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	\$48,000,000	7.18%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	\$48,240,000	7.21%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	\$32,160,000	4.81%	IRWD	Goldman	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	\$57,500,000	8.60%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	\$57,500,000	8.60%	B of A	Goldman	Variable	Daily
2010 Refunding COPS	02/23/10	03/01/20	\$1,980,000	0.30%	N/A	N/A	Fixed	Fixed
2016 COPS	09/01/16	03/01/46	\$116,745,000	17.46%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	\$175,000,000	26.17%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	\$103,400,000	15.46%	N/A	N/A	Fixed	Fixed
Total			\$668,825,000	100.00%				

IRVINE RANCH WATER DISTRICT
SUMMARY OF FIXED & VARIABLE RATE DEBT

June-19

ITN
Daily
Weekly

GENERAL BOND INFORMATION							LETTER OF CREDIT INFORMATION							TRUSTEE INFORMATION							
VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date	MOODY'S	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee	
SERIES 1993	05/19/93	04/01/33	APR 1	5th Bus. Day	\$38,300,000	\$28,300,000	US BANK	05/07/15	12/15/21	Aa3/VMIG1	AA-/A-1+	N/R	\$28,681,468	0.3300%	\$94,649	BAML	DAILY	0.10%	\$28,300	BANK OF NY	
SERIES 2008-A Refunding	04/24/08	07/01/35	JUL 1	5th Bus. Day	\$60,215,000	\$48,000,000	SUMITOMO	04/01/11	07/21/21	A1/P-1	A/A-1	A/F1	\$48,710,137	0.3150%	\$153,437	BAML	WED	0.07%	\$33,600	BANK OF NY	
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$60,545,000	\$48,240,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$60,300	BANK OF NY	
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	Oct 1	1st Bus. Day	\$40,370,000	\$32,160,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$40,200	BANK OF NY	
SERIES 2009 - A	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$57,500,000	US BANK	04/01/11	12/15/21	Aa2/VMIG 1	AA-/A-1+	AA/F1+	\$58,142,740	0.3300%	\$191,871	US Bank	DAILY	0.07%	\$40,250	US BANK	
SERIES 2009 - B	06/04/09	10/01/41	Oct 1	1st Bus. Day	\$75,000,000	\$57,500,000	B of A	04/01/11	05/16/22	Aa2/VMIG 1	A/A-1	A1/F1+	\$58,142,740	0.3000%	\$174,428	Goldman	DAILY	0.10%	\$57,500	US BANK	
					\$349,430,000	\$271,700,000	SUB-TOTAL VARIABLE RATE DEBT							\$193,677,085	0.3172%	\$614,385					
														(Wt. Avg)							

FIXED RATE ISSUES																					
ISSUE	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date	MOODY'S	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee	
2010 REFUNDING COPS	02/23/10	03/01/20	Mar -1	MAR/SEPT	\$85,145,000	\$1,980,000	N/A	N/A	N/A	Aa1	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY
2010 GO Build America Taxable Bonds	12/16/10	05/01/40	MAY (2025)	MAY/NOV	\$175,000,000	\$175,000,000	N/A	N/A	N/A	Aa1	AAA	NR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK
2016 COPS	09/01/16	03/01/46	Mar -1	MAR/SEPT	\$116,745,000	\$116,745,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK
SERIES 2016	10/12/16	02/01/46	Feb -1	FEB/AUG	\$103,400,000	\$103,400,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY
					\$480,290,000	\$397,125,000	SUB-TOTAL FIXED RATE DEBT														
					\$829,720,000	\$668,825,000	TOTAL - FIXED & VARIABLE RATE DEBT														

Remarketing Agents			GO VS COP's		
Goldman	137,900,000	51%	GO:	550,100,000	82%
BAML	76,300,000	28%	COPS:	118,725,000	18%
US Bank	57,500,000	21%	Total	668,825,000	
	271,700,000				

LOC Banks		Breakdown Between Variable & Fixed Rate Mode	
SUMITOMO	48,000,000	Daily Issues	143,300,000 21%
BANK OF AMERICA	57,500,000	Weekly Issues	48,000,000 7%
US BANK	85,800,000	ITN Issues	80,400,000 12%
	191,300,000	Sub-Total	271,700,000
		Fixed Rate Issues	\$397,125,000 59%
		Sub-Total - Fixed	397,125,000
		TOTAL DEBT	
		FIXED & VAR	668,825,000 100%

IRVINE RANCH WATER DISTRICT
SUMMARY OF DEBT RATES
Jun-19

Rmkt Agent Mode	GOLDMAN		GOLDMAN		MERRILL LYNCH		US BANK
	DAILY	WEEKLY	WEEKLY	WEEKLY	DAILY	WEEKLY	DAILY
Bond Issue	2009 - B	2011 A-1	2011 A-2	2011 A-2	1993	2008-A	2009-A
Par Amount	57,500,000	48,240,000	32,160,000	32,160,000	28,300,000	48,000,000	57,500,000
Bank	BOFA	(SIFMA -1)	(SIFMA -1)	(SIFMA -1)	US BANK	Sumitomo	US BANK
Reset		Wednesday	Wednesday	Wednesday		Wednesday	
6/1/2019	1.22%	1.41%	1.41%	1.41%	1.30%	1.14%	1.23%
6/2/2019	1.22%	1.41%	1.41%	1.41%	1.30%	1.14%	1.23%
6/3/2019	1.13%	1.41%	1.41%	1.41%	1.10%	1.14%	1.18%
6/4/2019	1.03%	1.41%	1.41%	1.41%	0.90%	1.14%	1.05%
6/5/2019	0.95%	1.41%	1.41%	1.41%	0.91%	1.14%	0.95%
6/6/2019	1.00%	1.39%	1.39%	1.39%	1.02%	1.15%	0.95%
6/7/2019	1.20%	1.39%	1.39%	1.39%	1.18%	1.15%	1.20%
6/8/2019	1.20%	1.39%	1.39%	1.39%	1.18%	1.15%	1.20%
6/9/2019	1.20%	1.39%	1.39%	1.39%	1.18%	1.15%	1.20%
6/10/2019	1.33%	1.39%	1.39%	1.39%	1.27%	1.15%	1.21%
6/11/2019	1.33%	1.39%	1.39%	1.39%	1.34%	1.15%	1.37%
6/12/2019	1.35%	1.39%	1.39%	1.39%	1.39%	1.15%	1.39%
6/13/2019	1.39%	1.70%	1.70%	1.70%	1.40%	1.37%	1.40%
6/14/2019	1.39%	1.70%	1.70%	1.70%	1.40%	1.37%	1.40%
6/15/2019	1.39%	1.70%	1.70%	1.70%	1.40%	1.37%	1.40%
6/16/2019	1.39%	1.70%	1.70%	1.70%	1.40%	1.37%	1.40%
6/17/2019	1.38%	1.70%	1.70%	1.70%	1.47%	1.37%	1.39%
6/18/2019	1.38%	1.70%	1.70%	1.70%	1.53%	1.37%	1.39%
6/19/2019	1.40%	1.70%	1.70%	1.70%	1.52%	1.37%	1.44%
6/20/2019	1.40%	1.89%	1.89%	1.89%	1.52%	1.50%	1.45%
6/21/2019	1.45%	1.89%	1.89%	1.89%	1.52%	1.50%	1.50%
6/22/2019	1.45%	1.89%	1.89%	1.89%	1.52%	1.50%	1.50%
6/23/2019	1.45%	1.89%	1.89%	1.89%	1.52%	1.50%	1.50%
6/24/2019	1.45%	1.89%	1.89%	1.89%	1.52%	1.50%	1.50%
6/25/2019	1.45%	1.89%	1.89%	1.89%	1.55%	1.50%	1.50%
6/26/2019	1.48%	1.89%	1.89%	1.89%	1.59%	1.50%	1.50%
6/27/2019	1.50%	1.89%	1.89%	1.89%	1.65%	1.42%	1.50%
6/28/2019	1.52%	1.89%	1.89%	1.89%	1.65%	1.42%	1.50%
6/29/2019	1.52%	1.89%	1.89%	1.89%	1.65%	1.42%	1.50%
6/30/2019	1.52%	1.89%	1.89%	1.89%	1.65%	1.42%	1.50%
Avg Interest Rates	1.34%	1.67%	1.67%	1.67%	1.38%	1.32%	1.35%
Rmkt Fee	0.10%	0.13%	0.13%	0.13%	0.10%	0.07%	0.07%
LOC Fee	0.30%				0.33%	0.32%	0.33%
All-In Rate	1.74%	1.79%	1.79%	1.79%	1.81%	1.70%	1.75%
Par Amount		105,740,000		32,160,000		76,300,000	57,500,000

Interest Rate Mode	Percent of Total Variable Rate Debt	Par Outstanding	Weighted All-In Average Rate	Base Rate Average
Daily	52.74%	143,300,000	1.76%	1.35%
Weekly	47.26%	128,400,000	1.76%	1.54%
Fixed	100.00%	\$ 271,700,000	1.76%	1.44%
COPS 2010	0.50%	1,980,000	3.82%	
COPS 2016	29.40%	116,745,000	2.90%	
BABS 2010	44.07%	175,000,000	4.45%	(1)
SERIES 2016	26.04%	103,400,000	3.32%	
	100.00%	\$ 397,125,000	3.70%	
All-In Debt Rate Including \$60 Million Notional Amount of Swaps				3.61%

(1) Rate adjusted up from 4.35% as a result of sequestration reducing BAB's subsidy by 6.2%

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**IRVINE RANCH WATER DISTRICT
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL
June 30, 2019**

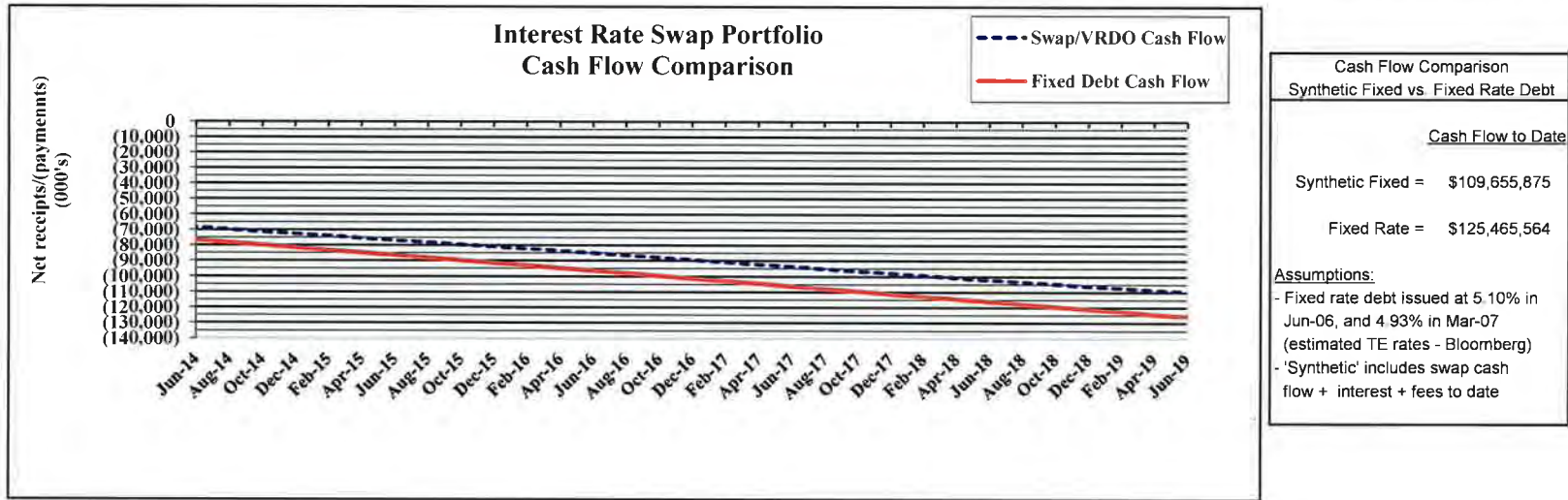
Exhibit "C"

LIBOR Avg %	Prior Mo.	Current Mo.	12-Mo Avg
	2.44%	2.40%	2.35%

Current Fiscal Year Active Swaps								Cash Flow				(Since 6/06)	Mark to Market	
Effective Date	Maturity Date	Years to Maturity	Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference	
Fixed Payer Swaps - By Effective Date														
3/10/2007	3/10/2029	9.7	ML	30,000,000	FXP	LIBOR	5.687%	(83,338)	(71,355)	(993,819)	(16,845,727)	19,390,884	(10,609,116)	
3/10/2007	3/10/2029	9.7	CG	30,000,000	FXP	LIBOR	5.687%	(83,338)	(71,355)	(993,819)	(16,845,727)	19,383,540	(10,616,460)	
Totals/Weighted Avgs		9.7		\$ 60,000,000			5.687%	\$ (166,676)	\$ (142,710)	\$ (1,987,638)	\$ (33,691,453)	\$ 38,774,424	\$ (21,225,576)	
Total Current Year Active Swaps				\$ 60,000,000				\$ (166,676)	\$ (142,710)	\$ (1,987,638)	\$ (33,691,453)	\$ 38,774,424	\$ (21,225,576)	

Current Fiscal Year Terminated Swaps								Cash Flow				Mark to Market	
Effective Date	Maturity Date		Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference
6/4/2006	6/4/2019	0.0	ML	\$ 20,000,000	FXP	LIBOR	6.200%	(64,261)	(4,851)	\$ (713,987)	\$ (12,570,379)	\$ -	\$ -
6/4/2006	6/4/2019	0.0	CG	20,000,000	FXP	LIBOR	6.200%	(64,261)	(4,851)	(713,987)	(12,570,379)	-	-
6/17/2006	6/17/2019	0.0	CG	30,000,000	FXP	LIBOR	6.140%	(95,192)	(47,408)	(1,096,986)	(18,680,694)	-	-
Total Current Year Terminated Swaps				\$ 70,000,000				\$ (223,714)	\$ (57,110)	\$ (2,524,960)	\$ (43,821,451)	\$ -	\$ -

Current Fiscal Year - Total Swaps								Cash Flow				Mark to Market	
								Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference
Total Current Year Active & Terminated Swaps				\$ 130,000,000				\$ (390,390)	\$ (199,820)	\$ (4,512,598)	\$ (77,512,904)	\$ 38,774,424	\$ (21,225,576)



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Exhibit "D"

IRWD

AP DISBURSEMENTS AND VOIDS FOR JUNE 2019

CHECK OR WIRE #	SUPPLIERS	PAYMENT DATE	PAYMENT METHOD	AMOUNT	STATUS
399226	Baquerizo, Joseph	6-Jun-19	IRWD Check	75.72	Negotiable
399227	Chaves, Romuel-Dave E (RD)	6-Jun-19	IRWD Check	123.89	Reconciled
399228	Doyle, Earl W	6-Jun-19	IRWD Check	25.00	Negotiable
399229	Drzymkowski, Michele A (Michele)	6-Jun-19	IRWD Check	280.00	Reconciled
399230	Garcia, Juan	6-Jun-19	IRWD Check	35.72	Reconciled
399231	Hufana, Mr. Eugenio D II (Gino)	6-Jun-19	IRWD Check	70.76	Reconciled
399232	Jacobson, Robert C (Rob)	6-Jun-19	IRWD Check	18.75	Reconciled
399233	Lin, Eileen (Eileen)	6-Jun-19	IRWD Check	7.60	Reconciled
399234	McNulty, Amy K (Amy)	6-Jun-19	IRWD Check	35.72	Reconciled
399235	Moeder, Jacob J (Jacob)	6-Jun-19	IRWD Check	27.84	Reconciled
399236	Montejano, Graciela (Grace)	6-Jun-19	IRWD Check	54.67	Voided
399237	Perez, Rodolfo (Rudy)	6-Jun-19	IRWD Check	89.96	Reconciled
399238	Seesangrit, Melody M	6-Jun-19	IRWD Check	55.72	Reconciled
399239	Zanetti, Enrique	6-Jun-19	IRWD Check	75.72	Negotiable
399240	Pan, Jenny W (Jenny)	6-Jun-19	IRWD Check	13.92	Reconciled
399241	Srader, Lisa	6-Jun-19	IRWD Check	75.86	Reconciled
399242	Mares, Michael	6-Jun-19	IRWD Check	68.37	Reconciled
399243	A&Y ASPHALT CONTRACTORS, INC.	6-Jun-19	IRWD Check	15,077.00	Reconciled
399244	ABSOLUTE STANDARDS, INC.	6-Jun-19	IRWD Check	481.00	Reconciled
399245	ACCURATE MEASUREMENT SYSTEMS INC	6-Jun-19	IRWD Check	2,087.39	Reconciled
399246	ACCUSTANDARD INC	6-Jun-19	IRWD Check	212.12	Reconciled
399247	AEGIS ENGINEERING MANAGEMENT, INC.	6-Jun-19	IRWD Check	2,760.00	Reconciled
399248	AGILENT TECHNOLOGIES, INC.	6-Jun-19	IRWD Check	61.44	Reconciled
399249	AIRGAS, INC.	6-Jun-19	IRWD Check	2,537.58	Reconciled
399250	ALEXANDER'S CONTRACT SERVICES, INC.	6-Jun-19	IRWD Check	120,639.40	Reconciled
399251	AMAZON CAPITAL SERVICES, INC.	6-Jun-19	IRWD Check	885.72	Reconciled
399252	AMERICAN GEOTECHNICAL, INC.	6-Jun-19	IRWD Check	915.00	Reconciled
399253	AMERICAN SEAL & PACKING	6-Jun-19	IRWD Check	70.59	Reconciled
399254	AMERICAN WATER CHEMICALS, INC.	6-Jun-19	IRWD Check	5,112.74	Reconciled
399255	ANMAR HIASSAT AND LARA ALKHLALI	6-Jun-19	IRWD Check	410.02	Reconciled
399256	ANTHONY N. LARSEN	6-Jun-19	IRWD Check	450.00	Reconciled
399257	APCO GRAPHICS INC	6-Jun-19	IRWD Check	237.26	Negotiable
399258	ASHFORD, WALT	6-Jun-19	IRWD Check	191.82	Reconciled
399259	AT&T	6-Jun-19	IRWD Check	5,157.26	Reconciled
399260	ATHENS SERVICES	6-Jun-19	IRWD Check	11,072.64	Reconciled
399261	AUTOZONE PARTS, INC.	6-Jun-19	IRWD Check	2,309.74	Reconciled
399262	BARTEL ASSOCIATES, LLC	6-Jun-19	IRWD Check	6,652.00	Reconciled
399263	BAVCO BACKFLOW APPARATUS & VALVE COMPANY	6-Jun-19	IRWD Check	2,349.30	Reconciled
399264	BILL'S SWEEPING SERVICE INC	6-Jun-19	IRWD Check	1,225.00	Reconciled
399265	BIOMAGIC INC	6-Jun-19	IRWD Check	4,147.62	Reconciled
399266	BLACK & VEATCH CORPORATION	6-Jun-19	IRWD Check	302,784.50	Reconciled
399267	BLOOMBERG FINANCE LP	6-Jun-19	IRWD Check	12,956.67	Reconciled
399268	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC	6-Jun-19	IRWD Check	2,868.78	Reconciled
399269	C WELLS PIPELINE MATERIALS INC	6-Jun-19	IRWD Check	10,761.46	Reconciled
399270	CALIFORNIA BARRICADE RENTAL, INC.	6-Jun-19	IRWD Check	10,645.00	Reconciled
399271	CALIFORNIA WATER EFFICIENCY PARTNERSHIP	6-Jun-19	IRWD Check	1,500.00	Reconciled
399272	CANON SOLUTIONS AMERICA, INC.	6-Jun-19	IRWD Check	1.27	Reconciled
399273	CAPTIVE AUDIENCE MARKETING INC.	6-Jun-19	IRWD Check	79.00	Reconciled
399274	CDW GOVERNMENT LLC	6-Jun-19	IRWD Check	102.87	Reconciled
399275	CHO DESIGN ASSOCIATES, INC	6-Jun-19	IRWD Check	6,500.00	Reconciled
399276	CITY CIRCUIT BREAKERS	6-Jun-19	IRWD Check	958.98	Reconciled
399277	CITY OF IRVINE	6-Jun-19	IRWD Check	680.00	Reconciled
399278	CITY OF LAKE FOREST	6-Jun-19	IRWD Check	300.00	Negotiable
399279	CITY OF NEWPORT BEACH	6-Jun-19	IRWD Check	324.38	Reconciled
399280	COMMERCIAL TRANSPORTATION SERVICES, INC	6-Jun-19	IRWD Check	8,480.46	Reconciled
399281	CONSTELLATION NEWENERGY, INC.	6-Jun-19	IRWD Check	41,181.34	Reconciled
399282	CONTROLLED KEY SYSTEMS INC	6-Jun-19	IRWD Check	310.23	Reconciled
399283	CONTROLLED MOTION SOLUTIONS, INC	6-Jun-19	IRWD Check	651.54	Reconciled
399284	CORELOGIC INC	6-Jun-19	IRWD Check	20.49	Reconciled
399285	COUNTY OF ORANGE	6-Jun-19	IRWD Check	8,929.25	Reconciled
399286	COX COMMUNICATIONS, INC.	6-Jun-19	IRWD Check	3,658.93	Reconciled
399287	D & G SIGNS	6-Jun-19	IRWD Check	2,391.88	Reconciled
399288	D & H WATER SYSTEMS INC.	6-Jun-19	IRWD Check	13,577.70	Reconciled

IRWD
AP DISBURSEMENTS AND VOIDS FOR JUNE 2019

CHECK OR WIRE #	SUPPLIERS	PAYMENT DATE	PAYMENT METHOD	AMOUNT	STATUS
399289	DEAVER SPRING INC	6-Jun-19	IRWD Check	714.06	Reconciled
399290	EBS UTILITIES ADJUSTING, INC	6-Jun-19	IRWD Check	35,272.62	Reconciled
399291	ECO SERVICES LLC	6-Jun-19	IRWD Check	5,252.19	Reconciled
399292	EI&C ENGINEERING INC	6-Jun-19	IRWD Check	64,566.39	Reconciled
399293	EKI ENVIRONMENT & WATER, INC.	6-Jun-19	IRWD Check	21,986.82	Reconciled
399294	EMD MILLIPORE CORPORATION	6-Jun-19	IRWD Check	1,103.80	Reconciled
399295	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.	6-Jun-19	IRWD Check	16,490.00	Reconciled
399296	ENVIRONMENTAL SCIENCE ASSOCIATES	6-Jun-19	IRWD Check	34,658.24	Reconciled
399297	EQUIPMENT DIRECT INC	6-Jun-19	IRWD Check	333.90	Reconciled
399298	EVANTEC CORPORATION	6-Jun-19	IRWD Check	728.05	Reconciled
399299	EXECUTIVE LIGHTING & ELECTRIC	6-Jun-19	IRWD Check	195.14	Reconciled
399300	FAIRBANK, MASLIN, MAULLIN, METZ & ASSOC. INC.	6-Jun-19	IRWD Check	28,000.00	Reconciled
399301	FARRELL & ASSOCIATES	6-Jun-19	IRWD Check	1,176.66	Reconciled
399302	FEDEX	6-Jun-19	IRWD Check	308.11	Reconciled
399303	FEDEX NATIONAL LTL, INC	6-Jun-19	IRWD Check	768.88	Reconciled
399304	FERGUSON ENTERPRISES, INC.	6-Jun-19	IRWD Check	10,207.91	Reconciled
399305	FIRST CHOICE SERVICES	6-Jun-19	IRWD Check	1,270.51	Reconciled
399306	FISHER SCIENTIFIC COMPANY LLC	6-Jun-19	IRWD Check	853.21	Reconciled
399307	FLEET SOLUTIONS LLC	6-Jun-19	IRWD Check	4,888.74	Reconciled
399308	FRAN SONDEREGGER	6-Jun-19	IRWD Check	21.90	Reconciled
399309	FULLER TRUCK ACCESSORIES	6-Jun-19	IRWD Check	402.72	Reconciled
399310	FULLJAMES, MACKENZIE	6-Jun-19	IRWD Check	12.89	Reconciled
399311	FUSCOE ENGINEERING, INC.	6-Jun-19	IRWD Check	9,000.00	Reconciled
399312	GRAINGER	6-Jun-19	IRWD Check	3,529.22	Reconciled
399313	GRAYBAR ELECTRIC COMPANY	6-Jun-19	IRWD Check	25.00	Reconciled
399314	HAAKER EQUIPMENT COMPANY	6-Jun-19	IRWD Check	1,176.20	Reconciled
399315	HACH COMPANY	6-Jun-19	IRWD Check	9,341.05	Reconciled
399316	HARRINGTON INDUSTRIAL PLASTICS LLC	6-Jun-19	IRWD Check	364.14	Reconciled
399317	HELPMATES STAFFING SERVICES	6-Jun-19	IRWD Check	32,918.43	Reconciled
399318	HERITAGE FIELDS EL TORO, LLC	6-Jun-19	IRWD Check	94,150.00	Reconciled
399319	HILL BROTHERS CHEMICAL COMPANY	6-Jun-19	IRWD Check	2,578.14	Reconciled
399320	HOME DEPOT USA INC	6-Jun-19	IRWD Check	1,295.50	Reconciled
399321	HONG, CHI	6-Jun-19	IRWD Check	185.00	Reconciled
399322	HYLIION, INC	6-Jun-19	IRWD Check	31.00	Reconciled
399323	INDUSTRIAL METAL SUPPLY CO	6-Jun-19	IRWD Check	1,419.13	Reconciled
399324	INDUSTRIAL NETWORKING SOLUTIONS	6-Jun-19	IRWD Check	2,254.67	Reconciled
399325	INFOSEND, INC.	6-Jun-19	IRWD Check	108,227.23	Reconciled
399326	INFOSYS LIMITED	6-Jun-19	IRWD Check	24,480.00	Reconciled
399327	IRVINE MANAGEMENT COMPANY	6-Jun-19	IRWD Check	938.26	Reconciled
399328	IRVINE PIPE & SUPPLY INC	6-Jun-19	IRWD Check	7,386.97	Reconciled
399329	IRWD-PETTY CASH CUSTODIAN	6-Jun-19	IRWD Check	1,179.99	Reconciled
399330	KAESER COMPRESSORS, INC.	6-Jun-19	IRWD Check	366.00	Reconciled
399331	KERN COUNTY TREASURER TAX COLLECTOR	6-Jun-19	IRWD Check	5,742.51	Reconciled
399332	KONECRANES INC	6-Jun-19	IRWD Check	7,752.00	Reconciled
399333	KOPIEC, JERRY D	6-Jun-19	IRWD Check	408.73	Reconciled
399334	LAGUNA BEACH COUNTY WATER DISTRICT	6-Jun-19	IRWD Check	4,581.05	Reconciled
399335	LANDCARE HOLDINGS, INC.	6-Jun-19	IRWD Check	86,077.79	Reconciled
399336	LAYFIELD USA CORPORATION	6-Jun-19	IRWD Check	385,381.55	Reconciled
399337	MAILFINANCE INC	6-Jun-19	IRWD Check	3,265.46	Reconciled
399338	MARK ENTERPRISES, INC.	6-Jun-19	IRWD Check	53,151.71	Reconciled
399339	MARK KADESH	6-Jun-19	IRWD Check	10,000.00	Reconciled
399340	MBC AQUATIC SCIENCES, INC.	6-Jun-19	IRWD Check	1,350.00	Reconciled
399341	MC MASTER CARR SUPPLY CO	6-Jun-19	IRWD Check	252.12	Reconciled
399342	MICHELE CHAVIS-LOVING	6-Jun-19	IRWD Check	155.72	Reconciled
399343	MPULSE MOBILE, INC	6-Jun-19	IRWD Check	111.89	Reconciled
399344	MSC INDUSTRIAL SUPPLY CO	6-Jun-19	IRWD Check	942.81	Reconciled
399345	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	6-Jun-19	IRWD Check	7,799.34	Reconciled
399346	MWAVE INDUSTRIES, LLC	6-Jun-19	IRWD Check	2,295.53	Reconciled
399347	NATIONAL METER & AUTOMATION, INC.	6-Jun-19	IRWD Check	95,358.75	Reconciled
399348	NATIONAL READY MIXED CONCRETE CO.	6-Jun-19	IRWD Check	1,301.41	Reconciled
399349	NEWPORT REAL ESTATE SERVICES	6-Jun-19	IRWD Check	13,100.00	Reconciled
399350	NEWPORT WINDOW MAINTENANCE INC	6-Jun-19	IRWD Check	2,314.00	Reconciled
399351	NORTH AMERICAN SALES COMPANY, INC.	6-Jun-19	IRWD Check	4,342.10	Reconciled

IRWD
AP DISBURSEMENTS AND VOIDS FOR JUNE 2019

CHECK OR WIRE #	SUPPLIERS	PAYMENT DATE	PAYMENT METHOD	AMOUNT	STATUS
399352	O.C. SUPERIOR CUSTOM CLEANING	6-Jun-19	IRWD Check	3,600.00	Negotiable
399353	OCEAN BLUE ENVIRONMENTAL SERVICES INC	6-Jun-19	IRWD Check	2,375.44	Reconciled
399354	OLIN CORPORATION	6-Jun-19	IRWD Check	11,050.30	Reconciled
399355	OMAR DANDASHI	6-Jun-19	IRWD Check	830.87	Negotiable
399356	ONESOURCE DISTRIBUTORS LLC	6-Jun-19	IRWD Check	5,636.60	Reconciled
399357	ORANGE COAST PLUMBING	6-Jun-19	IRWD Check	1,738.50	Reconciled
399358	ORANGE COUNTY AUTO PARTS CO	6-Jun-19	IRWD Check	2,042.77	Reconciled
399359	ORANGE COUNTY SANITATION DISTRICT	6-Jun-19	IRWD Check	1,890.00	Reconciled
399360	OSTS, INC	6-Jun-19	IRWD Check	1,150.00	Reconciled
399361	PARADA PAINTING INC	6-Jun-19	IRWD Check	5,000.00	Reconciled
399362	PARKHOUSE TIRE INC	6-Jun-19	IRWD Check	1,947.01	Reconciled
399363	PASCAL & LUDWIG CONSTRUCTORS	6-Jun-19	IRWD Check	14,959.38	Reconciled
399364	PASCAL & LUDWIG CONSTRUCTORS	6-Jun-19	IRWD Check	787.34	Reconciled
399365	PHILLIPS PLYWOOD CO, INC.	6-Jun-19	IRWD Check	746.45	Reconciled
399366	PRAXAIR DISTRIBUTION INC	6-Jun-19	IRWD Check	242.16	Reconciled
399367	PROCARE WORK INJURY CENTER	6-Jun-19	IRWD Check	1,165.00	Reconciled
399368	PTI SAND & GRAVEL INC	6-Jun-19	IRWD Check	3,058.13	Reconciled
399369	QUINTANA, WATTS & HARTMANN, LLC	6-Jun-19	IRWD Check	5,000.00	Reconciled
399370	R C FOSTER CORPORATION	6-Jun-19	IRWD Check	337,250.00	Reconciled
399371	R&B AUTOMATION, INC.	6-Jun-19	IRWD Check	18,845.48	Reconciled
399372	RAM AIR ENGINEERING INC	6-Jun-19	IRWD Check	3,000.00	Reconciled
399373	REALTECH CONTROLS, LLC	6-Jun-19	IRWD Check	1,020.61	Reconciled
399374	RED WING SHOE STORE	6-Jun-19	IRWD Check	290.91	Reconciled
399375	REGIONAL GOVERNMENT SERVICES AUTHORITY	6-Jun-19	IRWD Check	592.50	Reconciled
399376	RELIANCE SAFETY CONSULTANTS, INC.	6-Jun-19	IRWD Check	2,420.00	Reconciled
399377	RICHMOND AMERICAN HOMES OF MARYLAND, INC	6-Jun-19	IRWD Check	183.65	Reconciled
399378	SANDERS PAVING INC	6-Jun-19	IRWD Check	17,362.50	Reconciled
399379	SANTA ANA BLUE PRINT	6-Jun-19	IRWD Check	823.21	Reconciled
399380	SCHINDLER ELEVATOR CORPORATION	6-Jun-19	IRWD Check	214.92	Reconciled
399381	SEAL ANALYTICAL INC	6-Jun-19	IRWD Check	207.35	Reconciled
399382	SENG, JULIA	6-Jun-19	IRWD Check	27.78	Negotiable
399383	SHAMROCK SUPPLY CO INC	6-Jun-19	IRWD Check	3,874.69	Reconciled
399384	SHERWIN WILLIAMS COMPANY	6-Jun-19	IRWD Check	1,375.25	Reconciled
399385	SHOETERIA	6-Jun-19	IRWD Check	210.02	Reconciled
399386	SMARTFISH CORP	6-Jun-19	IRWD Check	3,554.46	Reconciled
399387	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	6-Jun-19	IRWD Check	793.87	Reconciled
399388	SOUTHERN CALIFORNIA EDISON COMPANY	6-Jun-19	IRWD Check	600.00	Reconciled
399389	SOUTHERN CALIFORNIA EDISON COMPANY	6-Jun-19	IRWD Check	387,599.47	Reconciled
399390	SOUTHSIDE TOWING	6-Jun-19	IRWD Check	600.00	Reconciled
399391	SOUTHWEST PRODUCTS CORPORATION	6-Jun-19	IRWD Check	4,485.64	Reconciled
399392	SPARKLETTS	6-Jun-19	IRWD Check	266.14	Reconciled
399393	SPATIAL WAVE, INC.	6-Jun-19	IRWD Check	1,200.00	Reconciled
399394	SS MECHANICAL CONSTRUCTION CORP	6-Jun-19	IRWD Check	23,015.00	Reconciled
399395	STANTEC CONSULTING SERVICES INC.	6-Jun-19	IRWD Check	1,157.00	Reconciled
399396	STREAKWAVE WIRELESS, INC.	6-Jun-19	IRWD Check	1,484.78	Reconciled
399397	SUSAN A. SIROTA	6-Jun-19	IRWD Check	4,525.00	Reconciled
399398	T.E. ROBERTS, INC.	6-Jun-19	IRWD Check	211,937.94	Reconciled
399399	TASSIN SCIENTIFIC SERVICES, LLC.	6-Jun-19	IRWD Check	1,125.00	Reconciled
399400	TAYLOR MORRISON	6-Jun-19	IRWD Check	994.05	Reconciled
399401	THE NEW HOME COMPANY SOUTHERN CALIFORNIA LLC	6-Jun-19	IRWD Check	483.30	Reconciled
399402	THYSSENKRUPP ELEVATOR CORPORATION	6-Jun-19	IRWD Check	198.24	Reconciled
399403	TOTAL RESOURCE MANAGEMENT, INC.	6-Jun-19	IRWD Check	14,439.16	Reconciled
399404	TRAN, THU	6-Jun-19	IRWD Check	60.14	Reconciled
399405	TRIPAC MARKETING INC	6-Jun-19	IRWD Check	1,260.05	Reconciled
399406	TRUCPARCO	6-Jun-19	IRWD Check	1,116.88	Reconciled
399407	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA	6-Jun-19	IRWD Check	922.93	Reconciled
399408	UNITED PARCEL SERVICE INC	6-Jun-19	IRWD Check	85.23	Reconciled
399409	UNITED STATES POST OFFICE	6-Jun-19	IRWD Check	1,000.00	Reconciled
399410	URBAN WATER INSTITUTE INC	6-Jun-19	IRWD Check	1,500.00	Negotiable
399411	US AIR CONDITIONING DISTRIBUTORS, LLC	6-Jun-19	IRWD Check	237.90	Reconciled
399412	USA BLUEBOOK	6-Jun-19	IRWD Check	552.36	Reconciled
399413	VERIZON WIRELESS SERVICES LLC	6-Jun-19	IRWD Check	5,230.60	Reconciled
399414	VULCAN INDUSTRIES INC	6-Jun-19	IRWD Check	8,559.21	Reconciled

IRWD
AP DISBURSEMENTS AND VOIDS FOR JUNE 2019

CHECK OR WIRE #	SUPPLIERS	PAYMENT DATE	PAYMENT METHOD	AMOUNT	STATUS
399415	WANG, LINGLI	6-Jun-19	IRWD Check	3,083.06	Negotiable
399416	WANG, YING	6-Jun-19	IRWD Check	36.76	Reconciled
399417	WARD, WILLIAM P JR.	6-Jun-19	IRWD Check	645.73	Reconciled
399418	WARE MALCOMB	6-Jun-19	IRWD Check	11,830.12	Reconciled
399419	WASTE MANAGEMENT OF ORANGE COUNTY	6-Jun-19	IRWD Check	2,732.80	Reconciled
399420	WAXIE'S ENTERPRISES, INC	6-Jun-19	IRWD Check	761.74	Reconciled
399421	WECK LABORATORIES INC	6-Jun-19	IRWD Check	1,231.00	Reconciled
399422	WEST YOST ASSOCIATES, INC	6-Jun-19	IRWD Check	2,463.00	Reconciled
399423	WORKFORCE SAFETY LLC	6-Jun-19	IRWD Check	3,000.00	Reconciled
399424	ZENG, HAOLAN	6-Jun-19	IRWD Check	21.20	Negotiable
399425	JCI JONES CHEMICALS INC	7-Jun-19	IRWD Check	2,570.03	Reconciled
399426	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	7-Jun-19	IRWD Check	2,360.87	Reconciled
399427	FRANCHISE TAX BOARD	7-Jun-19	IRWD Check	985.17	Negotiable
399428	ORANGE COUNTY SHERIFF'S OFFICE	7-Jun-19	IRWD Check	62.50	Reconciled
399429	PERS LONG TERM CARE	7-Jun-19	IRWD Check	538.89	Reconciled
399430	JCI JONES CHEMICALS INC	7-Jun-19	IRWD Check	3,153.15	Reconciled
399431	RELIANCE STANDARD LIFE INSURANCE COMPANY	7-Jun-19	IRWD Check	29,771.80	Reconciled
399432	MERRIMAC PETROLEUM, INC.	7-Jun-19	IRWD Check	24,905.37	Reconciled
399433	Bennett, Ray R (Ray)	13-Jun-19	IRWD Check	233.43	Reconciled
399434	Cariker, Cody J (Cody)	13-Jun-19	IRWD Check	21.00	Negotiable
399435	Clinton, Bryan R (Bryan)	13-Jun-19	IRWD Check	18.10	Reconciled
399436	Compton, Christine A	13-Jun-19	IRWD Check	80.47	Reconciled
399437	Cronin, Gregory	13-Jun-19	IRWD Check	733.17	Reconciled
399438	Ho, Connie	13-Jun-19	IRWD Check	62.59	Reconciled
399439	Lao, Richard S	13-Jun-19	IRWD Check	55.10	Reconciled
399440	Ledesma, Alejandro (Alex)	13-Jun-19	IRWD Check	29.81	Reconciled
399441	Legault, Dan (Dan)	13-Jun-19	IRWD Check	750.00	Reconciled
399442	Nash, Joel	13-Jun-19	IRWD Check	74.82	Reconciled
399443	Perret, Tiffany (Tiffany)	13-Jun-19	IRWD Check	2,714.32	Reconciled
399444	Perry, Guy M (Matthew)	13-Jun-19	IRWD Check	750.00	Reconciled
399445	Phuong, Sophia	13-Jun-19	IRWD Check	59.05	Reconciled
399446	Prewoznik, Frank	13-Jun-19	IRWD Check	10.00	Reconciled
399447	Sanchez, Hector A (Hector)	13-Jun-19	IRWD Check	750.00	Reconciled
399448	Tran, Jason M (Jason)	13-Jun-19	IRWD Check	280.00	Reconciled
399449	Vasquez, Jonathan	13-Jun-19	IRWD Check	28.54	Reconciled
399450	Wilson, Brett	13-Jun-19	IRWD Check	750.00	Reconciled
399451	20 TESORO, LLC.	13-Jun-19	IRWD Check	18.90	Reconciled
399452	ABBADESSA, TODD	13-Jun-19	IRWD Check	153.53	Reconciled
399453	ABC ICEHOUSE, INC.	13-Jun-19	IRWD Check	253.95	Reconciled
399454	ABM INDUSTRY GROUPS, LLC	13-Jun-19	IRWD Check	18,915.01	Reconciled
399455	ADS LLC	13-Jun-19	IRWD Check	2,160.00	Reconciled
399456	AECOM TECHNICAL SERVICES, INC.	13-Jun-19	IRWD Check	1,823.75	Reconciled
399457	AGILENT TECHNOLOGIES, INC.	13-Jun-19	IRWD Check	2,892.01	Reconciled
399458	AL KHAYAT, LILAS	13-Jun-19	IRWD Check	24.50	Reconciled
399459	ALL STAR GLASS	13-Jun-19	IRWD Check	383.06	Reconciled
399460	ALSTON & BIRD LLP	13-Jun-19	IRWD Check	267,817.35	Reconciled
399461	AMAZON CAPITAL SERVICES, INC.	13-Jun-19	IRWD Check	553.90	Reconciled
399462	ANACAPA APARTMENTS	13-Jun-19	IRWD Check	67.27	Reconciled
399463	AT&T	13-Jun-19	IRWD Check	64.26	Reconciled
399464	AT&T	13-Jun-19	IRWD Check	1,666.07	Reconciled
399465	ATHENS SERVICES	13-Jun-19	IRWD Check	1,619.68	Reconciled
399466	ATHENS SERVICES	13-Jun-19	IRWD Check	10,451.21	Reconciled
399467	AUTOZONE PARTS, INC.	13-Jun-19	IRWD Check	231.43	Reconciled
399468	B & K ELECTRIC WHOLESALE	13-Jun-19	IRWD Check	843.18	Reconciled
399469	BATTERIES PLUS AND BATTERIES PLUS BULBS	13-Jun-19	IRWD Check	1,177.48	Reconciled
399470	BDC SPECIAL WASTE	13-Jun-19	IRWD Check	465.00	Reconciled
399471	BELL TOWER FLORIST & GIFTS	13-Jun-19	IRWD Check	96.96	Reconciled
399472	BIGWIG MONSTER, LLC	13-Jun-19	IRWD Check	22,500.00	Negotiable
399473	BIOMAGIC INC	13-Jun-19	IRWD Check	8,654.54	Reconciled
399474	BOLTON, DIANE	13-Jun-19	IRWD Check	28.62	Reconciled
399475	BOMBET, MARC	13-Jun-19	IRWD Check	25.50	Reconciled
399476	BONNETT, SARA	13-Jun-19	IRWD Check	189.12	Negotiable
399477	BROWN AND CALDWELL	13-Jun-19	IRWD Check	7,099.52	Reconciled

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CHECK OR WIRE #	SUPPLIERS	PAYMENT DATE	PAYMENT METHOD	AMOUNT	STATUS
399478	BRUCE HADLEY NEWELL	13-Jun-19	IRWD Check	3,750.00	Reconciled
399479	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC	13-Jun-19	IRWD Check	319.37	Reconciled
399480	CALIFORNIA BARRICADE RENTAL, INC.	13-Jun-19	IRWD Check	510.00	Reconciled
399481	CALSENSE	13-Jun-19	IRWD Check	4,725.00	Reconciled
399482	CAMMARATO, RICK	13-Jun-19	IRWD Check	45.39	Reconciled
399483	CANON FINANCIAL SERVICES, INC	13-Jun-19	IRWD Check	401.91	Reconciled
399484	CANON SOLUTIONS AMERICA, INC.	13-Jun-19	IRWD Check	9,224.53	Reconciled
399485	CANON SOLUTIONS AMERICA, INC.	13-Jun-19	IRWD Check	915.31	Reconciled
399486	CARTER, DAMARLON	13-Jun-19	IRWD Check	73.20	Negotiable
399487	CENTRAL COAST POWER SERVICES, LLC	13-Jun-19	IRWD Check	2,251.84	Reconciled
399488	CHANDRE, JANIS	13-Jun-19	IRWD Check	91.80	Voided
399489	CHARLES WILLIAM ROBLE, JR.	13-Jun-19	IRWD Check	45.00	Reconciled
399490	CHEUK, JIANG SHIN	13-Jun-19	IRWD Check	3.07	Negotiable
399491	CHO DESIGN ASSOCIATES, INC	13-Jun-19	IRWD Check	11,800.00	Reconciled
399492	CHOO, JOHN	13-Jun-19	IRWD Check	24.14	Reconciled
399493	CITY CIRCUIT BREAKERS	13-Jun-19	IRWD Check	670.04	Reconciled
399494	CITY OF IRVINE	13-Jun-19	IRWD Check	4,236.80	Reconciled
399495	CITY OF TUSTIN	13-Jun-19	IRWD Check	229.48	Reconciled
399496	CLA-VAL COMPANY	13-Jun-19	IRWD Check	6,667.75	Reconciled
399497	CLARIS STRATEGY INC.	13-Jun-19	IRWD Check	7,390.00	Reconciled
399498	CLARK, LOUIS	13-Jun-19	IRWD Check	36.12	Reconciled
399499	CLIFFORD MORIYAMA	13-Jun-19	IRWD Check	8,000.00	Reconciled
399500	CNC ENGINEERING	13-Jun-19	IRWD Check	1,508.75	Reconciled
399501	CONSTELLATION NEWENERGY, INC.	13-Jun-19	IRWD Check	4,446.22	Reconciled
399502	CONTROLLED KEY SYSTEMS INC	13-Jun-19	IRWD Check	695.00	Reconciled
399503	COOLIDGE, MARK	13-Jun-19	IRWD Check	15.24	Reconciled
399504	CORRPRO COMPANIES, INC.	13-Jun-19	IRWD Check	21,802.03	Reconciled
399505	CULLIGAN OF SANTA ANA	13-Jun-19	IRWD Check	21,000.00	Reconciled
399506	CYVEX TECHNOLOGY INC	13-Jun-19	IRWD Check	205.16	Voided
399507	D & G SIGNS	13-Jun-19	IRWD Check	1,260.30	Reconciled
399508	DATASITE INC	13-Jun-19	IRWD Check	2,863.00	Reconciled
399509	DAVIS FARR LLP	13-Jun-19	IRWD Check	11,000.00	Reconciled
399510	DELATORRE, FRANCISCO	13-Jun-19	IRWD Check	25.00	Reconciled
399511	DELL MARKETING LP	13-Jun-19	IRWD Check	17,097.69	Reconciled
399512	DING, NINGFENG	13-Jun-19	IRWD Check	40.17	Negotiable
399513	DYER, KERI	13-Jun-19	IRWD Check	199.43	Reconciled
399514	EAGLE PRINT DYNAMICS	13-Jun-19	IRWD Check	396.64	Reconciled
399515	EHS INTERNATIONAL, INC	13-Jun-19	IRWD Check	1,330.00	Reconciled
399516	EISENBERG, DAWN	13-Jun-19	IRWD Check	39.55	Negotiable
399517	EMD MILLIPORE CORPORATION	13-Jun-19	IRWD Check	840.58	Reconciled
399518	ENDERS, DAVE	13-Jun-19	IRWD Check	284.35	Negotiable
399519	ENVIRONMENTAL RESOURCE ASSOCIATES	13-Jun-19	IRWD Check	174.33	Reconciled
399520	EVANS-HYDRO INC	13-Jun-19	IRWD Check	14,162.86	Reconciled
399521	EVERETT DOREY LLP	13-Jun-19	IRWD Check	360.00	Reconciled
399522	FARAH, FARTUN	13-Jun-19	IRWD Check	94.32	Negotiable
399523	FARRELL & ASSOCIATES	13-Jun-19	IRWD Check	732.43	Reconciled
399524	FARWEST CORROSION CONTROL COMPANY	13-Jun-19	IRWD Check	13,346.07	Reconciled
399525	FEDEX	13-Jun-19	IRWD Check	188.29	Reconciled
399526	FERGUSON ENTERPRISES, INC.	13-Jun-19	IRWD Check	4,751.78	Reconciled
399527	FERGUSON, PETER	13-Jun-19	IRWD Check	25.28	Negotiable
399528	FERRYANTO, LIEM	13-Jun-19	IRWD Check	43.12	Reconciled
399529	FIRST CHOICE SERVICES	13-Jun-19	IRWD Check	305.46	Reconciled
399530	FISERV	13-Jun-19	IRWD Check	288.35	Reconciled
399531	FISHER SCIENTIFIC COMPANY LLC	13-Jun-19	IRWD Check	2,828.25	Reconciled
399532	FOUGHT, CYNTHIA J.	13-Jun-19	IRWD Check	2,843.37	Reconciled
399533	FRONTIER CALIFORNIA INC.	13-Jun-19	IRWD Check	55.44	Reconciled
399534	GALLADE CHEMICAL INC	13-Jun-19	IRWD Check	1,680.90	Reconciled
399535	GANAHL LUMBER CO.	13-Jun-19	IRWD Check	255.10	Reconciled
399536	GEI CONSULTANTS INC	13-Jun-19	IRWD Check	891.00	Reconciled
399537	GENTERRA CONSULTANTS INC	13-Jun-19	IRWD Check	5,808.50	Reconciled
399538	GONZALEZ, LETICIA	13-Jun-19	IRWD Check	12.76	Reconciled
399539	GRAINGER	13-Jun-19	IRWD Check	4,116.12	Reconciled
399540	GRAYBAR ELECTRIC COMPANY	13-Jun-19	IRWD Check	1,101.67	Reconciled

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399541	GRE DEVELOPMENT INC	13-Jun-19	IRWD Check	32.50	Negotiable
399542	GREENE, NICOLE	13-Jun-19	IRWD Check	30.86	Negotiable
399543	GUEVARA, SUE ELLEN	13-Jun-19	IRWD Check	663.39	Negotiable
399544	HAAKER EQUIPMENT COMPANY	13-Jun-19	IRWD Check	3,419.07	Reconciled
399545	HACH COMPANY	13-Jun-19	IRWD Check	9,540.47	Reconciled
399546	HARMSWORTH ASSOCIATES	13-Jun-19	IRWD Check	2,348.00	Reconciled
399547	HARRINGTON INDUSTRIAL PLASTICS LLC	13-Jun-19	IRWD Check	13,927.20	Reconciled
399548	HELPMATES STAFFING SERVICES	13-Jun-19	IRWD Check	14,748.69	Reconciled
399549	HILL BROTHERS CHEMICAL COMPANY	13-Jun-19	IRWD Check	30,046.26	Reconciled
399550	HILTS CONSULTING GROUP, INC.	13-Jun-19	IRWD Check	7,079.00	Reconciled
399551	HINSILBLON LTD	13-Jun-19	IRWD Check	8,825.00	Reconciled
399552	HOME DEPOT USA INC	13-Jun-19	IRWD Check	75.11	Reconciled
399553	HORIZON TECHNOLOGY INC	13-Jun-19	IRWD Check	39,790.76	Negotiable
399554	HORIZON TECHNOLOGY INC	13-Jun-19	IRWD Check	1,430.05	Reconciled
399555	HSIA, WEN-CHENG	13-Jun-19	IRWD Check	22.48	Negotiable
399556	HU, BEI	13-Jun-19	IRWD Check	38.97	Reconciled
399557	HUMPHRIES, ALENE	13-Jun-19	IRWD Check	16.72	Reconciled
399558	IDEXX DISTRIBUTION, INC	13-Jun-19	IRWD Check	3,875.75	Reconciled
399559	INDUSTRIAL NETWORKING SOLUTIONS	13-Jun-19	IRWD Check	97.58	Reconciled
399560	INFOSEND, INC.	13-Jun-19	IRWD Check	37,371.93	Reconciled
399561	INSITUFORM TECHNOLOGIES INC	13-Jun-19	IRWD Check	55,006.70	Reconciled
399562	IRON MOUNTAIN INFORMATION MANAGEMENT INC	13-Jun-19	IRWD Check	1,624.42	Reconciled
399563	IRVINE PACIFIC	13-Jun-19	IRWD Check	254.70	Reconciled
399564	IRVINE PIPE & SUPPLY INC	13-Jun-19	IRWD Check	102.90	Reconciled
399565	IRVINE UNITED CONGREGATIONAL CHURCH	13-Jun-19	IRWD Check	435.48	Reconciled
399566	IRWD-PETTY CASH CUSTODIAN	13-Jun-19	IRWD Check	752.78	Reconciled
399567	J.R. FILANC CONSTRUCTION COMPANY INC	13-Jun-19	IRWD Check	48,155.22	Reconciled
399568	JCI JONES CHEMICALS INC	13-Jun-19	IRWD Check	2,102.10	Reconciled
399569	JIN, ZHIQIANG	13-Jun-19	IRWD Check	106.92	Reconciled
399570	JONES, LAURA	13-Jun-19	IRWD Check	153.12	Reconciled
399571	KB HOMES	13-Jun-19	IRWD Check	210.78	Negotiable
399572	KEARNS, MARC	13-Jun-19	IRWD Check	21.63	Reconciled
399573	KENNEDY, KAM	13-Jun-19	IRWD Check	32.70	Negotiable
399574	KENT & AMY DAHLBERG	13-Jun-19	IRWD Check	3,751.43	Reconciled
399575	KPRS CONSTRUCTION SERVICES, INC.	13-Jun-19	IRWD Check	935,851.72	Reconciled
399576	KRONICK MOSKOVITZ TIEDEMANN & GIRARD	13-Jun-19	IRWD Check	10,877.30	Reconciled
399577	LANDCARE HOLDINGS, INC.	13-Jun-19	IRWD Check	41,905.41	Reconciled
399578	LCS TECHNOLOGIES, INC.	13-Jun-19	IRWD Check	3,375.00	Reconciled
399579	LEE & RO, INC.	13-Jun-19	IRWD Check	14,288.32	Reconciled
399580	LENNAR HOMES	13-Jun-19	IRWD Check	34.43	Reconciled
399581	LEWIS BRISBOIS BISGAARD AND SMITH, LLP	13-Jun-19	IRWD Check	125,801.40	Reconciled
399582	LIAO, HUI	13-Jun-19	IRWD Check	51.65	Reconciled
399583	LILLESTRAND LEADERSHIP CONSULTING, INC.	13-Jun-19	IRWD Check	3,054.48	Reconciled
399584	LU'S LIGHTHOUSE, INC.	13-Jun-19	IRWD Check	4,337.66	Reconciled
399585	MATHER, TODD C	13-Jun-19	IRWD Check	331.41	Reconciled
399586	MBF CONSULTING, INC.	13-Jun-19	IRWD Check	3,416.09	Reconciled
399587	MC MASTER CARR SUPPLY CO	13-Jun-19	IRWD Check	1,072.97	Reconciled
399588	MEXIA,CYNTHIA	13-Jun-19	IRWD Check	118.33	Reconciled
399589	MILLS, CALIDA	13-Jun-19	IRWD Check	28.36	Negotiable
399590	MISSION COMMUNICATIONS, LLC	13-Jun-19	IRWD Check	11,225.55	Reconciled
399591	MSC INDUSTRIAL SUPPLY CO	13-Jun-19	IRWD Check	6,223.37	Reconciled
399592	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	13-Jun-19	IRWD Check	1,502.23	Reconciled
399593	MUTUAL PROPANE	13-Jun-19	IRWD Check	63.00	Reconciled
399594	NATIONAL READY MIXED CONCRETE CO.	13-Jun-19	IRWD Check	1,103.91	Reconciled
399595	NATURES IMAGE INC	13-Jun-19	IRWD Check	2,881.00	Reconciled
399596	NORTHERN SAFETY CO INC	13-Jun-19	IRWD Check	2,172.90	Reconciled
399597	NORTHWOOD PLACE APTS	13-Jun-19	IRWD Check	45.00	Reconciled
399598	NOVACOAST INC	13-Jun-19	IRWD Check	587.50	Reconciled
399599	NTERONE CORPORATION	13-Jun-19	IRWD Check	7,500.00	Reconciled
399600	O.C. SUPERIOR CUSTOM CLEANING	13-Jun-19	IRWD Check	832.00	Reconciled
399601	OCTA	13-Jun-19	IRWD Check	1,150.00	Reconciled
399602	OGUT, OZGUR	13-Jun-19	IRWD Check	44.47	Reconciled
399603	OLIN CORPORATION	13-Jun-19	IRWD Check	33,254.74	Reconciled

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399604	OMEGA INDUSTRIAL SUPPLY, INC.	13-Jun-19	IRWD Check	210.03	Reconciled
399605	ONESOURCE DISTRIBUTORS LLC	13-Jun-19	IRWD Check	925.41	Reconciled
399606	ORACLE AMERICA, INC.	13-Jun-19	IRWD Check	3,062.00	Reconciled
399607	ORANGE COUNTY ASPHALT, INC.	13-Jun-19	IRWD Check	1,639.07	Reconciled
399608	ORANGE COUNTY AUTO PARTS CO	13-Jun-19	IRWD Check	1,438.94	Reconciled
399609	ORANGE COUNTY SANITATION DISTRICT	13-Jun-19	IRWD Check	1,520.00	Reconciled
399610	PACIFIC COAST BOLT CORP	13-Jun-19	IRWD Check	670.70	Reconciled
399611	PACIFIC HYDROTECH CORPORATION	13-Jun-19	IRWD Check	18,222.75	Reconciled
399612	PACIFIC HYDROTECH CORPORATION	13-Jun-19	IRWD Check	823,693.93	Reconciled
399613	PACIFIC HYDROTECH CORPORATION	13-Jun-19	IRWD Check	25,129.56	Reconciled
399614	PACIFIC HYDROTECH CORPORATION	13-Jun-19	IRWD Check	29,820.68	Reconciled
399615	PACIFIC PARTS & CONTROLS INC	13-Jun-19	IRWD Check	2,617.25	Reconciled
399616	PAMPARA, VIJAYENDER	13-Jun-19	IRWD Check	74.34	Reconciled
399617	PAPER DEPOT DOCUMENT DESTRUCTION LLC	13-Jun-19	IRWD Check	540.00	Reconciled
399618	PAPPAN, BRONWYN	13-Jun-19	IRWD Check	39.81	Reconciled
399619	PARK WEST LANDSCAPE, INC.	13-Jun-19	IRWD Check	1,330.66	Reconciled
399620	PARMA	13-Jun-19	IRWD Check	150.00	Reconciled
399621	PASCAL & LUDWIG CONSTRUCTORS	13-Jun-19	IRWD Check	316,524.87	Reconciled
399622	PASCAL & LUDWIG CONSTRUCTORS	13-Jun-19	IRWD Check	16,659.20	Reconciled
399623	PAULUS ENGINEERING, INC.	13-Jun-19	IRWD Check	9,827.00	Reconciled
399624	PELLETIER & ASSOCIATES, INC.	13-Jun-19	IRWD Check	1,138.00	Reconciled
399625	PERKINELMER HEALTH SCIENCES INC	13-Jun-19	IRWD Check	549.05	Reconciled
399626	PHILLIPS PLYWOOD CO, INC.	13-Jun-19	IRWD Check	143.38	Reconciled
399627	PILLSBURY WINTHROP SHAW PITTMAN LLP	13-Jun-19	IRWD Check	3,356.50	Reconciled
399628	POLLARDWATER.COM	13-Jun-19	IRWD Check	559.98	Reconciled
399629	PORTOLA PLACE APTS	13-Jun-19	IRWD Check	101.32	Reconciled
399630	PRAXAIR DISTRIBUTION INC	13-Jun-19	IRWD Check	439.20	Reconciled
399631	PREMIER PAVING INC.	13-Jun-19	IRWD Check	1,512.33	Reconciled
399632	PRIDEMARK CONTRACTORS INC.	13-Jun-19	IRWD Check	1,478.07	Negotiable
399633	PRUDENTIAL OVERALL SUPPLY	13-Jun-19	IRWD Check	6,923.34	Reconciled
399634	PTI SAND & GRAVEL INC	13-Jun-19	IRWD Check	1,756.12	Reconciled
399635	QUINN COMPANY	13-Jun-19	IRWD Check	2,022.24	Reconciled
399636	REGIS CONTRACTORS	13-Jun-19	IRWD Check	314.25	Negotiable
399637	RELIANCE SAFETY CONSULTANTS, INC.	13-Jun-19	IRWD Check	6,410.00	Reconciled
399638	RELIANCE STANDARD LIFE INSURANCE COMPANY	13-Jun-19	IRWD Check	29,664.22	Reconciled
399639	RICHMOND AMERICAN HOMES OF MARYLAND, INC	13-Jun-19	IRWD Check	183.90	Negotiable
399640	RINCON TRUCK CENTER INC.	13-Jun-19	IRWD Check	3,175.66	Reconciled
399641	RS HUGHES COMPANY, INC.	13-Jun-19	IRWD Check	1,378.13	Reconciled
399642	SAMCHULLY AMERICA CORPORATION	13-Jun-19	IRWD Check	53.80	Reconciled
399643	SANTA ANA BLUE PRINT	13-Jun-19	IRWD Check	3,704.15	Reconciled
399644	SARWONO, NINOU	13-Jun-19	IRWD Check	46.63	Negotiable
399645	SCHULER CONSTRUCTORS, INC.	13-Jun-19	IRWD Check	150,409.93	Reconciled
399646	SECURITAS SECURITY SERVICES USA, INC.	13-Jun-19	IRWD Check	64,091.92	Reconciled
399647	SHAMROCK SUPPLY CO INC	13-Jun-19	IRWD Check	1,476.51	Reconciled
399648	SHEA/BAKER RANCH ASSOCIATES, LLC	13-Jun-19	IRWD Check	453.99	Reconciled
399649	SHI, SHIJE	13-Jun-19	IRWD Check	16.21	Negotiable
399650	SIGMA-ALDRICH INC	13-Jun-19	IRWD Check	300.19	Reconciled
399651	SIMI VALLEY LANDFILL AND RECYCLING CENTER	13-Jun-19	IRWD Check	377.28	Reconciled
399652	SITEONE LANDSCAPE SUPPLY, LLC	13-Jun-19	IRWD Check	317.86	Reconciled
399653	SKORUZ TECHNOLOGIES	13-Jun-19	IRWD Check	17,280.00	Reconciled
399654	SOUTH COAST WATER CO.	13-Jun-19	IRWD Check	90.00	Reconciled
399655	SOUTHERN CALIFORNIA EDISON COMPANY	13-Jun-19	IRWD Check	29,743.58	Reconciled
399656	SOUTHERN CALIFORNIA EDISON COMPANY	13-Jun-19	IRWD Check	1,260.00	Reconciled
399657	SOUTHERN CALIFORNIA GAS COMPANY	13-Jun-19	IRWD Check	1,398.28	Reconciled
399658	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.	13-Jun-19	IRWD Check	3,069.30	Negotiable
399659	STANTEC CONSULTING SERVICES INC.	13-Jun-19	IRWD Check	13,507.00	Reconciled
399660	TAIT ENVIRONMENTAL SERVICES INC	13-Jun-19	IRWD Check	2,011.03	Reconciled
399661	TAN, JIANNAN	13-Jun-19	IRWD Check	17.84	Reconciled
399662	TETRA TECH, INC	13-Jun-19	IRWD Check	1,245.00	Reconciled
399663	TEVORA BUSINESS SOLUTIONS, INC.	13-Jun-19	IRWD Check	38,613.67	Reconciled
399664	TROPICAL PLAZA NURSERY INC	13-Jun-19	IRWD Check	1,678.00	Reconciled
399665	TSU, NOLA	13-Jun-19	IRWD Check	155.32	Negotiable
399666	TUMULURI, RAVINDRANATH	13-Jun-19	IRWD Check	200.23	Negotiable

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399667	U S RIGGING SUPPLY	13-Jun-19	IRWD Check	1,016.51	Reconciled
399668	UNITED PARCEL SERVICE INC	13-Jun-19	IRWD Check	154.87	Reconciled
399669	UNITED PARCEL SERVICE INC	13-Jun-19	IRWD Check	290.95	Reconciled
399670	UNITED SITE SERVICES OF CALIFORNIA INC	13-Jun-19	IRWD Check	549.83	Reconciled
399671	VASWANI, SANTOSH	13-Jun-19	IRWD Check	20.98	Negotiable
399672	VAUGHAN'S INDUSTRIAL REPAIR CO INC	13-Jun-19	IRWD Check	29,266.60	Reconciled
399673	VERTECH INDUSTRIAL SYSTEMS, LLC	13-Jun-19	IRWD Check	15,750.22	Reconciled
399674	VU, DANNY	13-Jun-19	IRWD Check	26.64	Reconciled
399675	VULCAN MATERIALS COMPANY	13-Jun-19	IRWD Check	1,472.24	Reconciled
399676	VVR INTERNATIONAL, LLC	13-Jun-19	IRWD Check	1,022.71	Reconciled
399677	WALTERS WHOLESALE ELECTRIC	13-Jun-19	IRWD Check	97.37	Reconciled
399678	WANG, KUNLIN	13-Jun-19	IRWD Check	39.49	Negotiable
399679	WANG, TENG	13-Jun-19	IRWD Check	77.65	Voided
399680	WANG, YU	13-Jun-19	IRWD Check	33.38	Reconciled
399681	WASTE MANAGEMENT OF ORANGE COUNTY	13-Jun-19	IRWD Check	2,724.54	Reconciled
399682	WATERSMART SOFTWARE, INC	13-Jun-19	IRWD Check	27,195.00	Reconciled
399683	WATILO, CORY	13-Jun-19	IRWD Check	33.28	Negotiable
399684	WAXIE'S ENTERPRISES, INC	13-Jun-19	IRWD Check	1,820.29	Reconciled
399685	WECK LABORATORIES INC	13-Jun-19	IRWD Check	830.00	Reconciled
399686	WEST COAST SAFETY SUPPLY INC	13-Jun-19	IRWD Check	1,588.98	Reconciled
399687	WESTAMERICA COMMUNICATIONS, INC.	13-Jun-19	IRWD Check	787.50	Reconciled
399688	WOKCANO TUSTIN, LLC	13-Jun-19	IRWD Check	807.14	Negotiable
399689	XIU, XIANGYANG	13-Jun-19	IRWD Check	149.02	Negotiable
399690	YEN, PETER	13-Jun-19	IRWD Check	46.79	Reconciled
399691	YI, LIPING	13-Jun-19	IRWD Check	106.96	Negotiable
399692	YOUNG, ANTOINETTE	13-Jun-19	IRWD Check	46.94	Reconciled
399693	YP LLC	13-Jun-19	IRWD Check	91.00	Reconciled
399694	YUAN, YUAN	13-Jun-19	IRWD Check	11.02	Negotiable
399695	ZARRINKELK, YASMIN	13-Jun-19	IRWD Check	18.94	Reconciled
399696	Lieuw, Jessica	13-Jun-19	IRWD Check	255.71	Reconciled
399697	TULSA RIB COMPANY, INC.	13-Jun-19	IRWD Check	8,620.43	Reconciled
399698	RAMANPREET K. GREWAL	13-Jun-19	IRWD Check	1,680.00	Reconciled
399699	PCL CONSTRUCTION, INC.	17-Jun-19	IRWD Check	111,193.67	Reconciled
399700	Chauv, Denise	20-Jun-19	IRWD Check	116.87	Reconciled
399701	Chaves, Romuel-Dave E (RD)	20-Jun-19	IRWD Check	6.96	Negotiable
399702	Colston, James	20-Jun-19	IRWD Check	1,273.44	Reconciled
399703	Doyle, Earl W	20-Jun-19	IRWD Check	15.78	Negotiable
399704	Gronlund, Brandon A	20-Jun-19	IRWD Check	95.00	Reconciled
399705	Jackson, Bradley E (Brad)	20-Jun-19	IRWD Check	10.76	Reconciled
399706	Nguyen, Viet Quoc (Quoc)	20-Jun-19	IRWD Check	31.90	Reconciled
399707	Oldewage, Lars D (Lars)	20-Jun-19	IRWD Check	381.84	Reconciled
399708	Parsons, Sheryl	20-Jun-19	IRWD Check	351.33	Reconciled
399709	Saini, Mohit	20-Jun-19	IRWD Check	181.90	Reconciled
399710	Silva, Constantino (Tino)	20-Jun-19	IRWD Check	305.00	Negotiable
399711	Wise, Maureen (Mo)	20-Jun-19	IRWD Check	287.11	Reconciled
399712	A&Y ASPHALT CONTRACTORS, INC.	20-Jun-19	IRWD Check	113,777.00	Reconciled
399713	ACCUSTANDARD INC	20-Jun-19	IRWD Check	119.47	Reconciled
399714	ACWA	20-Jun-19	IRWD Check	475.00	Reconciled
399715	AEGIS ENGINEERING MANAGEMENT, INC.	20-Jun-19	IRWD Check	5,651.00	Reconciled
399716	AIRGAS, INC.	20-Jun-19	IRWD Check	2,199.99	Reconciled
399717	ALPHA TRAFFIC SERVICES, INC.	20-Jun-19	IRWD Check	505.00	Reconciled
399718	AMAZON CAPITAL SERVICES, INC.	20-Jun-19	IRWD Check	796.74	Reconciled
399719	AMERICAN GEOTECHNICAL, INC.	20-Jun-19	IRWD Check	406.25	Reconciled
399720	AMETEK BROOKFIELD	20-Jun-19	IRWD Check	1,531.51	Reconciled
399721	AQUA BEN CORPORATION	20-Jun-19	IRWD Check	38,981.63	Reconciled
399722	ARMORCAST PRODUCTS COMPANY	20-Jun-19	IRWD Check	6,126.67	Reconciled
399723	AT&T	20-Jun-19	IRWD Check	173.55	Reconciled
399724	AT&T	20-Jun-19	IRWD Check	12,503.33	Reconciled
399725	AUGUSTINE, CHRISTOPHER	20-Jun-19	IRWD Check	13.28	Negotiable
399726	AUTOZONE PARTS, INC.	20-Jun-19	IRWD Check	1,089.84	Reconciled
399727	B & K ELECTRIC WHOLESALE	20-Jun-19	IRWD Check	7,581.85	Reconciled
399728	BAIRD, GEORGE W	20-Jun-19	IRWD Check	10.43	Reconciled
399729	BEST MANAGEMENT CONSTRUCTION, INC.	20-Jun-19	IRWD Check	938.10	Reconciled

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399730	BIOMAGIC INC	20-Jun-19	IRWD Check	8,717.57	Reconciled
399731	BLEDSON, CYNTHIA	20-Jun-19	IRWD Check	22.80	Reconciled
399732	BROWN AND CALDWELL	20-Jun-19	IRWD Check	20,236.80	Reconciled
399733	CALIFORNIA BANK & TRUST	20-Jun-19	IRWD Check	22,487.92	Reconciled
399734	CALIFORNIA BARRICADE RENTAL, INC.	20-Jun-19	IRWD Check	12,497.50	Reconciled
399735	CANON FINANCIAL SERVICES, INC	20-Jun-19	IRWD Check	8,195.18	Reconciled
399736	CANON SOLUTIONS AMERICA, INC.	20-Jun-19	IRWD Check	179.70	Reconciled
399737	CDW GOVERNMENT LLC	20-Jun-19	IRWD Check	1,588.78	Reconciled
399738	CHARLES WILLIAM ROBLE, JR.	20-Jun-19	IRWD Check	90.00	Reconciled
399739	CHU, GILBERT	20-Jun-19	IRWD Check	144.88	Reconciled
399740	CITY OF SANTA ANA	20-Jun-19	IRWD Check	191.22	Reconciled
399741	CLARKE MOSQUITO CONTROL PRODUCTS, INC.	20-Jun-19	IRWD Check	2,212.55	Reconciled
399742	COLONIAL LIFE & ACCIDENT INSURANCE CO.	20-Jun-19	IRWD Check	1,103.26	Reconciled
399743	COMMERCIAL COATING RESOURCE INC	20-Jun-19	IRWD Check	1,690.00	Negotiable
399744	COMMERCIAL DOOR OF ORANGE COUNTY, INC.	20-Jun-19	IRWD Check	6,138.83	Reconciled
399745	CONSTELLATION NEWENERGY, INC.	20-Jun-19	IRWD Check	6,152.67	Reconciled
399746	CONTROLLED KEY SYSTEMS INC	20-Jun-19	IRWD Check	741.66	Reconciled
399747	CR & R INCORPORATED	20-Jun-19	IRWD Check	407.58	Reconciled
399748	CULLIGAN OF SANTA ANA	20-Jun-19	IRWD Check	3,000.00	Reconciled
399749	DATA CLEAN CORPORATION	20-Jun-19	IRWD Check	284.00	Reconciled
399750	DATAGEAR, INC.	20-Jun-19	IRWD Check	360.81	Reconciled
399751	DATASITE INC	20-Jun-19	IRWD Check	10,341.00	Negotiable
399752	DEE JASPAR & ASSOCIATES, INC.	20-Jun-19	IRWD Check	1,788.62	Reconciled
399753	DIRECTV INC	20-Jun-19	IRWD Check	131.98	Reconciled
399754	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY	20-Jun-19	IRWD Check	18,383.70	Negotiable
399755	DYNTEK SERVICES, INC.	20-Jun-19	IRWD Check	225.00	Reconciled
399756	EAGLE SYSTEMS INTERNATIONAL INC.	20-Jun-19	IRWD Check	79,986.57	Reconciled
399757	ENVIRONMENTAL RESOURCE ASSOCIATES	20-Jun-19	IRWD Check	602.22	Reconciled
399758	EVANTEC CORPORATION	20-Jun-19	IRWD Check	757.70	Reconciled
399759	FEDEX	20-Jun-19	IRWD Check	387.74	Reconciled
399760	FERGUSON ENTERPRISES, INC.	20-Jun-19	IRWD Check	1,869.42	Reconciled
399761	FIRE EXTINGUISHING SAFETY & SERVICE	20-Jun-19	IRWD Check	679.37	Reconciled
399762	FISHER SCIENTIFIC COMPANY LLC	20-Jun-19	IRWD Check	5,274.28	Reconciled
399763	FLYNN, PHILIP	20-Jun-19	IRWD Check	147.93	Reconciled
399764	FOOTHILL/EASTERN TRANSPORTATION	20-Jun-19	IRWD Check	4,650.00	Reconciled
399765	FORESTRY SUPPLIERS INC	20-Jun-19	IRWD Check	564.91	Reconciled
399766	FRONTIER CALIFORNIA INC.	20-Jun-19	IRWD Check	497.05	Reconciled
399767	GANAHL LUMBER CO.	20-Jun-19	IRWD Check	92.79	Reconciled
399768	GARZA INDUSTRIES, INC	20-Jun-19	IRWD Check	1,501.17	Reconciled
399769	GEORGE HILLS COMPANY, INC.	20-Jun-19	IRWD Check	42.50	Reconciled
399770	GRAINGER	20-Jun-19	IRWD Check	3,487.06	Reconciled
399771	GRANTHAM, P COLBERT	20-Jun-19	IRWD Check	16.37	Reconciled
399772	GRAYBAR ELECTRIC COMPANY	20-Jun-19	IRWD Check	29.70	Reconciled
399773	HACH COMPANY	20-Jun-19	IRWD Check	1,865.06	Reconciled
399774	HARIYANTO, JANTO	20-Jun-19	IRWD Check	1,776.01	Negotiable
399775	HARRINGTON INDUSTRIAL PLASTICS LLC	20-Jun-19	IRWD Check	1,564.08	Reconciled
399776	HELPMATES STAFFING SERVICES	20-Jun-19	IRWD Check	12,654.02	Reconciled
399777	HILL BROTHERS CHEMICAL COMPANY	20-Jun-19	IRWD Check	3,111.56	Reconciled
399778	HILLEBRECHT, WARREN K	20-Jun-19	IRWD Check	183.01	Reconciled
399779	HINSILBLON LTD	20-Jun-19	IRWD Check	1,000.00	Negotiable
399780	HIT IT HARD INDUSTRIES	20-Jun-19	IRWD Check	6,570.00	Reconciled
399781	HOME DEPOT USA INC	20-Jun-19	IRWD Check	1,350.62	Reconciled
399782	IBM CORPORATION	20-Jun-19	IRWD Check	792.00	Reconciled
399783	INFOSEND, INC.	20-Jun-19	IRWD Check	65,567.42	Reconciled
399784	INFOSYS LIMITED	20-Jun-19	IRWD Check	48,960.00	Reconciled
399785	INTEGRITY IT SOLUTIONS INC.	20-Jun-19	IRWD Check	6,675.00	Reconciled
399786	IRVINE PIPE & SUPPLY INC	20-Jun-19	IRWD Check	1,914.06	Reconciled
399787	KAESER COMPRESSORS, INC.	20-Jun-19	IRWD Check	6,739.57	Reconciled
399788	LA HABRA FENCE COMPANY INC	20-Jun-19	IRWD Check	1,063.00	Reconciled
399789	LANDCARE HOLDINGS, INC.	20-Jun-19	IRWD Check	74,582.83	Reconciled
399790	LEE & RO, INC.	20-Jun-19	IRWD Check	27,689.25	Reconciled
399791	LENNAR HOMES	20-Jun-19	IRWD Check	161.10	Reconciled
399792	LINE-X OF SOUTH COAST	20-Jun-19	IRWD Check	1,583.25	Reconciled

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399793	LIU, YUAN	20-Jun-19	IRWD Check	39.16	Negotiable
399794	MAP COMMUNICATIONS, INC.	20-Jun-19	IRWD Check	678.25	Reconciled
399795	MBF CONSULTING, INC.	20-Jun-19	IRWD Check	40,874.38	Reconciled
399796	MC FADDEN-DALE INDUSTRIAL	20-Jun-19	IRWD Check	273.48	Reconciled
399797	MICHELE ROBINSON AND CRAIG ROBINSON	20-Jun-19	IRWD Check	34.35	Negotiable
399798	MILLER, RUPA	20-Jun-19	IRWD Check	41.70	Reconciled
399799	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	20-Jun-19	IRWD Check	12,265.00	Reconciled
399800	MUTUAL PROPANE	20-Jun-19	IRWD Check	280.37	Reconciled
399801	NEOFUNDS	20-Jun-19	IRWD Check	5,010.00	Reconciled
399802	NEPTUNE TECHNOLOGY GROUP, INC.	20-Jun-19	IRWD Check	221,878.80	Reconciled
399803	NMG GEOTECHNICAL INC	20-Jun-19	IRWD Check	10,854.40	Reconciled
399804	NORTHERN SAFETY CO INC	20-Jun-19	IRWD Check	260.81	Reconciled
399805	NPG INC	20-Jun-19	IRWD Check	1,661.37	Reconciled
399806	O.C. SUPERIOR CUSTOM CLEANING	20-Jun-19	IRWD Check	3,600.00	Reconciled
399807	OLIN CORPORATION	20-Jun-19	IRWD Check	29,763.36	Reconciled
399808	ORANGE COUNTY AUTO PARTS CO	20-Jun-19	IRWD Check	1,367.96	Reconciled
399809	ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT	20-Jun-19	IRWD Check	12,089.41	Reconciled
399810	PACIFIC PARTS & CONTROLS INC	20-Jun-19	IRWD Check	512.53	Reconciled
399811	PARK WEST RESCOM, INC.	20-Jun-19	IRWD Check	1,986.59	Reconciled
399812	PINNACLE TOWERS LLC	20-Jun-19	IRWD Check	749.21	Reconciled
399813	PIPELINE PRODUCTS INC	20-Jun-19	IRWD Check	1,270.90	Reconciled
399814	PIVOT INTERIORS INC	20-Jun-19	IRWD Check	5,004.18	Reconciled
399815	PRUDENTIAL OVERALL SUPPLY	20-Jun-19	IRWD Check	3,232.50	Reconciled
399816	PULTE GROUP	20-Jun-19	IRWD Check	186.00	Negotiable
399817	QUICKEL PAVING INC	20-Jun-19	IRWD Check	20,100.00	Reconciled
399818	QUINN COMPANY	20-Jun-19	IRWD Check	30.00	Reconciled
399819	R.J. NOBLE COMPANY	20-Jun-19	IRWD Check	695.76	Reconciled
399820	RAM AIR ENGINEERING INC	20-Jun-19	IRWD Check	6,194.26	Reconciled
399821	REAL WATER CONSULTANTS INC.	20-Jun-19	IRWD Check	22,041.00	Reconciled
399822	REFRIGERATION SUPPLIES DISTRIBUTOR	20-Jun-19	IRWD Check	347.56	Reconciled
399823	RESILIENT COMMUNICATIONS INC.	20-Jun-19	IRWD Check	16,492.75	Negotiable
399824	ROSEMOUNT INC.	20-Jun-19	IRWD Check	1,794.33	Reconciled
399825	S & J SUPPLY CO INC	20-Jun-19	IRWD Check	1,357.65	Reconciled
399826	SAFETY-KLEEN SYSTEMS, INC	20-Jun-19	IRWD Check	1,131.01	Reconciled
399827	SANTA ANA BLUE PRINT	20-Jun-19	IRWD Check	193.69	Reconciled
399828	SASON-DOMULOT, JEANNETTE	20-Jun-19	IRWD Check	31.14	Reconciled
399829	SERRANO WATER DISTRICT	20-Jun-19	IRWD Check	11,275.83	Negotiable
399830	SHADY CANYON GOLD CLUB	20-Jun-19	IRWD Check	1,182.70	Voided
399831	SHAMROCK SUPPLY CO INC	20-Jun-19	IRWD Check	1,705.36	Reconciled
399832	SHIELDS, HARPER & CO.	20-Jun-19	IRWD Check	72.97	Reconciled
399833	SOUTH COAST WATER DISTRICT	20-Jun-19	IRWD Check	359.39	Reconciled
399834	SOUTHERN CALIFORNIA EDISON COMPANY	20-Jun-19	IRWD Check	41.23	Reconciled
399835	SOUTHERN CALIFORNIA EDISON COMPANY	20-Jun-19	IRWD Check	321,660.57	Reconciled
399836	SOUTHERN CALIFORNIA GAS COMPANY	20-Jun-19	IRWD Check	49,948.34	Reconciled
399837	SOUTHERN CALIFORNIA SECURITY CENTERS, INC.	20-Jun-19	IRWD Check	164.86	Negotiable
399838	SPATIAL WAVE, INC.	20-Jun-19	IRWD Check	11,860.00	Reconciled
399839	SUFFOLK CONSTRUCTION COMPANY, INC.	20-Jun-19	IRWD Check	1,750.00	Reconciled
399840	SUNBELT RENTALS, INC.	20-Jun-19	IRWD Check	2,367.43	Reconciled
399841	TELL STEEL INC.	20-Jun-19	IRWD Check	5,105.82	Reconciled
399842	THE FISHEL COMPANY	20-Jun-19	IRWD Check	3,328.53	Negotiable
399843	TIMOTHY W. HOGAN	20-Jun-19	IRWD Check	1,175.00	Reconciled
399844	TROPICAL PLAZA NURSERY INC	20-Jun-19	IRWD Check	51,212.74	Reconciled
399845	VIAU, CATALINA	20-Jun-19	IRWD Check	99.97	Negotiable
399846	VWR INTERNATIONAL, LLC	20-Jun-19	IRWD Check	485.78	Reconciled
399847	WALTERS WHOLESALE ELECTRIC	20-Jun-19	IRWD Check	649.67	Reconciled
399848	WATERLINE TECHNOLOGIES INC	20-Jun-19	IRWD Check	2,840.00	Reconciled
399849	WAXIE'S ENTERPRISES, INC	20-Jun-19	IRWD Check	2,008.99	Reconciled
399850	WEST, WILLIAM C	20-Jun-19	IRWD Check	52.96	Reconciled
399851	YORKE ENGINEERING, LLC	20-Jun-19	IRWD Check	3,856.50	Reconciled
399852	YSI, INC	20-Jun-19	IRWD Check	17,654.76	Reconciled
399853	ZHU, WEN QI	20-Jun-19	IRWD Check	181.35	Negotiable
399854	JCI JONES CHEMICALS INC	21-Jun-19	IRWD Check	5,446.00	Reconciled
399855	ORANGE COUNTY SHERIFF'S OFFICE	21-Jun-19	IRWD Check	62.50	Reconciled

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399856	FRANCHISE TAX BOARD	21-Jun-19	IRWD Check	1,323.28	Negotiable
399857	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	21-Jun-19	IRWD Check	2,391.96	Reconciled
399858	PERS LONG TERM CARE	21-Jun-19	IRWD Check	538.89	Reconciled
399859	ESSEX DERIAN, L.P.	21-Jun-19	IRWD Check	173.42	Reconciled
399860	SOUTHERN CALIFORNIA EDISON COMPANY	21-Jun-19	IRWD Check	149,816.05	Reconciled
399861	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION	21-Jun-19	IRWD Check	6,434.00	Reconciled
399862	JCI JONES CHEMICALS INC	24-Jun-19	IRWD Check	2,309.90	Reconciled
399863	EAST ORANGE COUNTY WATER DISTRICT	24-Jun-19	IRWD Check	67,129.72	Reconciled
399864	Chambers, Wendy	27-Jun-19	IRWD Check	383.96	Negotiable
399865	Clary, Cheryl L	27-Jun-19	IRWD Check	120.00	Negotiable
399866	Compton, Christine A	27-Jun-19	IRWD Check	90.44	Negotiable
399867	Fournier, Tanja L (Tanja)	27-Jun-19	IRWD Check	80.06	Negotiable
399868	McElroy, Dorien	27-Jun-19	IRWD Check	87.00	Reconciled
399869	Moeder, Jacob J (Jacob)	27-Jun-19	IRWD Check	56.90	Negotiable
399870	Moreno, Derek	27-Jun-19	IRWD Check	119.18	Reconciled
399871	Nash, Joel	27-Jun-19	IRWD Check	74.82	Reconciled
399872	Oldewage, Lars D (Lars)	27-Jun-19	IRWD Check	491.33	Reconciled
399873	Pan, Jenny W (Jenny)	27-Jun-19	IRWD Check	48.06	Reconciled
399874	Sanchez, Fiona M (Fiona)	27-Jun-19	IRWD Check	43.92	Reconciled
399875	Shinbashi, Allen	27-Jun-19	IRWD Check	100.47	Negotiable
399876	Flotho, Eric (Eric)	27-Jun-19	IRWD Check	725.28	Reconciled
399877	CALIFORNIA BARRICADE RENTAL, INC.	27-Jun-19	IRWD Check	18,518.43	Negotiable
399878	A STITCH ON TIME.COM	27-Jun-19	IRWD Check	2,501.70	Reconciled
399879	A&Y ASPHALT CONTRACTORS, INC.	27-Jun-19	IRWD Check	11,077.00	Negotiable
399880	ACCUSOURCE, INC.	27-Jun-19	IRWD Check	380.50	Negotiable
399881	ACCUSTANDARD INC	27-Jun-19	IRWD Check	120.47	Negotiable
399882	AECOM TECHNICAL SERVICES, INC.	27-Jun-19	IRWD Check	2,937.16	Negotiable
399883	AMAZON CAPITAL SERVICES, INC.	27-Jun-19	IRWD Check	1,711.47	Negotiable
399884	AMETEK BROOKFIELD	27-Jun-19	IRWD Check	220.12	Reconciled
399885	ANDERSONPENNA PARTNERS, INC	27-Jun-19	IRWD Check	76,871.25	Negotiable
399886	AQUA-METRIC SALES COMPANY	27-Jun-19	IRWD Check	153,682.92	Negotiable
399887	ARCADIS U.S., INC.	27-Jun-19	IRWD Check	39,666.89	Negotiable
399888	AT&T	27-Jun-19	IRWD Check	1,022.49	Reconciled
399889	AUTOZONE PARTS, INC.	27-Jun-19	IRWD Check	74.00	Reconciled
399890	AZTEC CONTAINER	27-Jun-19	IRWD Check	3,857.45	Reconciled
399891	BACKER, CARL S	27-Jun-19	IRWD Check	42.23	Negotiable
399892	BELL TOWER FLORIST & GIFTS	27-Jun-19	IRWD Check	215.48	Reconciled
399893	BERK, SUSAN	27-Jun-19	IRWD Check	35,000.00	Negotiable
399894	BEST MANAGEMENT CONSTRUCTION, INC.	27-Jun-19	IRWD Check	1,494.13	Reconciled
399895	BIGWIG MONSTER, LLC	27-Jun-19	IRWD Check	62,220.00	Negotiable
399896	BIOMAGIC INC	27-Jun-19	IRWD Check	5,988.21	Negotiable
399897	BIOMERIEUX INC	27-Jun-19	IRWD Check	119.55	Negotiable
399898	BOMEL CONSTRUCTION COMPANY INC.	27-Jun-19	IRWD Check	1,541.18	Negotiable
399899	BRIGHTVIEW LANDSCAPE DEVELOPMENT	27-Jun-19	IRWD Check	1,129.56	Negotiable
399900	BUSH & ASSOCIATES INC	27-Jun-19	IRWD Check	5,024.00	Negotiable
399901	C WELLS PIPELINE MATERIALS INC	27-Jun-19	IRWD Check	46,614.81	Negotiable
399902	CANON SOLUTIONS AMERICA, INC.	27-Jun-19	IRWD Check	885.78	Reconciled
399903	CANON SOLUTIONS AMERICA, INC.	27-Jun-19	IRWD Check	3,957.77	Reconciled
399904	CAROLLO ENGINEERS, INC	27-Jun-19	IRWD Check	80,574.50	Negotiable
399905	CEM CORPORATION	27-Jun-19	IRWD Check	15,784.61	Negotiable
399906	CENTRAL COAST POWER SERVICES, LLC	27-Jun-19	IRWD Check	1,727.66	Negotiable
399907	CHAIREL CUSTOM HAY, INC.	27-Jun-19	IRWD Check	5,143.96	Negotiable
399908	CHEM TECH INTERNATIONAL INC	27-Jun-19	IRWD Check	24,091.81	Negotiable
399909	CITY OF IRVINE	27-Jun-19	IRWD Check	609.00	Reconciled
399910	CITY OF IRVINE	27-Jun-19	IRWD Check	9,541.04	Reconciled
399911	CITY OF IRVINE	27-Jun-19	IRWD Check	263,566.00	Negotiable
399912	CITY OF NEWPORT BEACH	27-Jun-19	IRWD Check	1,257.50	Negotiable
399913	CITY OF ORANGE	27-Jun-19	IRWD Check	179.75	Reconciled
399914	CITY OF TUSTIN	27-Jun-19	IRWD Check	55,825.67	Negotiable
399915	CLA-VAL COMPANY	27-Jun-19	IRWD Check	6,695.36	Negotiable
399916	CLEAN ENERGY	27-Jun-19	IRWD Check	958.50	Negotiable
399917	CONSTELLATION NEWENERGY, INC.	27-Jun-19	IRWD Check	7,306.80	Negotiable
399918	CORRPRO COMPANIES, INC.	27-Jun-19	IRWD Check	950.00	Negotiable

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399919	COX COMMUNICATIONS, INC.	27-Jun-19	IRWD Check	3,393.96	Reconciled
399920	CULLIGAN OF SANTA ANA	27-Jun-19	IRWD Check	1,000.00	Negotiable
399921	CYBERNETICS	27-Jun-19	IRWD Check	16,904.00	Negotiable
399922	DATASITE INC	27-Jun-19	IRWD Check	8,632.00	Negotiable
399923	DAYTON CERTIFIED WELDING, INC.	27-Jun-19	IRWD Check	3,000.00	Negotiable
399924	DEACON, JANET	27-Jun-19	IRWD Check	657.55	Negotiable
399925	DEALERS SERVICE, INC	27-Jun-19	IRWD Check	2,345.45	Negotiable
399926	DIRECTV INC	27-Jun-19	IRWD Check	132.53	Negotiable
399927	DISCOUNT COURIER SERVICE INC.	27-Jun-19	IRWD Check	67.47	Negotiable
399928	DIVERSIFIED COMMUNICATIONS SERVICES, INC.	27-Jun-19	IRWD Check	9,100.00	Negotiable
399929	DUDEK	27-Jun-19	IRWD Check	7,476.25	Negotiable
399930	DUKE'S ROOT CONTROL INC	27-Jun-19	IRWD Check	1,210.04	Negotiable
399931	EAGLE PRINT DYNAMICS	27-Jun-19	IRWD Check	6,095.42	Reconciled
399932	EAGLE SYSTEMS INTERNATIONAL INC.	27-Jun-19	IRWD Check	5,454.67	Negotiable
399933	EBS UTILITIES ADJUSTING, INC	27-Jun-19	IRWD Check	3,050.00	Negotiable
399934	ECO SERVICES LLC	27-Jun-19	IRWD Check	5,214.86	Reconciled
399935	ENVIRONMENTAL EXPRESS INC	27-Jun-19	IRWD Check	836.78	Reconciled
399936	ENVIRONMENTAL RESOURCE ASSOCIATES	27-Jun-19	IRWD Check	704.50	Negotiable
399937	ETHERTON, WILL	27-Jun-19	IRWD Check	13.43	Negotiable
399938	EVANS-HYDRO INC	27-Jun-19	IRWD Check	8,119.53	Negotiable
399939	EVANTEC CORPORATION	27-Jun-19	IRWD Check	1,311.06	Reconciled
399940	EXECUTIVE LIGHTING & ELECTRIC	27-Jun-19	IRWD Check	1,419.88	Negotiable
399941	FARRELL & ASSOCIATES	27-Jun-19	IRWD Check	1,658.70	Reconciled
399942	FEDEX	27-Jun-19	IRWD Check	168.61	Reconciled
399943	FIERRO, SERGIO D	27-Jun-19	IRWD Check	3,960.00	Reconciled
399944	FIONA HUTTON & ASSOCIATES, INC.	27-Jun-19	IRWD Check	100,087.95	Negotiable
399945	FISHER SCIENTIFIC COMPANY LLC	27-Jun-19	IRWD Check	2,971.16	Reconciled
399946	FRONTIER CALIFORNIA INC.	27-Jun-19	IRWD Check	103.60	Reconciled
399947	GANAHL LUMBER CO.	27-Jun-19	IRWD Check	1,352.11	Negotiable
399948	GOLDEN BELL PRODUCTS	27-Jun-19	IRWD Check	63,987.00	Negotiable
399949	GRAINGER	27-Jun-19	IRWD Check	10,921.86	Negotiable
399950	HACH COMPANY	27-Jun-19	IRWD Check	2,520.44	Reconciled
399951	HARRINGTON INDUSTRIAL PLASTICS LLC	27-Jun-19	IRWD Check	3,943.66	Reconciled
399952	HARRIS & ASSOCIATES, INC.	27-Jun-19	IRWD Check	2,000.00	Reconciled
399953	HDR ENGINEERING INC	27-Jun-19	IRWD Check	28,242.74	Negotiable
399954	HELPMATES STAFFING SERVICES	27-Jun-19	IRWD Check	18,625.28	Negotiable
399955	HGCPM, INC	27-Jun-19	IRWD Check	4,951.87	Reconciled
399956	HILL BROTHERS CHEMICAL COMPANY	27-Jun-19	IRWD Check	20,034.32	Negotiable
399957	HINSILBLON LTD	27-Jun-19	IRWD Check	6,050.00	Negotiable
399958	HOME DEPOT USA INC	27-Jun-19	IRWD Check	570.53	Negotiable
399959	HOPKINS TECHNICAL PRODUCTS INC	27-Jun-19	IRWD Check	3,305.38	Negotiable
399960	HOWDEN ROOTS LLC	27-Jun-19	IRWD Check	48,851.38	Negotiable
399961	HYDROTECH ELECTRIC	27-Jun-19	IRWD Check	8,960.00	Negotiable
399962	IDEA HALL	27-Jun-19	IRWD Check	41,210.00	Negotiable
399963	INSITUFORM TECHNOLOGIES INC	27-Jun-19	IRWD Check	68,818.60	Negotiable
399964	IRVINE PIPE & SUPPLY INC	27-Jun-19	IRWD Check	2,516.58	Reconciled
399965	IRVINE UNIFIED SCHOOL DISTRICT	27-Jun-19	IRWD Check	100.00	Negotiable
399966	IRVINE WILDFLOWER HOA	27-Jun-19	IRWD Check	2,196.57	Negotiable
399967	IRWD-PETTY CASH CUSTODIAN	27-Jun-19	IRWD Check	1,381.29	Reconciled
399968	JUST ENERGY SOLUTIONS INC.	27-Jun-19	IRWD Check	51.72	Reconciled
399969	KEY INFORMATION SYSTEMS, INC.	27-Jun-19	IRWD Check	2,050.00	Negotiable
399970	KIMBALL MIDWEST	27-Jun-19	IRWD Check	537.11	Reconciled
399971	KOELLER, NEBEKER, CARLSON & HALUCK, LLP	27-Jun-19	IRWD Check	376.24	Reconciled
399972	KOURY ENGINEERING & TESTING, INC.	27-Jun-19	IRWD Check	13,348.00	Negotiable
399973	LAYFIELD USA CORPORATION	27-Jun-19	IRWD Check	306,390.01	Negotiable
399974	LEED ELECTRIC, INC.	27-Jun-19	IRWD Check	91,513.03	Negotiable
399975	LENNAR HOMES	27-Jun-19	IRWD Check	1,540.07	Reconciled
399976	LUDLOW, CHRIS	27-Jun-19	IRWD Check	1,548.57	Negotiable
399977	MARINA LANDSCAPE, INC.	27-Jun-19	IRWD Check	120,530.15	Negotiable
399978	MBK ENGINEERS	27-Jun-19	IRWD Check	360.00	Reconciled
399979	MC MASTER CARR SUPPLY CO	27-Jun-19	IRWD Check	1,700.99	Reconciled
399980	MCINTOSH, KATHLEEN	27-Jun-19	IRWD Check	26.60	Negotiable
399981	MEHTA, NAREN	27-Jun-19	IRWD Check	12.58	Reconciled

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CHECK OR WIRE #	SUPPLIERS	PAYMENT DATE	PAYMENT METHOD	AMOUNT	STATUS
399982	MICHAEL BAKER INTERNATIONAL, INC.	27-Jun-19	IRWD Check	9,867.18	Reconciled
399983	MICRO FOCUS SOFTWARE INC.	27-Jun-19	IRWD Check	63,037.36	Negotiable
399984	MOBILE MODULAR MANAGEMENT CORPORATION	27-Jun-19	IRWD Check	1,212.19	Reconciled
399985	MODERN WATER INC	27-Jun-19	IRWD Check	368.81	Negotiable
399986	MSDSOONLINE, INC.	27-Jun-19	IRWD Check	4,000.00	Negotiable
399987	NATIONAL READY MIXED CONCRETE CO.	27-Jun-19	IRWD Check	4,281.00	Reconciled
399988	NMG GEOTECHNICAL INC	27-Jun-19	IRWD Check	2,644.20	Negotiable
399989	NORTHPARK MAINTENANCE ASSN	27-Jun-19	IRWD Check	2,696.16	Negotiable
399990	OCTA	27-Jun-19	IRWD Check	580.00	Reconciled
399991	OLIN CORPORATION	27-Jun-19	IRWD Check	30,799.18	Negotiable
399992	OLSON, HAGEL & FISHBURN, LLP	27-Jun-19	IRWD Check	640.80	Negotiable
399993	ONESOURCE DISTRIBUTORS LLC	27-Jun-19	IRWD Check	1,173.53	Reconciled
399994	OPERATION TECHNOLOGY, INC	27-Jun-19	IRWD Check	1,578.00	Negotiable
399995	ORANGE COUNTY AUTO PARTS CO	27-Jun-19	IRWD Check	2,249.22	Negotiable
399996	ORANGE COUNTY SANITATION DISTRICT	27-Jun-19	IRWD Check	66,486.63	Negotiable
399997	ORRICK, HERRINGTON & SUTCLIFFE LLP	27-Jun-19	IRWD Check	1,500.00	Reconciled
399998	OSTS, INC	27-Jun-19	IRWD Check	1,150.00	Negotiable
399999	PACIFIC HYDROTECH CORPORATION	27-Jun-19	IRWD Check	1,013,126.08	Negotiable
400000	PACIFIC HYDROTECH CORPORATION	27-Jun-19	IRWD Check	21,981.80	Negotiable
400001	PACIFIC HYDROTECH CORPORATION	27-Jun-19	IRWD Check	31,340.62	Negotiable
400002	PACIFIC PARTS & CONTROLS INC	27-Jun-19	IRWD Check	2,275.37	Negotiable
400003	PARADA PAINTING INC	27-Jun-19	IRWD Check	9,800.00	Negotiable
400004	PARKWAY LAWNMOWER SHOP	27-Jun-19	IRWD Check	80.70	Negotiable
400005	PASCAL & LUDWIG CONSTRUCTORS	27-Jun-19	IRWD Check	19,335.65	Negotiable
400006	PASCAL & LUDWIG CONSTRUCTORS	27-Jun-19	IRWD Check	420,746.02	Negotiable
400007	PASCAL & LUDWIG CONSTRUCTORS	27-Jun-19	IRWD Check	2,808.88	Reconciled
400008	PAULUS ENGINEERING, INC.	27-Jun-19	IRWD Check	185,384.41	Negotiable
400009	PCL CONSTRUCTION, INC.	27-Jun-19	IRWD Check	21,850.00	Negotiable
400010	PILAR ONATE	27-Jun-19	IRWD Check	15,000.00	Negotiable
400011	PINTO, ARTHUR A	27-Jun-19	IRWD Check	37.06	Reconciled
400012	PLAGGE, LARISSA	27-Jun-19	IRWD Check	15.13	Negotiable
400013	PLAYCORE WISCONSIN INC	27-Jun-19	IRWD Check	2,030.40	Negotiable
400014	PLUMBERS DEPOT INC.	27-Jun-19	IRWD Check	999.91	Negotiable
400015	POLLARDWATER.COM	27-Jun-19	IRWD Check	401.54	Reconciled
400016	PRAXAIR DISTRIBUTION INC	27-Jun-19	IRWD Check	2,915.19	Reconciled
400017	PROCARE WORK INJURY CENTER	27-Jun-19	IRWD Check	166.56	Negotiable
400018	PRUDENTIAL OVERALL SUPPLY	27-Jun-19	IRWD Check	1,181.99	Negotiable
400019	PSOMAS	27-Jun-19	IRWD Check	1,830.00	Reconciled
400020	PTI SAND & GRAVEL INC	27-Jun-19	IRWD Check	2,790.53	Negotiable
400021	PYRO-COMM SYSTEMS INC	27-Jun-19	IRWD Check	270.00	Reconciled
400022	QUICKEL PAVING INC	27-Jun-19	IRWD Check	14,695.00	Negotiable
400023	QUINTANA, WATTS & HARTMANN, LLC	27-Jun-19	IRWD Check	5,000.00	Negotiable
400024	R C FOSTER CORPORATION	27-Jun-19	IRWD Check	67,687.50	Negotiable
400025	RAM AIR ENGINEERING INC	27-Jun-19	IRWD Check	5,703.93	Reconciled
400026	REPUBLIC PAVEMENT MAINTENANCE	27-Jun-19	IRWD Check	1,221.82	Reconciled
400027	RESILIENT COMMUNICATIONS INC.	27-Jun-19	IRWD Check	46,020.09	Negotiable
400028	RESTEK CORPORATION	27-Jun-19	IRWD Check	299.12	Reconciled
400029	RICHARD C. SLADE & ASSOCIATES LLC	27-Jun-19	IRWD Check	14,870.70	Negotiable
400030	RINCON TRUCK CENTER INC.	27-Jun-19	IRWD Check	10,549.10	Negotiable
400031	ROMERO, EVELYN	27-Jun-19	IRWD Check	65.63	Negotiable
400032	RS HUGHES COMPANY, INC.	27-Jun-19	IRWD Check	3,169.69	Negotiable
400033	SAN LEON APTS	27-Jun-19	IRWD Check	409.17	Negotiable
400034	SAN REMO APTS	27-Jun-19	IRWD Check	119.32	Negotiable
400035	SANTA MARGARITA FORD	27-Jun-19	IRWD Check	180.09	Reconciled
400036	SCHULER CONSTRUCTORS, INC.	27-Jun-19	IRWD Check	199,690.44	Negotiable
400037	SEAL ANALYTICAL INC	27-Jun-19	IRWD Check	49,416.31	Negotiable
400038	SHAMROCK SUPPLY CO INC	27-Jun-19	IRWD Check	2,538.43	Reconciled
400039	SITEONE LANDSCAPE SUPPLY, LLC	27-Jun-19	IRWD Check	9,116.77	Reconciled
400040	SNYDER LANGSTON L.P.	27-Jun-19	IRWD Check	1,805.97	Negotiable
400041	SOUTH COAST WATER CO.	27-Jun-19	IRWD Check	35.00	Negotiable
400042	SOUTHERN CALIFORNIA EDISON COMPANY	27-Jun-19	IRWD Check	138,509.84	Reconciled
400043	SOUTHWEST VALVE & EQUIPMENT	27-Jun-19	IRWD Check	4,183.29	Negotiable
400044	SPARKLETTS	27-Jun-19	IRWD Check	405.66	Negotiable

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CHECK OR WIRE #	SUPPLIERS	PAYMENT DATE	PAYMENT METHOD	AMOUNT	STATUS
400045	STANDARD & POOR'S FINANCIAL SERVICES LLC	27-Jun-19	IRWD Check	3,500.00	Reconciled
400046	STANTEC CONSULTING SERVICES INC.	27-Jun-19	IRWD Check	5,829.50	Reconciled
400047	SUKLE ADVERTISING INC.	27-Jun-19	IRWD Check	25,870.00	Negotiable
400048	SUNSHINE SUPPLY COMPANY, INC.	27-Jun-19	IRWD Check	2,734.70	Negotiable
400049	SUPERIOR WATER TECHNOLOGIES	27-Jun-19	IRWD Check	9,430.83	Negotiable
400050	T.E. ROBERTS, INC.	27-Jun-19	IRWD Check	176,078.58	Negotiable
400051	TAIT ENVIRONMENTAL SERVICES INC	27-Jun-19	IRWD Check	589.80	Reconciled
400052	TECHNICO TV INC.	27-Jun-19	IRWD Check	1,288.69	Reconciled
400053	TETRA TECH, INC	27-Jun-19	IRWD Check	14,695.00	Negotiable
400054	THOMAS HARDER & CO	27-Jun-19	IRWD Check	29,465.00	Negotiable
400055	THOMPSON INDUSTRIAL SUPPLY	27-Jun-19	IRWD Check	110.93	Reconciled
400056	TIC RETAIL PROPERTIES	27-Jun-19	IRWD Check	541.63	Negotiable
400057	TIC-OFFICE PROPERTIES	27-Jun-19	IRWD Check	136.01	Negotiable
400058	TIC-RESORT PROPERTIES	27-Jun-19	IRWD Check	54.74	Negotiable
400059	TIC-SPECTRUM OFFICE	27-Jun-19	IRWD Check	202.53	Negotiable
400060	TIMOTHY W. HOGAN	27-Jun-19	IRWD Check	21,314.89	Negotiable
400061	TOTAL RESOURCE MANAGEMENT, INC.	27-Jun-19	IRWD Check	11,985.00	Negotiable
400062	TROPICAL PLAZA NURSERY INC	27-Jun-19	IRWD Check	9,178.40	Reconciled
400063	UNITED PARCEL SERVICE INC	27-Jun-19	IRWD Check	98.81	Reconciled
400064	UNITED SITE SERVICES OF CALIFORNIA INC	27-Jun-19	IRWD Check	302.80	Reconciled
400065	US BANK NAT'L ASSOCIATION NORTH DAKOTA	27-Jun-19	IRWD Check	73,252.98	Negotiable
400066	VULCAN MATERIALS COMPANY	27-Jun-19	IRWD Check	1,473.15	Reconciled
400067	VWR INTERNATIONAL, LLC	27-Jun-19	IRWD Check	246.13	Negotiable
400068	WARE MALCOMB	27-Jun-19	IRWD Check	6,875.84	Reconciled
400069	WAXIE'S ENTERPRISES, INC	27-Jun-19	IRWD Check	380.72	Reconciled
400070	WCT PRODUCTS, INC.	27-Jun-19	IRWD Check	2,122.68	Negotiable
400071	WECK LABORATORIES INC	27-Jun-19	IRWD Check	2,215.00	Negotiable
400072	WESTAMERICA COMMUNICATIONS, INC.	27-Jun-19	IRWD Check	2,494.49	Reconciled
400073	WESTERN SAFETY PRODUCTS INC	27-Jun-19	IRWD Check	14,171.06	Negotiable
400074	WOODARD & CURRAN INC	27-Jun-19	IRWD Check	31,428.13	Negotiable
400075	WOODRUFF, SPRADLIN & SMART, APC	27-Jun-19	IRWD Check	102.00	Reconciled
400076	WORKFORCE SAFETY LLC	27-Jun-19	IRWD Check	1,500.00	Negotiable
400077	YSI, INC	27-Jun-19	IRWD Check	788.61	Reconciled
400078	Avalos, Joaquin	28-Jun-19	IRWD Check	188.00	Negotiable
400079	Beltran, Benjamin Vega	28-Jun-19	IRWD Check	50.00	Negotiable
400080	Garcia, Jose (Joe)	28-Jun-19	IRWD Check	5.68	Negotiable
400081	Ho, Connie	28-Jun-19	IRWD Check	90.71	Negotiable
400082	Perez, Cesar (Cesar)	28-Jun-19	IRWD Check	285.00	Negotiable
400083	AMAZON CAPITAL SERVICES, INC.	28-Jun-19	IRWD Check	716.08	Negotiable
400084	AT&T	28-Jun-19	IRWD Check	54.48	Negotiable
400085	AT&T	28-Jun-19	IRWD Check	489.36	Negotiable
400086	C WELLS PIPELINE MATERIALS INC	28-Jun-19	IRWD Check	7,317.43	Negotiable
400087	CALIFORNIA BARRICADE RENTAL, INC.	28-Jun-19	IRWD Check	1,975.00	Negotiable
400088	CANON FINANCIAL SERVICES, INC	28-Jun-19	IRWD Check	203.65	Negotiable
400089	CANON SOLUTIONS AMERICA, INC.	28-Jun-19	IRWD Check	10.64	Negotiable
400090	COLONIAL LIFE & ACCIDENT INSURANCE CO.	28-Jun-19	IRWD Check	1,103.26	Negotiable
400091	CONSTELLATION NEWENERGY, INC.	28-Jun-19	IRWD Check	12,307.48	Negotiable
400092	CULLIGAN OF SANTA ANA	28-Jun-19	IRWD Check	4,000.00	Negotiable
400093	DENALI WATER SOLUTIONS LLC	28-Jun-19	IRWD Check	4,119.55	Negotiable
400094	DYNTEK SERVICES, INC.	28-Jun-19	IRWD Check	5,175.00	Negotiable
400095	EUROFINS EATON ANALYTICAL, INC.	28-Jun-19	IRWD Check	52.50	Negotiable
400096	FEDEX	28-Jun-19	IRWD Check	370.98	Negotiable
400097	FLW, INC.	28-Jun-19	IRWD Check	745.10	Negotiable
400098	FULLER TRUCK ACCESSORIES	28-Jun-19	IRWD Check	1,834.98	Negotiable
400099	HACH COMPANY	28-Jun-19	IRWD Check	1,093.26	Negotiable
400100	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	28-Jun-19	IRWD Check	72.30	Negotiable
400101	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY	28-Jun-19	IRWD Check	72.30	Negotiable
400102	HELPMATES STAFFING SERVICES	28-Jun-19	IRWD Check	6,727.38	Negotiable
400103	HOWDEN ROOTS LLC	28-Jun-19	IRWD Check	32,712.90	Negotiable
400104	MICHELE CHAVIS-LOVING	28-Jun-19	IRWD Check	2,151.45	Negotiable
400105	MORRISROE, EDWARD	28-Jun-19	IRWD Check	266.37	Negotiable
400106	MOUSER ELECTRONICS, INC.	28-Jun-19	IRWD Check	959.08	Negotiable
400107	MYERS & SONS HI-WAY SAFETY, INC.	28-Jun-19	IRWD Check	2,605.40	Negotiable

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400108	OC WELDING SERVICES	28-Jun-19	IRWD Check	540.00	Negotiable
400109	OLIN CORPORATION	28-Jun-19	IRWD Check	10,982.00	Negotiable
400110	ORANGE COUNTY AUTO PARTS CO	28-Jun-19	IRWD Check	403.73	Negotiable
400111	PLAYCORE WISCONSIN INC	28-Jun-19	IRWD Check	1,570.00	Negotiable
400112	PLUMBERS DEPOT INC.	28-Jun-19	IRWD Check	1,658.00	Negotiable
400113	RAM AIR ENGINEERING INC	28-Jun-19	IRWD Check	5,715.00	Negotiable
400114	REACH EMPLOYEE ASSISTANCE INC	28-Jun-19	IRWD Check	1,064.00	Negotiable
400115	SANTA ANA BLUE PRINT	28-Jun-19	IRWD Check	85.34	Negotiable
400116	SIGNATURE FLOORING, INC	28-Jun-19	IRWD Check	525.00	Negotiable
400117	SIRIUS COMPUTER SOLUTIONS INC	28-Jun-19	IRWD Check	3,545.47	Negotiable
400118	SOFTWAREONE INC	28-Jun-19	IRWD Check	284.78	Negotiable
400119	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	28-Jun-19	IRWD Check	243.88	Negotiable
400120	SOUTHERN CALIFORNIA EDISON COMPANY	28-Jun-19	IRWD Check	89,598.59	Negotiable
400121	SOUTHERN COUNTIES LUBRICANTS LLC	28-Jun-19	IRWD Check	677.15	Negotiable
400122	SPARKLETTES	28-Jun-19	IRWD Check	109.01	Negotiable
400123	STANDARD REGISTER, INC.	28-Jun-19	IRWD Check	4,570.33	Negotiable
400124	SUMMIT CHEMICAL SPECIALTY PRODUCTS	28-Jun-19	IRWD Check	11,906.40	Negotiable
400125	SUPERIOR WATER TECHNOLOGIES	28-Jun-19	IRWD Check	4,997.45	Negotiable
400126	TEVORA BUSINESS SOLUTIONS, INC.	28-Jun-19	IRWD Check	39,133.12	Negotiable
400127	VERIZON WIRELESS SERVICES LLC	28-Jun-19	IRWD Check	3,045.45	Negotiable
400128	WALTERS WHOLESALE ELECTRIC	28-Jun-19	IRWD Check	2,628.72	Negotiable
400129	WAXIE'S ENTERPRISES, INC	28-Jun-19	IRWD Check	1,546.15	Negotiable
400130	ZEBRON CONTRACTING INC	28-Jun-19	IRWD Check	45,549.99	Negotiable
400131	FILANC-BALFOUR BEATTY JV	28-Jun-19	IRWD Check	-	Negotiable
400132	CYTECH SERVICES	28-Jun-19	IRWD Check	-	Negotiable
400133	ROCHESTER MIDLAND CORPORATION	28-Jun-19	IRWD Check	-	Negotiable
400134	SAFETY-KLEEN SYSTEMS, INC	28-Jun-19	IRWD Check	-	Negotiable
400135	FIRST CHOICE SERVICES	29-Jun-19	IRWD Check	903.13	Negotiable
400136	HELPMATES STAFFING SERVICES	29-Jun-19	IRWD Check	3,445.10	Negotiable
400137	MA, LIN	29-Jun-19	IRWD Check	38.48	Negotiable
400138	PETRUSSE-NORRIS PAINTING, INC.	29-Jun-19	IRWD Check	15,858.36	Negotiable
400139	PRAXAIR DISTRIBUTION INC	29-Jun-19	IRWD Check	679.20	Negotiable
400140	THERMO ELECTRON NORTH AMERICA LLC	29-Jun-19	IRWD Check	2,467.00	Negotiable
SUB-TOTAL CHECKS ISSUED				14,151,574.13	
13204	YORK INSURANCE SERVICES GROUP INC - CA	4-Jun-19	IRWD Wire	8,454.96	Negotiable
13205	CITIGROUP GLOBAL MARKETS INC.	5-Jun-19	IRWD Wire	370,597.31	Negotiable
13206	MERRILL LYNCH CAPITAL SERVICES, INC	5-Jun-19	IRWD Wire	370,597.31	Negotiable
13207	BANK OF NEW YORK MELLON TRUST COMPANY NA	6-Jun-19	IRWD Wire	115,225.32	Negotiable
13208	U.S. BANK NATIONAL ASSOCIATION	6-Jun-19	IRWD Wire	51,734.25	Negotiable
13209	BANK OF AMERICA	6-Jun-19	IRWD Wire	48,882.89	Negotiable
13210	BANK OF AMERICA MERRILL LYNCH	6-Jun-19	IRWD Wire	56,346.92	Negotiable
13211	INTERNAL REVENUE SERVICE	11-Jun-19	IRWD Wire	215,081.28	Negotiable
13212	FRANCHISE TAX BOARD	11-Jun-19	IRWD Wire	65,445.05	Negotiable
13213	EMPLOYMENT DEVELOPMENT DEPARTMENT	11-Jun-19	IRWD Wire	16,054.73	Negotiable
13214	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	11-Jun-19	IRWD Wire	3,269.65	Negotiable
13215	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	11-Jun-19	IRWD Wire	154,200.88	Negotiable
13216	CALPERS	11-Jun-19	IRWD Wire	518,223.68	Negotiable
13217	CALPERS	11-Jun-19	IRWD Wire	2,891.07	Negotiable
13218	YORK INSURANCE SERVICES GROUP INC - CA	11-Jun-19	IRWD Wire	17,147.36	Negotiable
13219	YORK INSURANCE SERVICES GROUP INC - CA	18-Jun-19	IRWD Wire	6,176.61	Negotiable
13220	U.S. BANK NATIONAL ASSOCIATION	18-Jun-19	IRWD Wire	7,308.55	Negotiable
13221	OAK PROJECT MANAGEMENT	19-Jun-19	IRWD Wire	47.06	Negotiable
13222	ARAUJO, DIONILIA	19-Jun-19	IRWD Wire	36.23	Negotiable
13223	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	19-Jun-19	IRWD Wire	773,002.20	Negotiable
13224	SUMITOMO MITSUI BANKING CORPORATION	19-Jun-19	IRWD Wire	57,047.67	Negotiable
13225	U.S. BANK NATIONAL ASSOCIATION	19-Jun-19	IRWD Wire	25,586.30	Negotiable
13226	CITIGROUP GLOBAL MARKETS INC.	19-Jun-19	IRWD Wire	546,104.27	Negotiable
13227	CALPERS	19-Jun-19	IRWD Wire	201,769.07	Negotiable
13228	CALPERS	19-Jun-19	IRWD Wire	1,336.77	Negotiable
13229	BANK OF NEW YORK MELLON TRUST COMPANY NA	20-Jun-19	IRWD Wire	10,694.44	Negotiable
13230	CHARD SNYDER & ASSOCIATES, INC.	20-Jun-19	IRWD Wire	17,744.67	Negotiable

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CHECK OR WIRE #	SUPPLIERS	PAYMENT DATE	PAYMENT METHOD	AMOUNT	STATUS
13231	CHARD SNYDER & ASSOCIATES, INC.	20-Jun-19	IRWD Wire	2,633.30	Negotiable
13232	CALPERS	21-Jun-19	IRWD Wire	181.95	Negotiable
13233	CHARD SNYDER & ASSOCIATES, INC.	21-Jun-19	IRWD Wire	13,015.34	Negotiable
13234	CHARD SNYDER & ASSOCIATES, INC.	21-Jun-19	IRWD Wire	3,671.29	Negotiable
13235	CHARD SNYDER & ASSOCIATES, INC.	24-Jun-19	IRWD Wire	1,850.54	Negotiable
13236	CHARD SNYDER & ASSOCIATES, INC.	24-Jun-19	IRWD Wire	13,790.26	Negotiable
13237	CHARD SNYDER & ASSOCIATES, INC.	24-Jun-19	IRWD Wire	1,513.45	Negotiable
13238	INTERNAL REVENUE SERVICE	24-Jun-19	IRWD Wire	200,741.71	Negotiable
13239	FILANC-BALFOUR BEATTY JV	24-Jun-19	IRWD Wire	351,819.90	Negotiable
13240	FILANC-BALFOUR BEATTY JV	24-Jun-19	IRWD Wire	3,909.61	Negotiable
13241	FRANCHISE TAX BOARD	24-Jun-19	IRWD Wire	61,818.48	Negotiable
13242	EMPLOYMENT DEVELOPMENT DEPARTMENT	24-Jun-19	IRWD Wire	14,069.61	Negotiable
13243	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	24-Jun-19	IRWD Wire	3,269.65	Negotiable
13244	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	24-Jun-19	IRWD Wire	154,992.12	Negotiable
13245	YORK INSURANCE SERVICES GROUP INC - CA	25-Jun-19	IRWD Wire	2,747.37	Negotiable
13246	CALPERS	25-Jun-19	IRWD Wire	200,922.40	Negotiable
13247	FRANCHISE TAX BOARD	26-Jun-19	IRWD Wire	8,860.50	Negotiable
13248	INTERNAL REVENUE SERVICE	26-Jun-19	IRWD Wire	33,202.20	Negotiable
13249	EMPLOYMENT DEVELOPMENT DEPARTMENT	26-Jun-19	IRWD Wire	1,280.00	Negotiable
13250	CHARD SNYDER & ASSOCIATES, INC.	27-Jun-19	IRWD Wire	1,209.90	Negotiable
SUB-TOTAL WIRES ISSUED				4,736,506.08	
399830	SHADY CANYON GOLD CLUB	20-Jun-19	IRWD Check	1,182.70	Voided
399236	Montejano, Graciela (Grace)	6-Jun-19	IRWD Check	54.67	Voided
399679	WANG, TENG	13-Jun-19	IRWD Check	77.65	Voided
399488	CHANDRE, JANIS	13-Jun-19	IRWD Check	91.80	Voided
399506	CYVEX TECHNOLOGY INC	13-Jun-19	IRWD Check	205.16	Voided
SUB-TOTAL CHECKS/WIRES ISSUED AND VOIDED IN JUNE 2019				1,611.98	
TOTAL AP DISBURSEMENTS AND VOIDS FOR JUNE 2019				18,886,468.23	

Exhibit "E"

MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS

June
2019

	AMOUNT	VENDOR	PURPOSE
6/7/2019	993,208.88	BANK OF AMERICA	ACH Payments for Payroll
6/21/2019	1,021,380.86	BANK OF AMERICA	ACH Payments for Payroll
	<u>\$2,014,589.74</u>		

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Exhibit "F"

IRWD Gov Code 53065.5 Disclosure Report

Payment or Reimbursements for Individual charges of \$100 or more per transaction for services or product received.

01-JUN-19 to 30-JUN-19

NAME	CHECK NO.	CHECK DATE	AMOUNT	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Avalos, Joaquin	400078	28-Jun-19	188.00	Membership Renewal	CWEA membership
Bennett, Ray	399433	13-Jun-19	180.96	Mileage	SGMA meeting in Bakersfield
Chambers, Wendy	399864	27-Jun-19	383.96	Airfare	Attending AWWA ACE19 Annual Conference & Exposition, Denver, CO - June 9-12, 2019
Chauv, Denise	399700	20-Jun-19	116.87	Other(Misc)	Safety Shoe Allowance
Chaves, Romuel-Dave E (RD)	399227	6-Jun-19	123.89	Other(Misc)	Safety Shoe Allowance
Clary, Cheryl	399865	27-Jun-19	120.00	Certification Renewal	CPA License Renewal
Colston, James	399702	20-Jun-19	272.01	Lodging	AWWA 2019 Annual Conference & Exposition, Denver, CO - June 9, 2019
Colston, James	399702	20-Jun-19	272.01	Lodging	AWWA 2019 Annual Conference & Exposition, Denver, CO - June 10, 2019
Colston, James	399702	20-Jun-19	272.01	Lodging	AWWA 2019 Annual Conference & Exposition, Denver, CO - June 11, 2019
Colston, James	399702	20-Jun-19	272.01	Lodging	AWWA 2019 Annual Conference & Exposition, Denver, CO - June 12, 2019
Cronin, Gregory	399437	13-Jun-19	259.00	Other(Misc)	FY 18-19 Tool Reimbursement
Cronin, Gregory	399437	13-Jun-19	314.99	Other(Misc)	FY 18-19 Tool Reimbursement
Cronin, Gregory	399437	13-Jun-19	118.45	Other(Misc)	FY 18-19 Tool Reimbursement
Drzymkowski, Michele	399229	6-Jun-19	188.00	Membership Renewal	CWEA membership
Flotho, Eric	399876	27-Jun-19	484.94	Other(Misc)	Polycom phone for Conference rooms
Flotho, Eric	399876	27-Jun-19	240.34	Other(Misc)	Polycom phone for Conference rooms
Legault, Dan	399441	13-Jun-19	106.67	Other(Misc)	FY 18-19 Tool Reimbursement
Legault, Dan	399441	13-Jun-19	203.59	Other(Misc)	FY 18-19 Tool Reimbursement
Legault, Dan	399441	13-Jun-19	198.26	Other(Misc)	FY 18-19 Tool Reimbursement
Oldewage, Lars	399707	20-Jun-19	269.96	Airfare	SWRCB ELAP Fees Stakeholder Meeting, Sacramento, CA - June 13, 2019
Oldewage, Lars	399872	27-Jun-19	107.74	Other(Misc)	Hand Truck supplies for laboratory
Oldewage, Lars	399872	27-Jun-19	263.00	Membership Renewal	WEF annual membership
Perez, Cesar	400082	28-Jun-19	188.00	Membership Renewal	CWEA membership
Perry, Guy (Matthew)	399444	13-Jun-19	110.54	Other(Misc)	FY 18-19 Tool Reimbursement
Perry, Guy (Matthew)	399444	13-Jun-19	140.50	Other(Misc)	FY 18-19 Tool Reimbursement
Perry, Guy (Matthew)	399444	13-Jun-19	116.33	Other(Misc)	FY 18-19 Tool Reimbursement
Saini, Mohit	399709	20-Jun-19	130.86	Other(Misc)	Meeting supplies
Sanchez, Hector	399447	13-Jun-19	143.29	Other(Misc)	FY 18-19 Tool Reimbursement
Sanchez, Hector	399447	13-Jun-19	104.92	Other(Misc)	FY 18-19 Tool Reimbursement
Sanchez, Hector	399447	13-Jun-19	409.99	Other(Misc)	FY 18-19 Tool Reimbursement
Silva, Constantino	399710	20-Jun-19	180.00	Certification Renewal	SWRCB Waste Water Operator Grade II exam fee
Silva, Constantino	399710	20-Jun-19	125.00	Certification Renewal	SWRCB Waste Water Operator Grade II certificate
Tran, Jason	399448	13-Jun-19	188.00	Membership Renewal	CWEA membership
Wilson, Brett	399450	13-Jun-19	265.51	Other(Misc)	FY 18-19 Tool Reimbursement
Wilson, Brett	399450	13-Jun-19	397.57	Other(Misc)	FY 18-19 Tool Reimbursement
Total Amount:			\$7,457.17		

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July 22, 2019

Prepared by: D. Pardee / C. Smithson

Submitted by: C. Clary

Approved by: Paul A. Cook



CONSENT CALENDAR

IRVINE RANCH WATER DISTRICT STRATEGIC MEASURES

SUMMARY:

Provided as Exhibit “A” are the IRWD Strategic Measures and informational items for the Board’s review. These measures are intended to reflect the critical performance measures that gauge the District’s key business objectives.

BACKGROUND:

The proposed strategic measures document summarizes a number of operating performance, financial, customer and other key measures important to the ongoing operation of the District. These measures were selected and designed to provide a “snapshot” view of the measures that would be of interest to the Board.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

RECEIVE AND FILE.

LIST OF EXHIBITS:

Exhibit “A” – June 2019 Strategic Measures

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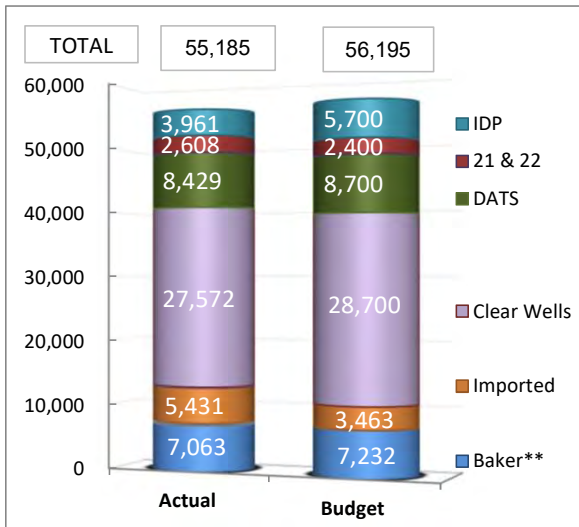
Exhibit "A"

IRVINE RANCH WATER DISTRICT

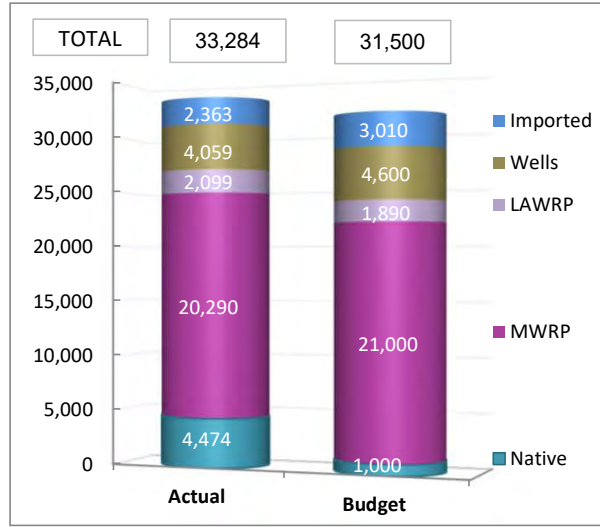
Operational Performance Measures

Data as of June 30, 2019

Potable Water Production FYTD
(AF)



Non-Potable Water Production FYTD
(AF)



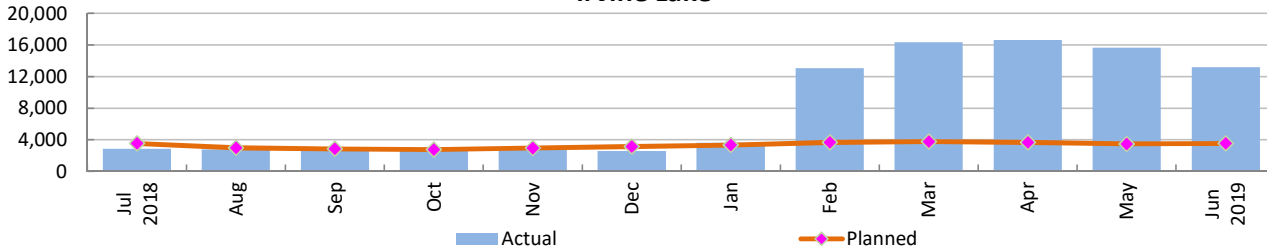
* Excess production moved to recycled reservoirs.

** Baker was supplied with 3,195 AF of native water. This is included in both potable and non potable production.

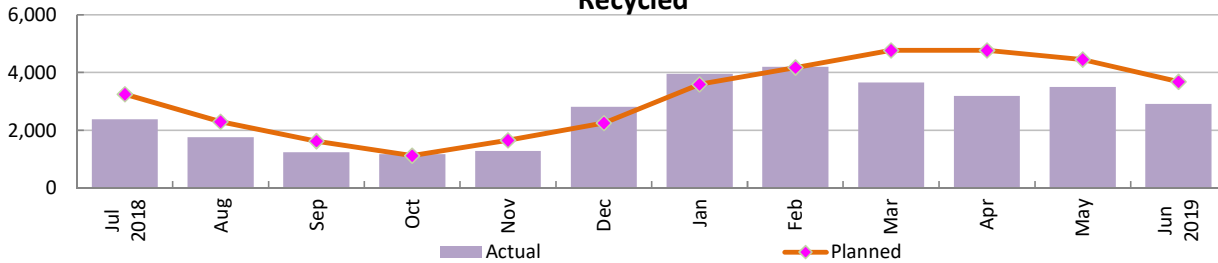
Non-Potable Reservoir Storage

(AF)

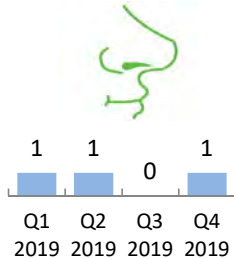
Irvine Lake



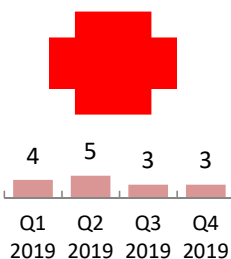
Recycled



Odor Complaints (FY by quarter)



OSHA Recordables Incidents



Regulatory Compliance Incidents

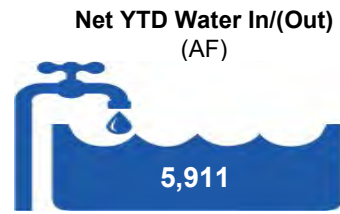
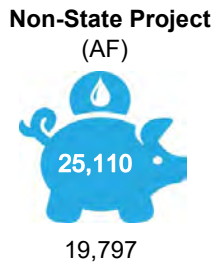
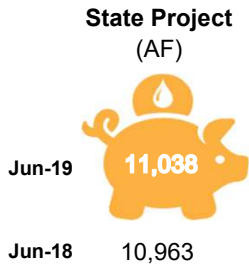
AQMD	0	0	0	0
Plants	0	0	0	0
Sewer Spills	2	1	1	0
	Q1 2019	Q2 2019	Q3 2019	Q4 2019

IRVINE RANCH WATER DISTRICT

Other Statistical Information

Data as of June 30, 2019

Banked Water



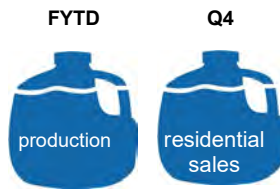
*Calendar Year including extraordinary supply received.

Certificates of Occupancies FYTD



	Apartment	Condominium	Single Family
FY 18-19	1481	1639	1308
FY 17-18	1968	1765	1659

Total Potable Water



	AF	GPCD
FY 18-19	54,210	66
FY 13-14	63,834	82
Reduction	15.1%	20%

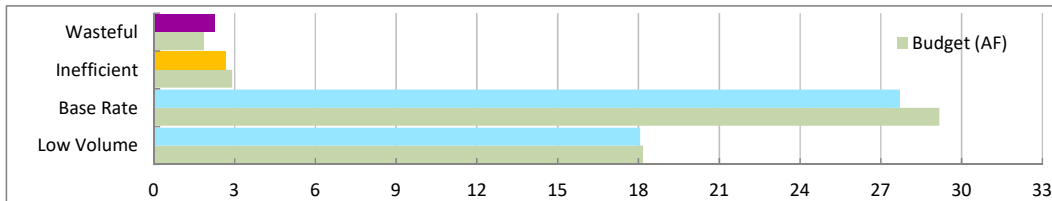
Acre-Feet Per Acre Irrigation



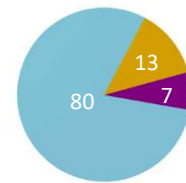
	AF	ET Based Allocation
FY 18-19 Q4	0.18	0.27
FY 13-14 Q4	0.24	0.39

Potable Sales by Tier FYTD

(in thousands)

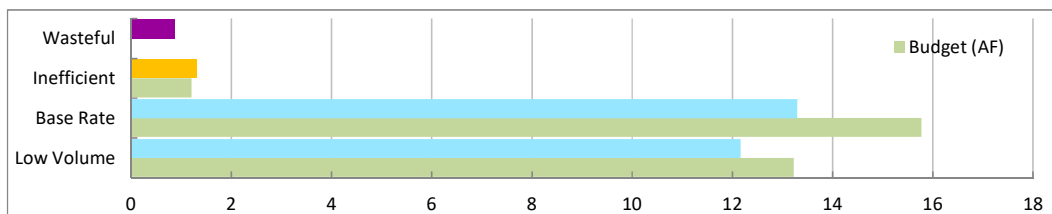


% of Customers by Tier

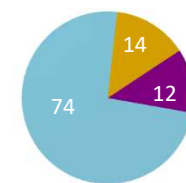


Non-Potable Sales by Tier FYTD

(in thousands)

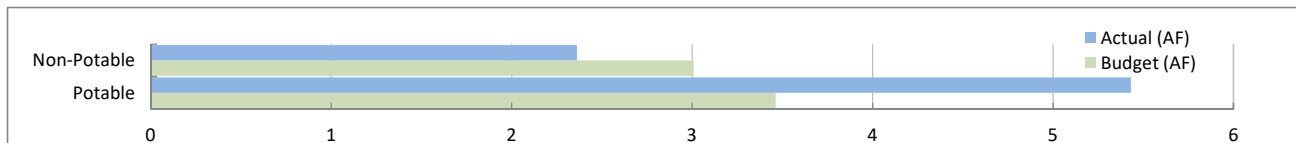


% of Customers by Tier



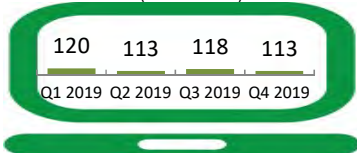
Imported Water Purchases FYTD

(in thousands)

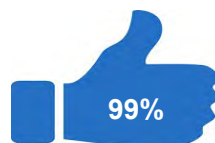


Website Hits

(in thousands)



Customer Satisfaction Index**



** 12 month rolling average

July 22, 2019
Prepared and
submitted by: C. Compton
Approved by: Paul A. Cook



CONSENT CALENDAR

2019 LEGISLATIVE AND REGULATORY UPDATE

SUMMARY:

This report provides an update on the 2019-2020 legislative session and IRWD priorities. As legislation and regulations develop, staff will provide updates and recommendations to the Water Resources Policy and Communications Committee and the Board, as appropriate.

Staff recommends that the Board adopt the following position:

- *AB 217 (E. Garcia, D-Coachella) – Income Taxation: Credits: Exclusions – “WATCH”*

BACKGROUND:

With the State budget adopted and the July 12 policy committee deadline looming, the California Legislature is looking forward to its summer recess. The Legislature will be on recess from July 12 to August 12. When the Legislature returns, the fiscal committees will have until August 30 to meet and report bills to the floor. The last day for each house to pass bills this legislative year is September 13, which is the day the Interim Recess begins.

A copy of the 2019 Legislative Matrix is attached as Exhibit “A”. Exhibit “B” is the 2019 Legislative Update Report Links to Bill Texts, which contains links to the bills discussed below.

State Budget Update:

May Revenue Numbers:

On June 10, 2019, State Controller Betty Yee released her monthly report on the State’s finances. She announced that the State took in \$9.47 billion during the month of May. This was \$1.22 billion more than the State took in during the month of May in 2018. Revenue receipts for the fiscal year through May 31 have come in at \$123.4 billion, which was \$386 million above the estimates contained in the Governor’s May Revise.

Fiscal Year 2019-2020 State Budget:

Following the Legislature’s passage of the Fiscal Year 2019-2020 (FY 19-20) budget, Governor Newsom signed the budget into law on June 27, 2019. The enacted budget authorizes \$147.8 billion in General Fund expenditures, assumes \$150.7 billion in General Fund resources, and provides for combined total reserves of \$19.4 billion. Overall, the FY 19-20 budget is approximately six percent larger than the Fiscal Year 2018-2019 budget.

The budget and its associated budget trailer bills also included a number of policy changes, including safe drinking water funding and housing. Policy changes related to wildfires have also been provided in a budget trailer bill.

Water Tax Update / Safe Drinking Water Funding:

The FY 19-20 budget funds a Safe Drinking Water Program without a water tax or any other new taxes. For FY 19-20, the budget allocates \$100 million from the Greenhouse Gas Reduction Fund/Cap-and-Trade Revenues (GGRF) and \$30 million from the General Fund for the Safe Drinking Water Program. The budget also provides \$3.4 million from the General Fund for the State Water Resources Control Board's (State Board's) administrative costs.

Two drinking water budget trailer bills were also proposed. SB 101, which represented the Assembly's version of the implementing language for safe drinking water, and AB 100, which represented the Senate's version of the implementing language for safe drinking water, both provided for a continuous appropriation of five percent of the GGRF up to \$130 million beginning FY 2020-2021 for safe drinking water. The bills also proposed a General Fund backstop of the \$130 million if five percent of the GGRF falls short of the \$130 million appropriation. The backstop was proposed to begin in FY 2023-2024. Both the GGRF appropriation and the backstop would sunset June 30, 2030.

Despite containing similar funding provisions, the two bills differed substantially in how the Safe Drinking Water Program is to be implemented. One example is that SB 101 would have authorized the use of Safe Drinking Water funds for addressing contamination that does not exceed existing safe drinking water standards while AB 100 was focused on exceedances of safe drinking water standards. Another example is that AB 100 listed funding priorities while SB 101 did not include a priority list.

Ultimately, the two budget trailer bills were not acted upon and the Legislature decided to put the implementation language for the Safe Drinking Water Program and Safe Drinking Water Fund in SB 200, authored by Senator Bill Monning (D-Carmel), Assemblymember Eduardo Garcia (D-Coachella Valley), and Assemblymember Richard Bloom (D-Santa Monica).

SB 200 would establish the Safe and Affordable Drinking Water Fund in the State Treasury, and provides for a continuous appropriation of five percent of the GGRF up to \$130 million beginning FY 2020-2021 for safe drinking water. The bill also established a General Fund backstop of the \$130 million if five percent of the GGRF falls short of the \$130 million appropriation. The backstop was proposed to begin in FY 2023-2024. Both the GGRF appropriation and the backstop would sunset June 30, 2030.

SB 200, which contains an urgency clause, authorizes use of the Safe Drinking Water Funding for the following:

- Operation and maintenance costs to help deliver an adequate supply of safe drinking water in both the near and long terms;

- Consolidating water systems, or extending drinking water services to other public water systems, domestic wells, and state small water systems;
- The provision of replacement water, as needed, to ensure immediate protection of health and safety as a short-term solution;
- The provision of services for purposes of helping the systems become self-sufficient in the long term;
- The development, implementation, and sustainability of long-term drinking water solutions; and
- State Board costs associated with the implementation and administration of the Safe Drinking Water Program.

The bill would also require the State Board to adopt a fund expenditure plan, and make publicly available a map of aquifers that are used or likely to be used as a source of drinking water that are at high risk of containing contaminants that exceed safe drinking water standards.

SB 200 was passed by the Assembly on a vote of 68 to 0. As of the writing of this report, the bill is on the Senate Floor for a vote of concurrence in amendments. It is expected that the Senate will take the bill up before leaving for Summer Recess. While IRWD current has a “support” position on SB 200, staff has actively tracked the bill and the related discussion on safe drinking water.

AB 1486 (Ting, D-San Francisco) – Surplus Land:

AB 1486 would revise the rules related to a local agency’s disposal of surplus land. Specifically, the bill would revise the definition of “surplus land” within the Government Code and would restrict local agencies’ ability to dispose of surplus land.

Under AB 1486, prior to a local agency conducting negotiations to dispose of real property it owns, the local agency must issue a written notice of availability to low- and moderate-income housing providers. This means that prior to negotiating the sale of any property owned by a local agency, a local agency would need to offer the property for housing.

AB 1486 was a reintroduction of a bill Assemblymember Ting ran last year, but this bill has been amended several times as it has moved through the legislative process. A broad coalition of local agencies opposes this bill. Given the bill’s potential impact to IRWD’s real estate investments, IRWD currently has an “oppose unless amended” position on AB 1486.

Staff continues its work to obtain amendments to AB 1486. Staff will provide an update on any new developments related to this bill.

2019 State Legislative Update on Other Bills of Interest to IRWD:

As has been traditionally done in July after the House of Origin deadline, staff has provided an update on each bill the District has taken a position on or actively monitored during this legislation session. A summary and a status report on each bill are provided below:

AB 68 (Ting, D-San Francisco) – Land Use: Accessory Dwelling Units:

AB 68 would prohibit local ordinances from imposing requirements on minimum lot size, or that limit lot coverage, floor area ratio, or open space for accessory dwelling units (ADUs) if those ordinances do not permit ADUs of at least 800-square-feet and at least 16 feet in height with 4-foot side and rear yard setbacks. The bill would also require ministerial approval of a building permit application or mixed-use zone to create any of the following:

- One accessory dwelling unit and one junior accessory dwelling unit per lot with a proposed or existing single-family dwelling if certain requirements are met;
- A detached, new construction single-story accessory dwelling unit that meets certain requirements and would authorize a local agency to impose specified conditions relating to floor area and height on that unit;
- Multiple accessory dwelling units within the portions of an existing multifamily dwelling structure provided those units meet certain requirements; or
- Not more than two accessory dwelling units that are located on a lot that has an existing multifamily dwelling, but are detached from that multifamily dwelling and are subject to certain height and rear yard and side setback requirements.

The bill, which does not directly address the fees a local agency like IRWD can charge, was set to be heard by the Senate Governance and Finance Committee on July 10.

Because the ADU bills introduced by this authors last year included provisions that could have impacted water fees and charges. Staff has monitored the ADU legislation this year to ensure that they do not impact the District's ability to charge connection fees, or cost-of-service-based rates and charge. IRWD currently has a "watch" position on this bill.

AB 69 (Ting, D-San Francisco/Quirk-Silva, D-Fullerton) – Land Use: Accessory Dwelling Units:

AB 69 bill would require the Department of Housing and Community Development to propose and submit small home building standards governing ADUs smaller than 800 square feet to the California Building Standards Commission for adoption on or before January 1, 2021.

Amendments taken in the Senate Housing Committee added Assemblymember Quirk-Silva (D-Fullerton) as joint author.

The bill, which does not directly address the fees a local agency like IRWD can charge, is currently on the Senate Appropriations Suspense File.

Because the ADU bills introduced by this author last year included provisions that could have impacted water fees and charges, staff has monitored the ADU legislation this year to ensure that they do not impact the District's ability to charge connection fees, or cost-of-service-based rates and charge. IRWD currently has a "watch" position on this bill.

AB 134 (Bloom, D-Santa Monica) – Safe Drinking Water Restoration:

AB 134 would require the State Board to adopt an assessment of funding needed for at-risk water systems, adopt and provide for a sustainable plan for restoring safe drinking water based on the recommendation of a regional engineer, and make available a map of aquifers that are used or likely to be used as a source of drinking water and that are at high risk of containing contaminants.

Separate from the two safe drinking water budget trailer bills and SB 200, AB 134 represents another approach to implementing a program to fund safe drinking water. Given the Legislature's agreement to pass SB 200 this year as the vehicle to implement the Safe Drinking Water Program, AB 134 was made a two-year bill and will not advance in the Legislature this year. Assemblymember Bloom, the author of AB 134, has stated that he will continue to work on refining his bill to address safe drinking water in California during the remainder of the 2019-2020 two-year legislative session.

The bill is current in the Senate Environmental Quality Committee. IRWD currently has a "watch" position on AB 134.

AB 217 (Burke, D-Inglewood) – Income Taxation: Credits: Exclusions: Federal Conformity:

Previously, AB 217 was authored by Assembly Water, Parks and Wildlife Committee Chairman Eduardo Garcia. The bill would have the Safe and Affordable Drinking Water Fund in the State Treasury and would have provided that moneys in the fund were available, upon appropriation by the Legislature, to the State Board to provide a stable source of funding to secure access to safe drinking water for all Californians. Previous versions of the bill included a hybrid approach to funding safe drinking water that included a water tax, an agricultural tax and development of a trust fund. The water tax included in the bill was a monthly \$0.50 per service connection tax on all public water systems.

On June 17, AB 217 was gutted and amended. Assemblymember Autumn Burke (D-Inglewood) took over as author of the bill. AB 217 no longer relates to safe drinking water. The bill now addresses state conformity with federal income tax law.

The bill is currently on the Assembly Floor. IRWD previously had taken an "oppose unless amended" position AB 217. As this bill no longer includes a water tax or relates to safe drinking water, staff recommends that the Board adopt a "watch" position.

AB 292 (Quirk, D-Hayward) – Recycled Water: Raw Water and Groundwater Augmentation:

In 2017, in order to further the development of potable reuse regulations, WaterReuse California sponsored AB 574, introduced by Assemblymember Bill Quirk (D-Hayward). AB 574 established a statutory deadline for the State Board to develop a policy and sequential regulations for potable reuse consistent with a report provided to the Legislature. Additionally, the bill recognized that there is a continuum of potable reuse projects, and defined “potable reuse” as well as four subcategories — groundwater augmentation, reservoir augmentation, raw water augmentation, and treated water augmentation.

As introduced, AB 574 also proposed to remove the terms “Indirect Potable Reuse” and “Direct Potable Reuse” from the Water Code; however, the version of AB 574 signed into law did not include the removal of the terms from the Water Code. As a result, WaterReuse California is sponsoring AB 292 this year. AB 292 proposes to remove the terms “Indirect Potable Reuse” and “Direct Potable Reuse” from the Water Code.

AB 574 was scheduled to be heard by the Senate Natural Resources and Water Committee on July 9. As a leader in recycled water, IRWD has long advocated and supported efforts to increase water recycling in California. The District supported AB 574 in 2017, as introduced, and IRWD currently has a “support” position on AB 292.

AB 402 (Quirk, D-Hayward) – State Board: Local Primacy Delegation: Funding Stabilization Program:

As amended June 18, AB 402 would authorize the State Board to delegate partial responsibility for the Safe Drinking Water Act’s administration and enforcement to local primacy agencies. It would also require the State Board to evaluate and report on each local primacy agency annually. The bill would also allow local primary agencies to participate in a funding stabilization program.

This bill passed the Assembly without opposition because there was an understanding that the author’s intent for this bill was to assess fees only on small public water systems, as opposed to assessing fees on all public water systems. However, after this bill passed the Assembly, the author expressed his intent for the bill to require fees from all public water systems. This bill was amended on June 18, 2019, to provide that public water systems are required either to pay a fee to a local primary agency or to the State Board. Given that the author’s intent for this bill is to assess fees on all public water systems, IRWD adopted an “opposed unless amended” position on AB 402.

AB 402 is currently in the Senate Appropriations Committee.

AB 510 (Cooley, D-Rancho Cordova) – Local Records: Destruction of Records:

Since 1998, the Government Code has required that public agencies retain any routine video monitoring recordings for a period of one year, and keep radio and telephone recordings for 100 days. Over the past 20 years, video monitoring technology has changed drastically. When the original one-year recording provision was enacted, the legislative history shows that the original

intent was to store videotapes. Since that time, technology has advanced while the law has remained unchanged. The vast majority of video monitoring today is now done using digital cameras that record onto DVRs, agency servers, and cloud-based servers.

With the ease of digital storage and decreased cost of digital cameras, public agencies are installing an ever-increasing number of cameras and the cameras are recording in significantly higher resolution. While this has made video monitoring records more useful and effective, the increased number of cameras and picture quality means that the amount of data that must be stored to comply with the current statutory retention requirements is exceptionally high. Additionally, public agencies are more frequently using more cameras for routine video monitoring that is of no value to the public because it is footage of no activity. For example, 24-hour footage from a camera facing the back entrance to an office building where zero incidents have occurred must still be maintained for one year.

AB 510 sought to modernize the Government Code to allow local public agencies to adopt records retention policies designed for modern digital recording technologies, while ensuring the proper retention of any records in which an incident may have occurred. Specifically, the bill would have allowed public agencies to set their own records retention policies for routine digital (video, radio and telephone) recordings, provided they maintain routine monitoring records where incidents may have occurred until the incident is fully resolved. Additionally, the bill specified that in the absence of agencies adopting their own records retention policy, the current one-year (video recordings) and 100-day (radio and telephone recordings) retention policies would remain in effect.

The author in early spring decided to make the bill a two-year bill due to opposition from consumer attorneys. The California Special Districts Association, the sponsor of the bill, continues to work to develop a strategy on how to move the bill forward next year. IRWD had adopted a “support” position on AB 510 given the benefit the bill would provide the District. Staff will provide an oral update on the next steps on the bill.

AB 533 (Holden, D-Pasadena) – Income Taxes: Exclusion: Turf Removal Water Conservation Program:

AB 533 would have extended from January 1, 2019, to January 1, 2024, the sunset date for the allowance for a taxpayer to exclude from taxable gross income rebates that a taxpayer receives from a local water agency or supplier for turf removal water conservation programs. In the absence of this income tax exclusion, the turf removal rebates that customers receive will be subject to taxation as income. These rebates create an incentive for customers to remove turf to conserve water. Taxing these rebates as income diminishes that incentive.

The bill was held on the Assembly Appropriations Suspense File in May and will not move. IRWD has a “support” position on this bill.

AB 1180 (Friedman, D-Burbank) – Recycled Water:

AB 1180 would require the State Board to update the State’s non-potable recycled water regulations by 2023, if they have the resources to do so. These regulations have not been revised since 2000. An update to these regulations, incorporating the knowledge and lessons learned over nearly two decades of non-potable water recycling, will help the State to achieve its ambitious goals for recycled water use.

IRWD has advocated for greater water reuse and supported efforts to increase water recycling in California because the District strongly believes that reuse is a key component of the State’s water supply portfolio. IRWD has a “support” position on this bill.

The bill is current on the Senate Appropriations Committee Suspense File.

AB 1204 (Rubio, D-West Covina) – Primary Drinking Water Standards: Implementation Date:

AB 1204 is a short, but important bill. The bill would provide that the adoption or amendment of a primary drinking water standard for a contaminant in drinking water that is more stringent than federal standards will take effect three years after the date on which the State Board adopts or amends the standard. Additionally, the bill would authorize the State Board to delay the effective date of the primary drinking water standard by up to two additional years when capital improvements are needed to comply with meeting the standard.

The bill is sponsored by the Association of California Water Agencies (ACWA) and strives to provide water agencies the time needed to comply with new primary drinking water standards.

The bill is in the Assembly Environmental Safety and Toxic Materials Committee, and is a two-year bill. IRWD has a “support” position on AB 1204.

AB 1414 (Friedman, D-Burbank) – Urban Retail Water Suppliers: Reporting:

AB 1414 seeks to address issues raised by some urban retail water suppliers that the reporting deadlines contained in the “Making Water Conservation a California Way of Life” are challenging to meet given the large amount of data needed to complete the reports. As a result, AB 1414 proposes changing the reporting date for submitting a validated water loss audit to the Department of Water Resources (DWR) from October 1 to January 1 of each year depending on if a water supplier is reporting based on a calendar or fiscal year. Additionally, AB 1414 proposes changing the reporting date for calculating and complying with the urban water use objective from November 1 of 2023, and each November 1 thereafter, to January 1, 2024, and each January 1 thereafter. Finally, the bill adjusts the compliance deadlines and reporting deadlines for updating Urban Water Management Plans.

The bill is currently on the Senate Floor. IRWD does not currently have a position on this bill.

AB 1415 (Friedman, D-Burbank) – DWR: Reporting Requirements/Civil Penalties:

AB 1415 would establish civil penalties that DWR would be required to impose of any person or entity failing to file certain statutorily required reports with the Department by the dates specified in the statute. Specially, the bill would authorize a \$1,000 civil penalty for failing to file a water loss audit report, urban water management plan, groundwater sustainability plan, and agricultural management plan, among others, by the deadlines prescribed in the statute. The civil penalty would increase to \$250 per day if the reports or plans are not submitted within 60 days of the statutory deadline.

The bill was scheduled to be heard by the Senate Judiciary Committee on July 9. IRWD does not currently have a position on this bill.

AB 1432 (Dahle, R-Bieber) – Urban Water Use Objective: Indoor Residential Water Use:

AB 1432 as introduced was a spot bill that would modify Water Code Section 10609.4, which outlines the indoor residential water use standards to be used when calculating an urban water use objective. The bill was amended to deal with water shortages as a result of wildfires. The bill was chaptered on June 26, 2019. IRWD did not take a position on this bill.

AB 1588 (Gloria, D-Mission Hills/Gray, D-Merced) – Drinking Water and Wastewater Operator Certification:

AB 1588 would provide a path of reciprocity for military veterans to apply their skills and experience toward meeting the requirements for California's water and wastewater operator certifications. This bill would ensure that military veterans transitioning from military service into civilian water and wastewater treatment operator occupations receive appropriate credit for the work experience, education, skills, and knowledge they gained while working on water and wastewater treatment systems during their time in our military.

With AB 1588, California's water and wastewater industries would have a larger pool of highly skilled, motivated, and talented individuals.

The bill is currently scheduled to be heard by the Senate Committee on Veterans Affairs on July 9. IRWD currently has a "support" position on this bill.

AB 1672 (Bloom, D-Santa Monica) – Flushable Products:

AB 1672 is a proposal sponsored by the California Association of Sanitation Agencies (CASA). The bill would have prohibited representing, including representing on a label, that a nonwoven disposable product can be flushed or that it is safe for sewer systems or septic systems, unless the product is a flushable wipe that meets certain performance standards. Additionally, the bill would require non-flushable wipes to be labeled clearly and conspicuously to communicate that they should not be flushed.

In recent years, wipes labeled as flushable have gained popularity, which encourages residents to dispose of wipes products generally in their toilets instead of in the trashcans. This can result in

the wipes being caught in pipes and can cause problems for wastewater infrastructure and treatment facilities. These products often combine with fats, oils, and grease and become larger obstructions within sewer systems, which can result in costly sewer overflows.

This bill sought to ensure manufactures properly label their products so that consumers do not think they can flush the wipes. The approach balanced consumer demands for the products with the need to prevent the consequences of instructing consumers to flush these products.

IRWD currently has a “support” position on the bill. The Assembly Appropriations Committee referred this bill to the committee’s Suspense File, and subsequently postponed the hearing on the bill. As such, this bill is not eligible for consideration this year. Nevertheless, this bill remains eligible for consideration in 2020.

ACA 3 (Mathis, R-Visalia/E. Garcia, D-Coachella) – Water: Minimum Funding Guarantee:

ACA 3, while not directly related to safe and affordable drinking water, relates to providing a durable funding source for water in the state which could be used to address safe and affordable drinking water in California. The proposed constitutional amendment would, starting in the 2021–2022 fiscal year, set aside not less than two percent of State revenues for the payment of principal and interest on bonds authorized pursuant to the Water Quality, Supply, and Infrastructure Improvement Act of 2014, and for water supply, delivery, and quality projects.

IRWD has a “watch” position on ACA 3. The bill failed passage in the Assembly Water, Parks and Wildlife Committee, but as a constitutional amendment, it is not subject to the normal bill deadlines and it remains eligible for consideration by the Legislature at any time. Given the bill’s failed passage in the Assembly Water, Park and Wildlife Committee, the bill is not expected to move forward.

ACR 89 (Cooley, D-Rancho Cordova) – Special Districts Week:

ACR 89, authored by Assemblymember Ken Cooley, would establish September 22, 2019, to September 28, 2019, as Special Districts Week and would encourage all Californians to be involved in their communities and be civically engaged with their local government. The CSDA has sponsored the resolution to bring attention to the important role that special districts serve in providing Californians with essential government services. CSDA has requested that its members consider supporting the resolution. Given IRWD’s involvement with CSDA, the Board adopted a “support” position on ACA 89.

ACA 89 is currently on the Senate Floor.

SB 13 (Wieckowski, D-Fremont) – Accessory Dwelling Units:

SB 13 is intended to foster the creation of ADUs. Of specific interest to IRWD were the provisions of this bill that prohibit a local agency, special district, or water corporation from imposing any “impact fee” upon the development of an ADU less than 750 square feet and that limit the impact fees that may be imposed on an ADU 750 square feet or larger. Those provisions of the bill were removed.

The bill was scheduled to be heard by the Assembly Local Government Committee on July 10.

Because the ADU bills introduced by this authors last year included provisions that could have impacted water fees and charges. Staff has monitored the ADU legislation this year to ensure that they do not impact the District's ability to charge connection fees, or cost-of-service-based rates and charge. IRWD currently has a "watch" position on this bill.

SB 134 (Hertzberg, D-Van Nuys) – Water Conservation: Water Losses:

Last year, Senator Bob Hertzberg (D-Van Nuys) and Assemblymember Laura Friedman authored SB 606 and AB 1668, the "Making Water Conservation a California Way of Life" legislation. The legislation, among other things, requires urban retail water suppliers to calculate and comply with an urban water use objective. The urban water use objective is composed of adding efficient indoor residential water use, efficient outdoor water use, and water loss to create a retail-level water budget for each urban retail agency.

When SB 606 and AB 1668 were enacted last year, one of the outstanding issues was the fact that the urban water use objective language did not clearly state that the State Board could only enforce the water loss performance standard within the urban water use objective. In fact, the State Board has made statements indicating that enforcement of the water loss performance standard, which is currently being set by the State Board, may be enforced under both the urban water use objective and as a separate objective.

Hearing the concerns raised by the water community, Senator Hertzberg introduced SB 134 this year to clarify that the performance standard being set by the State Board on water loss shall only be enforced via the urban water use objective. IRWD currently has a "support" position on this bill.

The bill is the in the Assembly Appropriations Committee.

SB 204 (Dodd, D-Napa) – State Water Projects: Contracts:

SB 204 would require the Department of Water Resources (DWR) to provide notice to the Joint Legislative Budget Committee and relevant policy and fiscal committees of the Legislature before holding public sessions to negotiate any potential amendment of certain long-term water supply contracts for the State Water Project. The bill would require DWR, before the execution of a specified proposed amendment to a long-term water supply contract and at least 60 days before final approval of such an amendment, to submit to the Joint Legislative Budget Committee and relevant policy and fiscal committees of the Legislature certain information regarding the terms and conditions of a proposed amendment of a long-term water supply contract and to submit a copy of the long-term contract as it is proposed to be amended.

The bill is currently in the Assembly Water, Parks and Wildlife Committee. The July 2 hearing was postponed by that committee. IRWD currently has a "watch" position on SB 204.

SB 307 (Roth, D- Riverside) – Water Conveyance: Use of Facility with Unused Capacity:

SB 307 is a reintroduction of AB 1000 (2018), authored by Assemblymember Laura Friedman, and SB 210 (2018), authored by Senator Richard Roth (D-Riverside). The bill seeks to prohibit water from the Cadiz Valley Water Conservation, Recovery & Storage Project from being placed into a water conveyance facility that has unused capacity unless the State Lands Commission finds that there would be no adverse effect on the natural or cultural resources.

The bill is current in the Assembly Appropriations Committee. IRWD currently has a “watch” position on SB 307.

SB 332 (Hertzberg, D-Van Nuys/Wiener, D-San Francisco) – Wastewater Treatment: Recycled Water:

SB 332 would have declared that the discharge of treated wastewater from ocean outfalls is a waste and unreasonable use of water, and would mandate that agencies reduce their ocean discharges by 50 percent by 2030 and by 95 percent by 2040, as compared to average annual wastewater discharges between 2010 and 2020. On May 16, the Senate Appropriations Committee held the bill on the Suspense File and as a result, the bill will not move forward this year.

IRWD currently has an “oppose unless amended” position on the bill.

SB 414 (Caballero, D-Salinas) – Small System Water Authority Act of 2019:

The California Municipal Utilities Association (CMUA), in coordination with the Eastern Municipal Water District, is sponsoring SB 414. SB 414, which is similar to AB 2050 (2018), proposes to enact the Small System Water Authority Act of 2019. The proposal seeks to address the governance issues causing unsafe drinking water in a number of communities in California.

The bill was scheduled to be heard by the Assembly Local Government Committee on July 10. IRWD currently has a “support” position on this bill.

SB 669 (Caballero, D-Salinas) – Water Quality: Safe Drinking Water Fund:

SB 669 was sponsored by ACWA and CMUA. It proposed an alternative mechanism to fund safe drinking water. The proposal would have created a Safe Drinking Water Trust to provide a perpetual funding source to address safe drinking water in disadvantaged communities. The bill was held on the Senate Appropriations Suspense File in May and will not advance.

IRWD has a “support” position on SB 669.

SB 732 (Allen) – South Coast Air Quality Management District Taxing Authority:

Senate Ben Allen (D, Redondo Beach) authored SB 732 to propose providing the South Coast Air Quality Management District (AQMD) the authority to impose a sales tax within its district boundaries. Specifically, the bill would have authorized AQMD to seek voter approval for a sales tax of between 0.25 and 1 percent.

If a sales tax was sought and approved, the bill would have authorized AQMD to send the revenue from the tax on the financial incentives and programs to implement the AQMD-adopted plans to achieve state and federal ambient air quality standards and to accelerate the deployment of all of the following:

- Zero-emission, near-zero-emission, or cleanest commercially available mobile and stationary equipment, and
- Alternative fueling and charging infrastructure.

SB 732 is currently in the Senate Appropriations Committee. Since the bill missed the house of origin deadline, the bill is now a two-year bill. IRWD currently does not have a position on SB 732.

2019 State Regulatory Update:

Other 2019 State Regulatory Updates:

Staff continues to track, monitor and engage in a number of regulations of interest to IRWD. The following is a list of some of the state regulations and agency reports staff is monitoring, tracking or planning to engage in over the next 12 months. As the next drafts of the regulations or report are released for public review and comment, staff will engage, as appropriate. Staff will also provide an oral update to the Committee on any new developments related to these regulations.

The pending regulations and reports actively being tracked include the:

- Building Standards Commission’s “2019 California Plumbing Code;”
- Department of Water Resources (DWR) and the State Board’s implementation of the “Making Water Conservation a California Way of Life” legislation;
- DWR’s “The Open and Transparent Water Data Act (AB 1755, Dodd) Implementation Plan;”
- Governor’s Executive Order on a Water Resiliency Portfolio;
- Office of Environmental Health Hazard Assessment’s “A Framework and Tool for Evaluating California’s Progress in Achieving the Human Right to Water;”
- State Board Electronic Annual Report;
- State Board’s development of a “Cross Connection Policy Handbook;”

- State Board’s proposed “Environmental Laboratory Accreditation Program Regulations;”
- State Board’s proposed “Mercury TMDL and Statewide Mercury Control Program for Reservoirs” regulations;
- State Board’s proposed regulations on “Prohibiting Wasteful Water Use Practices;”
- State Board’s “Water Loss Performance Standards Regulations;”
- State Board’s Water Rights Enforcement Policy; and
- State Board’s “Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California” and draft “Toxicity Provisions.”

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on July 11, 2019.

RECOMMENDATION:

THAT THE BOARD ADOPT A “WATCH” POSITION ON AB 217 (GARCIA).

LIST OF EXHIBITS:

Exhibit “A” – IRWD Legislative Matrix

Exhibit “B” – 2018 Legislative Update Report Links to Bill Texts

EXHIBIT "A"
IRWD 2019 LEGISLATIVE MATRIX
Updated 07/08/2019

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
AB 5 Gonzalez (D)	Independent Contractors		States the intent of the Legislature to codify the decision in the case of Dynamex Operations West, Inc. v. Superior Court of Los Angeles and clarify its application. Provides that the factors of the ABC test be applied in order to determine the status of a worker as an employee or independent contractor for all provisions of the Labor Code and the Unemployment Insurance Code, unless another definition or specification of employee is provided.	06/13/2019 - To SENATE Committee on LABOR, PUBLIC EMPLOYMENT AND RETIREMENT.
AB 11 Chiu (D)	Community Redevelopment Law		Requires the Director of Finance to adjust the percentage of General Fund revenues appropriated for school districts and community college districts for computing the minimum amount of revenues that the state is required to appropriate for the support thereto in a manner that ensures that the division of taxes authorized by the Community Redevelopment Law have no net fiscal impact upon the total amount of the General Fund revenue and local property tax revenue allocated to such.	04/24/2019 - From ASSEMBLY Committee on LOCAL GOVERNMENT: Do pass to Committee on APPROPRIATIONS.
AB 15 Nazarian (D)	Student Financial Aid: Savings Account Program		Establishes the Children's Savings Account Program, under the administration of the Scholarshare Investment Board, for the purposes of expanding access to higher education through savings. Establishes the Children's Savings Account Program Fund to serve as the initial repository of all moneys received from state and private sources for the program.	06/06/2019 - To SENATE Committee on EDUCATION.
AB 38 Wood (D)	Fire Safety: Low-Cost Retrofits		Requires the Natural Resources Agency to review the regional capacity of each county that contains a very high fire hazard severity zone to improve forest health, fire resilience, and safety. Requires the seller of any property located in a high fire hazard severity zone to provide a disclosure notice to the buyer relating to fire hardening improvements on the property. Establishes the Fire Hardened Homes Revolving Loan and Rebate Fund to pay for costs of fire hardening.	07/01/2019 - In SENATE. Read second time and amended. Re-referred to Committee on GOVERNMENTAL ORGANIZATION.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
AB 59 Kalra (D)	Elections: Polling Places: University Campuses		Directs a county elections official conducting an all-mailed ballot election to consider vote center location on a public or private university or college campus. Expands the definition of "public building" for purposes of that provision to include buildings owned or controlled by community college districts, the California State University, and the University of California, and it would also clarify that the University of California is encouraged, but not required, to comply with such a request.	07/02/2019 - From SENATE Committee on ELECTIONS AND CONSTITUTIONAL AMENDMENTS: Do pass to Committee on APPROPRIATIONS.
AB 60 Friedman (D)	Water Conservation: Water Meters: Accuracy Standards		Requires the State Energy Resources Conservation and Development Commission to adopt regulations setting standards for the accuracy of water meters. Prohibits any water meter manufactured on or after the effective date of those regulations from being sold or offered for sale in the state, or installed by a water purveyor, unless it is certified by the manufacturer to be in compliance with those standards.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
AB 64 Fong (R)	State Project Audits		Requires the California State Auditor to examine and audit a state contract involving the expenditure of public funds in excess of \$500,000,000 entered into by a state agency, board, commission, or department within one year of the date of final payment under the contract.	04/04/2019 - To ASSEMBLY Committee on ACCOUNTABILITY AND ADMINISTRATIVE REVIEW.;04/04/2019 - From ASSEMBLY Committee on ACCOUNTABILITY AND ADMINISTRATIVE REVIEW with author's amendments.;04/04/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on ACCOUNTABILITY AND ADMINISTRATIVE REVIEW.
AB 68 Ting (D)	Land Use: Accessory Dwelling Units	WATCH	Deletes the provision authorizing the imposition of standards on lot coverage and would prohibit an ordinance from imposing requirements on minimum lot size. Prohibits the imposition of those limitations if they do not permit at least an 800 square foot	07/05/2019 - From SENATE Committee on GOVERNANCE AND FINANCE with author's amendments.;07/05/2019 - In SENATE. Read second time and amended. Re-

IRWD 2049 LEGISLATIVE MATRIX
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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			accessory dwelling unit that is at least 16 feet in height with 4-foot side and rear yard setbacks.	referred to Committee on GOVERNANCE AND FINANCE.
<u>AB 69</u> Ting (D)	Land Use: Accessory Dwelling Units	WATCH	Requires the department to propose small home building standards governing accessory dwelling units smaller than 800 square feet, junior accessory dwelling units, and detached dwelling units smaller than 800 square feet, as specified, and to submit the small home building standards to the California Building Standards Commission for adoption on or before a specified date.	07/01/2019 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>AB 71</u> Melendez (R)	Independent Contractors and Employees		Requires a determination of whether a person is an employee or an independent contractor to be based on a specific multifactor test, including whether the person to whom the service is rendered has the right to control the manner and means of accomplishing the result desired.	02/25/2019 - From ASSEMBLY Committee on LABOR AND EMPLOYMENT with author's amendments.;02/25/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LABOR AND EMPLOYMENT.
<u>AB 100</u> Budget Cmt	Drinking Water		Establishes the Safe and Affordable Drinking Water Fund in the State Treasury to help water systems provide an adequate and affordable supply of safe drinking water in both the near and the long terms. Authorizes the state board to provide for the deposit into the fund of federal contributions, voluntary contributions, gifts, grants, and bequests and would continuously appropriate the moneys in the fund to the state board for grants, loans, contracts, or services to assist eligible recipients.	06/24/2019 - From SENATE Committee on BUDGET AND FISCAL REVIEW: Do pass.;06/24/2019 - In SENATE. Read second time. To third reading.
<u>AB 134</u> Bloom (D)	Safe Drinking Water Restoration	WATCH	Requires each regional engineer to arrange for a prescribed comprehensive assessment of each failed water system in the region of the drinking water regional office to be completed. Requires the board, upon adoption of an assessment of funding need, to convey to each regional engineer a list of at-risk water systems in that region and additional information. Requires the board by a specified date of each year to review the assessment of funding need and to prioritize the public water systems.	06/13/2019 - To SENATE Committees on ENVIRONMENTAL QUALITY and NATURAL RESOURCES AND WATER.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 196</u> Gonzalez (D)	Paid Family Leave		Revises the formula for determining benefits available pursuant to the family temporary disability insurance program for periods of disability by redefining the weekly benefit amount.	06/06/2019 - To SENATE Committee on LABOR, PUBLIC EMPLOYMENT AND RETIREMENT.
<u>AB 202</u> Mathis (R)	Endangered Species: Conservation: Safe Harbor Program		Extends the operation of the California State Safe Harbor Agreement Program Act indefinitely, which encourages landowners to manage their lands voluntarily, by means of state safe harbor agreements approved by the Department of Fish and Wildlife, to benefit endangered, threatened, or candidate species.	04/24/2019 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 217</u> Burke (D)	Income Taxation: Credits: Exclusions	OPPOSE UNLESS AMENDED	Allows a refundable young child tax credit against the taxes imposed under the Personal Income Tax Law, for each taxable year beginning on or after January 1, 2019, in an amount equal to \$1,176 multiplied by the earned income tax credit adjustment factor, not to exceed \$1,000 per each qualified taxpayer per taxable year.	06/18/2019 - In ASSEMBLY. Read second time. To third reading.
<u>AB 223</u> Stone (D)	California Safe Drinking Water Act: Microplastics		Requires the State Water Resources Control Board, to the extent possible, and where feasible and cost effective, to work with the State Department of Public Health in complying with requirements to adopt a standard methodology to be used in the testing of drinking water for microplastics and requirements for 4 years of testing and reporting of microplastics in drinking water.	02/04/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
<u>AB 233</u> Cooley (D)	Insurance: Licensees		Requires a broker agent, agent, or licensed organization that maintains multiple offices to prominently display a copy of its license in each office. Requires a broker agent, agent, or licensed organization that sells insurance on an internet website to display a link to a copy of its license on its home page.	05/22/2019 - To SENATE Committee on INSURANCE.
<u>AB 254</u> Quirk-Silva (D)	Warewashing Machines: Water Reuse		Authorizes water from a warewashing machine at a retail food business to be reused on the same warewashing machine, for prerinse purposes only, if an attendant is onsite to control the reuse	05/29/2019 - To SENATE Committee on HEALTH.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			of the water for prerinse purposes and a written disclosure notice is posted.	
<u>AB 274</u> Mathis (R)	Water Treatment Facility: Grant		Appropriates a specified sum to the state Water Resources Board for the purpose of water treatment. Requires the Board to grant a specified sum to a specified joint powers authority for a water treatment facility to be operated by a joint powers authority.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 292</u> Quirk (D)	Recycled Water: Raw Water and Groundwater Augmentation	SUPPORT	Eliminates the definition of direct potable reuse and instead substitutes the term groundwater augmentation for indirect potable reuse for groundwater recharge in definitions. Requires the State Water Resources Control Board to adopt uniform water recycling criteria for raw water augmentation.	06/20/2019 - From SENATE Committee on NATURAL RESOURCES AND WATER with author's amendments.;06/20/2019 - In SENATE. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES AND WATER.
<u>AB 305</u> Nazarian (D)	Public Facilities: Water Agencies: Rate Reduction Bonds		Expands the definition of a publicly owned utility to include certain utilities furnishing wastewater service to a certain number of customers. Authorizes an authority to issue rate reduction bonds to finance or refinance water or wastewater utility projects. Eliminates specified duties of the Pollution Control Financing Authority under certain circumstances.	07/02/2019 - In SENATE. Read second time. To third reading.
<u>AB 314</u> Bonta (D)	Public Employment: Labor Relations: Release Time		Prescribes requirements relating to release time that would apply to all of the public employers and employees subject to specified labor relations laws. Repeals the provisions relating to release time in those acts. Requires these public employers to grant a reasonable number of employee representatives of the exclusive representative reasonable time off without loss of compensation or other benefits for specified activities.	06/26/2019 - From SENATE Committee on LABOR, PUBLIC EMPLOYMENT AND RETIREMENT: Do pass to Committee on APPROPRIATIONS.
<u>AB 322</u> Gallagher (R)	Political Reform Act: Online Filing System		Requires a local government agency to post on its internet website a copy of any specified statement, report, or other document filed with that agency in paper format. Requires that the statement,	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Not heard.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			report, or other document be made available for four years from the date of the election associated with the filing.	
<u>AB 333</u> Eggman (D)	Whistleblower Protection: Patients' Rights Advocates		Extends the whistleblower protections afforded to employees to county patients' rights advocates under contract, as independent contractors or employees of a contracted organization, to provide services relating to mental health advocacy. Establishes a private right of action to enforce the rights and protections afforded to county patients' rights advocates. Provides that a violation does not require an administrative investigation by the Department of Industrial Relations.	06/26/2019 - From SENATE Committee on LABOR, PUBLIC EMPLOYMENT AND RETIREMENT: Do pass to Committee on JUDICIARY.;06/26/2019 - From SENATE Committee on JUDICIARY with author's amendments.;06/26/2019 - In SENATE. Read second time and amended. Re-referred to Committee on JUDICIARY.
<u>AB 382</u> Mathis (R)	Integrated Regional Water Management Plans: Grants		Requires the Department of Water Resources to include in any criteria, used to select a project or program for grant funding, a criterion that provides a preference for a regional water management group undertaking a project improving upper watershed health upstream and outside of the defined geographical area covered by the group's plan.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 400</u> Lackey (R)	State Mandates		Amends existing law which authorizes a local agency or school district, by February 15, to file an annual reimbursement claim detailing state-mandated costs. Extends that date to March 1.	02/28/2019 - To ASSEMBLY Committee on LOCAL GOVERNMENT.
<u>AB 402</u> Quirk (D)	Water Resources Control Board: Local Primacy Delegation	OPPOSE UNLESS AMENDED	Authorizes the State Water Resources Control Board to delegate partial responsibility for the Safe Drinking Water Act's enforcement by means of a local primacy delegation agreement. Includes enforcement costs as costs covered by the annual Drinking Water Surveillance Program grant. Authorizes any local primacy agency, with the approval of the State Water Resources Control Board, to elect to participate in a funding stabilization program.	07/03/2019 - From SENATE Committee on ENVIRONMENTAL QUALITY: Do pass to Committee on APPROPRIATIONS.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 405</u> Rubio (D)	Sales and Use Taxes: Exemption: Water Treatment		Exempts from the Sales and Use Tax Law the gross receipts from the sale in this state of, and the storage, use, or other consumption in this state of, chemicals used by a city, county, public utility, and sanitation district to treat water, recycled water, or wastewater regardless of whether those chemicals or other agents become a component part thereof and regardless of whether the treatment takes place before or after the delivery to consumers.	05/16/2019 - In ASSEMBLY. Joint Rule 62(a) suspended.;05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 418</u> Kalra (D)	Evidentiary Privileges: Union Agent-Worker Privilege		Establishes a privilege between a union agent and a represented employee or represented former employee to refuse to disclose any confidential communication between the employee or former employee and the union agent made while the union agent was acting in the union agent's representative capacity, except as specified.	07/05/2019 - In SENATE. Read second time. To third reading.
<u>AB 435</u> Fong (R)	High-speed Rail Bonds: Water		Provides that no further bonds shall be sold for high-speed rail purposes pursuant to the Safe, Reliable High-speed Passenger Train Bond Act for the 21st Century, except as specifically provided with respect to an existing appropriation for high-speed rail purposes for early improvement projects in the Phase I blended system.	03/19/2019 - From ASSEMBLY Committee on TRANSPORTATION with author's amendments.;03/19/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on TRANSPORTATION.
<u>AB 441</u> Eggman (D)	Water: Underground Storage		Provides that any diversion of water to underground storage constitutes a diversion of water for beneficial use for which an appropriation may be made if the diverted water is put to beneficial use. Provides that the forfeiture periods of a water right do not include any period when the water is being used in the aquifer or storage area or is being held in underground storage for later application to beneficial use.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 448</u> Garcia E (D)	Water Rights: Stockponds		Provides that the owner of a stockpond built prior to a specified date, that does not have a capacity greater than ten acre feet, may obtain a right to appropriate water for the principal purpose of watering livestock if that person files a claim for a water right with	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.

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			the State Water Resources Control Board accompanied by a fee not later than a certain date, with certain exceptions.	
<u>AB 454</u> Kalra (D)	Migratory Birds: Migratory Bird Protection Act		Makes unlawful the taking or possession of any migratory nongame bird designated in the Migratory Bird Treaty Act before a specified date, any additional migratory nongame bird that may be designated in the Migratory Bird Treaty Act after that date, or any part of those migratory nongame birds, except as provided by rules and regulations adopted by the United States Secretary of the Interior under the Migratory Bird Treaty Act.	06/06/2019 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 456</u> Chiu (D)	Public Contracts: Claim Resolution		Removes the repeal date of a claim resolution process applicable to any claim by a contractor in connection with a public works project against a public entity, thereby making this claim resolution process operative indefinitely.	06/24/2019 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>AB 487</u> Gallagher (R)	Department of Water Resources: Dams and Reservoirs		Authorizes that a penalty plus interest may be imposed for fees received more than 30 days after the July 1 required date of payment in any year.	07/01/2019 - In SENATE. Read third time. Passed SENATE. To enrollment.
<u>AB 508</u> Chu (D)	Drinking Water: Consolidation of Service: Wells		Authorizes consolidation or extension of service by a water system if a disadvantaged community, in whole or in part, is reliant on domestic wells that consistently fail to provide an adequate supply of safe drinking water. Imposes the additional requirement that the state board consider how many owners of dwelling units served by domestic wells in the service area have or are likely to provide written consent to extension of service. Revises the definition of a subsumed water system.	07/05/2019 - In SENATE. Read second time and amended. Re-referred to Committee on GOVERNANCE AND FINANCE.
<u>AB 510</u> Cooley (D)	Local Government Records: Destruction of Records	SUPPORT	Exempts the head of a department of a county or city, or the head of a special district from recording retention requirements if the county, city, or special district adopts a records retention policy governing recordings of routine video monitoring and recordings of telephone and radio communications.	02/21/2019 - To ASSEMBLY Committee on LOCAL GOVERNMENT.

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<u>AB 520</u> Kalra (D)	Public Works: Public Subsidy		Amends existing law relating to prevailing wages for workers employed on public works. Provides that a public subsidy is de minimis if it is both less than a specified amount and less than certain percentage of the total project cost. Specifies that these provisions do not apply to a project that was advertised for bid, or a contract that was awarded before a specified date.	06/25/2019 - In SENATE. Read second time. To third reading.
<u>AB 533</u> Holden (D)	Income Tax: Exclusion: Turf Removal Water Conservation	SUPPORT	Extends the operative date of the provisions excluding from gross income specified amounts received in a turf removal water conservation program to taxable years beginning before a specified date. Requires the Department of Finance to include an analysis of these exclusions in its annual tax expenditure report provided to the Legislature and further provides that taxpayer information collected pursuant to this requirement is subject to the limitation on the collection and use of that information.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Not heard.
<u>AB 557</u> Wood (D)	Atmospheric Rivers: Research and Forecasting Program		Appropriates \$9,250,000 from the General Fund to the Department of Water Resources in the 2019-20 fiscal year to operate the Atmospheric Rivers: Research, Mitigation, and Climate Forecasting Program.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 587</u> Friedman (D)	Accessory Dwelling Units: Sale or Separate Conveyance		Authorizes a local agency to allow, by ordinance, an accessory dwelling unit that was created to be sold or conveyed separately from the primary residence to a qualified buyer if certain conditions are met. Provides that those conditions include that the property was built or developed by a qualified nonprofit corporation that is receiving the welfare exemption, and a recorded contract exists between the qualified buyer and the qualified nonprofit corporation.	06/25/2019 - In SENATE. Read second time and amended. To third reading.
<u>AB 600</u> Chu (D)	Local Government: Disadvantaged Communities		Provides that an application to annex a contiguous disadvantaged community is not required if a local agency formation commission finds that a majority of the registered voters within the affected	06/24/2019 - In SENATE. Read second time. To third reading.

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			disadvantaged unincorporated community would prefer to address the service deficiencies through an extraterritorial service extension.	
<u>AB 616</u> Patterson (R)	California Forest Carbon Plan: Reports		Requires the Department of Forestry and Fire Protection, in collaboration with the Natural Resources Agency and California Environmental Protection Agency, to prepare and submit to the Legislature and appropriate legislative policy and budget committees, on or before January 1, 2021, and by January 1 of each year thereafter, until January 1, 2024.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 626</u> Quirk-Silva (D)	Conflicts of Interest		Prohibits an officer or employee from being deemed interested in a contract, as described above, if the interest is that of an engineer, geologist, architect, landscape architect, land surveyor, or planner, performing specified services on a project, including preliminary design and preconstruction services, when proposing to perform services on a subsequent portion or phase of the project, if the work product for prior phases is publicly available.	05/30/2019 - In ASSEMBLY. From third reading. To Inactive File.
<u>AB 636</u> Gray (D)	State Water Resources Control Board: Objectives		Prohibits the State Water Resources Control Board from implementing water quality objectives for which the state board makes a certain finding relating to environmental quality until it has submitted the water quality objectives and a statement of that finding to the appropriate policy committees of the Legislature and each committee has held a hearing on these matters.	03/14/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
<u>AB 637</u> Gray (D)	Disadvantaged Communities: Drinking Water		Requires the State Water Resources Control Board, before taking an action that significantly impacts drinking water, to use existing information to identify impacted disadvantaged communities and to seek to reduce impacts to those communities. Requires the Board to ensure that disadvantaged communities are provided an opportunity to participate in the public process for a decision that significantly impacts drinking water by holding a public hearing in or near an impacted community.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.

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<u>AB 638</u> Gray (D)	Dept. of Water Resources: Water Storage: Climate Change		Requires the Department of water Resources, with updates every 5 years, to identify water storage facilities vulnerable to climate change impacts and the mitigation strategies for anticipated adverse impacts. Requires the department to publish this information on the department's publicly available internet website and to provide a copy of the information to the appropriate policy committees of the Legislature.	06/19/2019 - Re-referred to SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 654</u> Rubio (D)	Public Records: Utility Customers: Personal Information		Authorizes a local agency to disclose the name, utility usage data, and home address of utility customers to an officer or employee of another governmental agency when the disclosure is not necessary for the performance of the other governmental agency's official duties but is to be used for scientific, educational, or research purposes, and the requesting agency receiving the disclosed material agrees to maintain it as confidential in accordance with specified criteria.	02/28/2019 - To ASSEMBLY Committee on JUDICIARY.
<u>AB 658</u> Arambula (D)	Water Rights: Water Management		Authorizes a groundwater sustainability agency or local agency to apply for, and the State water Resources Control Board to issue, a conditional temporary permit for diversion of surface water to underground storage for beneficial use that advances the sustainability goal of a groundwater basin.	06/28/2019 - From SENATE Committee on NATURAL RESOURCES AND WATER with author's amendments.;06/28/2019 - In SENATE. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES AND WATER.
<u>AB 756</u> Garcia (D)	Public Water Systems: Perfluoroalkyl Substances		Authorizes the State Water Resources Control Board to order a public water system to monitor for perfluoroalkyl substances and polyfluoroalkyl substances. Requires a community water system or a nontransient noncommunity water system, upon a detection of these substances, to report that detection.	07/05/2019 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY for concurrence.

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<u>AB 782</u> Berman (D)	Environmental Quality Act: Exemption: Land Transfers		Exempts from the California Environmental Quality Act the acquisition, sale, or other transfer of interest in land by a public agency for certain purposes, or the granting or acceptance of funding by a public agency for those purposes.	07/01/2019 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY for concurrence.
<u>AB 834</u> Quirk (D)	Safe Recreational Water Use: Standards		Requires the state Water Resources Control Board to establish a Freshwater and Estuarine Harmful Algal Bloom Program to protect water quality and public health from algal blooms. Requires the board in consultation with specified entities to coordinate immediate and long-term algal bloom even incident response and conduct and support algal bloom field assessment and ambient monitoring at the state, regional, watershed, and site-specific waterbody scales.	07/03/2019 - From SENATE Committee on ENVIRONMENTAL QUALITY: Do pass to Committee on APPROPRIATIONS.
<u>AB 835</u> Quirk (D)	Safe Recreational Water Use: Harmful Algal Blooms		Requires the State Water Resources Control Board by regulation and in consultation with the State Department of Public Health, local health officers, California Native American tribes, as defined, and the public, to establish, maintain, and amend as necessary, minimum standards for the safety of freshwater recreational bodies as related to harmful algal blooms, as it determines are reasonably necessary for the protection of the public health and safety.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 841</u> Ting (D)	Drinking Water: Contaminants		Requires the Office of Environmental Health Hazard Assessment to adopt and complete a work plan within prescribed timeframes to assess which substances in the class of perfluoroalkyl and polyfluoroalkyl substances should be identified as a potential risk to human health.	06/19/2019 - In SENATE Committee on ENVIRONMENTAL QUALITY: Not heard.
<u>AB 849</u> Bonta (D)	Elections: City and County Redistricting		Requires the governing body of each local jurisdiction to adopt new district boundaries after each federal decennial census, with exceptions. Specifies redistricting criteria and deadlines for the adoption of new boundaries by the governing body. Specifies hearing procedures that would allow the public to provide input on the placement of boundaries and on proposed boundary maps.	07/03/2019 - From SENATE Committee on GOVERNANCE AND FINANCE with author's amendments.;07/03/2019 - In SENATE. Read second time and amended. Re-

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				referred to Committee on GOVERNANCE AND FINANCE.
<u>AB 868</u> Bigelow (R)	Electric Utilities: Wildfire Mitigation Plans		Requires each election corporation that deenergize portions of of the electrical grid as a wildfire mitigation measure to adopt protocols for when deenergization will be undertaken, protocols for providing notice and other steps to be taken to minimize any adverse effects from deenergization, and protocols for restoring electrical service following a deenergization. Requires such utilities to maintain a web site devoted to public safety as it relates to the utility services provided by the utility.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 881</u> Bloom (D)	Accessory Dwelling Units		Requires a local agency to designate areas where accessory dwelling units may be permitted based on the adequacy of water and sewer services and the impact of accessory dwelling units on traffic flow and public safety. Deletes the provision authorizing a local agency to require owner occupancy as a condition of issuing a permit.	07/08/2019 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 931</u> Boerner Horvath (D)	Local Boards and Commissions		Requires, in a city with a population of 50,000 or more, a board or commission with a certain number of nonelected and nonsalaried members to have a specified minimum number of members meet the definition of a woman, and would require no less than 50 percent of all members of the boards and commissions of the city to meet the definition of a woman.	06/24/2019 - In SENATE. Read second time and amended. Re-referred to Committee on JUDICIARY.
<u>AB 937</u> Rivas R (D)	Waste Discharge Requirements: Produced Water		Authorizes a regional board to approve a waste discharge requirement for the use or reuse of produced water from an oil and gas operation for agricultural purpose or for groundwater recharge, only if, after a public hearing, it finds that the California Council on Science and Technology has reviewed the best available independent scientific evidence and has found the use will not pose a significant risk to the public from contaminants in the produced water.	03/04/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.

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<u>AB 945</u> McCarty (D)	Local Government: Financial Affairs: Surplus Funds		Authorizes a local agency to invest and deposit the agency's surplus funds in deposits at specified types of financial institutions whether those investments are in certificates of deposit or another form. Increases the percentage of funds that can be so invested by a city, district, or other local agency that does not pool money in deposits or investments with other local agencies with a different governing body.	07/05/2019 - In SENATE. From Special Consent Calendar. To third reading.
<u>AB 961</u> Reyes (D)	Energy Programs and Projects: Nonenergy Benefits		Requires the commission to establish common definitions of nonenergy benefits and attempt to determine consistent values for use in all distributed energy resource programs, meaningfully consider producing nonenergy benefits in distributed energy resource programs and projects, incorporate nonenergy benefits in distributed energy resource programs and projects in environmental and social justice communities and track the nonenergy benefits produced in distributed energy resource programs.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 992</u> Mullin (D)	Open Meetings: Local Agencies: Social Media		Provides that the Ralph M. Brown Act does not apply to the participation, as defined, in an internet- based social media platform, as defined, by a majority of the members of a legislative body, provides that a majority of the members do not discuss among themselves the business o a specific nature that is within subject matter jurisdiction of the legislative body.	05/01/2019 - In ASSEMBLY Committee on LOCAL GOVERNMENT: Failed passage.;05/01/2019 - In ASSEMBLY Committee on LOCAL GOVERNMENT: Reconsideration granted.
<u>AB 1013</u> Oberholte (R)	State Agencies: Grant Applications		Prohibits a state agency from selecting as an evaluator of a grant application a person who, within the five-year period preceding receipt of that application, was a representative, member, or staff member of an organization or person that is applying to receiver grant funding from that state agency.	07/05/2019 - In SENATE. From Special Consent Calendar. To third reading.
<u>AB 1035</u> Mayes (R)	Personal Information: Data Breaches		Requires a person or business that owns or licenses computerized data that includes personal information to disclose any breach of the security of the system in the most expedient time possible and without unreasonable delay. Requires an agency that was the	05/23/2019 - From SENATE Committee on JUDICIARY with author's amendments.;05/23/2019 - In SENATE. Read second time and

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			source of a security breach to offer, in the notice of the breach, appropriate identity theft prevention and mitigation services at no cost to potential or actual victims of the breach.	amended. Re-referred to Committee on JUDICIARY.
<u>AB 1045</u> Chen (R)	Public Works: Prevailing Wages		Increase the threshold to require the payment of a prevailing rate of per diem wages.	03/19/2019 - From ASSEMBLY Committee on LABOR AND EMPLOYMENT with author's amendments.;03/19/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LABOR AND EMPLOYMENT.
<u>AB 1054</u> Holden (D)	Public Utilities: Wildfires		Creates in state government the California Catastrophe Council to oversee the CEA and the Wildfire Fund Administrator, who this bill would require the council to appoint. Requires the division to take specified actions related to wildfire safety.	07/05/2019 - In SENATE. Joint Rule 62(a) suspended.;07/05/2019 - In SENATE Committee on ENERGY, UTILITIES AND COMMUNICATIONS: Not heard.;07/05/2019 - From SENATE Committee on ENERGY, UTILITIES AND COMMUNICATIONS with author's amendments.;07/05/2019 - In SENATE. Read second time and amended. Re-referred to Committee on ENERGY, UTILITIES AND COMMUNICATIONS.
<u>AB 1093</u> Rubio (D)	Municipal Separate Storm Sewer Systems		Requires the State Water Resources Control Board to establish financial capability assessment guidelines for municipal separate storm sewer system permittees that are adequate and consistent when considering the costs to local jurisdictions. Requires the state board and the regional boards to continue using available regulatory tools and other approaches to foster collaboration with permittees to implement permit requirements in light of the costs of implementation.	07/01/2019 - In SENATE Committee on APPROPRIATIONS: To Suspense File.

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<u>AB 1130</u> Levine (D)	Personal Information: Data Breaches		Revises the definition of personal information to add specified unique biometric data and tax identification numbers, passport numbers, military identification numbers, and unique identification numbers issued on a government document in addition to those for driver's licenses and State identification cards to these provisions.	07/02/2019 - From SENATE Committee on JUDICIARY: Do pass to Committee on APPROPRIATIONS.
<u>AB 1151</u> Daly (D)	Fire Damages: Civil Actions: Pecuniary Damages		Provides that in a civil action seeking damages caused by a fire, pecuniary damages must be quantifiable and not unreasonable in relation to the prefire fair market value of the damaged property or the prefire market value of similar property. Provides that these provisions are not intended to limit or change the ability of a public agency to recover costs arising from a fire, as provided in other specified provisions of law.	03/28/2019 - To ASSEMBLY Committees on JUDICIARY and NATURAL RESOURCES.;03/28/2019 - From ASSEMBLY Committee on JUDICIARY with author's amendments.;03/28/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on JUDICIARY.
<u>AB 1180</u> Friedman (D)	Water: Recycled Water	SUPPORT	Requires the State Water Resources Control Board to administer provisions under the California Safe Drinking Water Act relating to the regulation of drinking water to protect the public health. Requires the state board to adopt standards for the backflow protection and cross-connection control through the adoption of a policy handbook.	06/24/2019 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1194</u> Frazier (D)	Sacramento-San Joaquin Delta		Increases the membership of the Delta Stewardship Council to 13 members, including 11 voting members and 2 nonvoting members.	04/09/2019 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Held in committee.
<u>AB 1204</u> Rubio (D)	Public Water Systems: Primary Water Standards	SUPPORT	Relates to the California Safe Drinking Water Act. Requires the adoption or amendment of a primary drinking water standard for a contaminant in drinking water not regulated by a federal primary drinking water standard or that is more stringent than a federal primary drinking water standard to take effect 3 years after the date on which the state board adopts or amends the primary drinking water standard.	03/11/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.

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<u>AB 1212</u> Levine (D)	Public Employees' Retirement: Pension Fund		Requires a state agency that is responsible for infrastructure projects to produce a list of priority infrastructure projects for funding consideration by the retirement boards, as described, and to provide it to them. Requires a state agency also to provide further project information to a board upon request.	06/26/2019 - From SENATE Committee on LABOR, PUBLIC EMPLOYMENT AND RETIREMENT: Do pass to Committee on APPROPRIATIONS.
<u>AB 1220</u> Garcia (D)	Metropolitan Water Districts		Relates to the Metropolitan Water Districts Act. Prohibits a member public agency from having fewer than the number of representatives it had as of a certain date.	06/28/2019 - Enrolled.
<u>AB 1224</u> Gray (D)	Disability Insurance: Paid Family Leave Program		Authorizes up to a certain period of temporary disability benefits in a specified period, but would limit each disability benefit period to a certain length of temporary disability benefits. Provides for the deposit of additional contributions in, and authorizes an increase in disbursements from, the Unemployment Compensation Disability Fund. Makes an appropriation.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 1241</u> Quirk-Silva (D)	Contracts Between Public and Private Entities		Requires an agency that contracts with a person or private entity that owns or licenses an electronic database that contains the personal information of individuals for the purpose of hiring and training specified individuals, to do so only if the contract requires the person or private entity to comply with the requirements for disclosure and maintenance of personal information that are applicable to an agency pursuant to the Information Practices Act.	03/11/2019 - To ASSEMBLY Committee on PRIVACY AND CONSUMER PROTECTION.
<u>AB 1323</u> Stone (D)	Public Utilities Information: Confidentiality		Relates to the Public Utilities Act. Requires the information to be open to the public inspection unless federal or state law or an order of the commission based on a specified finding requires the information to be closed to inspection, or the withholding of that information is ordered by the commission, a commissioner, or an administrative law judge in the course of a hearing or proceeding.	04/02/2019 - From ASSEMBLY Committee on UTILITIES AND ENERGY with author's amendments.;04/02/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on UTILITIES AND ENERGY.
<u>AB 1347</u>	Electricity: Renewable Energy		Establishes the policy of the state that eligible renewable energy resources and zero carbon resources supply a percentage of all	03/11/2019 - To ASSEMBLY Committees on UTILITIES AND

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Boerner Horvath (D)			retail sales of electricity to state and local government buildings by a certain date, and to all the State end use customers by a certain date.	ENERGY and NATURAL RESOURCES.
<u>AB 1375</u> Bigelow (R)	Disaster Relief: Dead and Dying Tree Removal		Provides that the state share for removal of dead and dying trees in connection with the Governor's Proclamation of a State of Emergency issued on October 30, 2015, is not more than a certain percentage of total eligible costs.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 1381</u> Salas (D)	Safe Drinking Water Plan		Requires the State Water Resources Control Board, in its Safe Drinking Water Plan, to identify public water systems that fail to deliver water that meets all applicable standards under the Safe Drinking Water Act, specified areas in which persons have limited access to, or ability to pay for, safe and affordable drinking water, and strategies to address the changing needs of current and future populations. Requires the plan to include a publicly accessible map that identifies such areas.	03/18/2019 - To ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.;03/18/2019 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS with author's amendments.;03/18/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
<u>AB 1389</u> Eggman (D)	Special Districts: Organization: Revenue Loss		Authorizes the local agency formation commission to propose, as part of the review and approval of a proposal for the establishment of new or different functions or class of services, or the divestiture of the power to provide particular functions or class of services, that the special district, to mitigate any loss of property taxes, franchise fees, and other revenues to any other affected local agency, provide payments to the affected local agency.	03/14/2019 - To ASSEMBLY Committee on LOCAL GOVERNMENT.
<u>AB 1414</u> Friedman (D)	Urban Retail Water Suppliers: Reporting		Requires each urban retail water supplier to submit a completed and validated water loss audit report as prescribed by the Department of Water Resources. Requires on or before a certain date, and on or before a certain day of each year thereafter, each urban retail water supplier to submit a completed and validated	06/25/2019 - In SENATE. Read second time. To third reading.

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			water loss audit report for the previous calendar year or previous fiscal year.	
<u>AB 1415</u> Friedman (D)	Department of Water Resources: Reporting		Requires the department to impose a civil penalty on an entity that fails to file with the department a specified report or plan by the deadline required for that particular report or plan. Authorizes the department to reduce or waive the civil penalty under certain circumstances.	06/25/2019 - From SENATE Committee on NATURAL RESOURCES AND WATER: Do pass to Committee on JUDICIARY.
<u>AB 1432</u> Dahle (R)	Water Shortage Emergencies: Declarations: Wildfires		Authorizes a public water supplier to declare a water shortage emergency condition without holding a public hearing in the event of a wildfire.	06/26/2019 - Signed by GOVERNOR.;06/26/2019 - Chaptered by Secretary of State. Chapter No. 2019-19
<u>AB 1439</u> Melendez (R)	Policy for Water Quality Control		Makes nonsubstantive changes to the Porter-Cologne Water Quality Control Act.	02/22/2019 - INTRODUCED.
<u>AB 1445</u> Gloria (D)	Climate Change: Emergency Declaration and Policy		Declares that it is the policy of the State of California to restore an optimal safe climate and to provide maximum protection from climate change to all people and species, globally, including the most vulnerable.	02/22/2019 - INTRODUCED.
<u>AB 1484</u> Grayson (D)	Mitigation Fee Act: Housing Developments		Requires each city, county, or city and county to post on its internet website the type and amount of each fee imposed on a housing development project. Requires each city, county, or city and county to include the location on its internet website of all fees imposed upon a housing development project in the list of information provided to a development project applicant that was developed pursuant to certain provisions.	05/29/2019 - To SENATE Committee on GOVERNANCE AND FINANCE.
<u>AB 1486</u> Ting (D)	Surplus Land	OPPOSE UNLESS AMENDED	Expands the definition of local agency to include sewer, water, utility, and local and regional park districts, joint powers authorities, successor agencies to former redevelopment agencies, housing authorities, and other political subdivisions of this state, and any instrumentality thereof, that is empowered to acquire and	07/03/2019 - Withdrawn from SENATE Committee on GOVERNANCE AND FINANCE.;07/03/2019 - Re-referred to

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			hold real property, thereby requiring these entities to comply with requirements for the disposal of surplus land.	SENATE Committee on APPROPRIATIONS.
<u>AB 1503</u> Burke (D)	Distributed Energy and Microgrids: Policies: Report		Requires in the report that the PUC also describe workforce opportunities in the areas of distributed energy and microgrids, including emerging energy jobs and professions and the costs and benefits to the ratepayers. Requires the PUC to collaborate with the Labor and Workforce Development Agency in the development of this section of the report.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
<u>AB 1574</u> Mullin (D)	Lobbying Expenditures		Requires reports regarding lobbying expenditures to be filed on a monthly basis.	04/24/2019 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
<u>AB 1588</u> Gloria (D)	Drinking Water and Wastewater Operator Certification	SUPPORT	Requires the State Water Resources Control Board to evaluate opportunities to issue a water treatment operator certificate or water distribution operator certificate by reciprocity, or a wastewater certificate by examination waiver, to persons who performed duties comparable to those duties while serving in the United States military.	06/25/2019 - In SENATE. Read second time and amended. Re-referred to Committee on VETERANS AFFAIRS.
<u>AB 1640</u> Boerner Horvath (D)	Local Government Finance: Budget Reserves.		Requires a local government by September 1, 2020, and annually thereafter, to submit a written report to the State Controller's office on how it plans to spend any of its budget reserves, as defined, on specified priorities over a 5-year fiscal period, including, among others, mental and behavioral health services and affordable housing.	03/18/2019 - To ASSEMBLY Committee on LOCAL GOVERNMENT.
<u>AB 1672</u> Bloom (D)	Solid Waste: Flushable Products	SUPPORT	Prohibits a covered entity, as defined, from labeling a covered product as safe to flush, safe for sewer systems, or safe for septic systems, unless the product is a flushable wipe that meets certain performance standards. Requires nonflushable products to be labeled clearly and conspicuously to communicate that they should not be flushed.	05/16/2019 - In ASSEMBLY Committee on APPROPRIATIONS: Not heard.

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<u>AB 1768</u> Carrillo (D)	Prevailing Wage: Public Works		Expands the definition of public works to include work conducted during site assessment or feasibility studies. Specifies that preconstruction work, including design, site assessment, feasibility studies, and land surveying, is deemed to be part of a public work, regardless of whether any further construction work is conducted.	07/02/2019 - In SENATE. Read second time. To third reading.
<u>AB 1819</u> Judiciary Cmt	Public Records Inspection: Use of Requester's Equipment		Grants a requester of a public record the right to use the requester's equipment, without being charged any fees or costs, to photograph or otherwise copy or reproduce any record upon inspection and on the premises of the agency, unless the means of copy or reproduction would result in damage to the record, or unauthorized access to a computer system or secured network of the agency.	07/02/2019 - From SENATE Committee on JUDICIARY: Do pass to Committee on APPROPRIATIONS.
<u>ACA 3</u> Mathis (R)	Clean Water for All Act	WATCH	Requires not less than a certain percent of specified state revenues to be set apart for the payment of principal and interest on bonds authorized pursuant to the Water Quality, Supply, and Infrastructure Improvement Act. Relates to water supply, delivery, and quality projects administered by the Department of Water Resources and water quality projects administered by the State Water Resources Control Board.	04/30/2019 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Failed passage.;04/30/2019 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Reconsideration granted.
<u>ACR 89</u> Cooley (D)	Special Districts Week	SUPPORT	Proclaims September 22, 2019, to September 28, 2019, to be Special Districts Week.	07/03/2019 - From SENATE Committee on RULES: Ordered to third reading.;07/03/2019 - In SENATE. Ordered to third reading.
<u>SB 1</u> Atkins (D)	Environmental, Public Health, and Workers Defense Act		Enacts the California Environmental, Public Health, and Workers Defense Act, which prohibits a state or local agency from amending or revising its rules to be less stringent than the federal baseline standards pertaining to environmental protection.	07/01/2019 - In ASSEMBLY. Assembly Rule 56 suspended.;07/01/2019 - From ASSEMBLY Committee on NATURAL RESOURCES with author's amendments.;07/01/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES.

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<u>SB 13</u> Wieckowski (D)	Accessory Dwelling Units	WATCH	Amends the Planning and Zoning Law. Authorizes the creation of accessory dwelling units in areas zoned to allow single family or multifamily dwelling residential use. Prohibits a local agency from requiring the replacement of parking spaces if a garage, carport, or covered parking is demolished to construct an accessory dwelling unit. Prohibits a local agency from requiring occupancy of either the primary or the accessory dwelling unit.	07/01/2019 - From ASSEMBLY Committee on LOCAL GOVERNMENT with author's amendments.;07/01/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LOCAL GOVERNMENT.
<u>SB 19</u> Dodd (D)	Water Resources: Stream Gages		Requires the Department of Water Resources and the State Water Resources Control Board, upon an appropriation of funds by the Legislature, to develop a plan to deploy a network of stream gages that includes a determination of funding needs and opportunities for modernizing and reactivating existing gages and deploying new gages.	07/03/2019 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
<u>SB 43</u> Allen (D)	Carbon Intensity and Pricing: Retail Products		Requires the state board, no later than January 1, 2022, to submit a report to the Legislature on the findings from a study, as specified, to determine the feasibility and practicality of assessing the carbon intensity of all retail products subject to the tax imposed pursuant to the Sales and Use Tax Law, so that the total carbon equivalent emissions associated with such retail products can be quantified.	07/01/2019 - From ASSEMBLY Committee on REVENUE AND TAXATION with author's amendments.;07/01/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on REVENUE AND TAXATION.
<u>SB 44</u> Skinner (D)	Medium and Heavy Duty Vehicles: Comprehensive Strategy		Requires the State Air Resources Board, in consultation with certain entities, to update the mobile source strategy to include a comprehensive strategy for the deployment of medium- and heavy-duty vehicles in the state for the purpose of bringing the state into compliance with federal ambient air quality standards and reducing motor vehicle greenhouse gas emissions from the medium- and heavy-duty vehicle sector. Requires the board to recommend reasonable and achievable goals for reducing emissions.	07/01/2019 - From ASSEMBLY Committee on TRANSPORTATION: Do pass to Committee on NATURAL RESOURCES.
<u>SB 45</u> Allen (D)	Wildfire, Drought, and Flood Protection Bond Act 2020		Enacts the Wildfire, Drought, and Flood Protection Bond Act of 2020, which, if approved by voters, authorizes the issuance of bonds to finance projects to restore fire damaged areas, reduce	04/24/2019 - From SENATE Committee on GOVERNANCE AND

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			wildfire risk, create healthy forests and watersheds, reduce climate impacts on urban areas and vulnerable populations, protect water supply and water quality, protect rivers, lakes, and streams, reduce flood risk, protect fish and wildlife from climate impacts, and protect coastal lands and resources.	FINANCE: Do pass to Committee on APPROPRIATIONS.
SB 46 Jackson (D)	Emergency Services: Telecommunications		Amends the Emergency Services Act. Requires a local government that enters into an agreement to access information of resident accountholders to, upon receipt of that information, notify residents that they have been entered into the public emergency warning system.	05/16/2019 - In SENATE Committee on APPROPRIATIONS: Held in committee.
SB 69 Wiener (D)	Ocean Resiliency Act		Requires the Department of Fish and Wildlife to develop and implement a plan, in collaboration with specified scientists, experts, and representatives, as part of its fish hatchery operations for the improvement of the survival of hatchery-produced salmon, and the increased contribution of the hatchery program to commercial and recreational salmon fisheries.	07/03/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES.
SB 101 Budget and Fiscal Review Cmt	Drinking Water		Establishes the Safe and Affordable Drinking Water Fund in the State Treasury to help water systems provide an adequate and affordable supply of safe drinking water in both the near and the long terms. Prohibits a person from operating a public water system unless the person first submits an application to the state board and receives a permit to operate the system.	06/24/2019 - From ASSEMBLY Committee on BUDGET with author's amendments.;06/24/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on BUDGET.
SB 128 Beall (D)	Public contracts: Best Value Construction Contracting		Authorizes the County of Santa Clara to utilize this pilot program and would extend the operation of certain provisions.	07/05/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
SB 133 Galgiani (D)	Wildfires: Detection		States the intent of the Legislature to enact legislation to create and fund a program for installing remote infrared cameras that can help in detecting wildfires.	01/24/2019 - To SENATE Committee on RULES.

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<u>SB 134</u> Hertzberg (D)	Water Conservation: Water Losses	SUPPORT	Prohibits the board from issuing an information order, written notice, or conservation order to an urban retail water supplier that does not meet its urban water use objective if the board determines the urban retail water supplier is not meeting its urban water use objective solely because the volume of water loss exceeds the urban retail water supplier's standard for water loss and the board is taking enforcement action against the urban retail water supplier for not meeting the performance standards.	06/18/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
<u>SB 139</u> Allen (D)	Independent Redistricting Commissions		Requires certain counties to establish an independent redistricting commission to adopt the county's supervisorial districts after each federal census. Requires these commissions to take steps to encourage county residents to participate in the redistricting process. Specifies certain procedures for a commission's hearing process relating to notice, the number of hearings, and translation of hearings. Requires the county to provide for reasonable funding and staffing of the commission.	07/03/2019 - From ASSEMBLY Committee on LOCAL GOVERNMENT: Do pass to Committee on APPROPRIATIONS.
<u>SB 166</u> Wiener (D)	Process Water Treatment Systems: Breweries		Requires the State Water Resources Control Board in consultation with the State Department of Public Health, Food and Drug Branch, to adopt regulations for microbiological, chemical, and physical water quality and treatment requirements for voluntary onsite treatment and reuse of process water in breweries.	07/05/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>SB 190</u> Dodd (D)	Fire Safety: Building Standards: Defensible Space		Requires the Office of the State Fire Marshal to develop a model defensible space program. Requires the Office to make available on their website a Wildland Urban Interface Fire Safety Building Standards Compliance training manual for the training of local building officials, builders, and firefighters.	06/26/2019 - From ASSEMBLY Committee on GOVERNMENTAL ORGANIZATION: Do pass to Committee on NATURAL RESOURCES.
<u>SB 200</u> Monning (D)	Drinking Water	SUPPORT	Establishes the Safe and Affordable Drinking Water Fund in the State Treasury to help water systems provide an adequate and affordable supply of safe drinking water in both the near and the long terms. Authorizes the state board to provide for the deposit	07/05/2019 - In ASSEMBLY. Read second time. To third reading.;07/05/2019 - In ASSEMBLY. Assembly Rule 63

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			into the fund of certain moneys and would continuously appropriate the moneys in the fund to the state board for grants, loans, contracts, or services to assist eligible recipients.	suspended.;07/05/2019 - In ASSEMBLY. Read third time, urgency clause adopted. Passed ASSEMBLY. *****To SENATE for concurrence.
<u>SB 204</u> Dodd (D)	State Water Project: Contracts	WATCH	Requires the Department of Water Resources to provide at least 10 days' notice to the Joint Legislative Budget Committee and relevant policy and fiscal committees of the Legislature before holding public sessions to negotiate any potential amendment of a long-term water supply contract that is of projectwide significance with substantially similar terms intended to be offered to all contractors, or that would permanently transfer a contractual water amount between contractors.	06/06/2019 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.
<u>SB 209</u> Dodd (D)	Wildfire Warning Center: Fire-Weather Monitoring		Establishes in the state government the California Wildfire Warning Center. Provides for representatives from the Public Utilities Commission, the Office of Emergency Services, the Department of Forestry and Fire Protection, 2 county fire chiefs, a representative of an electrical corporation, and a representative of a local publicly owned electric utility.	06/26/2019 - From ASSEMBLY Committee on GOVERNMENTAL ORGANIZATION: Do pass to Committee on UTILITIES AND ENERGY.
<u>SB 210</u> Leyva (D)	Heavy-Duty Vehicle Inspection and Maintenance Program		Requires the state board, in consultation with the bureau and other specified entities, to implement a pilot program that develops and demonstrates technologies that show potential for readily bringing heavy-duty vehicles into an inspection and maintenance program. Requires the state board, no later than 2 years after the completion of the pilot program, to develop and implement a Heavy-duty Vehicle Inspection and Maintenance Program for nongasoline heavy-duty onroad motor vehicles.	07/01/2019 - From ASSEMBLY Committee on TRANSPORTATION: Do pass to Committee on NATURAL RESOURCES.
<u>SB 212</u> Allen (D)	Elections: Local Voting Methods		Authorizes a city, county, or local educational agency to conduct an election using ranked choice voting, in which voters rank the candidates for office in order of preference. Specifies the procedures for conducting an election using ranked choice voting as it applies to both a single seat election and a multiseat election.	07/03/2019 - From ASSEMBLY Committee on ELECTIONS AND REDISTRICTING: Do pass as amended to Committee on APPROPRIATIONS.

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<u>SB 226</u> Nielsen (R)	Watershed Restoration: Wildfires: Grant Program		Requires the Natural Resources Agency to develop and implement a watershed restoration grant program for purposes of awarding grants to private property land owners to assist them with watershed restoration on watersheds that have been affected by wildfire. Requires the agency to provide technical resources to the private property land owners seeking assistance with watershed restoration.	07/03/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>SB 287</u> Nielsen (R)	Commission on State Mandates: Test Claims: Filing Date		Relates to the filing date on test claims for the Commission on State Mandates. Specifies that for purposes of filing a test claim based on the date of incurring increased costs, "within 12 months" means by June 30 of the fiscal year following the fiscal year in which increased costs were first incurred by the test claimant.	06/26/2019 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>SB 288</u> Wiener (D)	Democratic Party of California		Allows, if the rules and bylaws of the Democratic Party so permit, a person who is not a United States citizen to serve as a member of a county central committee or as a delegate to the state central committee of the Democratic Party of California.	07/03/2019 - From ASSEMBLY Committee on ELECTIONS AND REDISTRICTING: Do pass as amended.
<u>SB 307</u> Roth (D)	Water Conveyance: Use of Facility with Unused Capacity	WATCH	Prohibits a transferor of water from using a water conveyance facility that has unused capacity to transfer water from a groundwater basin underlying desert lands that is in the vicinity of specified federal lands or state lands to outside of the groundwater basin unless the State Lands Commission finds no adverse affect to the natural or cultural resources of those federal or state lands. Requires a transferor of water to submit an application to the Commission.	06/12/2019 - In ASSEMBLY. Coauthors revised.
<u>SB 332</u> Hertzberg (D)	Wastewater Treatment: Recycled Water	OPPOSE UNLESS AMENDED	Declares that the discharge of treated wastewater from ocean outfalls is a waste and unreasonable use of water. Requires each wastewater treatment facility that discharges through an ocean outfall and affiliated water suppliers to reduce the facility's annual flow as compared to the average annual dry weather wastewater	05/16/2019 - In SENATE Committee on APPROPRIATIONS: Held in committee.

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			discharge baseline volume. Provides a penalty for failing to submit a plan or report addressing the progress toward meeting the annual flow reduction deadlines.	
<u>SB 335</u> Hurtado (D)	Provision of Sewer Service: Onsite Treatment System		Authorizes the property owner of an affected residence to opt out of the provision of sewer service for a maximum of 5 years if the adequate onsite sewage treatment system was installed no more than 5 years prior to the issuance of the order.	02/28/2019 - To SENATE Committees on ENVIRONMENTAL QUALITY and GOVERNANCE AND FINANCE.
<u>SB 341</u> Morrell (R)	Public Employment and Retirement		Requires the Board of Administration of the Public Employees' Retirement System to report a calculation of liabilities based on a discount rate equal to the yield on a 10-year United States Treasury note in the year prior to the report. Requires the Teacher's Retirement Board to provide a description of the discount rate the board uses for reporting liabilities, a calculation of liabilities based on a discount rate that is 2% below the long-term rate of return.	03/27/2019 - In ASSEMBLY Committee on LABOR AND EMPLOYMENT: Failed passage.;03/27/2019 - In SENATE Committee on LABOR, PUBLIC EMPLOYMENT AND RETIREMENT: Reconsideration granted.
<u>SB 355</u> Portantino (D)	Joint Powers Agencies: Meetings		Relates to The Joint Exercise of Powers Act and the Ralph M. Brown Act. Authorizes any joint powers authority that is entirely within either the County of Los Angeles or the County of Ventura to designate alternate members of the legislative body of a joint powers agency who are not also members of the legislative body of a local agency member to attend closed sessions of the joint powers agency.	07/03/2019 - From ASSEMBLY Committee on LOCAL GOVERNMENT: Do pass as amended.
<u>SB 414</u> Caballero (D)	Small System Water Authority Act of 2019	SUPPORT	Creates the Small System Water Authority Act of 2019 and states legislative findings and declarations relating to authorizing the creation of small system water authorities that will have powers to absorb, improve, and competently operate noncompliant public water systems.	07/02/2019 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: Do pass to Committee on LOCAL GOVERNMENT.
<u>SB 454</u> Caballero (D)	Water Resources Control Board: Administrative Hearings		Requires the State Water Resources Control Board to assess filing fees for the filing of briefing papers or motions in a hearing	05/16/2019 - In SENATE Committee on APPROPRIATIONS: Held in committee.

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			conducted by the Office. Requires filing fees or monetary penalties to be deposited in the Water Rights Hearings Office Fund.	
<u>SB 474</u> Stern (D)	Habitat Conservation Fund		Relates to the State Wildlife Protection Act of 1990. Establishes the Wildlife Protection Subaccount in the Habitat Conservation Fund and would require the Controller, if an appropriation is made for this purpose in any fiscal year, to transfer \$30,000,000 from the General Fund to the subaccount, less any amount transferred from specified accounts and funds, to be expended by the board for the acquisition, enhancement, or restoration of wildlife habitat.	06/06/2019 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.
<u>SB 487</u> Caballero (D)	Department Of Water Resources: Aerial Snow Survey		Requires, to the extent an appropriation is made for these purposes, the department's California snow survey program to conduct aerial surveys of the snowpack and conduct supporting forecasts of runoff volume and timing for the watersheds of the Sierra Nevada and Cascade Range and the Klamath-trinity Mountains, including areas that drain or supply water to major reservoirs and lakes.	07/02/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
<u>SB 518</u> Wieckowski (D)	Civil Actions: Settlement Offers		Exempts from provisions any action to enforce the California Public Records Act.	07/03/2019 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>SB 535</u> Moorlach (R)	Greenhouse Gases: Wildfires and Forest Fires		Requires the report to include information, if feasible, regarding the greenhouse gas, criteria air pollutant, and short-lived climate pollutant emissions from wildfires and forest fires, an assessment of the increased severity of wildfires and forest fires from the impacts of climate change, and a calculation of the increase in the emissions of criteria air pollutants, greenhouse gases, and short-lived climate pollutants based on the increased severity of wildfires and forest fires assessed.	06/27/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>SB 559</u> Hurtado (D)	California Water Commission: Grant: Friant-kern Canal		Appropriates funds to the Department of Water Resources for the purposes of restoring the Friant-kern Canal to its full capacity. Requires the grant to be part of a comprehensive solution to groundwater sustainability and subsidence in the San Joaquin	07/03/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.

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			Valley and would require the joint powers authority to demonstrate a funding match of at least 35% from user fees, local sources, federal funding, or a combination of these sources.	
SB 608 Glazer (D)	Architects and Landscape Architects		Amends existing law that requires applicants to furnish their fingerprints for purposes of conducting criminal history record checks. Adds the State Architects Board and the Landscape Architects Technical Committee to the list of designated agencies subject to such requirement. Provides that the Board has the authority to obtain and review criminal offender record information to determine whether an applicant is subject to denial of a license.	07/02/2019 - From ASSEMBLY Committee on BUSINESS AND PROFESSIONS with author's amendments.;07/02/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on BUSINESS AND PROFESSIONS.
SB 615 Hueso (D)	Public Records: Disclosure		Permits any person to institute proceedings for injunctive or declarative relief or a writ of mandate in any court of competent jurisdiction to enforce their right to inspect or to receive a copy of any public record or class of public records covered by the California Public Records Act. Requires a person to meet and confer in good faith with the agency in an attempt to informally resolve each issue.	03/14/2019 - To SENATE Committee on JUDICIARY.
SB 629 McGuire (D)	Air Districts: Hearing Boards: Notice Requirements		Relates to the Ralph M. Brown Act. Requires a hearing board to send a notice of hearing not less than a specified number of hours before the hearing to any person who requests the notice.	05/30/2019 - To ASSEMBLY Committee on NATURAL RESOURCES.
SB 641 Allen (D)	Special Elections		Changes the period of time in which a special election may be conducted for consolidation purposes to within 200 days following the proclamation.	06/24/2019 - In ASSEMBLY. Read second time. To third reading.
SB 646 Morrell (R)	Local Agency Utility Services: Service Extensions		Revises the definition of fee to mean a fee for the physical facilities necessary to make a water connection or sewer connection, and that the estimated reasonable cost of labor and materials for installation of those facilities bears a fair or reasonable relationship to the payor's burdens on, or benefits received from, the water connection or sewer connection.	07/05/2019 - *****To GOVERNOR.

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<u>SB 668</u> Rubio (D)	Fire Hydrants: Water Suppliers: Regulations		Imposes certain requirements upon an urban water supplier in statute. Requires the Office of Emergency Services to establish emergency response and recovery plans in coordination with urban water suppliers. Requires an urban water supplier to review and revise its disaster preparedness plan every 5 years.	06/26/2019 - From ASSEMBLY Committee on GOVERNMENTAL ORGANIZATION: Do pass to Committee on APPROPRIATIONS.
<u>SB 669</u> Caballero (D)	Water Quality: Safe Drinking Water Fund		Establishes the Safe Drinking Water Fund in the State Treasury. Provides that moneys in the fund are continuously appropriated to the state board. Requires the state board to administer the fund to assist community water systems in disadvantaged communities that are chronically noncompliant relative to the federal and state drinking water standards and do not have the financial capacity to pay for operation and maintenance costs comply with those standards.	05/16/2019 - In SENATE Committee on APPROPRIATIONS: Held in committee.
<u>SB 732</u> Allen (D)	South Coast Air Quality Management District	WATCH	Authorizes the South Coast District Board to impose a transactions and use tax within the boundaries of the south coast district.	05/13/2019 - In SENATE Committee on APPROPRIATIONS: Not heard.
<u>SB 762</u> Jones (R)	Groundwater Storage		Makes a nonsubstantive change in provisions relating to groundwater storage.	03/14/2019 - To SENATE Committee on RULES.
<u>SB 779</u> Nat Resour & Water Cmt	Appropriation of Water: Change of Point of Diversion		Authorizes the State Water Resources Control Board, after a hearing, to change provisions or conditions for permits and licenses to appropriate water. Authorizes an applicant, permittee, or licensee to initiate the making of a minor change to an application, permit, or license without requiring the filing of a petition for change if the board makes specified findings, including that the change does not have the potential to adversely affect the water supply of other legal users of water.	07/02/2019 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
<u>SB 780</u>	Local Government Omnibus Act		Requires the Secretary of State and each county clerk to establish and maintain an indexed Registry of Public Agencies containing a specified statement of facts about the agency.	07/01/2019 - From ASSEMBLY Committee on LOCAL GOVERNMENT with author's

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Governance and Finance Cmt				amendments.;07/01/2019 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LOCAL GOVERNMENT.
<u>HR 535</u> Dingell D (D)	Hazardous Substances Designation		Requires the Administrator of the Environmental Protection Agency to designate per- and polyfluoroalkyl substances as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.	02/07/2019 - In HOUSE Committee on TRANSPORTATION & INFRASTRUCTURE: Referred to Subcommittee on RAILROADS, PIPELINES & HAZARDOUS MATERIALS.
<u>HR 1162</u> Napolitano (D)	Water Recycling and Reuse Projects Grant Program	SUPPORT	Establishes a grant program for the funding of water recycling and reuse projects.	06/13/2019 - Subcommittee on WATER, POWER AND OCEANS hearings held.
<u>HR 1417</u> Lawrence (D)	Water and Sewer Infrastructure Trust Fund		Establishes a trust fund to provide for adequate funding for water and sewer infrastructure.	03/27/2019 - In HOUSE Committee on AGRICULTURE: Referred to Subcommittee on CONSERVATION AND FORESTRY.
<u>HR 1567</u> Lujan (D)	Water Contamination From Military Installations		Authorizes the Department of Defense to temporarily provide water uncontaminated with perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) for agricultural purposes to areas affected by contamination from military installations, authorizes the Secretary of the Air Force to acquire real property to extend the contiguous geographic footprint of any Air Force base that has shown signs of contamination from PFOA and PFOS due to activities on the base.	03/07/2019 - In HOUSE Committee on TRANSPORTATION & INFRASTRUCTURE: Referred to Subcommittee on WATER RESOURCES AND ENVIRONMENT.
<u>HR 1764</u> Garamendi (D)	Federal Water Pollution Control Permitting Terms	SUPPORT	Amends the Federal Water Pollution Control Act with respect to permitting terms.	03/15/2019 - In HOUSE Committee on TRANSPORTATION & INFRASTRUCTURE: Referred to Subcommittee on WATER RESOURCES AND ENVIRONMENT.
<u>HR 1976</u> Kildee (D)	Perfluorinated Compounds Survey		Requires the Director of the United States Geological Survey to perform a nationwide survey of perfluorinated compounds.	06/13/2019 - Subcommittee on WATER, POWER AND OCEANS hearings held.

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<u>HR 2377</u> Boyle B (D)	Drinking Water Maximum Contaminant Level		Amends the Safe Drinking Water Act, requires the Administrator of the Environmental Protection Agency to publish a maximum contaminant level goal and promulgate a national primary drinking water regulation for total per- and polyfluoroalkyl substances.	04/29/2019 - INTRODUCED.;04/29/2019 - To HOUSE Committee on ENERGY AND COMMERCE.
<u>HR 2533</u> Pallone (D)	Community Water Systems Contamination		Assists community water systems affected by perfluoroalkyl substances (PFAS) contamination.	05/07/2019 - INTRODUCED.;05/07/2019 - To HOUSE Committee on ENERGY AND COMMERCE.
<u>HR 2570</u> Rouda (D)	Water Treatment Costs		Ensures that polluters pay ongoing water treatment costs associated with contamination from perfluoroalkyl and polyfluoroalkyl substances.	05/09/2019 - In HOUSE Committee on TRANSPORTATION & INFRASTRUCTURE: Referred to Subcommittee on WATER RESOURCES AND ENVIRONMENT.
<u>HR 2577</u> Delgado (D)	Toxics Release Inventory Inclusion		Amends the Emergency Planning and Community Right-To-Know Act of 1986, includes per- and polyfluoroalkyl substances on the Toxics Release Inventory.	05/08/2019 - INTRODUCED.;05/08/2019 - To HOUSE Committee on ENERGY AND COMMERCE.
<u>HR 2596</u> Kuster (D)	Polyfluoroalkyl Substances Manufacturing and Processing		Amends the Toxic Substances Control Act with respect to manufacturing and processing notices for per- and polyfluoroalkyl substances.	05/08/2019 - INTRODUCED.;05/08/2019 - To HOUSE Committee on ENERGY AND COMMERCE.
<u>HR 2600</u> Dean (D)	Per and Polyfluoroalkyl Substances Regulation		Regulates per- and polyfluoroalkyl substances under the Toxic Substances Control Act.	05/08/2019 - INTRODUCED.;05/08/2019 - To HOUSE Committee on ENERGY AND COMMERCE.
<u>HR 2605</u> Stevens (D)	Hazardous Air Pollutants Classification		Directs the Administrator of the Environmental Protection Agency to issue a final rule adding as a class all perfluoroalkyl and polyfluoroalkyl substances with at least one fully fluorinated carbon atom to the list of hazardous air pollutants under section 112(b) of the Clean Air Act (42 U.S.C. 7412(b)).	05/08/2019 - INTRODUCED.;05/08/2019 - To HOUSE Committee on ENERGY AND COMMERCE.
<u>HR 2608</u> Maloney S (D)	Toxic Substances Testing		Requires the testing of perfluoroalkyl and polyfluoroalkyl substances under the Toxic Substances Control Act.	05/09/2019 - INTRODUCED.;05/09/2019 - To

IRWD 2049 LEGISLATIVE MATRIX
Updated 07/08/2019

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
				HOUSE Committee on ENERGY AND COMMERCE.
<u>HR 2626</u> Upton (R)	Water Contamination Remediation Agreements		Encourages Federal agencies to expeditiously enter into or amend cooperative agreements with States for removal and remedial actions to address PFAS contamination in drinking, surface, and ground water and land surface and subsurface strata.	06/26/2019 - Subcommittee on WATER RESOURCES AND ENVIRONMENT discharged.;06/26/2019 - In HOUSE Committee on TRANSPORTATION AND INFRASTRUCTURE: Consideration and mark-up session held.;06/26/2019 - In HOUSE Committee on TRANSPORTATION AND INFRASTRUCTURE: Ordered to be reported.
<u>HR 2638</u> Fletcher (D)	Firefighting Foam Use		Directs the Administrator of the Environmental Protection Agency to issue guidance on minimizing the use of firefighting foam containing PFAS.	05/09/2019 - INTRODUCED.;05/09/2019 - To HOUSE Committee on ENERGY AND COMMERCE.
<u>S 611</u> Sanders (I)	Water and Sewer Infrastructure Funding		Provides adequate funding for water and sewer infrastructure.	02/28/2019 - INTRODUCED.;02/28/2019 - In SENATE. Read second time.;02/28/2019 - To SENATE Committee on ENVIRONMENT AND PUBLIC WORKS.
<u>S 638</u> Carper (D)	Hazardous Substances Designation		Requires the Administrator of the Environmental Protection Agency to designate per- and polyfluoroalkyl substances as hazardous substances under the Comprehensive Environmental Response, Compensation, Liability Act of 1980.	02/28/2019 - INTRODUCED.;02/28/2019 - In SENATE. Read second time.;02/28/2019 - To SENATE Committee on ENVIRONMENT AND PUBLIC WORKS.
<u>S 675</u> Udall T (D)	Water Contamination From Military Installations		Authorizes the Department of Defense to temporarily provide water uncontaminated with perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) for agricultural purposes to areas affected by contamination from military installations, authorizes the Secretary of the Air Force to acquire real property to extend the	03/06/2019 - INTRODUCED.;03/06/2019 - In SENATE. Read second time.;03/06/2019 - To SENATE Committee on ARMED SERVICES.

IRWD 2049 LEGISLATIVE MATRIX
Updated 07/08/2019

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			contiguous geographic footprint of any Air Force base that has shown signs of contamination from PFOA and PFOS due to activities on the base.	
S 950 Stabenow (D)	Perfluorinated Compounds Survey		Requires the Director of the United States Geological Survey to perform a nationwide survey of perfluorinated compounds.	03/28/2019 - INTRODUCED.;03/28/2019 - In SENATE. Read second time.;03/28/2019 - To SENATE Committee on ENVIRONMENT AND PUBLIC WORKS.
S 1372 Stabenow (D)	Water Contamination Remediation Agreements		Encourages Federal agencies to expeditiously enter into or amend cooperative agreements with States for removal and remedial actions to address polyfluoroalkyl substances (PFAS) contamination in drinking, surface, and ground water and land surface and subsurface strata.	05/08/2019 - INTRODUCED.;05/08/2019 - In SENATE. Read second time.;05/08/2019 - To SENATE Committee on ENVIRONMENT AND PUBLIC WORKS.
S 1473 Gillibrand (D)	Drinking Water Maximum Contaminant Levels		Amends the Safe Drinking Water Act, requires the Administrator of the Environmental Protection Agency to set maximum contaminant levels for certain chemicals.	05/15/2019 - INTRODUCED.;05/15/2019 - In SENATE. Read second time.;05/15/2019 - To SENATE Committee on ENVIRONMENT AND PUBLIC WORKS.
S 1507 Capito (R)	Toxics Release Inventory Inclusion		Includes certain perfluoroalkyl and polyfluoroalkyl substances in the toxics release inventory.	06/19/2019 - In SENATE Committee on ENVIRONMENT AND PUBLIC WORKS: Ordered to be reported with an amendment in the nature of a substitute.;06/19/2019 - From SENATE Committee on ENVIRONMENT AND PUBLIC WORKS: Reported by Sen. Barrasso with an amend. in the nature of a substitute.;06/19/2019 - In SENATE. Placed on SENATE Legislative Calendar under General Orders.

IRWD 2049 LEGISLATIVE MATRIX
Updated 07/08/2019

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>S 1790</u> Inhofe (R)	National Defense Authorization Act for Fiscal Year 2020		Provides for the National Defense Authorization Act for Fiscal Year 2020.	06/27/2019 - In SENATE. Amendment SA 883 proposed by Senator Udall.;06/28/2019 - In SENATE. SA 883 failed on SENATE floor.
<u>S 1932</u> Feinstein (D)	Drought Resiliency and Water Supply Infrastructure Act	SUPPORT	Reclamation States Water Infrastructure Support	06/20/2019 – To SENATE Committee on ENERGY AND NATURAL RESORUCES

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Exhibit “B”

2019 Legislative Update Report:
Links to Bill & Regulatory Texts
(as of July 8, 2019)

Bill Number/Version Date	Link to Bill Text
AB 100 (Com. on Budget), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB100
AB 68 (Ting), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB68
AB 69 (Ting), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB69
AB 134 (Bloom), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB134
AB 217 (Burke), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB217
AB 292 (Quirk), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB292
AB 402 (Quirk), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB402
AB 510 (Cooley), as introduced	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB510
AB 533 (Holden), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB533

AB 1180 (Friedman), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1180
AB 1204 (Rubio), as introduced	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1204
AB 1414 (Friedman), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1414
AB 1415 (Friedman), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1415
AB 1432 (Dahle), as chaptered	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1432
AB 1486 (Ting), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1486
AB 1588 (Gloria), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1588
AB 1672 (Bloom) as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1672
ACA 3 (Mathis/Garcia), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200ACA3
ACR 89 (Cooley), an introduced	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200ACR89
SB 13 (Wieckowski), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB13

SB 134 (Hertzberg), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB134
SB 101 (Com. on Budget and Fiscal Review, as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB101
SB 200 (Monning), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB200
SB 204 (Dodd), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB204
SB 307 (Roth), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB307
SB 332 (Hertzberg/Wiener), as introduced	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB332
SB 414 (Caballero), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB414
SB 669 (Caballero), as introduced	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB669
SB 732 (Allen), as amended	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB732

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July 22, 2019
Prepared and
Submitted by C. Compton
Approved by: Paul A. Cook



CONSENT CALENDAR

2018-2019 ORANGE COUNTY GRAND JURY REPORT RESPONSE TO “RE-OPENING IRVINE LAKE – A WIN-WIN FOR TAXPAYERS AND OUTDOOR ENTHUSIASTS”

SUMMARY:

During its 2018-2019 session, the Orange County Grand Jury examined the closure of Irvine Lake to public recreational uses. The purpose of the Grand Jury’s review of Irvine Lake was to “provide useful background for interested residents of Orange County as to the specific interests and driving factors of the three public agencies involved” with the current closure of Irvine Lake. The Grand Jury also stated that the purpose of its review was to “provide a possible road map to a successful resolution of the outstanding issues among the parties” needed to be resolved in order to reopen the lake to public recreation.

On May 13, 2019, the Grand Jury released a report titled “*Re-Opening Irvine Lake – A Win-Win for Taxpayers and Outdoor Enthusiasts*” to the public. The report identified seven findings and six recommendations related to Irvine Lake. The District is required to respond to three findings, Findings F4, F5, and F6, and two recommendations, Recommendations R4 and R5. Staff recommends that the Board authorize the General Manager to respond to the Presiding Judge, as required by the California Penal Code, and the Grand Jury.

BACKGROUND:

Since it was constructed in 1933, the primary purpose of Irvine Lake (also known as Santiago Creek Reservoir) has been to store water for the benefit of the surrounding communities – initially to provide irrigation water for local farms, and more recently to satisfy water demands for agricultural and urban needs. IRWD utilizes water from Irvine Lake for two purposes: 1) as a source of water for non-drinking purposes, such as irrigation for avocado orchards, and 2) as a source of water for the Baker Water Treatment Plant which creates drinking water for an estimated 85,000 homes in Orange County.

Both IRWD and Serrano Water District, co-owners of Irvine Lake, balance the benefits of storing water in Irvine Lake to ensure customers have a reliable supply of water while minimizing the loss of water from the lake due to evaporation or water going over the dam spillway in a year with heavy precipitation. When the water level in Irvine Lake is high, the rate of evaporation increases dramatically with the increase surface area of water. One other key consideration for managing water levels in the lake is preserving the ability to capture rainwater from the surrounding hills that will flow into Irvine Lake. Capturing this fresh water in Irvine Lake at no cost to both agencies can help reduce the cost of providing drinking water to customers.

While Irvine Lake remains first and foremost a water resource facility, recreational activities, such as fishing and boating, have been allowed in the past at Irvine Lake. Control over these activities is the responsibility of the owners of the “Irvine Lake Recreation Rights.” The Irvine

Lake recreation rights will be owned by the County of Orange, a 75 percent owner of the recreation rights, and Serrano Water District, a 25 percent owner of the recreation rights. (The Irvine Company is in the process of transferring its recreation rights to the County of Orange.) IRWD does not have any ownership of the Irvine Lake Recreation Rights.

Grand Jury Review of Irvine Lake:

The Grand Jury reviewed the closure of Irvine Lake to public recreation during the 2018-2019 session. The stated purpose for the review as outlined in the report is as follows:

“Irvine Lake has provided recreation opportunities to the residents of Orange County since 1941. In 2014, The Irvine Company (TIC) agreed to dedicate 2,500 acres surrounding Irvine Lake to the residents of Orange County to enjoy as permanent open space. This dedication required an agreement between the two water districts actively involved in the management of Irvine Lake regarding access to Irvine Lake and future recreation rights: Serrano Water District (SWD) and Irvine Ranch Water District (IRWD). Orange County Parks (OC Parks) would be the governmental agency responsible for restoring and maintaining the newly dedicated public land, and in consideration would receive TIC’s interest in water recreation rights at Irvine Lake, plus additional adjacent land parcels (see Appendix, Exhibit 1); therefore, OC Parks would need to be a party to any new agreement(s).

The three primary parties (SWD, IRWD and OC Parks) began negotiations in 2014 but by early 2016 had failed to make any real progress. This impasse resulted in a termination in March 2016 of the existing agreement between TIC and SWD with respect to recreation rights. Irvine Lake has remained closed to the public for water recreation through the balance of 2016 until the present.

Given the historic importance of Irvine Lake for water recreation to Orange County residents, the continued lack of progress in the negotiations between the relevant government agencies, and a general lack of understanding of the underlying issues by the residents of Orange County, the 2018-2019 Orange County Grand Jury (Grand Jury) elected to conduct an investigation, employing its particular powers to gather information, for the benefit of Orange County residents.”

As part of its process, the Grand Jury interviewed key stakeholders involved with the negotiations taking place over Irvine Lake, toured the lake and adjacent properties, reviewed local newspaper coverage of the closing of Irvine Lake, and examined existing development plans for the recreational facilities and services offered at Irvine Lake. The results of the Grand Jury’s investigation were detailed in a report, “*Re-Opening Irvine Lake - A Win-Win for Taxpayers and Outdoor Enthusiasts*,” which was released to the public on May 13, 2019. A copy of the report is attached as Exhibit “A”.

Required Responses to Findings and Recommendations:

Based on its investigation, the Grand Jury arrived at seven findings (F1 through F7), and six recommendations (R1 through R8). In accordance with California Penal Code Sections 933 and 933.05, each agency affected by the findings is required to submit a response to the Presiding Judge of the Superior Court. The District is required to respond to Findings F4, F5 and F6, which state:

Finding F4: “Minimal effort to engage one another, a lack of creative proposals and slow responsiveness between OC Parks and the water districts have allowed negotiations to stall.”

Finding F5: “Although not a party to any recreation rights, IRWD does have a right of approval over decisions affecting water use rights and water quality. Therefore, settling easement rights issues in a successor document to the 2003 Memorandum of Understanding (MOU) among SWD, IRWD and TIC is required prior to concluding negotiations on recreation rights. Parties expect to complete this in the first half of 2019.”

Finding F6: “SWD, OC Parks and IRWD acknowledge that to maximize recreational opportunities a more stable Irvine Lake water level is desirable.”

Since the District has actively sought resolution of the issues surrounding Irvine Lake, including settling the easement rights discussed in the 2003 Memorandum of Understanding, staff recommends that the Board authorize the General Manager to notify the Presiding Judge of the Superior Court, in writing, that the District wholly disagrees with Finding F4 and agrees with Finding F5. Additionally, for the reasons stated above, staff recommends that the Board authorize the General Manager to notify the Presiding Judge of the Superior Court that the District wholly disagrees with Finding F6.

The District is also required to respond to Recommendations R4 and R5, which state:

Recommendation R4: “If by December 31, 2019 resolution has not been reached as to the reopening of Irvine Lake for water recreation, staff for SWD, IRWD, and OC Parks should post on their respective websites and submit to their governing body for discussion in a public meeting their perspective as to the obstacles to reopening the lake and what plan they have to resolve the issue. (F4)”

Recommendation R5: “By December 31, 2019, SWD, IRWD and OC Parks should explore the economic feasibility of establishing and maintaining Irvine Lake at a minimum water level based on expected income and other potential cost offsets. (F5 and F6)”

IRWD has actively sought resolution to the issues surrounding Irvine Lake. Resolution of the outstanding issues could result in the reopening of Irvine Lake to public recreation; however, as discussed above, control over recreational activities is the responsibility of the owners of the

“Irvine Lake Recreation Rights” – not IRWD. From the District’s perspective, Irvine Lake must remain first and foremost a water resource facility, and any recreational activities, such as fishing and boating, must account for and preserve the lake’s primary purpose of a water resource facility.

Given the long-standing discussions over Irvine Lake, the IRWD Board has been briefed (primarily through the IRWD / Serrano Water District Committee) on the outstanding issues related to Irvine Lake. IRWD has also posted information on its website regarding Irvine Lake. The outstanding issues related to Irvine Lake are complex given the nearly 100-year history of the lake and the numerous agreements covering the interests held by IRWD, Serrano Water District, and the Irvine Company/County of Orange. IRWD continues to actively work to resolve the remaining issues related to Irvine Lake, but resolution of the remaining issues requires further negotiation between the parties.

Posting on IRWD’s website and submitting to the Board for discussion in a public meeting the District’s perspective as to the obstacles to reopening the lake and the plan for resolving the remaining issues could undercut the District’s negotiating position. As a result, staff recommends that the Board authorize the General Manager to notify the Presiding Judge of the Superior Court that Recommendation R4 will not be implemented because it is not warranted and is unreasonable. IRWD has and will continue to post as much information as possible to its website in order to keep its customers and the general public appropriately informed about the status of Irvine Lake.

With regard to Recommendation R5, IRWD and Serrano Water District balance the benefits of storing water in Irvine Lake to ensure customers have a reliable supply of water while minimizing the potential loss of water from the lake. When the water level in Irvine Lake is high, the rate of evaporation increases dramatically with the increase surface area of water. IRWD also manages the water level in Irvine Lake to preserve the ability to capture rainwater from the surrounding hills, because capturing this fresh water in Irvine Lake at no cost helps reduce the cost of providing reliable drinking water to customers.

If the owners of the Irvine Lake Recreation Rights desire to establish a minimum level of water in Irvine Lake, IRWD is willing to discuss the costs associated with this request to ensure the recreational activities are not to be subsidized by IRWD customers for no benefit. Because IRWD does not have any ownership of the Irvine Lake Recreation Rights, it is not appropriate for IRWD to explore the economic feasibility of establishing and maintaining Irvine Lake at a minimum water level based on expected income and other potential cost offsets. Staff recommends that the Board authorize the General Manager to notify the Presiding Judge of the Superior Court that Recommendation R5 will not be implemented because it is unwarranted.

A copy of the proposed response to the Grand Jury is provided as Exhibit “B”.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communication Committee on July 11, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO PROVIDE THE PRESIDING JUDGE OF THE SUPERIOR COURT WITH THE PROPOSED RESPONSE TO FINDING F4, FINDING F5, FINDING F6, RECOMMENDATION R4, AND RECOMMENDATION R5 OF THE 2018-2019 ORANGE COUNTY GRAND JURY REPORT ENTITLED “*RE-OPENING IRVINE LAKE – A WIN-WIN FOR TAXPAYERS AND OUTDOOR ENTHUSIASTS.*”

LIST OF EXHIBITS:

Exhibit “A” – 2018-2019 Orange County Grand Jury Report “*Re-Opening Irvine Lake- A Win-Win for Taxpayers and Outdoor Enthusiasts*”

Exhibit “B” – Proposed Draft Response to the Orange County Grand Jury

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EXHIBIT "A"

Re-Opening Irvine Lake
A Win-Win for Taxpayers and Outdoor
Enthusiasts



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SUMMARY

The Grand Jury has determined the cause of the closure of Irvine Lake to the public in 2016, and why it remains closed. As of the end of 2018, it has remained closed; however, in 2019 there is reason for optimism on multiple fronts. This report from the Grand Jury intends to provide useful background for interested residents of Orange County as to the specific interests and driving factors of the three public agencies involved. This report also will provide some insight on the sequence of legal issues to be resolved. The Grand Jury intends to provide a possible road map to a successful resolution of the outstanding issues among the parties.

Irvine Lake is the largest fresh water body in Orange County. Since 1941, the lake has provided the residents of Orange County with a unique opportunity for a variety of recreational activities. In 2014, The Irvine Company made public its intention to transfer certain land parcels it owned surrounding Irvine Lake to Orange County in perpetuity for the benefit of its residents. The land transfer triggered a series of negotiations among, primarily, Orange County Parks, Serrano Water District and Irvine Ranch Water District, seeking agreements on certain matters to move the action forward. Those negotiations stalled and in March 2016, Irvine Lake was closed to the public for fishing, boating and other water recreation. This closure has and continues to result in lost revenues for Orange County taxpayers in addition to lost recreation for its residents.

Finally, there is good reason to believe that Irvine Lake and the property transferred to Orange County by The Irvine Company will once again provide residents with a unique recreational experience. Further, the involvement of the Orange County Parks in the future of Irvine Lake has the potential to make the recreational land and water experiences at the Irvine Lake area property better and more varied than ever before.

REASON FOR THE STUDY

The three public agencies involved in the future operations of Irvine Lake have not announced a plan for its reopening for recreation use since its closure in 2016. The Grand Jury examined the reasons that the lake remains closed.

Irvine Lake has provided recreation opportunities to the residents of Orange County since 1941. In 2014, The Irvine Company (TIC) agreed to dedicate 2,500 acres surrounding Irvine Lake to the residents of Orange County to enjoy as permanent open space. This dedication required an agreement between the two water districts actively involved in the management of Irvine Lake regarding access to Irvine Lake and future recreation rights: Serrano Water District (SWD) and Irvine Ranch Water District (IRWD). Orange County Parks (OC Parks) would be the governmental agency responsible for restoring and maintaining the newly dedicated public land, and in consideration would receive TIC's interest in water recreation rights at Irvine Lake, plus additional adjacent land parcels (see Appendix, Exhibit 1); therefore, OC Parks would need to be a party to any new agreement(s).

The three primary parties (SWD, IRWD and OC Parks) began negotiations in 2014 but by early 2016 had failed to make any real progress. This impasse resulted in a termination in March 2016 of the existing agreement between TIC and SWD with respect to recreation rights. Irvine Lake has remained closed to the public for water recreation through the balance of 2016 until the present.

Given the historic importance of Irvine Lake for water recreation to Orange County residents, the continued lack of progress in the negotiations between the relevant government agencies, and a general lack of understanding of the underlying issues by the residents of Orange County, the 2018-2019 Orange County Grand Jury (Grand Jury) elected to conduct an investigation, employing its particular powers to gather information, for the benefit of Orange County residents. The report will describe interagency dynamics that have resulted in the current impasse among SWD, IRWD and OC Parks with respect to the reopening of Irvine Lake. The Grand Jury will investigate methods for improving those dynamics to allow for the successful resolution of negotiations and reopening of Irvine Lake.

METHOD OF STUDY

The Grand Jury identified and interviewed key stakeholders involved in the negotiations. The interviews identified basic principles or restraints driving the negotiating parameters, such as the priority of providing safe water supplies over the need for recreation, the need to generate sufficient income to cover water infrastructure costs, and the need to obtain sufficient returns to maintain and improve land newly dedicated to the public. The Grand Jury reviewed information about past recreational services and solicited suggestions to expand recreational and revenue generating capabilities of the area.

Members of the Grand Jury toured Irvine Lake and all adjacent properties that are part of the negotiations and expected to be part of future OC Parks development plans. They reviewed the condition of existing improvements and issues affecting property access.

The Grand Jury reviewed multiple articles in local newspapers that provided coverage of the closing of Irvine Lake and limited coverage of the ongoing negotiations, plus material on the general background of the history of Irvine Lake and its status.

The Grand Jury reviewed existing development or redevelopment plans for the recreational facilities and services offered for Irvine Lake. These included estimates for associated costs and investments as well as expected future revenue streams. The Grand Jury reviewed existing agreements among relevant parties and their successors dating back to 1928, written communications between the parties, and limited historical financial operating information. The stakeholders also provided legal background and documentation as to the sequence that negotiations should follow to be successful.

BACKGROUND AND FACTS

Background History

Santiago Dam (also known as Santiago Creek Dam) is an earthen and rock filled dam across Santiago Creek within Orange County, forming Irvine Lake. The 136-foot earth dam and its reservoir primarily provide for water storage. The dam and reservoir secondarily provide recreational opportunities. It lies east of the city of Orange and north of Irvine. Irvine Lake is the largest body of fresh water entirely within Orange County.

Construction on the dam commenced in 1929 with a joint agreement by the Irvine Company and Serrano Irrigation District. After they graded the site they built the dam using dirt and rock excavated from the sides of the canyon. They completed the structure in 1931, and its reservoir, Irvine Lake, was filled by 1933. By the late 1930s, the lake had been stocked with fish. It was opened to the public for recreational use in 1941.

The dam's initial purpose was for, irrigation and municipal water use. With heavy suburban sprawl that has occurred since the 1960s, agriculture along lower Santiago Creek has been drastically reduced. Conversely, the need for water storage and distribution to urban users has increased. It is currently owned by the Irvine Ranch Water District and the Serrano Water District (the former Serrano Irrigation District). Today the dam marks the end of Santiago Creek. All the discharge is retained in the reservoir and downstream flow is limited to seepage and released storm water.¹

History of Water Recreation

The recreation rights to the waters of Irvine Lake were initially established under a February 6, 1928 settlement agreement between TIC, Carpenter Irrigation District and the Serrano Irrigation District, predecessor to SWD ("1928 Agreement"). The 1928 Agreement generally deals with the use of Irvine Lake as a reservoir by the parties. Over the decades, the parties to the 1928 Agreement changed as water and irrigation districts formed and dissolved. Subject to the 1928 Agreement, TIC retained 75% of the recreation rights on the water while SWD retained the remaining 25% of those rights.

Recreation rights to the water at Irvine Lake are limited by the 1928 Agreement. Such rights include fishing, hunting, boating and such other uses as will not pollute or interfere with the use of said waters by the parties, Irvine Lake functions first as a reservoir, and second as a recreational lake – and then only for recreational uses that are compatible with the functioning of

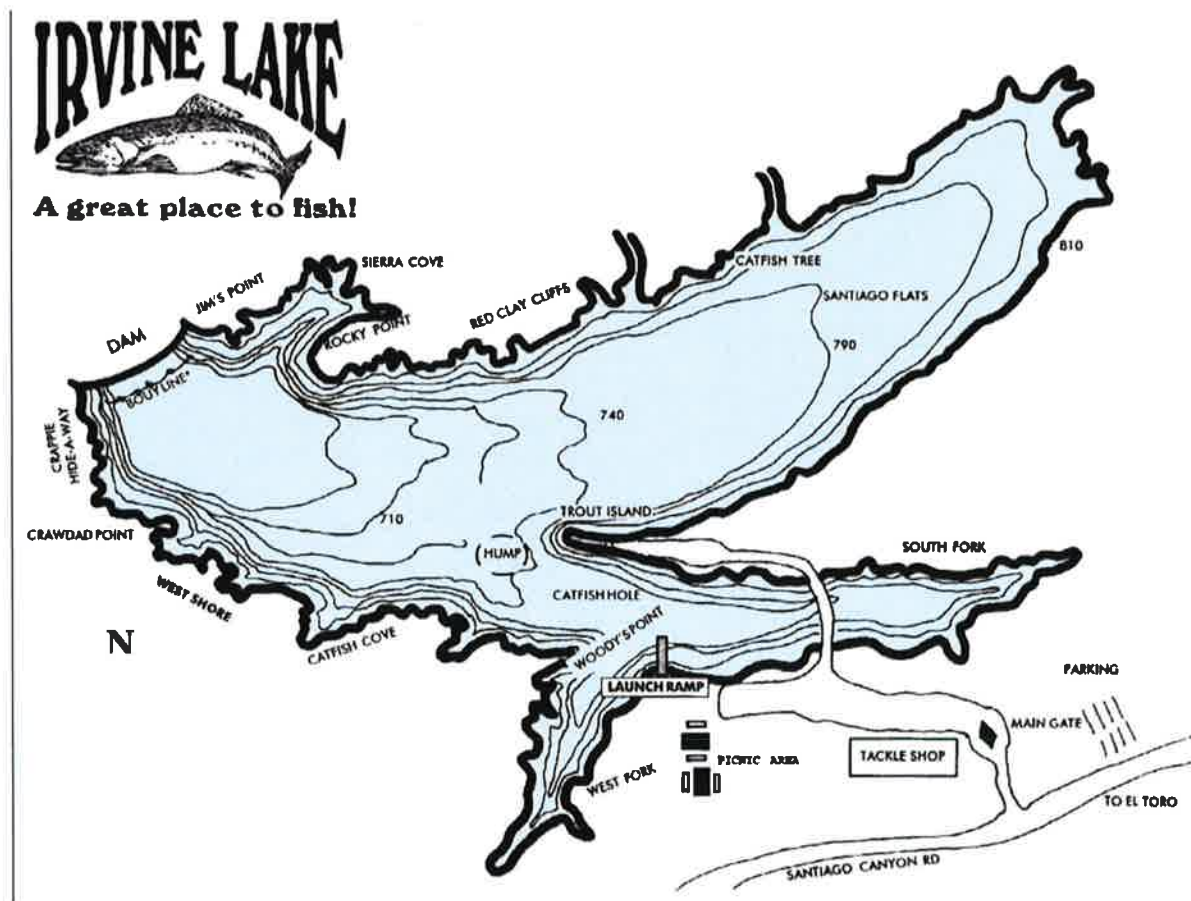
¹ Wikipedia, https://en.wikipedia.org/wiki/Santiago_Dam, Last Edited December 7, 2018 (Modified from the original), used, and available for reuse, pursuant to <https://creativecommons.org/licenses/by-sa/3.0/>.

the reservoir. Article Thirteen of the 1928 Agreement requires that, in order to open Irvine Lake to general public recreational use, the parties who share any interest must agree to satisfactory terms with one another.

Prior to 1993, recreational activities such as boating and fishing were facilitated by way of an informal agreement between the owners of recreation rights. A more formal agreement was drafted in 1993 between TIC and SWD (the two remaining parties with recreation rights). In addition, in 2011, TIC and SWD entered into a concurrent agreement in the form of a lease, wherein TIC leased to SWD and SWD Recreation Inc. (a wholly owned subsidiary) the land under the RV Storage facility, which provided SWD with an opportunity to operate and profit from the RV storage facility on TIC's land.

Although the types of recreational activities on the water were reduced over the years by SWD due to liability concerns (boater drownings occurred in 2012 and 2015), shoreline fishing remained open to the public until the termination of the lease and recreation rights agreement between TIC and SWD on March 31, 2016.

Figure 1



Source: Irvinelake.net

Involvement of Orange County Parks (OC Parks)

Prior to 2014, Orange County had no direct involvement with Irvine Lake or the surrounding property. In 2014, TIC made a donation of 2,500 acres of land to the County of Orange for park uses, including the areas on the Exhibit A Map (see Appendix) denoted as “East Orange I” and “East Orange II”. Orange County Parks Foundation, a nonprofit conservancy, holds the habitat conservation easements that govern these. In addition to the open space lands, TIC also transferred to Orange County fee title (unencumbered ownership) to the area shown on the map in orange and denoted as the “OC Parks Lease Parcel”. This parcel is a private leasehold that produces revenue to OC Parks and assists in offsetting OC Parks costs of open space management, habitat restoration, and public access improvements in lieu of a more traditional conservation endowment. The other revenue-generating parcel of land intended to offset OC Parks open space management costs, shown on the map in pink and denoted as “Irvine Company IOD (Irrevocable Offer of Dedication) to Orange County,” is the 29-acre Recreation Parcel at the entrance to the lake. It includes the RV storage facility, which TIC irrevocably offered to Orange County, but can be transferred only once certain conditions are met.

As to the recreation rights to the water, in conjunction with the 29-acre Recreation Parcel and related access roads, TIC did make an IOD to OC Parks for its 75% of the recreation rights. Effectively, the components that it offered to OC Parks can be accepted or declined at OC Parks unilateral discretion once certain conditions have been satisfied within a 90-year period. This report will address below each one of these conditions and their complexity. Only after all of these conditions are satisfied will OC Parks receive TIC’s 75% interest in the recreation rights and the Recreation Parcel. It also bears noting here that even if/when OC Parks does accept TIC’s 75% recreation rights, pursuant to the 1928 Agreement, SWD must still concur with terms of recreation management before it can permit any public recreation on Irvine Lake.

Memorandum of Understanding- 2003

Pursuant to a Memorandum of Understanding dated April 30, 2003 between TIC, IRWD and SWD, the parties to the MOU are obligated to exchange access easements for the land adjacent to the lake. This has not yet occurred. OC Parks is not a party to this MOU and therefore lacks any legal standing or bargaining power over this situation. Nevertheless, unless or until those easements are agreed upon and exchanged, OC Parks cannot obtain any recreation rights to the lake water.

Additionally, the 2003 MOU stipulates that TIC may not transfer its 75% of the recreation rights unless or until SWD and IRWD agree to that transfer. To date, SWD has signified its approval to the transfer through the initiation of negotiations over the recreation management agreement with OC Parks, but IRWD has withheld its approval pending completion of a successor agreement to the 2003 MOU.

In spite of multiple contacts by OC Parks to IRWD over the past few years, it appears to the Grand Jury that OC Parks has not yet received any information from IRWD regarding the terms of any successor agreement nor its expected completion and execution date. However, the Grand Jury has learned that the execution of a successor agreement to the 2003 MOU will likely occur in the first half of 2019.

Conditions Needed to Satisfy Irvine Company's IOD Transferring the 29 Acre Recreational Parcel and its 75% Interest in Recreation rights

Condition #1: Water Districts Must Accept Access Easements from The Irvine Company

IRWD and SWD must accept and record easements from TIC providing the water districts with access to the access road alongside Irvine Lake. TIC is obligated to offer the easements to satisfy the terms of the 2003 MOU. Likewise, IRWD and SWD must provide a reciprocal easement to TIC (or its successor) pursuant to the 2003 MOU and TIC must accept the easement.

Condition #2: Orange County Accepts Access Road Parcel

After Condition #1 is satisfied, Orange County must accept fee title to the Access Road Parcel within a certain period. (Currently, OC Parks has an easement over the Access Road Parcel, which provides access to the Oak Canyon Park/concessionaire lease parcel.)

Condition #3: IRWD Consents for Transfer of Recreation rights

IRWD must provide its consent for TIC to transfer its 75% recreation rights to OC Parks. SWD has already indicated its willingness to consent, assuming completion of a recreation management agreement or buyout with OC Parks. This item can take place at any time; however, the IOD considers IRWD's consent to be a condition precedent to Condition #4 below.

Condition #4: Orange County Accepts 29 Acre Recreation Parcel & Recreation Rights Transferred to Orange County (2 Options)

After Conditions #1-#3 are satisfied, OC Parks may accept the Recreation Parcel and is then eligible to receive TIC's 75% of the recreation rights to the water if:

1. SWD agrees to transfer its 25% of the recreation rights to OC Parks (buyout);
or
2. SWD and OC Parks enter into a management agreement for the recreation rights, which could include sharing of the profits generated from water-based recreation.

Even if these conditions are satisfied and OC Parks obtains the ability to use the water for public recreational activities, the geographic conditions at the lake may hinder OC Parks ability to do so. For example, the lakebed is much larger than the current body of water. Thus, OC Parks will still lack access over the lakebed to provide direct access to the water for recreational activities. At that point, OC Parks, IRWD, and SWD may need to negotiate additional agreements (*e.g.* license, permit, or easement) to grant OC Parks access to the dry lakebed for recreation-serving uses such as launch ramps for rental and/or private fishing boats, vehicle access, lakeshore fishing, etc.

Current Ownership and Control

The ownership, control, use, and rights to Irvine Lake and the surrounding area are complex. To facilitate the reader's understanding, please refer to attached map included as Appendix A from the OC Parks website, showing the various properties and the interests, summarized below:

1. TIC owns:
 - a. the 29-acre "Recreation Parcel" including the RV storage lot and the public entrance to Irvine Lake (shown in pink on the attached map);
 - b. the access road from Santiago Canyon Road to the back of the reservoir, including portions of Blue Diamond Haul Road (shown in yellow on the attached map); and
 - c. 75% of the recreation surface rights to the water of Irvine Lake
2. Orange County owns:
 - a. the Oak Canyon Park/Concessionaire lease parcel (shown in orange on the attached map);
 - b. easement rights over the access road to reach the Oak Canyon parcel; and
 - c. the majority of the open space surrounding Irvine Lake
3. SWD owns:
 - a. the lakebed and the water of Irvine Lake (including determining the permitted uses on the water) – owned jointly with IRWD
 - b. 25% of the recreation surface rights to the water of Irvine Lake
4. IRWD owns:
 - a. the lakebed and the water of Irvine Lake (including determining the permitted uses on the water) – owned jointly with SWD

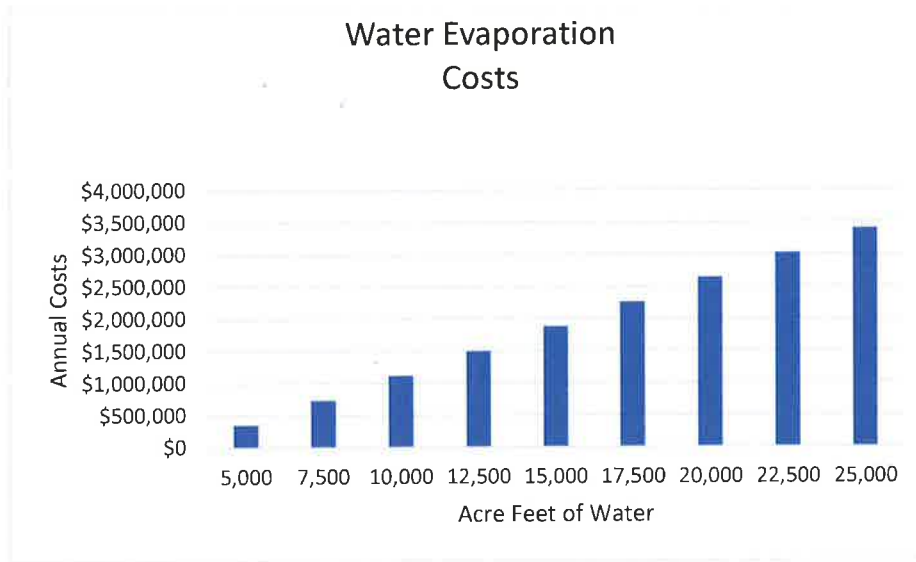
Although SWD owns only a minority share of the recreation rights to the water, the public may not exercise any recreation rights unless all parties agree to such uses per the controlling agreement. In other words, SWD may withhold permission and thereby prohibit TIC (or TIC's successor-in-interest) from offering public use of the recreation rights despite its majority share of the recreation rights.

The Impact of Water Levels at Irvine Lake

Irvine Lake experiences wide fluctuations in the water level as a storage facility for the water districts. SWD estimated the Irvine Lake surface area to be 2,700-acre feet as of January 2019. This water level reflects several years of drought and SWD considers it the minimum level at which to operate the outlet towers and other pump facilities. The water districts would need to purchase water from the Metropolitan Water District to raise the water level other than by precipitation runoff directly or from the upstream water flow from Santiago Creek. MWD imports water from the Colorado River and Central California Aqueduct. The MWD water does not greatly influence the watershed for the majority of Orange County (generally north of El

Toro) that receives roughly 80% of its water from the underlying aquifer. When purchasing the water for storage the water districts must account for the cost of the water lost to surface evaporation. This is relatively predictable, based on annual weather patterns, the cost of water and surface area exposed to evaporation. Those cost estimates for Irvine Lake by surface area exposed would be:

Graph 1:



Source: Data provided by Serrano Water District

As the chart indicates, the annual costs of water evaporation to the water districts is significant, particularly as the surface area approaches a maximum size for Irvine Lake of 25,000-acre feet. Even at lower lake levels of 10,000-acre feet (four times the current surface area), the annual cost would be close to \$1 million. In summary, the larger the surface area of the lake becomes, the more the evaporation and water replacement costs increase. Notably, the cost of water replacement varies by season. The price of purchase water goes down when water from natural precipitation is higher, and water is more plentiful. Conversely, during times when natural precipitation is scarce, water is costlier.

The nature of planning recreation around a man-made lake would be much easier if wide fluctuations in water level could be moderated. Involved entities consider maximum water levels so that permanent facility areas are not lost when water level increases. Additionally, they can improve access to the lake if water levels are predictable and do not fall below a certain level. They can manage this with floating and moveable dock systems and moveable structures. If they could maintain Irvine Lake at a minimum level, for example 10,000-acre feet, even in years when naturally occurring runoff would result in lower lake levels, recreational experiences would be easier to plan and more esthetically pleasing. At that level of water, the costs to the water districts, up to \$1 million, could occur in certain years or multiple years. Without a way to offset those

costs there would be little incentive for the water districts to maintain Irvine Lake at that higher water level.

At the current level of income generated from recreation surrounding Irvine Lake, accruing to either OC Parks or SWD, there is little ability to offset much increase in evaporation costs and still generate income for the primary purposes of covering water infrastructure costs or restoration and maintenance of new OC Parks' open space. However, this relationship could change if the entities expand recreation at Irvine Lake and recreation income increases. In the future, to reduce Orange County's need to purchase water from outside sources, the water districts may seek to expand water storage capacity at various reservoirs, including Irvine Lake. This could also be a source of cost offset.

Lack of Formal Planning by Local Government Agencies for Irvine Lake

Since 1928, TIC has managed recreation around Irvine Lake, with SWD's role increasing gradually over time. Both entities, by nature and mission, primarily focus on their core businesses of real estate development (TIC) and water delivery (SWD). In 1993, when TIC felt recreation was not receiving appropriate attention it entered into an agreement with SWD to increase the focus on viable water-based recreation. The size of Irvine Lake and its location in an increasingly urbanized area contributed to the success of selected recreation.

As part of its investigation, the Grand Jury requested from all three local government agencies any planning documents or feasibility assessments conducted for Irvine Lake and found that no planning reports or studies exist. Given the recent TIC land donation and the new and anticipated role of OC Parks going forward, the lack of planning or feasibility studies for an asset of this size and significance within Orange County is inconsistent with OC Parks' general practices.

Future planning activities and documents typically would involve public focus groups and interviews with interested stakeholders. Issues could include the types and location of land-based recreation given the limited land areas involved, access to the lake and connecting roads. Planners could identify locations for future expansion opportunities. Operational models for recreation other than direct management by OC Parks could include public/private partnership or leases that would reduce needed public investment and provide business opportunities for local business people. Restrictions governing permitted activities on or near the water, based on the need for preservation of water quality, would prohibit certain recreation. Likewise, concerns for public safety and operator liability related to past boating operations at Irvine Lake (speed boating, private boating, or boating rentals) will need to be considered.

Parameters of Negotiation

Intended Use of Revenues from Recreation Activities and Donated Land Parcels

SWD historically has applied all revenue from the water-based recreational activities to offset costs associated with the maintenance, repair and replacement of the dam and lake infrastructure. As co-owner of the land under Irvine Lake and the water rights, SWD shares the infrastructure costs with IRWD on a 25% (SWD)-75% (IRWD) basis. SWD is a small water district relative to IRWD with approximately 6,500 households served, compared to IRWD's 110,000+ households. SWD's customer base is relatively stable, consisting of a largely fully developed area around the cities of Villa Park and parts of Orange.

The water ratepayers of SWD and IRWD currently fund 100% of all dam maintenance costs. In addition, two large, necessary capital projects appear on the near horizon. Nobody has yet estimated the cost of these projects, but they have the potential to be quite high. By way of example only, to cover a potential one-time capital investment of \$50 million on a shared 25%-75% basis roughly would translate to \$1,900 for every SWD ratepayer and \$340 for every IRWD ratepayer. Therefore, finding an alternative way to fund capital projects may prove more critical for SWD.

OC Parks intends to use the revenue generated from water-based recreation plus the lease income from the two land-based parcels that TIC intends to transfer to OC Parks to assist in offsetting OC Parks' costs of habitat restoration, open space management and public access improvements; this is in lieu of a more traditional conservation endowment. The initial rough estimate of the costs of habitat restoration, trail construction and maintenance, and improvements needed for public access is in the range of \$5 million. The estimate is for the roughly 2,500 acres identified on Exhibit 1 as OC Parks East Orange I and II.

Historic Operation of Recreation at Irvine Lake and its Impact on Negotiations

Since recreation first opened to the public in 1941, the recreational activities at Irvine Lake have consisted of water-based and land-based activities

The definition of water-based recreational activities in Section 4 of the 1993 Recreation Rights Agreement between TIC and SWD, reads as follows:

“TIC and SID (SWD) agree that the Recreation Rights give them jointly through the Manager the exclusive right to do the following things within the boundary of the Reservoir (the “Recreational Activities”):

- A. The right to use, permit the public to use or grant concessions for the public to use the Reservoir and all boats and related equipment, piers, floats, boat landings, buildings, structures and other improvements located within the Reservoir for:

- a. Fishing and other uses incidental to fishing, including the rental, repair and use of fishing boats, and the rental or sale of fishing tackle, bait and other equipment and supplies;
 - b. Boating and other uses incidental to boating, including the rental, use and sale of boats and all boating accessories and equipment and the use and sale of fuel and supplies;
 - c. Such other amusements and recreation activities as will not impair the use of the waters of the Reservoir by SID and IRWD; and
 - d. The right to stock the waters of the Reservoir with fish and maintain the same therein.
- B. The right to erect, place and maintain within the boundary of the Reservoir such buildings, structures, improvements and equipment as may be necessary or convenient for the uses and purposes herein specified, subject to the provisions hereof (the “Recreation Structures”)
- C. The right to sell food, refreshments, merchandise and other items to the public.
- D. The right to rent equipment and other items associated with the Recreational Activities to the public.”²

² Recreation Rights Agreement, Dated June 30, 1993, between Serrano Irrigation District and The Irvine Company

Land-based recreation has occurred on two land parcels adjacent to Irvine Lake and owned by TIC. The map included in Exhibit 1 identifies the two parcels where recreation has occurred, the orange and the pink parcel. A private concessionaire under a License Agreement (Concession Agreement) in place since 1993, has managed the recreation on the orange parcel. The concessionaire is responsible for constructing and maintaining improvements to conduct its business, providing insurance and indemnifying TIC against all liability associated with the operations. Permitted uses are generally defined as private corporate events, car clubs, some limited concert events, scout jamborees, carnival rides, day camping and picnic areas. Overnight camping and most motor sports are prohibited. Activities added over the years include mountain bike courses, “mud racing,” various sports events, radio controlled aircraft and drone flying. The orange parcel was transferred to OC Parks in 2015. The Concession Agreement remains on holdover status, pending a longer-term agreement with OC Parks.

The pink parcel includes the general public entrance to Irvine Lake, improvements related to fishing and boat rental (both currently closed), and a paved, secured RV and boat storage area. In 2011, TIC entered into a lease with SWD to operate the RV and boat storage area, in addition to its responsibilities for operating “water-based” recreation. That lease was terminated in 2016, along with the Recreation Rights Agreement. TIC continues to operate the RV and boat storage, pending transfer to OC Parks.

Historic Operating Revenues and Profits from Recreation at Irvine Lake

Review of lease and management documents, interviews with lessors and lessees, and a limited review of accounting information, provide some general trends for recreation operations at Irvine Lake. The Concession Agreement has a minimum rent of \$120,000 annually, plus a share of gross revenues. Total annual income generated in recent years was in the estimated range of \$350,000-\$400,000. The Grand Jury has learned annual revenue from the RV and boat storage area is estimated to be in the range of \$375,000-\$400,000. TIC has recently expanded the storage area and anticipates continued strong demand for this type of storage; therefore, revenues could possibly increase. Many have described the location of the storage area near the main entrance to Irvine Lake as an eyesore. Overall master planning might entail relocating the storage area, and reducing the size of the storage area may result. Nonetheless, the demand for such use is strong.

A review of limited accounting records for water-based recreation indicates income from fishing (including entrance fees), boating rental and equipment rentals, as well as food and other sales, generating a positive net income of an estimated \$125,000-\$350,000 annually. Net income from water-based recreation is shared between TIC (75%) and SWD (25%), until OC Parks fully takes over from TIC (and becomes the 75% shareholder) and unless a purchase of SWD’s interest occurs. A general decline in net income from water-based recreation during the period from 2011-2016 was a result of declining boat and fishing revenues following two separate boating accidents

and drownings in 2012 and 2015. These resulted in increased insurance costs for the operator and resulted in a suspension of boating on Irvine Lake in 2015.

If boating and fishing could be restored to past levels, it would appear, based on prior history, that the water-based along with the two land-based recreation operations would produce net income in roughly the historical amounts. However, future income could be substantially different, based on OC Parks' involvement, new capital investments, and limited comparable recreation sites in an increasingly urbanized Orange County.

Chronology of Negotiations

Orange County became aware in 2014 of TIC's plans to transfer the 2,500 acres of open space. In 2015 OC Parks first approached SWD regarding its interest in purchasing SWD's 25% interest in the water-based recreation rights. SWD initially indicated an interest in this buyout in exchange for a shorter term no fee (no rent) operation of the RV Storage parcel which it had been operating for TIC and some unspecified ongoing participation in a percentage of other recreational income at Irvine Lake.

In September of 2015, TIC notified SWD of its intent to terminate both the Recreation Rights Agreement and the RV Storage lease effective March 31, 2016. SWD requested a six-month extension to the RV Storage lease to allow time to negotiate an agreement with OC Parks to continue to manage the RV Storage operation. In early 2016, OC Parks offered a buyout based on a two year no fee lease of the RV Storage with a market rate lease thereafter. In February of 2016, SWD revised its offer to sell its water-based recreation rights, and instead offered an unusual lease-like arrangement for those rights in return for a minimum annual payment of \$400,000, or a no fee long-term lease for the RV Storage area. TIC soon thereafter denied SWD's request for an extension of the RV Storage lease, basing its decision on the two parties (SWD and OC Parks) being too far apart on terms.

After February 2016, there were no more written counteroffers from either OC Parks or SWD regarding SWD's recreation rights. The Grand Jury learned that OC Parks did request financial operation information on the water-based recreation in order to evaluate the last offer made by SWD. The Grand Jury has determined that OC Parks has yet to receive this information.

As OC Parks consummated the transfer of the orange-colored Recreation Parcel, it investigated the conditions needed to achieve the remaining transfer of the IOD parcel and the recreation rights. It became clear that the negotiation of recreation rights with SWD could not occur prior to satisfying the IOD conditions, which in turn requires a modification or successor document to the 2003 MOU.

OC Parks is not party to the 2003 MOU document and cannot directly influence negotiations. The primary parties are the two water districts and TIC. Neither of the water districts has provided a progress report to OC Parks as to how those negotiations are progressing or what, if any, contract points are critical. The Grand Jury has learned that there is some level of confidence that the

MOU agreement could be signed within the first half of 2019. Only following that agreement could all the conditions of the IOD be satisfied.

The last documented communication between OC Parks and SWD regarding recreation rights occurred in the summer of 2017. OC Parks offered to enter into a short-term agreement to permit shore fishing at Irvine Lake. All costs and liability would be borne by OC Parks. OC Parks would share with SWD any net income generated. OC Parks agreed to allow some fishing at Irvine Lake while negotiations continued. SWD did not want to consider a short-term arrangement.

Negotiation Observations

OC Parks is concerned about offering relatively certain land-based income targeted for public land restoration without knowing what it is getting in return. The only source of funding to restore and maintain for public benefit the 2,500 acres of open land surrounding Irvine Lake would be the income generated from the property and recreation rights transferred by TIC.

Negotiations have been delayed due to the need to revise the 2003 MOU as well as resolving the easement and other rights. This needs to occur prior to finalizing the final transfer of the rights included in TIC's IOD. The primary focus of both water districts is the delivery of water and maintaining the water delivery systems, not recreation.

SWD's initial negotiation strategy appears to seek a price premium to buy out its recreation rights. This strategy is common when negotiations involved fractional or shared ownership. The current agreements do not contain provisions to resolve buy-sell disagreements involving fractional ownership.

Given OC Parks' financial constraints, OC Parks cannot proceed in the absence of financial information regarding expected operating profits from water-based recreation. A continued impasse on the water-based recreation rights will deny both parties its share of potential income, and more importantly continue the delay of the reopening of water recreation at Irvine Lake to the public.

OC Parks does have the option of pursuing a separation of the IOD terms with TIC to allow for the settlement of all issues within the IOD other than the transfer of its 75% interest in recreation rights. This would settle the required access easements and allow OC Parks to take over ownership and management of the RV Storage parcel.

If SWD and OC Parks cannot agree on a buyout figure, they could enter into a management agreement to allow for continued water recreation and a split of net income on a negotiated basis. This would allow OC Parks to begin overall recreation planning at Irvine Lake making water recreation available to the public. A lease of SWD's recreation rights on terms other than in proportion to its current ownership interest may not make economic sense, particularly in the absence of compelling financial information.

FINDINGS

In accordance with *California Penal Code* Sections 933 and 933.05, the 2018-2019 Grand Jury requires (or as noted, requests) responses from each agency or special district affected by the Findings presented in this section. The Responses are to be submitted to the Presiding Judge of the Superior Court.

Based on its investigation, titled “Re-Opening Irvine Lake- A Win-Win for Taxpayers and Outdoor Enthusiasts,” the 2018-2019 Orange County Grand Jury has arrived at seven principal Findings:

F1. In the past SWD has used revenue from its recreation rights as one of its sources to offset costs for maintenance and replacement of capital investments in water infrastructure.

F2. For OC Parks the revenue from rights and property assigned by TIC will be the source to cover costs associated with the restoration, maintenance and repairs of the newly- dedicated open space.

F3. Without sufficient historical financial information from SWD, OC Parks cannot project future financial opportunities at Irvine Lake.

F4. Minimal effort to engage one another, a lack of creative proposals and slow responsiveness between OC Parks and the water districts have allowed negotiations to stall.

F5. Although not a party to any recreation rights, IRWD does have a right of approval over decisions affecting water use rights and water quality. Therefore, settling easement rights issues in a successor document to the 2003 Memorandum of Understanding (MOU) among SWD, IRWD and TIC is required prior to concluding negotiations on recreation rights. Parties expect to complete this in the first half of 2019.

F6. SWD, OC Parks and IRWD acknowledge that to maximize recreational opportunities a more stable Irvine Lake water level is desirable.

F7. A master plan for recreational activities remains to be developed.

RECOMMENDATIONS

In accordance with *California Penal Code* Sections 933 and 933.05, the 2018-2019 Grand Jury requires (or as noted, requests) Responses from each agency or special district affected by the Recommendations presented in this section. The Responses are to be submitted to the Presiding Judge of the Superior Court.

Based on its investigation titled “Re-Opening Irvine Lake- A Win-Win for Taxpayers and Outdoor Enthusiasts,” the 2018-2019 Orange County Grand Jury makes six Recommendations:

R1. If an impasse still exists between SWD and OC Parks on basic terms of water-based recreation rights the parties should use a neutral outside resource such as solution focused good faith mediation by September 30, 2019, to achieve resolution. (F1, F2, F3 & F6)

R2. If an impasse still exists between SWD and OC Parks on basic terms of water-based recreation rights OC Parks should, by September 30, 2019, request from TIC a separation of those rights described in the IOD from the remaining road parcels, easements and Recreation Land Parcel and a transfer of all but the water recreation rights to OC Parks. (F1, F2, F3 & F6)

R3. By September 30, 2019, SWD should provide full financial disclosure of historical operating information for water-based recreational activity, at a minimum for the period 2011-2016, in sufficient detail to allow OC Parks to evaluate any recreation rights buyout offer or other specific management proposal. Absent such information, SWD and OC Parks should negotiate and present to their respective governing bodies a management agreement to continue operating water-based recreation at Irvine Lake and share revenue, expenses and net profits (F3)

R4. If by December 31, 2019 resolution has not been reached as to the reopening of Irvine Lake for water recreation, staff for SWD, IRWD, and OC Parks should post on their respective websites and submit to their governing body for discussion in a public meeting their perspective as to the obstacles to reopening the lake and what plan they have to resolve the issue. (F4)

R5. By December 31, 2019, SWD, IRWD and OC Parks should explore the economic feasibility of establishing and maintaining Irvine Lake at a minimum water level based on expected income and other potential cost offsets. (F5 & F6)

R6. By March 31, 2020, once recreation rights are determined, OC Parks should hold open public planning meetings to address possible uses and activities, and their location at Irvine Lake, that result in the development of a multi-year Recreational Master Plan. This planning would include examining other public/private models within Orange County and Southern California for covering future capital costs and minimizing any liability associated with boating. This also would include general cost benefit or financial feasibility analysis for the recreational uses under consideration. (F7)

RESPONSES

The following excerpts from the California Penal Code provide the requirements for public agencies to respond to the findings and recommendations of this Grand Jury report:

§933(c)

“No later than 90 days after the grand jury submits a final report on the operations of any public agency subject to its reviewing authority, the governing body of the public agency shall comment to the presiding judge of the superior court on the findings and recommendations pertaining to matters under the control of the governing body and every elected county officer or agency head for which the grand jury has responsibility pursuant to Section 914.1 shall comment within 60 days to the presiding judge of the superior court, with an information copy sent to the board of supervisors, on the findings and recommendations pertaining to matters under the control of that county officer or agency head or any agency or agencies which that officer or agency head supervises or controls. In any city and county, the mayor shall also comment on the findings and recommendations. All of these comments and reports shall forthwith be submitted to the presiding judge of the superior court who impaneled the grand jury. A copy of all responses to grand jury reports shall be placed on file with the clerk of the public agency and the office of the county clerk, or the mayor when applicable, and shall remain on file in those offices. . . .” §933.05

“(a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall indicate one of the following:

- (1) The respondent agrees with the finding.*
- (2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.*

(b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:

- (1) The recommendation has been implemented, with a summary regarding the implemented action.*
- (2) The recommendation has not yet been implemented, but will be implemented in the future, with a timeframe for implementation.*
- (3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a timeframe for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This timeframe shall not exceed six months from the date of publication of the grand jury report.*
- (4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.*

(c) However, if a finding or recommendation of the Grand Jury addresses budgetary or personnel matters of a county agency or department headed by an elected officer, both the

agency or department head and the board of supervisors shall respond if requested by the grand jury, but the response of the board of supervisors shall address only those budgetary or personnel matters over which it has some decision-making authority. The response of the elected agency or department head shall address all aspects of the findings or recommendations affecting his or her agency or department.”

Comments to the Presiding Judge of the Superior Court in compliance with Penal Code §933.05 are required from:

Responses Required:

OC Parks responds to Findings 1-7 and Recommendations 1-6

SWD responds to Findings 1-6 and Recommendations 1-5

IRWD responds to Findings 4-6 Recommendation 4 and 5

Responses Requested:

TIC responds to Recommendation 2

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APPENDICES

Appendix A- Map of Greater Irvine Lake Area Ownership and Encumbrances

Appendix B – Current photos of Irvine Lake

Appendix C- Web link to photos of Irvine Lake prior to closure

Appendix A



Source: OCParks website

Appendix B - Current Water-based Recreation Conditions

Main Entrance to Irvine Lake



Source: 2018-2019 Grand Jury



Source: 2018-2019 Grand Jury



Source: 2018-2019 Grand Jury



Source: 2018-2019 Grand Jury

Temporary Building for Fishing and RV Management



Source: 2018-2019 Grand Jury

Appendix C- Web link to Photos of Past Recreation Activities

<https://www.google.com/search?q=irvine+lake+photos&tbm=isch&source=hp&sa=X&ved=2ahUKEwj8jJCe5ubhAhXCrJ4KHaaXCsUQsAR6BAgJEAE&biw=1600&bih=805>

DRAFT

July X, 2019

The Honorable Kirk H. Nakamura
Presiding Judge of the Superior Court of California
700 Civic Center Drive West
Santa Ana, CA 92701

RE: Response to Grand Jury Report, "*Re-Opening Irvine Lake - A Win-Win for Taxpayers and Outdoor Enthusiasts*"

Dear Presiding Judge Nakamura:

On May 13, 2019, the Grand Jury released a report entitled "*Re-Opening Irvine Lake – A Win-Win for Taxpayers and Outdoor Enthusiasts.*" This report requires a response to findings and recommendations from the Irvine Ranch Water District (IRWD). Per the 2018-2019 Orange County Grand Jury's request, and in accordance with Penal Code 933.05, below are the District's responses to Findings F4, F5 and F6, and Recommendations R5 and R5.

Prior to providing its required responses, IRWD has provided some background on Irvine Lake that is key to understanding the District's responses to Findings F4, F5 and F6, and Recommendations R5 and R5. IRWD also offers several clarifications to certain statements contained in the published report.

Background on Irvine Lake

Since it was originally constructed in 1933, the primary purpose of Irvine Lake, which is also known as Santiago Creek Reservoir, has been to store water for the benefit of the surrounding communities – initially to provide irrigation water for local farms, and more recently to satisfy water demands for agricultural and urban needs. IRWD utilizes water from Irvine Lake for two purposes: 1) as a source of water for non-drinking purposes, such as irrigation for avocado orchards, and 2) as a source of water for the Baker Water Treatment Plant which creates drinking water for an estimated 85,000 homes in Orange County.

IRWD and Serrano Water District, the co-owners of Irvine Lake, balance the benefits of storing water in Irvine Lake to ensure customers have a reliable supply of water while minimizing the loss of water from the lake due to evaporation or water going over the dam spillway in a year with heavy precipitation. When the water level in Irvine Lake is high, the rate of evaporation increases dramatically with the increase in the surface area of the water. One other key

consideration for managing water levels in the lake is preserving the ability to capture rainwater from the surrounding hills that will flow into Irvine Lake. Capturing this fresh water in Irvine Lake at no cost to both agencies can help reduce the cost of providing drinking water to customers, as well as improving local water supply reliability.

While Irvine Lake remains first and foremost a water resource facility, recreational activities, such as fishing and boating, have been allowed in the past at Irvine Lake. IRWD remains supportive of Irvine Lake being used for public recreational uses that are compatible with its important purpose of serving as a water supply and storage facility.

Control over any recreational activities is the responsibility of the owners of the “Irvine Lake Recreation Rights.” The Irvine Lake recreation rights will be owned by the County of Orange, a 75 percent owner of the recreation rights, and Serrano Water District, a 25 percent owner of the recreation rights. (The Irvine Company is in the process of transferring its recreation rights to the County of Orange.) IRWD does not have any ownership of the Irvine Lake Recreation Rights.

Factual Clarifications to Statements Contained in the Report:

In addition to the factual clarifications offered by other respondents to the report, IRWD offers the following clarifications to certain statements contained in the published report:

- On page 8 the report states that “OC Parks is not a part to this MOU and therefore lacks any legal standing or bargaining power over this situation.” Further down, on the same page, the report states that “In spite of multiple contacts by OC Parks to IRWD over the past few years, it appears to the Grand Jury that OC Parks has not yet received any information from IRWD regarding the terms of any successor agreement nor its expected completion and execution date.” From IRWD’s perspective, OC Parks does have legal standing and bargaining power to resolve a number of the outstanding issues related to Irvine Lake. This is why IRWD has engaged in numerous conversations with OC Parks over the past few years seeking to resolve outstanding issues, and why the District provided OC Parks, the Irvine Company, and Serrano Water District with a proposed agreement to resolve the outstanding issues from the 2003 MOU on March 27, 2019; and
- On page 12, the report states that “As part of its investigation, the Grand Jury requested from all three local government agencies any planning documents or feasibility assessments conducted for Irvine Lake and found that no planning reports or studies exist.” The IRWD personnel contacted by the Grand Jury regarding this report do not recall such a request being made of IRWD.

Required Responses

Finding F4: *“Minimal effort to engage one another, a lack of creative proposals and slow responsiveness between OC Parks and the water districts have allowed negotiations to stall.”*

Response: IRWD wholly disagrees with this finding.

IRWD has actively sought resolution of the issues surrounding Irvine Lake, including settling the easement rights discussed in the 2003 Memorandum of Understanding. In fact, IRWD took the initiative to move the negotiations forward earlier this year and proposed a draft agreement to resolve the outstanding issues related to the 2003 Memorandum of Understanding over the same period of time the Grand Jury wants to portray that negotiations were stalled. While the draft agreement has not resulted in resolution of the outstanding issues, the parties continue to seek resolution to those issues, discussions have been ongoing and negotiations are actively continuing.

Finding F5: *“Although not a party to any recreation rights, IRWD does have a right of approval over decisions affecting water use rights and water quality. Therefore, settling easement rights issues in a successor document to the 2003 Memorandum of Understanding (MOU) among SWD, IRWD and TIC is required prior to concluding negotiations on recreation rights. Parties expect to complete this in the first half of 2019.”*

Response: IRWD agrees with finding, though the timing to complete negotiations will continue into the second half of 2019.

Finding F6: *“SWD, OC Parks and IRWD acknowledge that to maximize recreational opportunities a more stable Irvine Lake water level is desirable.”*

Response: IRWD wholly disagrees with this finding.

Irvine Lake remains first and foremost a water resource facility, and as a water resource facility water levels in the lake change regularly. Over the lake’s long history, water levels have fluctuated greatly at times being high when Orange County has had a wet winter and at other times lower, as in an extended drought. Despite changes in the lake’s water levels, recreational opportunities have been available at Irvine Lake and, at various times and different water levels, those opportunities have been maximized based on active adaptive management of the recreational rights. From IRWD’s perspective, it

is not a more stable water level that is necessary to maximize recreational opportunities, but an adaptive management plan for recreational opportunities at the lake, which recognizes that water levels change, that could maximize the recreational opportunities at Irvine Lake.

Control over recreational activities at Irvine Lake is the responsibility of the owners of the “Irvine Lake Recreation Rights.” The Irvine Lake Recreation Rights will be owned by the County of Orange and the Serrano Water District. As outlined above, IRWD does not have any ownership of the Irvine Lake Recreation Rights.

Recommendation R4: *“If by December 31, 2019 resolution has not been reached as to the reopening of Irvine Lake for water recreation, staff for SWD, IRWD, and OC Parks should post on their respective websites and submit to their governing body for discussion in a public meeting their perspective as to the obstacles to reopening the lake and what plan they have to resolve the issue. (F4)”*

Response: The recommendation will not be implemented by IRWD because it is not warranted and it is unreasonable.

IRWD has actively sought resolution to the issues surrounding Irvine Lake. Resolution of the outstanding issues could result in the reopening of Irvine Lake to public recreation. But, as IRWD has communicated consistently to its customers and to the public, conducting recreational activities is the responsibility of the owners of the “Irvine Lake Recreation Rights” and not IRWD. From the District’s perspective, Irvine Lake must remain first and foremost a water resource facility, and any recreational activities, such as fishing and boating, must account for and preserve the lake’s primary purpose of a water resource facility.

Given the long-standing discussions over Irvine Lake, the IRWD Board of Directors has been briefed on the outstanding issues related to Irvine Lake. For many years, IRWD has also posted information on its website regarding Irvine Lake. The outstanding issues related to Irvine Lake are complex given the nearly 100-year history of the lake and the numerous agreements covering the interests held by IRWD, Serrano Water District, and now the County of Orange. IRWD continues to actively work to resolve the remaining issues related to Irvine Lake; resolution of the remaining issues requires further negotiation between the parties.

Posting on IRWD's website and submitting to the IRWD Board of Directors for discussion in a public meeting the District's perspective as to the obstacles related to permanently reopening the lake and the plan for resolving the remaining issues would likely undercut the District's negotiating position. As a result, Recommendation R4 will not be implemented. IRWD has and will continue to post as much information as possible to its website in order to keep its customers and the general public appropriately informed about the status of Irvine Lake.

IRWD would also note that while Irvine Lake remains closed to the public for fishing, it is our understanding that some fishing may be allowed in the near future at Irvine Lake. An agreement to facilitate the potential for fishing at Irvine Lake in the future has been executed by the County, Serrano Water District, and IRWD.

Recommendation R5: *“By December 31, 2019, SWD, IRWD and OC Parks should explore the economic feasibility of establishing and maintaining Irvine Lake at a minimum water level based on expected income and other potential cost offsets. (F5 & F6)”*

Response: The recommendation will not be implemented by IRWD because it is not warranted for IRWD.

As stated above, IRWD and the Serrano Water District balance the benefits of storing water in Irvine Lake to ensure customers have a reliable supply of water while minimizing the potential loss of water from the lake. When the water level in Irvine Lake is high, the rate of evaporation increases dramatically with the increased surface area of water. IRWD also manages the water level in Irvine Lake to preserve the ability to capture rainwater from the surrounding hills, because capturing this fresh water in Irvine Lake at no cost helps reduce the cost of providing reliable drinking water to customers.

If the owners of the Irvine Lake Recreation Rights desire to establish a minimum level of water in Irvine Lake, IRWD is willing to discuss the costs associated with this request to ensure the recreational activities are not be subsidized by IRWD customers for no benefit. Because IRWD does not have any ownership of the Irvine Lake Recreation Rights, it is not appropriate for IRWD to explore the economic feasibility of establishing and maintaining Irvine Lake at a minimum water level based on expected income and other potential cost offsets.

Thank you for the opportunity to respond to the May 13, 2019, report on Irvine Lake. If you have any questions or need further information about IRWD or this response, please contact me at (949) 453-5590.

Sincerely,

Paul A. Cook, P.E.
General Manager

cc: Orange County Grand Jury
IRWD Board of Directors

July 22, 2019
Prepared and
submitted by: K. Burton
Approved by: Paul A. Cook



CONSENT CALENDAR

IRWD 2019 PROJECT MANUAL

SUMMARY:

IRWD's standard form construction contract documents consist of the plans for the project, Project Manual and Construction Manual. The Project Manual, excluding the Special Provisions, Project Technical Specifications and Appendix, was last revised in March 2015. Staff recommends that the Board rescind Resolution No. 2015-6 and adopt a resolution revising the Project Manual subject to non-substantive revisions.

BACKGROUND:

The District's standard form construction contract documents consist of the plans for the project, Project Manual and Construction Manual. Contents of the Project and Construction Manuals include:

<u>Project Manual</u>	<u>Construction Manual</u>
Instruction to Bidders	General Technical Specifications
Notice Inviting Bids	Standard Drawings
Bid Form	
Agreement, Bonds & Insurance	
General Provisions	
Special Provisions	
General Requirements	
Project Technical Specifications	
Appendix	

The manuals are revised periodically, with revisions to the Project manual, excluding the Special Provisions, Project Technical Specifications and Appendix, being approved by resolution as required by the District's Policy For Competitive Bidding. The Project Manual was last revised in March 2015. The plans are project-specific and the Construction Manual is updated as necessary to incorporate changes to the District's General Technical Specifications and Standard Drawings. Project plans and the Construction Manual are approved by the General Manager and/or the Executive Director of Technical Services.

The 2019 Project Manual incorporates substantial revisions to the Instruction to Bidders, Notice Inviting Bids, and the Bid Form to accommodate the District's new electronic bidding system, minor revisions to the General Provisions to address needed updates and clarifications identified since March 2015, and substantial revisions to the Project Technical Specifications, Section 01510 Testing, Training, and Facility Start-up to incorporate more detailed requirements related to testing and start-up of facilities.

Staff recommends that the Board rescind Resolution No. 2015-6 and adopt a resolution revising the Project Manual subject to non-substantive revisions. A copy of the resolution is attached as Exhibit "A". An edited version of the 2019 Project Manual, with all revisions shown in "track changes" mode, is attached as Exhibit "B". All revisions have been reviewed by the District's legal counsel.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 16, 2019.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE SUBJECT TO NON-SUBSTANTIVE CHANGES TO THE DOCUMENTS:

RESOLUTION NO. 2019 -

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT RESCINDING
RESOLUTION NO. 2015-6 AND REVISING STANDARD FORM
CONSTRUCTION CONTRACT DOCUMENTS

LIST OF EXHIBITS:

Exhibit "A" – Resolution
Exhibit "B" – 2019 Project Manual

EXHIBIT "A"

RESOLUTION NO. 2019 -

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT RESCINDING
RESOLUTION NO. 2015-6 AND REVISING STANDARD FORM
CONSTRUCTION CONTRACT DOCUMENTS

Irvine Ranch Water District (IRWD) is a California Water District, organized and existing under the California Water District Law; and

The Board of Directors previously adopted on March 9, 2015 standard form construction contract documents which have undergone minor additions and deletions; and

The "IRWD Project Manual," which includes General Provisions, has been revised, and includes modifications that reflect the latest legislative changes and statutes. The "IRWD Construction Manual," which includes General Technical Specifications and Standard Drawings, is revised on an ongoing basis.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of IRWD as follows:

Section 1. That the Project Manual of Irvine Ranch Water District as set forth in Exhibit "A" attached hereto, (excluding the Special Provisions, Project Technical Specifications and Appendix) be and hereby is approved and adopted.

Section 2. The General Manager and/or the Executive Director of Technical Services are authorized to make and approve amendments to the General Technical Specifications and Standard Drawings as contained in ongoing revisions of the District's Construction Manual. The General Manager shall make periodic reports to the Board of Directors to identify all revisions.

Section 3. That Resolution No. 2015-6 adopted on March 9, 2015 be rescinded in its entirety.

ADOPTED, SIGNED AND APPROVED this 22nd day of July 2019.

President, IRVINE RANCH WATER DISTRICT
and the Board of Directors thereof

Secretary, IRVINE RANCH WATER DISTRICT
and the Board of Directors thereof

APPROVED AS TO FORM:
LEWIS BRISBOIS BISGAARD & SMITH LLP

Legal Counsel – IRWD

Note: This page is intentionally left blank

PROJECT MANUAL

FOR

PROJECT NO. XXXXX

CODE XXXX

MONTH 20XX



Irvine Ranch
WATER DISTRICT

PROJECT MANUAL

FOR

PROJECT NO. XXXXX

MONTH 20XX

Insert Engineer's Stamp and Signature Here



Kevin L. Burton RME 28832 Date
Executive Director of ~~Engineering and Water Quality~~ Technical Services

PROJECT MANUAL

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Bid Documents

Agreement, Bonds, and Insurance

General Provisions

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BID DOCUMENTS

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Notice Inviting Sealed Proposals (Bids)

Instructions to Bidders

[Schedule of Work](#)

Bid Form

Bid Bond

NOTICE INVITING SEALED PROPOSALS (BIDS)

FOR THE

PROJECT NO. XXXXX

IRVINE RANCH WATER DISTRICT

NOTICE IS HEREBY GIVEN that the Irvine Ranch Water District ("DISTRICT") invites and will receive ~~sealed~~electronically submitted proposals ("Bids") up to the hour of 2:00 PM on the ___ day of _____, 20___, at the ~~office of the Irvine Ranch Water District ("DISTRICT")~~, ~~as given below~~, PlanetBids website, for furnishing to DISTRICT all transportation, materials, equipment, labor, services, and supplies necessary to construct the Work for DISTRICT, ~~at which~~. At the time specified above the Bids will be ~~publicly~~electronically opened ~~and read aloud~~. Bidders may view the bid opening online or at the office of DISTRICT at the below address.

**IRVINE RANCH WATER DISTRICT
15600 SAND CANYON AVENUE
IRVINE, CALIFORNIA 92618**

Prospective bidders must be on the Bidders List accompanying this Notice. Bids will not be accepted from bidders that are not on the Bidders List. Prequalification to be placed on the Bidders List for this project is closed. Bids must be submitted to DISTRICT through the PlanetBids website as given below.

~~Bids may be delivered to the Engineering Counter at the address listed above, or express mailed to the above address, or sent by regular mail to: Irvine Ranch Water District, P.O. Box 57000, Irvine, CA 92619-7000, Attention: _____.~~ Regardless of delivery method, proposals received after the deadline listed above will not be opened.

~~The bids~~<https://www.planetbids.com/portal/portal.cfm?CompanyID=39499>

Bids shall conform to and be responsive to all of the Contract Documents for the Work as heretofore approved by DISTRICT and must be accompanied by the security referred to in the Instructions to Bidders.

The Contract Documents consist of the IRWD Construction Manual, the Project Manual, and the Plans. ~~The IRWD Construction Manual, which consists of IRWD standard drawings, and standard technical specifications,~~ may be downloaded free of charge at www.irwd.com ~~the PlanetBids website~~. Complete hard copy sets of the Project Manual and Plans may be purchased from SABP Print Solutions, 2372 Morse Avenue, Irvine, California 92614, (949) 756-1001.

~~This cost is not refundable regardless of whether the plans and specifications are returned to DISTRICT.~~

Under the provisions of the California Labor Code, the Director of the Department of Industrial Relations has determined the prevailing rate of wages for the locality in which the Work is to be performed and DISTRICT has adopted said prevailing rate of wages. A copy of the prevailing wage rates can be found online with the State of California at <http://www.dir.ca.gov/dlsr/pwd>. A copy of such prevailing wage rates shall be posted on the jobsite by CONTRACTOR.

It shall be mandatory for the bidder to whom the Work is awarded, and upon any subcontractor under the successful bidder, to pay not less than the specified rates to all workers employed by them in the execution of the Work. The project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

~~Qualification to bid on this project or to be listed as a subcontractor (The Contractor and subcontractors, if required in Part CB of the Statements By Bidder), or to engage in the performance of any of the Work requires, require proof of the contractor's or subcontractor's current registration and qualification to perform public work pursuant to Labor Code Section 1725.5. A bid shall not be accepted nor any contract or subcontract entered into without proof of the contractor's ~~or~~ and subcontractor's current registration.~~

The Contractor to whom this project is awarded must possess a class _____ contractor's license, issued by the State of California, which is current and full.

The Contractor will be permitted to substitute securities for moneys withheld under this Agreement to ensure performance. Such substitution shall be subject to the provisions of Article 11.8 of the General Provisions of the Agreement. A payment bond and performance bond are required to be provided by the Contractor.

A pre-bid meeting and site visit will be held at the hour of ____:00 _M on the ____ day of _____, 20__, at _____.

SUBSTANTIALLY COMPLEX PROJECT FINDING

PROJECT NO. XXXXX

(Delete this page unless the Board has made a finding on the project complexity.)

DISTRICT’s Board of Directors on _____ approved the following finding during a properly noticed and normally scheduled public hearing and prior to bid: “That this project is substantially complex and therefore requires a higher retention amount than five (5) percent, and that the actual retention amount of _____ percent be established for this project.” All references in the Contract Documents indicating a five (5) percent retention amount are hereby superseded and replaced with the higher retention amount specified in the preceding sentence. The basis of the finding, including a description of the project and why it is a unique project that is not regularly, customarily or routinely performed by DISTRICT or licensed contractors, is set forth below.

Insert information from the Board write-up on the basis of the finding, including a description of the project and why it is a unique project that is not regularly, customarily or routinely performed by DISTRICT or licensed contractors.

BIDDERS LIST

PROJECT NO. XXXXX

<i>Insert contractor names and addresses from District's Prequalified Contractor List</i>		

INSTRUCTIONS TO BIDDERS

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Bid Documents

Revised 7/2019
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INSTRUCTIONS TO BIDDERS

ARTICLE 1 PROPOSAL REQUIREMENTS AND CONDITIONS

1.1 Contract Documents

The documents that comprise the Contract Documents are set forth in the Agreement and the definition of "Contract Documents" in Article 1 of the General Provisions.

1.2 Contractor's License

No bid will be accepted from a Bidder who is not a licensed contractor in the State of California for the contracting class indicated in the Notice Inviting Sealed Proposals.

1.3 Proposals

1.3.1 Bids shall be made in accordance with the following: Bids shall be ~~made upon the bid form furnished by DISTRICT. The bid formsubmitted electronically through DISTRICT's PlanetBids website. The electronically submitted bid~~ is a part of the Contract Documents. All bids shall be properly executed and with all items filled in; the signatures of all persons signing shall be in longhand. Erasures, interlineations, or other corrections shall be authenticated by affixing in the margin immediately adjacent to the correction the initials of a person signing the bid. ~~If the unit price and the total amount named by a Bidder for any item are not in agreement, the unit price alone shall be considered as representing the Bidder's intention, and the total amount of the bid shall be corrected.~~

1.3.2 Bids shall not contain any additional description or summaries of the work to be done. Alternative proposals will not be considered, except as called for. No paper copy, oral, telegraphic, or telephonic proposals or modifications will be considered.

1.3.3 ~~Bids shall be accompanied by a~~ proposal guarantee in the form of cash, a cashier's or a certified check, or bidder's bond, in an amount not less than ten (10) percent of the amount of bid, made payable to or for the benefit of DISTRICT; ~~shall be submitted in paper form in a sealed envelope to DISTRICT prior to the bid opening. The envelope exterior shall indicate "Bid Security" and the project title.~~ The check or bond shall be given as a guarantee that the Bidder will enter into a contract if awarded the Work, and in case of refusal or failure to enter into said contract and furnish the required bonds and insurance certificates and endorsements within fifteen (15) calendar days after Notice of Award by DISTRICT in writing, the check and the money represented by the check shall be forfeited to DISTRICT, or in the event that a bond is deposited, said bond shall be deemed to be forfeited. Forfeiture does not preclude DISTRICT from seeking all other remedies provided by law to recover losses sustained as a result of Bidder's failure to enter into the contract or to furnish the required bonds, insurance certificates and endorsements.

1.3.4 Bids shall be ~~sealed in an envelope marked and addressed as stated in the Notice Inviting Sealed Proposals. Bids shall be delivered to the addressee at the location designated in the Notice Inviting Sealed Proposalssubmitted~~ on or before the day and hour set for the opening of bids in the Notice Inviting Sealed Proposals, ~~and shall bear the name of the Bidder.~~ It is the sole responsibility of the Bidder to see that their bid is deliveredsubmitted and received in proper time. ~~Any bid received after the scheduled closing time for the receipt of bids shall be returned to the Bidder unopened.~~

1.3.5 Prospective bidders must be on the Bidders List accompanying the Notice Inviting Sealed Proposals. Bids will not be accepted from bidders that are not on the Bidders List. Prequalification to be placed on the Bidders List for this project is closed.

Bid Documents

Revised 7/2019
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INSTRUCTIONS TO BIDDERS

1.4 Withdrawal of Bid

A Bidder may withdraw their bid ~~either personally or by a signed written request delivered to DISTRICT~~ electronically through PlanetBids any time prior to the scheduled time for opening of the bids.

1.5 Bidders Interested in More Than One Bid

No person, partnership, or corporation shall be allowed to make or file or be interested in more than one bid for the Work, unless alternative bids are called for. A person, partnership, or corporation submitting a subproposal to a Bidder, or who has quoted prices on material to a Bidder, is not disqualified from submitting a subproposal or quoting prices to other Bidders.

1.6 Interpretation of Plans and Other Documents

If any prospective Bidder is in doubt as to the true meaning of any part of the plans, specifications, or other Contract Documents, or finds discrepancies in, or omissions from the Plans and specifications or other Contract Documents, they may submit to DISTRICT through PlanetBids a written request for an interpretation or correction. An interpretation or correction of the documents will be made solely at DISTRICT's discretion and only by addendum duly issued by DISTRICT; a copy of such addendum will be ~~mailed or delivered~~ made available to ~~each person who has received a set of such documents.~~ Bidders through PlanetBids. DISTRICT and the Engineer/~~Architect~~ will not be responsible for any other explanation or interpretation of the documents.

1.7 Substitute and Or Equivalent Items

The contract, if awarded, will be on the basis of materials and equipment shown or specified in the Contract Documents without consideration of possible substitute or "or equivalent" items. Application for acceptance of a substitute or "or equivalent" item of material or equipment will not be considered by DISTRICT until after the effective date of the Agreement except as may be specified for major items of equipment in the Special Provisions. The procedure for submission of a request for substitution is set forth in the general provisions.

1.8 Engineer's Opinion of Probable Cost

The quantities of work to be done and materials to be furnished are approximate as shown in the Contract Documents and are given as a basis for comparison of bids only. DISTRICT does not expressly or by implication agree or represent that the actual amount of work will correspond with the engineer's opinion of probable cost.

1.9 Addenda

Addenda issued ~~in writing~~ through PlanetBids before the time in which to submit bids expires shall be covered in the bid and shall form a part of the Contract Documents.

1.10 Registration To Perform Public Work

~~Qualification to bid on this project or be listed as a subcontractor~~ Contractor and subcontractors, if required in ~~Article 1.11 Part CB of the Statements By Bidder~~, requires ~~require~~ proof of the ~~contractor's or subcontractor's~~ current registration ~~and qualification to perform public work~~

Bid Documents

Revised 7/2019

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INSTRUCTIONS TO BIDDERS

~~pursuant to Labor Code Section 1725.5.~~ A bid shall not be accepted nor any contract or subcontract entered into without proof of the contractor's or subcontractor's current registration.

1.11 Subcontractors

The bidder shall provide the name, State of California license number, Department of Industrial Relations registration number, location of place of business, type of work which will be done, and percentage of work of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the Work in an amount in excess of 1/2 of 1 percent (0.5%) of the bidder's total Bid on the PlanetBids website.

ARTICLE 2 EXISTING CONDITIONS AND EXAMINATION OF CONTRACT DOCUMENTS

2.1 General

2.1.1 Any investigations and reports related to the Work are listed in the Special Provisions and are available for review at DISTRICT's office. Bidder should visit the project site prior to submitting a bid in order to confirm soil and groundwater conditions in the project area at the time of bidding. If additional information is required, it is recommended that it be obtained from a qualified soils engineer.

2.1.2 The Bidder shall examine the Contract Documents and the site where the Work is to be performed. The submittal of a bid shall be conclusive evidence that the Bidder has investigated and has determined to their satisfaction the conditions to be encountered and the character, quality, and scope of the Work.

2.1.3 The plans for the Work show conditions as they are supposed or believed by DISTRICT to exist; but it is not represented or intended to be inferred that the conditions are actually existent. DISTRICT and the Engineer/~~Architect~~ will not be liable for any loss sustained by CONTRACTOR as a result of any variance between the conditions as shown on the plans and the actual conditions revealed during the progress of the Work or otherwise.

2.1.4 Where DISTRICT or the Engineer/~~Architect~~ or their consultants have made investigations of subsurface conditions in areas where the Work is to be performed, such investigations were made only for the purpose of study and design. The conditions indicated by such investigations apply only at the specific location of each boring or excavation at the time the borings or excavations were made. Where such investigations have been made, the records as to such investigations are available for inspection at the office of DISTRICT.

2.1.5 The records of such investigations are not a part of the Contract Documents and are available solely for the convenience of the Bidder or CONTRACTOR. It is expressly understood and agreed that DISTRICT, the Engineer/~~Architect~~, and their consultants assume no responsibility whatsoever in respect to the sufficiency or accuracy of the investigations, the records, or of the interpretations set forth or made by DISTRICT's ~~consultants~~, the Engineer/~~Architect~~ or their consultants. There is no warranty or guarantee, either ~~express~~expressed or implied, that the conditions indicated by such investigations or records are representative of those existing throughout the area, or any part of an area, or that unlooked for developments may not occur, or that materials other than, or in proportions different from, those indicated may not be encountered.

Bid Documents

Revised ~~7/2019~~
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INSTRUCTIONS TO BIDDERS

2.1.6 When a log of test borings showing a record of the data obtained by the investigation of subsurface conditions by DISTRICT, the Engineer/~~Architect~~, or their consultants is included with the Contract Documents it is expressly understood and agreed that said log of test borings does not constitute a part of the Agreement, that it represents only the opinion of DISTRICT or the Engineer/~~Architect~~ or their consultants as to the character of the materials encountered by them in the test borings at the time they were made, that it is included in the plans only for the convenience of Bidders, and that their use is subject to all of the conditions and limitations set forth in this Article.

2.1.7 The availability or use of information described in this Article is not to be construed in any way as a waiver of the provisions of subparagraph 2.1.2 and a Bidder or CONTRACTOR is cautioned to make such independent investigations and examination as they deem necessary to satisfy themselves as to conditions to be encountered in the performance of the Work.

2.1.8 No information derived from such inspection of records of investigations or compilation of records made by DISTRICT, the Engineer/~~Architect~~, or their consultants will in any way relieve the Bidder or CONTRACTOR from any risk or from properly fulfilling the terms of the Agreement.

ARTICLE 3 AWARD OF CONTRACT OR REJECTION OF BIDS

3.1 Award

3.1.1 The award of the Agreement, if it is awarded, will be to the lowest responsive and responsible Bidder complying with the instructions contained in the Contract Documents. DISTRICT, however, reserves the right to reject any and all bids and to waive any informality in bids received. If, in the judgment of DISTRICT, a bid is unbalanced or if the Bidder is not responsive and responsible, it shall be considered sufficient grounds for rejection of the entire bid.

3.1.2 DISTRICT shall have sixty (60) days, unless otherwise specified in the Special Provisions, after the opening of bids within which to accept or reject the bids. No Bidder may withdraw their bid during said period. DISTRICT will return the proposal guarantees, except Bidders' bonds and any guarantees that have been forfeited, to the respective Bidders whose proposals they accompanied within ten (10) days after the execution of the Agreement by the successful Bidder or rejection of all bids.

3.1.3 Before award of the contract, any Bidder upon request shall furnish a recent statement of their financial condition and previous construction experience or such other evidence of their qualifications as may be requested by DISTRICT. Failure to do so upon request shall constitute grounds for rejection of the bid.

3.1.4 If the schedule of work items includes bid items or schedule(s) of bid items that may be added to ("Additive Items") or deducted from ("Deductive Items") the bids, the lowest responsive and responsible Bidder will be determined by adding all Additive Items to, and deducting all Deductive Items from, the total of the base bid, unless another method is provided in the Special Provisions. DISTRICT reserves the right to award the Work to the lowest responsive and responsible bidder based on any single schedule or combination of schedules of bid items deemed by DISTRICT, in its sole discretion, to be in DISTRICT's best interest.

3.2 Agreement and Bonds

INSTRUCTIONS TO BIDDERS

3.2.1 The form of Agreement, bonds, and other documents that the successful Bidder, as CONTRACTOR, shall be required to execute are included in the Contract Documents and should be carefully examined by the Bidder.

3.2.2 The successful Bidder, simultaneously with the execution of the Agreement, will be required to furnish a payment bond and a performance bond, each in an amount equal to one hundred (100) percent of the Contract Price. Said bonds shall be secured from a surety company satisfactory to DISTRICT and who is admitted and authorized to transact business in California. A certified copy of Power of Attorney must be attached to each bond. Said bonds shall continue in full force and effect for the guarantee period.

3.2.3 Should any surety or sureties be deemed unsatisfactory at any time by ~~the~~ DISTRICT, notice will be given CONTRACTOR to that effect, and CONTRACTOR shall substitute a new surety or sureties satisfactory to ~~the~~ DISTRICT. No further payment shall be deemed due or will be made under the Agreement until the new sureties qualify and are accepted by ~~the~~ DISTRICT.

3.2.4 All alterations, time extensions, extra and additional work, and other changes authorized by the Specifications, or any part of the Agreement, may be made without securing consent of the surety or sureties on the contract bonds.

3.3 Insurance Requirements

The successful Bidder will be required to furnish DISTRICT proof of full compliance with all insurance requirements as specified in the Articles on CONTRACTOR's Insurance in the General and Special Provisions. The form of certificates of insurance and endorsements which the successful Bidder, as CONTRACTOR, shall be required to furnish are included in the Contract Documents and should be carefully examined by the Bidder. No alteration or substitution of said forms will be allowed.

3.4 Execution of Agreement

The Agreement shall be signed by the successful Bidder and returned to DISTRICT, together with the contract bonds and certificates of insurance coverage and endorsements, within fifteen (15) calendar days after the mailing date of the Notice of Award. The date of commencement stated in the Notice of Award will constitute the beginning of the Contract Time. The Agreement, bonds, certificates of insurance and endorsements, and other documents to be executed by CONTRACTOR shall be executed and submitted in original-triplicate, two of which shall be filed with DISTRICT and one returned to CONTRACTOR after execution by DISTRICT. Following receipt and approval of the executed Contract Documents, DISTRICT will issue a Notice to Proceed. The receipt of the Notice to Proceed will be authorization for CONTRACTOR to begin work in the field and to start ordering of equipment and material.

3.5 Failure to Execute Agreement or Submit Insurance

3.5.1 Failure by a Bidder to whom the Work is awarded to execute the Agreement and file acceptable bonds and certificates of insurance coverage and endorsements as provided herein shall be just cause for the annulment of the award and the forfeiture of the proposal guarantee, and shall make the Bidder liable to DISTRICT for all damages resulting from the failure, including reasonable attorneys' fees. The value of the proposal guarantee shall not be a limitation of damages.

3.5.2 The insurance certificates and endorsements included in the Contract Documents shall be completed, without alteration, to the satisfaction of DISTRICT ~~or District's Representative~~, and submitted to DISTRICT by CONTRACTOR or CONTRACTOR's insurance company within

Bid Documents

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INSTRUCTIONS TO BIDDERS

fifteen (15) calendar days of the date of the Notice of Award. DISTRICT shall be allotted seven (7) calendar days for review of insurance documents. Additional time as may be required for transmittal and review of follow-up insurance submittals shall not result in an extension of the Contract Time. The insurance certificates and endorsements shall reflect coverage that complies with all insurance requirements in the general provisions and Special Provisions.

ARTICLE 4 ASSIGNMENT OF ANTITRUST ACTIONS

4.1 General

In entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, CONTRACTOR or Subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2, commencing with Section 16700, of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to CONTRACTOR, without further acknowledgment by the parties.

ARTICLE 5 MISCELLANEOUS

5.1 Bid Breakdown

Lump-sum and unit-price bid items shall be broken down as indicated on the [Schedule of Workbid form](#). CONTRACTOR may be directed to provide greater detail of the items making up the Contract Price prior to submission of the first Progress Payment Request as indicated in the General Provisions.

5.2 Contract Time

The Contract Time shall be as set forth in the Agreement.

5.3 Liquidated Damages

Liquidated damages shall be as set forth in the Agreement.

5.4 Unit Price Bid Item Quantities

It is understood that the unit price bid item quantities listed in the [Schedule of Workbid schedule\(s\) of work items](#) are approximate only and are solely for the purpose of facilitating the comparison of bids, and that CONTRACTOR's compensation will be computed upon the basis of the actual quantities in the completed Work whether they be more or less than those shown in the bid.

SCHEDULE OF WORK

PROJECT NO. XXXXX

Base Bid Items

<u>Item No.</u>	<u>Approx. Quantity</u>	<u>Description</u>	<u>Unit Price Dlrs./Cts.</u>	<u>Total Amount Dlrs./Cts.</u>
<u>1-N</u>		<u>(PROJECT BID ITEMS AS REQUIRED)</u>		<u>ENTER BIDS ON PLANETBIDS</u>
<u>N+1</u>		<u>Trench Safety Measures</u>		
<u>N+2</u>		<u>Startup Testing</u>		
<u>N+3</u>		<u>Final Record Drawings</u>		
		<u>SUBTOTAL, Base Bid Items</u>		

Additive and Deductive Bid Items

<u>Item No.</u>	<u>Approx. Quantity</u>	<u>Description</u>	<u>Unit Price Dlrs./Cts.</u>	<u>Total Amount Dlrs./Cts.</u>
<u>A-1</u>		<u>Builder's Risk Insurance</u>		<u>ENTER BIDS ON PLANETBIDS</u>
<u>A-2</u>		<u>Additive Bid Item No. 2</u>		
<u>D-1</u>		<u>Deductive Bid Item No. 1</u>		
		<u>SUBTOTAL, Additive/Deductive Bid Items</u>		
		<u>SUBTOTAL, Base Bid and Additive/Deductive Bid Items</u>		
		<u>ADDITION (+) OR</u>		
		<u>DEDUCTION (-)*</u>		
		<u>TOTAL AMOUNT OF BID</u>		

Fill in total amounts for specified Bid Item numbers N+1, N+2, N+3, etc. in blanks above; leave remaining blank for CONTRACTOR to fill in. Only CONTRACTOR entered bid amounts should be greyed out.

*Provision is made here for the bidder to include an addition or deduction in their Bid, if bidder wishes, to reflect any last-minute adjustments in price. The addition or deduction, if made, will be proportionately applied to all of the base bid items.

BID PROPOSAL

DOCUMENT CHECKLIST

PROJECT NO. XXXXX

Bid proposals shall include the following information entered electronically on PlanetBids:

Schedule of Work

Bid proposals shall include the Bid Form and all contents provided therein as listed below that shall be completed by hand and uploaded to PlanetBids as a compiled single document:

Bid Form

- Statements by Bidder
- Certification of Bidder and Qualifications
- Safety Program Certification
- Non-Collusion Declaration
- Bid Security Declaration

Bid proposals shall include the following document that shall be submitted in a sealed envelope to DISTRICT prior to Bid Opening in accordance with the Article 1.3.3 of the Instructions to Bidders:

Bid Bond, Cash, or Certified Check

BID FORM

PROPOSAL TO

IRVINE RANCH WATER DISTRICT

PROJECT NO. XXXXX

Name of Bidder: _____

~~Business Address:~~ _____

~~Phone No.~~ _____ ~~E-mail~~ _____

~~Type of firm:~~ ~~Individual~~ ~~Corporation~~ ~~Partnership~~

~~Limited Liability Company~~ ~~Joint Venture~~

~~Contractor's License: Primary Class.~~ _____ ~~License No.~~ _____

~~Department of Industrial Relations Registration No.~~ _____

TO: BOARD OF DIRECTORS,
IRVINE RANCH WATER DISTRICT

Pursuant to and in compliance with your notice inviting sealed proposals (the "Bids") and the other documents relating thereto, the ~~undersigned~~ bidder, having familiarized himself with the terms of the Contract Documents, local conditions affecting the performance of the Work, and the cost of the Work at the place where the Work is to be done, hereby proposes and agrees to perform the Work within the Contract Time stipulated in the Agreement, including all of its component parts and everything required to be performed, and to provide and furnish any and all of the labor, material, tools, expendable equipment, and all utility and transportation services necessary to perform and complete in a workmanlike manner, all of the Work required by the Contract Documents, including Addenda, for the prices hereinafter set forth.

The ~~undersigned, as~~ bidder, declares that the only persons or parties interested in this proposal as principals are those named herein; that this proposal is made without collusion with any person, firm, or corporation; and bidder proposes and agrees, if the proposal is accepted, that bidder will execute an Agreement with DISTRICT in the form set forth in the Contract Documents and that

bidder will accept in full payment thereof the ~~following~~ prices submitted electronically on PlanetBids.

Signed this _____ day of _____, 20_____

Name of Bidder

Signature of Bidder

Title of Signatory

SCHEDULE OF WORK ITEMS

 PROJECT NO. XXXXX

<u>Base Bid Items</u>				Total
Item No.	Approx. Quantity	Description	Unit Price Dlrs./Cts.	Amount Dlrs./Cts.
1-N		(PROJECT BID ITEMS AS REQUIRED)	\$ _____	\$ _____
N+1		Trench Safety Measures	\$ _____	\$ _____
N+2		Startup Testing	\$ _____	\$ _____
N+3		Operation & Maintenance Manuals	\$ _____	\$ _____
N+4		Final Record Drawings	\$ _____	\$ _____
SUBTOTAL, Base Bid Items				\$ _____
<u>Additive and Deductive Bid Items</u>				Total
Item No.	Approx. Quantity	Description	Unit Price Dlrs./Cts.	Amount Dlrs./Cts.
A-1		Builder's Risk Insurance	\$ _____	\$ _____
A-2		Additive Bid Item No. 2	\$ _____	\$ _____
D-1		Deductive Bid Item No. 1	\$ _____	\$ _____
SUBTOTAL, Additive/Deductive Bid Items				\$ _____
SUBTOTAL, Base Bid and Additive/Deductive Bid Items				\$ _____
ADDITION (+) OR				\$+ _____
DEDUCTION (-)*				\$ _____
TOTAL AMOUNT OF BID				\$ _____

*Provision is made here for the bidder to include an addition or deduction in their Bid, if bidder wishes, to reflect any last minute adjustments in price. The addition or deduction, if made, will be proportionately applied to the progress payments for items _____, _____, _____, and _____. (If no items are listed by the bidder, the addition or deduction shall be treated as a separate bid item, and payment or deduction for this item shall be proportionate to the percentage payment for completed work)-all of the base bid items.

Signed this _____ day of _____, 20__

Name of Bidder

Signature of Bidder

Title of Signatory

STATEMENTS BY BIDDER

PROJECT NO. XXXXX

Bidder shall indicate opposite each item listed by DISTRICT below the name of the manufacturer or supplier proposed to be used under the Agreement. Award of an Agreement under this proposal (bid) will not imply approval by DISTRICT of a manufacturer or supplier listed by the bidder. However, if a manufacturer or supplier is acceptable to DISTRICT, the successful bidder shall furnish the items from the manufacturer or supplier indicated. Any manufacturer or supplier listed in the Agreement may be substituted, changed, or omitted by the successful bidder, subject to the approval of DISTRICT, without subjecting DISTRICT to any liability for the substitution, change or omission.

The listing of any manufacturer or supplier in the Agreement does not, and is not intended to, grant any right, title, or interest in the Agreement for the benefit of the named manufacturer or supplier. Each bidder shall inform in writing each named manufacturer or supplier that the so named manufacturer or supplier is listed for information purposes only and they may be substituted, changed, or omitted by the successful bidder, subject to the approval of DISTRICT, without subjecting DISTRICT to any liability for the substitution, change or omission. The successful bidder shall reimburse DISTRICT for any expenses incurred by DISTRICT as a result of the successful bidder's failure to so notify each named manufacturer or supplier.

- A. For each item listed by DISTRICT below, the bidder intends to furnish materials supplied by the following manufacturers: (Bidder to list one manufacturer only for each item.)

<u>Item</u>	<u>Manufacturer</u>
<i>Insert "None" if no items are going to be listed</i>	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

~~B. Except as provided below, the bidder acknowledges and agrees that the bidder will perform all required work in accordance with Section 4106 of the California Public Contract Code.~~

~~The name, State of California license number, Department of Industrial Relations registration number, location of place of business, type of work which will be done, and percentage of work of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the Work in an amount in excess of 1/2 of 1 percent (0.5%) of the bidder's total Bid is set forth as follows: shall be entered on the PlanetBids website.~~

<u>Name of Subcontractor</u>	<u>License No.</u>	<u>DIR Reg. No.</u>	<u>Address of Office</u>	<u>Type of Work</u>	<u>Percentage of Work</u>
------------------------------	--------------------	---------------------	--------------------------	---------------------	---------------------------

~~C. Bidder shall indicate person who inspected site of the proposed Work here:~~

~~Name: _____ Date of Inspection: _____~~

~~D. Bidder shall indicate receipt of all addenda (if any) here:~~

~~Addenda Nos: _____~~

Signed this ____ day of _____, 20 __

Name of Bidder

Signature of Bidder

Title of Signatory

CERTIFICATION OF BIDDER AND QUALIFICATIONS

PROJECT NO. XXXXX

The undersigned bidder certifies that bidder is, at the time of bidding, and shall be, throughout the period of the Contract, licensed by the State of California to do the type of work required under the terms of the Contract Documents. Bidder further certifies that bidder is skilled and regularly engaged in the general class and type of work called for in the Contract Documents.

The undersigned bidder certifies that it is not an ineligible contractor for the purposes of California Labor Code Section 1777.1 or 1777.7. The undersigned further certifies that no subcontractor to be used for the performance of the Work is an ineligible contractor for the purposes of Labor Code Section 1777.1 or 1777.7.

The bidder represents that bidder is competent, knowledgeable and has special skills regarding the nature, extent and inherent conditions of the Work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the Work which may create, during the Work, unusual or peculiar unsafe conditions hazardous to persons and property.

Bidder expressly acknowledges that bidder is aware of such peculiar risks and that they have the skill and experience to foresee and to adopt protective measures to adequately and safely perform the Work with respect to such hazards.

Furthermore, Bidder hereby certifies to DISTRICT that all representations, certifications, and statements made by Bidder, as set forth in this bid, are true and correct and are made under penalty of perjury.

Signed this ____ day of _____, 20 __

Name of Bidder

Signature of Bidder

Title of Signatory

SAFETY PROGRAM CERTIFICATION

PROJECT NO. XXXXX

CONTRACTOR acknowledges that CONTRACTOR has read Section 01410 of Division 1 – General Requirements, Construction Safety Procedures.

CONTRACTOR certifies to DISTRICT that CONTRACTOR’s SAFETY PROGRAM includes the following elements:

- Safety Policy
- Incident Investigation Program
- Safety Meeting Program
- Statistical Injury and Illness Data
- Safety Training Program and Records
- Disciplinary Procedures
- Safety Inspection Program
- OSHA T1 Annual Trench Excavation Permit: Permit No. _____

Signed this ____ day of _____, 20 __

Name of Bidder

Signature of Bidder

Title of Signatory

NON-COLLUSION DECLARATION

PROJECT NO. XXXXX

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [date], at _____ [city], _____ [state].

Name of Bidder

Signature of Bidder

Title of Signatory

BID SECURITY DECLARATION

PROJECT NO. XXXXX

~~ACCOMPANYING~~ THIS PROPOSAL IS INCLUDES

(Insert the words "cash", "bidder's bond", "cashier's check", or "certified check", as the case may be) in an amount equal to at least ten percent (10%) of the total amount of the bid, payable in lawful money of the United States of America to the IRVINE RANCH WATER DISTRICT.

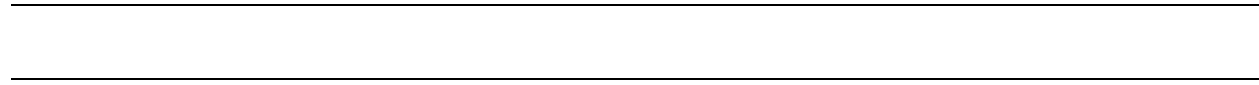
~~IRVINE RANCH WATER DISTRICT~~

~~This page of the bid form shall accompany the bid security when submitted to DISTRICT. Prior to bid opening, this page of the bid form and the bid security must be received in a sealed envelope by mail or hand delivery to DISTRICT at 15600 Sand Canyon Avenue, Irvine, California 92618, Attention: Laura Gates.~~

The undersigned deposits the security in the form set forth above as a proposal guarantee and agrees that it shall be forfeited to DISTRICT in case this is accepted by DISTRICT and the undersigned fails to execute an Agreement with DISTRICT as specified in the Contract Documents accompanied by the required payment and faithful performance bonds with sureties satisfactory to DISTRICT, and accompanied by the required certificates of insurance coverage and endorsements. Should DISTRICT be required to engage the services of an attorney(s) in connection with the enforcement of this Bid, bidder promises to pay all of DISTRICT's reasonable attorneys' fees and costs incurred with or without suit. The bidder's liability to DISTRICT for failure to do any of the foregoing shall not be limited to the amount of the deposited security in the form set forth above.

The names of all persons interested in the foregoing proposal as principals are as follows:

(NOTICE: If bidder or other interested person is a **corporation**, state legal name of corporation also names of the president, secretary, treasurer and manager thereof; if a **general partnership**, state true name of firm, also names of all individual partners and limited partners; if bidder or other interested person is an **individual**, state first and last names in full; if the bidder is a **joint venture**, state the complete name of each venture; if the bidder is a **limited liability company**, state the complete name of each manager and each member, and if the manager or member is a corporation, its president, secretary and treasurer, and state the complete name of the chief executive officer, if any, of the limited liability company).



BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we

as Principal, and _____ as Surety, are held and
firmly bound unto the

IRVINE RANCH WATER DISTRICT

hereinafter called DISTRICT, in the penal sum of

_____ Dollars (\$ _____),

lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, assigns, and successors, jointly and severally, firmly by these presents. The condition of this obligation is such that whereas the Principal has submitted

~~the accompanying Bid dated _____, 20___, a Bid~~ for the construction of:

PROJECT NO. XXXXX

NOW THEREFORE, if the Principal shall not withdraw said Bid within the period of time set forth in the Contract Documents, and shall within fifteen (15) calendar days after the prescribed forms are presented to the Principal for signature enter into a written contract with DISTRICT in accordance with the Bid as accepted, and if the Principal shall give the required bonds with good and sufficient sureties for the faithful performance and proper fulfillment of such contract, and for the protection of laborers and material men, or in the event of the withdrawal of the Bid within the period specified, or the failure to enter into the Agreement, and give such bonds within the time specified, if the Principal shall within sixty (60) days after request by DISTRICT pay to DISTRICT the difference between the amount specified in the Bid and the amount for which DISTRICT may procure the required work, if the latter amount be in excess of the former, then the above obligation shall be void and of no effect, otherwise it shall remain in full force and virtue.

Forfeiture of this bond shall not preclude DISTRICT from seeking any or all other remedies provided by law to cover losses sustained as a result of the Principal's failure to do any of the foregoing, and this bond shall not be a limitation on Principal's liability therefor.

It is further agreed that if DISTRICT is required to initiate legal proceedings to recover on this bond, it may also recover its costs relating thereto including a reasonable amount for attorneys' fees incurred with or without suit.

IN WITNESS WHEREOF the above-bounded parties have executed this instrument this day of _____, 20____, the name and corporate seal for each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

Two Witnesses (if individual)

PRINCIPAL

By _____

Title _____

ATTEST: (if corporation, or limited liability company with officers)

Title

Corporate Seal

Attach acknowledgments of authorized representative of Principal.

Any claims under this bond may be addressed to:

_____ (name and address of Surety)

_____ (name and address of agent or
representative in California,
if different from above)

_____ (telephone number of Surety
and agent of representative
in California)

SURETY

By _____

Title _____

ATTEST: (if corporation)

Title

Corporate Seal

Attach acknowledgments of authorized representatives of Surety.

AGREEMENT, BONDS, AND INSURANCE

Contents

Agreement

Performance Bond

Payment Bond

Contractor's Certificate Regarding Worker's Compensation

Certificates of Insurance and Endorsements

AGREEMENT

THIS AGREEMENT, made and entered into by and between the IRVINE RANCH WATER DISTRICT hereinafter referred to as "DISTRICT" and _____ a corporation organized and existing under the laws of the State of _____; a partnership consisting of _____; a joint venture consisting of _____; a limited liability company consisting of _____; or an individual trading as _____; in the City of _____, County of _____, State of _____, hereinafter referred to as "CONTRACTOR".

WITNESSETH: That DISTRICT and CONTRACTOR, for the consideration hereinafter named, agree as follows:

- 1. SCOPE OF WORK: CONTRACTOR will furnish all materials and will perform all of the work for the construction of:

PROJECT NO. XXXXX

in accordance with the Contract Documents therefor.

- 2. CONTRACT TIME:
 - 2.1 The work shall be substantially completed within _____ calendar days from the date of the Notice of Award.
 - 2.2 For any early occupancy milestone described in Section 01700 of Division 1, General Requirements, CONTRACTOR shall achieve Substantial Completion of the milestone within the number of calendar days from the date of the Notice of Award, as set forth below:

Early Occupancy Milestone

Substantial Completion

()
()
()

() days
() days
() days

- 3. CONTRACT PRICE: DISTRICT will pay CONTRACTOR in accordance with the prices shown in the bid form.
- 4. PAYMENTS: Monthly progress payments and the final payment will be made in accordance with the General Provisions. The filing of the notice of completion by DISTRICT shall be preceded by final acceptance of the Work by DISTRICT.
- 5. LIQUIDATED DAMAGES:
 - 5.1 Liquidated Damages shall be assessed at the rate of \$ _____ per calendar day, in accordance with the General Provisions.
 - 5.2 For any early occupancy milestone that is not Substantially Complete within the time set forth above, Liquidated Damages shall be assessed at the rates per calendar day listed below for each calendar day that expires after the time specified in paragraph 2.2 above, until the early occupancy milestone Work is Substantially Complete. Liquidated damages shall be assessed cumulatively for early occupancy milestones that are not substantially completed, as well as for substantial completion of the Work.

Early Occupancy Milestone

Liquidated Damages Per Day

()
()
()

(\$)
(\$)
(\$)

Fill in above early occupancy milestones, completion times and liquidated damage rates, if applicable. Delete paragraphs 2.2 and 5.2 if there are no early occupancy milestones.

- 6. COMPLIANCE WITH PUBLIC CONTRACTS LAW: DISTRICT is a public agency in the State of California and is subject to provisions of law relating to public contracts. It is agreed that all applicable provisions of law related to public contracts are a part of this Agreement to the same extent as though set forth herein and will be complied with by CONTRACTOR.
- 7. CONTRACT DOCUMENTS: The complete contract includes all the contract documents set forth herein, to wit: Project Manual, Construction Manual, Plans, Addenda, and supplemental agreements.

IN WITNESS WHEREOF, this agreement is executed by the General Manager and the Secretary of DISTRICT pursuant to Minutes of the meeting of the Board of Directors held on _____, authorizing the same, and CONTRACTOR has caused this agreement to be executed.

Dated: _____

IRVINE RANCH WATER DISTRICT
Owner

By _____
General Manager

ATTEST: _____
Secretary to the Board

(SEAL)

Dated: _____

Contractor

By _____

APPROVED:

Title _____

Attorney for District

(SEAL)

CORPORATE CERTIFICATE

I, _____, certify that I am the _____
Secretary of _____, a _____ corporation;

That said corporation executed the foregoing Agreement as (*check only one*):

- CONTRACTOR,
- venturer of the joint venture named as CONTRACTOR in the foregoing Agreement,
- partner of the partnership named as CONTRACTOR in the foregoing Agreement,
- manager or member of the limited liability company named as CONTRACTOR in the foregoing Agreement;

that _____, who signed said agreement on behalf of CONTRACTOR was then _____ of said corporation; and that said corporation is in good standing; and that said contract was duly signed for and in behalf of CONTRACTOR by said corporation by express authority of its governing body and is within the scope of its corporate powers; and that if CONTRACTOR is a joint venture, partnership or limited liability company that includes said corporation, said corporation is CONTRACTOR's duly authorized signatory.

By _____

Bond No. _____

Premium \$ _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: THAT

WHEREAS, THE Board of Directors of the

IRVINE RANCH WATER DISTRICT

by Minute Order at the meeting held the ___ day of _____, 20___, has awarded to

_____ hereinafter designed as the "Principal", a contract for the construction of:

PROJECT NO. XXXXX

WHEREAS, said Principal is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract,

NOW, THEREFORE, we the Principal and

_____ as Surety, and held firmly bound unto the

IRVINE RANCH WATER DISTRICT

hereinafter called the "Obligee", in the penal sum of _____

_____ Dollars (\$ _____), lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, and firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in the Contract and any alteration thereof made as therein provided, on his or their part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the Obligee, the Obligee's Representative, the

Engineer/Architect and their consultants and each of their officers, directors, agents and employees, as therein stipulated, this obligation shall become null and void, otherwise, it shall be and remain in full force and virtue inclusive of the entire Contract guarantee period. And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract, or to the Work to be performed thereunder, or the plans or specifications accompanying the same, shall in any way affect its obligation on this bond, and it does hereby waive notice by District of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work or to the plans or specifications. Principal and Surety agree that if Obligee is required to engage the services of an attorney(s) in connection with the enforcement of this bond, each shall also pay Obligee's reasonable attorneys' fees incurred with or without suit.

IN WITNESS WHEREOF, three counterparts of this instrument, each of which shall for all purposes be deemed an original hereof, have been duly executed by the Principal and Surety above named, on the ___ day of _____ 20__.

APPROVED:

(Attorney for the District)

Principal
By _____
Title _____

Any Claims under this bond may be addressed to:

(Name and address of Surety)

(Name and Address of Agent or Representative in California, if different from above)

(Telephone Number of Surety and Agent or Representative in California)

Surety
(Attach Acknowledgment) By _____
Title _____

NOTICE: No substitution or revision to this bond form will be accepted. Sureties must be admitted and authorized to do business in and have an agent for service of process in California. A certified copy of Power of Attorney must be attached.

PAYMENT BOND

We, _____

as Principal, and _____

as Surety, jointly and severally, bind ourselves, our heirs, representatives, successors and assigns,

as set forth herein, to the Irvine Ranch Water District (herein called Owner) for payment of the

penal of sum of _____ Dollars (\$ _____), lawful

money of the United States of America. Owner has awarded Principal a contract for the

construction of:

PROJECT NO. XXXXX

If Principal or any of his subcontractors fails to pay any of the persons named in Section 9100 of the California Civil Code, or amounts due under the California Unemployment Insurance Code with respect to work or labor performed under the Contract or during the one-year guarantee period, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department Franchise Tax Board from wages of employees of the Contractor and his subcontractors pursuant to Section 13020 of the California Unemployment Insurance Code, with respect to such work and labor, then Surety will pay the same in an amount not exceeding the sum specified above, and also will pay, in case suit is brought upon this bond, such reasonable attorney's fees as shall be fixed by the court.

This bond shall inure to the benefit of any of the persons named in Section 9100 of the California Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Surety agrees that no change, extension of time, alteration, or addition to the terms of the Contract, or the work to be performed thereunder, or the plans and specifications shall in any way affect its obligation on this bond, and it does hereby waive notice by District thereof.

Principal and Surety agree that should Owner become a party to any action on this bond that each will also pay Owner reasonable attorneys' fees incurred therein in addition to the sum above set forth.

Executed in three original counterparts on

_____, 20__.

(Seal of Corporation)

Principal

By _____

Title _____

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of Agent or
Representative in California,
if different from above)

(Telephone Number of Surety's
Agent in California)

(Attach Acknowledgment)

Surety

By _____
Attorney-in-Fact

APPROVED:

Attorney for District

NOTICE: No substitution or revision to this bond form will be accepted. Sureties must be admitted and authorized to do business in and have an agent for service of process in California. Certified copy of Power of Attorney must be attached.

**CONTRACTOR'S CERTIFICATE
REGARDING WORKER'S COMPENSATION**

Description of Contract:

PROJECT NO. XXXXX

California Labor Code Section 3700 provides:

"Every employer, except the state shall secure the payment of compensation in one or more of the following ways:

- (a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state.
- (b) By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees...."

I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of the Labor Code, and I will comply with such provisions before commencing the performance of any and all work required under the terms and conditions of this Contract.

Dated: _____, 20__

Contractor

By _____

(SEAL)

(In accordance with Article 5 commencing at Section 1860, Chapter 1, Division 2, Part 7, of the California Labor Code, the above certificate must be signed and filed with the District (the awarding body) prior to performing any work under this contract.)

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT-CALIFORNIA

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

You must maintain payroll records accurately segregating the remuneration of your employees while engaged in the work described in the Schedule.

The additional premium for this endorsement shall be _____% of the California workers' compensation premium otherwise due on such remuneration.

Schedule

Person or Organization

Job Description

Notes:

1. This endorsement may be used to waive the company's right of subrogation against named third parties who may be responsible for an injury.
2. The sentence in () is optional with the company. It limits the endorsement to apply only to specific jobs of the insured, and only to the extent that the insured is required to obtain this waiver.

This endorsement changes the policy to which it is attached and is effective on the date unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective
Insured

Policy No.
Insurance Company

Endorsement No.

Countersigned By _____

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From the WCIRB's California Workers' Compensation Insurance Forms Manual © 2001.

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AGENCY CUSTOMER ID: _____

LOC #: _____



ADDITIONAL REMARKS SCHEDULE

Page ____ of ____

AGENCY		NAMED INSURED	
POLICY NUMBER		EFFECTIVE DATE:	
CARRIER	NAIC CODE		

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: _____ FORM TITLE: _____

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED - OWNERS, LESSEES OR
CONTRACTORS - AUTOMATIC STATUS WHEN
REQUIRED IN CONSTRUCTION AGREEMENT WITH YOU**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. Section II - Who Is An Insured is amended to include as an additional insured any person or organization for whom you are performing operations when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured on your policy. Such person or organization is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
 2. The acts or omissions of those acting on your behalf;
- in the performance of your ongoing operations for the additional insured.

However, the insurance afforded to such additional insured:

1. Only applies to the extent permitted by law; and
2. Will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

A person's or organization's status as an additional insured under this endorsement ends when your operations for that additional insured are completed.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to:

1. "Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:
 - a. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
 - b. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional architectural, engineering or surveying services.

2. "Bodily injury" or "property damage" occurring after:
 - a. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
 - b. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to Section III - Limits Of Insurance:

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement you have entered into with the additional insured; or
 2. Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED - OWNERS, LESSEES OR CONTRACTORS - COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

A. Section II - Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III - Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
 2. Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

GENERAL PROVISIONS

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ARTICLE 1 DEFINITION

1.1 Definitions

Whenever the following terms occur in the Contract Documents, they shall have the meanings as set forth in this Article which shall be equally applicable in both the singular and plural forms of any of the defined terms.

Addendum - Corrections, additions, and/or deletions that are made to the Plans, Project Manual, Construction Manual, and/or other Addenda prior to DISTRICT's receipt of sealed proposals ("Bids").

Agreement - The written agreement executed between DISTRICT and CONTRACTOR covering the performance of the Work. Other Contract Documents are incorporated into the Agreement and are made a part of it.

Bidder - Any individual, partnership, corporation, or combination thereof submitting a proposal for the Work, acting directly or through an authorized representative.

Change Order - A written instrument, which when signed by DISTRICT, amends the Contract Documents to provide for changes in the Work or in the provisions of the Contract Documents or changes in Contract Price or Contract Time, or any combination of these.

Change Request - A written instrument which, when signed by DISTRICT, is a directive authorizing a change in the Work or in the provisions of the Contract Documents, or an adjustment in Contract Price or Contract Time, or a combination of these. Even when signed by DISTRICT, a Change Request is not an instrument that amends the Contract Documents; however, it may be converted into a Change Order.

Construction Manual (IRWD) - Manual containing General Technical Specifications and Standard Drawings.

Contract Documents - Project Manual, Construction Manual, Plans, addenda, and supplemental agreements. Supplemental agreements are written agreements covering alterations, amendments, or extensions to the contract and include Change Orders.

Contract Price - The total compensation, subject to authorized adjustments, payable by DISTRICT to CONTRACTOR under the Contract Documents.

Contract Time - The time set forth in the Agreement for achieving substantial completion of the Work or any designated portion of the Work. Contract Time shall be in calendar days measured from the date of commencement stated in the Notice of Award, or shall be in such other time increments or measured from such other time of commencement as are specified in the Agreement.

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CONTRACTOR - The individual, partnership, corporation, or combination of these who has entered into the Agreement with DISTRICT for the performance of the Work. The term "CONTRACTOR" means the CONTRACTOR or their authorized representative.

Days - Unless otherwise specified, days shall mean calendar days.

DISTRICT - The Irvine Ranch Water District (IRWD). The term "DISTRICT" means DISTRICT or their authorized representative.

District Board of Directors - The governing body of the Irvine Ranch Water District.

DISTRICT's Representative - The person or engineering/architectural firm authorized by DISTRICT to represent them during the performance of the Work by CONTRACTOR. The term "DISTRICT's Representative" means DISTRICT's Representatives or their assistants.

Emergency - A sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. Emergency includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage.

Engineer/Architect - The person, firm, or corporation duly authorized by DISTRICT to oversee the execution of this Agreement, acting either directly or through their properly authorized agents, and the person, firm, or corporation or their properly authorized agents who designed the project.

Final Acceptance - The formal action by DISTRICT as evidenced by the filing of a Notice of Completion accepting the Work as being complete after certification by the DISTRICT's Representative of final completion.

Final Progress Payment - The total amount to be paid under the terms of the Agreement less all previous payments and all amounts to be retained under the provisions of the Agreement.

General Requirements - Sections of Section 1 of the Project Technical Specifications.

General Technical Specifications - The documents identified as such in the latest revision of the IRWD Construction Manual (may also be referred to as standard specifications or specifications).

Holidays - The days designated by DISTRICT as legal holidays.

Laboratory - The facility authorized by DISTRICT or DISTRICT's Representative to test materials and work involved in the contract.

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Notice of Award - Written notice to the successful Bidder of DISTRICT'S intent to enter into the Agreement. This notice will be accompanied by documents to be executed by CONTRACTOR.

Notice of Completion - Certification by DISTRICT that the Work is complete, including minor items identified on the certificate of Substantial Completion, delivery of record documents, and final cleanup.

Notice to Proceed - Written notice by DISTRICT that all Contract Documents have been approved and executed by DISTRICT and CONTRACTOR. CONTRACTOR shall not commence work in the field or order materials until the Notice to Proceed is issued.

Owner - The legal owner of the property on which or through which the work is to be constructed.

Plans (Drawings) - The plans, drawings, or reproductions that show the location, character, dimensions, and details of the Work.

Progress Payment Request - The form furnished by DISTRICT that is to be used by CONTRACTOR in requesting progress or final payments. The request includes such supporting documentation as required by the Contract Documents.

Progress Schedule - All documentation related to the planning and scheduling of the Work as described in these General Provisions and the General Requirements.

Project Manual - Instruction to Bidders, Notice Inviting Sealed Proposals (Bids), Bid Form, Bid Bond, Agreement, Performance Bond, Payment Bond, CONTRACTOR'S Certificate Regarding Worker's Compensation, Certificates of Insurance and Endorsements, General Provisions, Special Provisions, Project Technical Specifications, and Appendix.

Project Technical Specifications - The documents identified as such in the IRWD Project Manual (may also be referred to as specifications).

Shop Drawings - Drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data that are prepared by CONTRACTOR or any Subcontractor, manufacturer, supplier, or distributor that illustrate some portion of the Work.

Special Provisions - Sections of Section O, containing additions, deletions, and changes to the Instructions To Bidders and General Provisions.

Standard Drawings (Standard Plans) - The documents identified as such in the latest revision of the IRWD Construction Manual.

Substantial Completion - The date when (a) the Work, or specified part of the Work, is complete in accordance with the Contract Documents, with the exception of the minor

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items identified during the inspections described in the General Provisions, and (b) the Work or any specified part of the Work can be utilized for the purpose for which it is intended. The terms "substantially complete" and "substantially completed" as applied to any work refers to Substantial Completion.

Subsurface Installation - Any underground pipeline, conduit, duct, wire, or other structure operated or maintained in or across a public street or public right way (Government Code Section 4216).

Subcontractor - An individual, partnership, corporation, or combination of these, who has a contract with CONTRACTOR to perform any of the Work at the site. The term "Subcontractor" means a Subcontractor or their authorized representative. Subcontractor also means an individual, partnership, corporation, or combination of these, who has a contract with a Subcontractor to perform any of the Work at the site.

Utility - Public or private fixed works for the transportation of fluids, gases, power, signals, or communications.

Work - All obligations and responsibilities and all labor necessary to produce the construction or improvement required by the Agreement, and all materials and equipment incorporated in the construction or improvement.

1.2 Document Headings

The headings in these Contract Documents are for convenience of reference only, and shall not limit or otherwise affect the meaning of the Contract Documents.

1.3 Terms

Wherever the terms "directed", "required", "permitted", "ordered", "designated", "prescribed", or terms of like import are used, it shall be understood that the direction, requirements, permission, order, designation, or prescription of DISTRICT's Representative is intended. Similarly, the terms "approved", "acceptable", "satisfactory", "or equivalent", or terms of like import shall mean approved by, or acceptable to, DISTRICT's Representative, unless otherwise expressly stated. The word "provide" shall be understood to mean furnish and install.

1.4 Abbreviations

Wherever the following abbreviations are used, they shall have the meanings indicated:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGA	American Gas Association
AAI	The Asphalt Institute

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AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AIMA	Acoustical and Insulating Materials Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Moving and Conditioning Association, Inc.
ANSI	American National Standards Institute (formerly USASI, USAS, ASA)
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASA	American Standards Association (Now ANSI)
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AT&SF	Atchison, Topeka and Santa Fe Railway Company
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
CALTRANS	State of California, Department of Transportation, Division of Highways
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CRSI	Concrete Reinforcing Steel Institute
CRWQCB	California Regional Water Quality Control Board
CA	Commercial Standard, US Department of Commerce
DIPRA	Ductile Iron Pipe Research Association
ETL	Electrical Testing Laboratories
GRI	Geosynthetic Research Institute
HI	Hydraulics Institute
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronics Engineers
ISA	Instrument Society of America
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAPF	National Association of Plastic Fabricators
NBFU	National Board of Fire Underwriters
NCPI	National Clay Pipe Institute
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NOAA	National Oceanographic and Atmospheric Administration
NSF	National Sanitation Foundation

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OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PS	Product Standard, U.S. Department of Commerce
SDI	Steel Deck Institute
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air-Conditioning Contractors National Association
State Specifications	Standard Specifications, State of California, Business and Transportation Agency, Department of Transportation
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction (Green Book)
UBC	Uniform Building Code, Pacific Coast Building Officials Conference of the International Conference of Building Officials
U/L or UL	Underwriters' Laboratories, Inc.
USA	Underground Service Alert
USASI or USAS	United States of America Standards Institute (Now ANSI)
USGS	United States Geological Survey

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1.5 Abbreviations – Common Usage

The following abbreviations, together with others in general use, are applicable to the Contract Documents.

<u>Abbreviation</u>	<u>Word or Words</u>	<u>Abbreviation</u>	<u>Word or Words</u>
ABAN.....	Abandon	DIP.....	Ductile iron pipe
ABAND.....	Abandoned	DW.....	Domestic water
ABS.....	Acrylonitrile – butadiene – styrene	DWG.....	Drawing
AC.....	Asphalt Concrete	EA.....	Each
ACP.....	Asbestos cement pipe	EC.....	End of curve
ALT.....	alternate	ECR.....	End of curb return
AWG.....	American Wire Gage (nonferrous wire)	EF.....	Each face
BC.....	beginning of a curve	EGL.....	Energy grade line
BCR.....	beginning of a curb return	El.....	Elevation
BDRY.....	Boundary	ENGR.....	Engineer, Engineering
BM.....	Bench mark	EP.....	Edge of pavement
BVC.....	Beginning of a vertical curve	ESMT.....	Easement
C/C.....	Center to center	ETB.....	Emulsion-treated base
CAB.....	Crushed aggregate base	EVC.....	End of vertical curve
CAP.....	Corrugated aluminum pipe	EXC.....	Excavation
CB.....	Catch Basin	EXP JT.....	Expansion joint
Cb.....	Curb	EXST.....	Existing
CBR.....	California Bearing Radio	F.....	Fahrenheit
CCTV.....	Closed Circuit TV	FAB.....	Fabricate
CF.....	Curb face	FD.....	Floor drain
CF.....	Cubic foot	FDN.....	Foundation
CFS.....	Cubic feet per Second	FG.....	Finished grade
C&G.....	Curb and gutter	FH.....	Fire hydrant
CIP.....	Cast iron pipe	FL.....	Flow line
CIPP.....	Cast-in place pipe	FS.....	Finished surface
CL.....	Clearance, center line	FTG.....	Footing
CLF.....	Chain link fence	FW.....	Face of wall
CMB.....	Crushed miscellaneous base	GA.....	Gauge
CMC.....	Cement mortar-coated	GALV.....	Galvanized
CML.....	Cement mortar-lined	GIP.....	Galvanized iron pipe
CO.....	Cleanout (Sewer)	GL.....	Ground line or grade line
CONC.....	Concrete	GM.....	Gas meter
CONN.....	Connection	GR.....	Grade
CONST.....	Construct, Construction	GRTG.....	Grating
COORD.....	Coordinate	GSP.....	Galvanized steel pipe
CSP.....	Corrugated steel pipe	H.....	High or height
CTB.....	Cement treated base	HB.....	Hose bib
CV.....	Check valve	HC.....	House connection
CY.....	Cubic yard	HDWL.....	Headwall
dB.....	Decibels	HGL.....	Hydraulic grade line
DIA.....	Diameter	HORIZ.....	Horizontal
		HP.....	Horsepower

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<u>Abbreviation</u>	<u>Word or Words</u>
HPG.....	High pressure gas
HYDR.....	Hydraulic
ID.....	Inside diameter
INCL.....	Including
INV.....	Invert
IP.....	Iron pipe
JC.....	Junction chamber
JCT.....	Junction
JS.....	Junction structure
JT.....	Joint
L.....	Length
LAB.....	Laboratory
LAT.....	Lateral
LB.....	Pound
LD.....	Local depression
LF.....	Linear foot
LONG.....	Longitudinal
LS.....	Lump sum
LTS.....	Lime treated soil
MAINT.....	Maintenance
MAX.....	Maximum
MCR.....	Middle of curb return
MEAS.....	Measure
MGD.....	Million Gallons per day
MH.....	Manhole, maintenance hole
MIN.....	Minimum
MISC.....	Miscellaneous
MOD.....	Modified, modify
MON.....	Monument
MULT.....	Multiple
OC.....	On center
OD.....	Outside diameter
OPP.....	Opposite
ORIG.....	Original
PB.....	Pull box
PC.....	Point of curvature
PCC.....	Portland cement concrete or point of compound curvature
PE.....	Polyethylene
PI.....	Point of intersection
PL.....	Property line
PMB.....	Processed miscellaneous base
POC.....	Point on curve
POT.....	Point on tangent
PP.....	Power pole
PRC.....	Point of reverse curve
PSI.....	Pounds per square inch
PT.....	Point of tangency
PVC.....	Polyvinyl chloride
PVMT.....	Pavement
Q.....	Rate of flow in cubic feet per second
QUAD.....	Quadrangle, Quadrant
R.....	Radius
R/W.....	Right-of-way

<u>Abbreviation</u>	<u>Word or Words</u>
RC.....	Reinforced concrete
RCB.....	Reinforced concrete box
RCE.....	Registered civil engineer
RCP.....	Reinforced concrete pipe
RCV.....	Remote control valve
REF.....	Reference
REINF.....	Reinforced or reinforcement
RES.....	Reservoir
RR.....	Railroad
RW.....	Reclaimed water
S.....	Slope or sewer
SCCP.....	Steel cylinder concrete pipe
SD.....	Storm drain
SDR.....	Standard thermoplastic pipe dimension ratio (ratio of pipe O.D. to minimum wall thickness)
SEC.....	Section or second
SF.....	Square foot
SPEC.....	Specifications
SR.....	Standard ratio
SS.....	Sanitary sewer
SSB.....	Select sub-base
STA.....	Station
STD.....	Standard
STR.....	Straight
STRUC.....	Structural/Structure
SW.....	Sidewalk
SWD.....	Sidewalk drain
SY.....	Square yard
TAN.....	Tangent
TC.....	Top of curb
TEL.....	Telephone
TF.....	Top of footing
TOPO.....	Topography
TR.....	Tract
TRANS.....	Transition
TS.....	Traffic signal or transition structure
TSC.....	Traffic signal conduit
TW.....	Top of wall
TYP.....	Typical
VAR.....	Varies, Variable
VB.....	Valve box
VC.....	Vertical curve
VCP.....	Vitrified clay pipe
VERT.....	Vertical
VOL.....	Volume
W.....	Wide or width
WATCH.....	Work Area Traffic Control Handbook
WM.....	Water meter
WPJ.....	Weakened plane joint
XCONN.....	Cross connection
XSEC.....	Cross section

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1.6 Units of Measure, Their Abbreviation and Conversion

The following units of measure, together with other units in general use, are applicable to the Contract Documents.

<u>U.S. Customary Unit</u> <u>(Abbreviations)</u>	<u>Equal To</u>	<u>SI unit</u> <u>(Abbreviations)</u>
1 mil (=0.001 in).....		25.4 micrometer (um)
1 inch (in).....		25.4 millimeter (mm)
1 inch (in).....		2.54 centimeter (cm)
1 foot (ft).....		0.3048 meter (m)
1 yard (yd).....		0.9144 meter (m)
1 mile (mi).....		1.6093 kilometer (km)
1 square foot (ft ²).....		0.0929 square meter (m ²)
1 square yard (yd ²).....		0.8361 square meter (m ²)
1 cubic foot (ft ³).....		0.0283 cubic meter (m ³)
1 cubic yard (yd ³).....		0.7646 cubic meter (m ³)
1 acre.....		0.4047 hectare (ha)
1 U.S. gallon (gal).....		3.7854 Liter (L)
1 fluid ounce (fl. Oz.).....		29.5735 milliliter (mL)
1 pound mass (lb) (avoirdupois).....		0.4536 kilogram (kg)
1 ounce mass (oz).....		28.3495 kilogram (kg)
1 Ton (=2000 lb. avoirdupois).....		0.9072 Tonne (= 1000 kg)
1 Poise.....		0.1 pascal . second (Pa . s)
1 centistoke (cs).....	1 square millimeter per second (mm ² /s)	
1 pound force (lbf).....		4.4482 Newton (N)
1 pounds per square inch (psi).....		6.8948 Kilopascal (kPa)
1 pound force per foot (lbf/ft).....		1.4594 Newton per meter (N/m)
1 foot-pound force (ft-lbf).....		1.3558 Joules (J)
1 foot-pound force per second ([ft-lbf]/s).....		1.3558 Watt (W)
1 part per million (ppm).....		1 milligram/liter (mg/L)

1.7 Language of Documents

Wherever anything is required or permitted by a provision of the Contract Documents to be furnished in writing, it shall be in the English language.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 2 NOTICES

2.1 Notice and Service

2.1.1 Any notice required or given by one party to the other under the contract shall be in writing and shall be dated and signed by the party giving such notice or by a duly authorized representative of such party. Any such notices shall not be effective for any purposes whatsoever, unless served in the following manner:

- 2.1.1.1 If the notice is given to DISTRICT, by personal delivery, delivery service, or by depositing the same in the United States mail, enclosed in a sealed envelope addressed to DISTRICT, postage prepaid and registered or certified.
- 2.1.1.2 If the notice is given to CONTRACTOR, by personal delivery to CONTRACTOR or to their authorized representative at the site of the Work or by depositing the same in the United States mail or delivery service, enclosed in a sealed envelope addressed to CONTRACTOR at their regular place of business or such other address as may have been established for the conduct of the Work under this contract, postage prepaid and registered or certified.
- 2.1.1.3 If the notice is given to the surety or any other person, by personal delivery to surety or other person, or by depositing the same in the United States mail, enclosed in a sealed envelope addressed to such surety or person at the address of surety or person last communicated by them to the party giving the notice, postage prepaid and registered or certified.

2.2 CONTRACTOR Correspondence

All CONTRACTOR's correspondence shall have identification numbers assigned by CONTRACTOR. The identification numbers shall be sequential and assigned chronologically such that each CONTRACTOR's submission can be individually identified by reference to the assigned identification number. The numbering system must be approved by DISTRICT. Any correspondence not so identified may not be accepted by DISTRICT.

2.3 DISTRICT Correspondence

All correspondence from DISTRICT or the Engineer/Architect shall be by project transmittal memorandum (PTM). PTMs shall be sequentially numbered for identification. CONTRACTOR shall sign and return one copy of each PTM to acknowledge receipt of the PTM and all attachments. CONTRACTOR's acknowledgement of receipt shall not constitute acceptance of or agreement with the contents of the PTM.

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2.4 Use of Forms Provided

Unless DISTRICT allows to the contrary, only those forms provided or approved by DISTRICT shall be used and no modifications or substitutions shall be allowed.

2.5 Initial Submittals by CONTRACTOR

2.5.1 Within ten (10) days after Notice of Award (unless otherwise specified in the Special Provisions or General Requirements), CONTRACTOR shall submit to DISTRICT for review a preliminary progress schedule indicating the starting and completion dates of the various stages of the Work, a proposed schedule of Shop Drawing submissions, a proposed schedule of values of the Work on the form provided by DISTRICT, and a listing of labor projections through the Contract Time.

2.5.2 DISTRICT will review and return these submissions and CONTRACTOR shall revise, adjust or modify and resubmit acceptable schedules.

2.5.3 Within thirty (30) days after Notice of Award, CONTRACTOR shall (except as otherwise specified in the Special Provisions) submit to DISTRICT acceptable Progress and Shop Drawing Submittal Schedules, acceptable labor projections, and a final schedule of values of the Work. These schedules shall be of satisfactory type, form, and substance to DISTRICT. DISTRICT may require the schedule of values to be adjusted if in their opinion the breakdown does not accurately reflect the true distribution of the Contract Price. Upon acceptance of the Schedule of Values by DISTRICT, it shall be incorporated into the Progress Payment Request.

2.6 Daily Reports By CONTRACTOR

2.6.1 CONTRACTOR shall be responsible for preparing and delivering to DISTRICT, on a daily basis, reports recording labor and equipment available and used, materials and equipment received each day, and problems encountered on a form acceptable to DISTRICT. If CONTRACTOR fails to submit reports daily, DISTRICT may withhold payments for undocumented work until such time as CONTRACTOR submits the required information. CONTRACTOR shall make available any records as requested by DISTRICT to verify that the reports are accurate.

2.6.2 CONTRACTOR shall submit to DISTRICT each morning, a list of specific items requiring final inspection, monitoring, or witnessing by DISTRICT on the following day.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 3 CONTRACT DOCUMENTS

3.1 Applicable Law; Intent

3.1.1 The Contract Documents comprise the entire agreement between DISTRICT and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

3.1.2 It is the intent of the Contract Documents to describe a functionally complete project (or part of it) to be constructed in accordance with the Contract Documents. Any work, materials, or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. When words that have a well-known technical or trade meaning are used to describe work, materials or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental entity, including DISTRICT, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties and responsibilities of DISTRICT, CONTRACTOR, or the Engineer/Architect, or any of their consultants, agents, or employees from those set forth in the Contract Documents, nor shall it assign to DISTRICT or the Engineer/Architect, or any of their consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of this Agreement.

3.2 Priority of the Contract Documents

3.2.1 In resolving conflicts, errors, or discrepancies, the Contract Documents shall be given precedence in the following order:

- Supplemental agreements (including Change Orders)
- Agreement
- Notice to Proceed
- Notice of Award
- Addenda
- Special Provisions
- Instructions to Bidders
- General Provisions
- General Requirements
- Project Technical Specifications
- Plans
- General Technical Specifications
- Standard Drawings

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- Notice Inviting Sealed Proposals
- CONTRACTORS's Bid
- Bonds
- Certificate(s) of Insurance and Endorsements
- Affidavits

3.2.2 If the issue of priority pertains to the specifications and the drawings, figured dimensions shall govern over scaled dimensions, but Work not dimensioned shall be as directed, and Work not particularly shown, identified, sized, or located shall be the same as similar parts that are shown or specified. Further, detail drawings shall govern over general drawings, larger scale drawings take precedence over smaller scale drawings, Change Order drawings govern over contract drawings, and contract drawings govern over standard or Shop Drawings. In all cases where notes, specifications, sketches, diagrams, details or schedules in the specifications or in the drawings, or between the specifications and the drawings, conflict, the higher cost requirement shall be binding on CONTRACTOR, unless otherwise directed by DISTRICT.

3.2.3 If the issue of priority is due to a conflict or discrepancy between provisions of the Contract Documents and any referenced standard specification, manual, or code of any technical society, organization or association, the provisions of the Contract Documents will take precedence if they are more stringent or presumptively cause a higher level of performance. If there is any conflict or discrepancy between standard specifications, manuals, or codes of any technical society, organization or association, or between laws or regulations, the higher cost requirement shall be binding on CONTRACTOR, unless otherwise directed by DISTRICT.

3.2.4 In accordance with the intent of the Contract Documents, CONTRACTOR recognizes and agrees that compliance with the priority order specified shall not justify an increase in Contract Price or extension in Contract Time.

3.3 Reuse of Documents

Neither CONTRACTOR nor any Subcontractor or supplier or other person or organization shall acquire any title to or have ownership rights of any of the drawings, specifications or other documents (or copies) prepared by or bearing the seal of the design engineer or architect of record; and they shall only be used on this project and shall not be used on any other project nor shall they be generally published without written consent of DISTRICT.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 4 CONTRACTOR'S INSURANCE

4.1 General

4.1.1 CONTRACTOR shall not commence or continue to perform any Work unless they, at their own expense, have in full force and effect all required insurance. CONTRACTOR shall not permit any Subcontractor to perform work on this project until the same insurance requirements have been complied with by such Subcontractor.

4.1.2 The types of insurance the CONTRACTOR shall obtain and maintain for the full period of the Agreement are worker's compensation insurance, commercial general liability insurance, business automobile liability insurance and, unless otherwise specified in the Special Provisions or so determined by DISTRICT at the time of awarding the Agreement, builder's risk insurance, including coverage for collapse, earthquake and flood, all as detailed in the following portions of this Article.

4.1.3 Insurers shall have financial and size ratings of at least an "A", VIII in accordance with the most current Best's Key Rating Guide, Property Casualty.

4.1.4 As evidence that specified insurance coverage has been obtained for the period of the Agreement, the CONTRACTOR shall provide certificates of insurance and endorsements on the forms provided as a part of the Contract Documents. Additional information as set forth in the Special Provisions shall be included on said forms. No alteration or substitution of said forms will be allowed. Certified copies of insurance policies from the insurance company affording coverage shall be provided by CONTRACTOR upon request.

4.1.5 DISTRICT reserves the right to withhold payments to CONTRACTOR in the event of material noncompliance with insurance requirements.

4.1.6 The requirements set forth herein as to the types and limits of insurance coverage to be maintained by the CONTRACTOR and any approval of said insurance by the DISTRICT or its insurance consultant(s) is not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the CONTRACTOR pursuant to the Agreement, including but not limited to the provisions concerning indemnification.

4.2 Worker's Compensation Insurance and Employer's Liability Insurance

4.2.1 CONTRACTOR shall provide worker's compensation insurance coverage for no less than the statutory limits and employer's liability insurance coverage, with limits not less than those specified in the Special Provisions, for all persons whom CONTRACTOR employs or may employ in carrying out the Work. This insurance shall be in strict accordance with the requirements of the most current and applicable state worker's compensation insurance laws.

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4.2.2 The worker's compensation insurance shall include a waiver of right of subrogation against the DISTRICT, the District Board of Directors, DISTRICT's Representative, the Engineer/Architect, those persons and entities required to be included as additional insureds by the Special Provisions, owners of record of all private properties on which entry will be made, and their consultants, and each of their officers, agents, and employees but only while acting in their capacity as such and only in respect to operations of the original named insured, their Subcontractors, agents, officers, and employees in the performance of the Work.

4.3 Commercial General Liability Insurance

4.3.1 CONTRACTOR shall provide commercial general liability insurance coverage equivalent to Insurance Services Office Form CG 00 01, with limits not less than those specified in the Special Provisions.

4.3.2 Included in such insurance shall be blanket contractual liability coverage and severability of interests (no cross suits exclusion).

4.3.3 The commercial general liability insurance shall be primary and non-contributory and include as additional insureds: DISTRICT, the District Board of Directors, DISTRICT's Representative, the Engineer/Architect, those persons and entities required to be included as additional insureds by the Special Provisions, owners of record of all private properties on which entry will be made, and their consultants, and each of their officers, agents, and employees but only while acting in their capacity as such and only in respect to operations of the original named insured, their Subcontractors, agents, officers, and employees in the performance of the Work.

4.3.4 Such insurance shall have a deductible or self insured retention not to exceed \$25,000.

4.4 Automobile Liability Insurance

4.4.1 CONTRACTOR shall provide business automobile liability insurance coverage equivalent to Insurance Services Office Form CA 00 01, with limits not less than those specified in the Special Provisions. Business automobile liability insurance coverage shall be provided for all owned, non-owned and hired vehicles.

4.5 Builder's Risk Insurance

4.5.1 CONTRACTOR shall provide builder's risk insurance upon the Work, including completed work and work in progress and including coverage for collapse, earthquake and flood. Coverage shall also include transit, off-site storage, permission to occupy, waiver of subrogation, testing, extra expense and boiler & machinery.

4.5.2 Such insurance shall have a deductible clause not to exceed ~~\$10,000~~\$50,000, except for earthquake and high hazard flood. The deductible for earthquake and high

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hazard flood shall not exceed five (5) percent of the Contract Price.

4.5.3 The builder's risk insurance shall include as named insureds: DISTRICT, CONTRACTOR and all subcontractors.

4.6 CONTRACTOR's Responsibility Not Limited by Insurance

Nothing contained in these insurance requirements is to be construed as limiting the extent of the liability of CONTRACTOR or CONTRACTOR's sureties.

4.7 Maintaining Insurance

The maintenance of proper insurance in conformity with the Contract Documents is a material element of this Agreement. If at any time during the life of the Agreement, including the guarantee period, or any extension, CONTRACTOR fails to maintain the required insurance in full force and effect, the Work shall be discontinued immediately and all payments due or that become due to CONTRACTOR shall be withheld until notice is received by DISTRICT that the required insurance has been restored to full force and effect and that the premiums have been paid for a period satisfactory to DISTRICT. Failure to maintain or renew coverage or to provide evidence of renewal upon request of DISTRICT may be treated by DISTRICT as a material breach of contract.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 5 DISTRICT'S RESPONSIBILITIES

5.1 Authority of DISTRICT's Representative

5.1.1 DISTRICT's Representatives will decide any and all questions that may arise as to the interpretation of the Plans and specifications, and will have the authority to disapprove or reject materials and equipment furnished and work performed which, in their opinion, is not in accordance with the Contract Documents. DISTRICT's Representatives may be represented at the Work by their authorized assistants.

5.1.2 The administration, inspection, assistance, and actions by DISTRICT's Representatives and the Engineer/Architect shall not be construed as supervisory control of the Work nor of means and methods employed by CONTRACTOR and shall not relieve CONTRACTOR from their responsibilities and obligations under the Agreement. CONTRACTOR shall not request nor require DISTRICT's Representative or the Engineer/Architect to undertake such supervisory control nor to administrate, to supervise, to inspect, to assist, or to act in a manner so as to relieve CONTRACTOR of their responsibilities and obligations. The presence of DISTRICT's Representatives shall in no way relieve CONTRACTOR of their obligation to conform to local, DISTRICT, state, and federal regulations.

5.2 Plans and Supplemental Drawings

The Plans shall be supplemented by such drawings as are necessary to define the Work adequately. All such drawings delivered to CONTRACTOR by DISTRICT's Representatives shall be deemed written instructions to CONTRACTOR.

5.3 Land and Rights-of-Way

5.3.1 Unless otherwise specified in the Special Provisions, DISTRICT shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way, easements, entry and encroachment permits for access, and such other lands that are designated for the use of CONTRACTOR. Lands and easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by DISTRICT, unless otherwise provided in the Contract Documents. CONTRACTOR shall make their own arrangements and pay all expenses for additional area required by them outside the limits of DISTRICT's lands and rights-of-way.

5.3.2 Work in rights-of-way shall be done in accordance with the requirements of the permit, easement or license issued by the public agency or owner in whose right-of-way the work is located in addition to conforming to the Contract Documents.

5.4 DISTRICT Communications and Access

5.4.1 DISTRICT shall generally issue all communications to CONTRACTOR through DISTRICT's Representatives.

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5.4.2 All approvals and comments by DISTRICT will be in writing.

5.4.3 DISTRICT may allow its consultants, agents, attorneys, employees, and others access to site. CONTRACTOR shall cooperate with DISTRICT in allowing such access.

5.5 Surveying

DISTRICT will provide one (1) set of construction survey staking as described in the General Requirements. Work shall not proceed until construction staking has been provided. The cost of restaking after initial staking shall be charged to CONTRACTOR.

5.6 DISTRICT May Stop the Work

5.6.1 If the Work is defective and CONTRACTOR has been notified by DISTRICT, or if CONTRACTOR fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, or if CONTRACTOR fails to supply sufficient supervisory personnel or skilled workers or suitable materials or equipment, or if CONTRACTOR has failed to correct any breach or violation of this Agreement after written notification, or if CONTRACTOR fails to obtain, maintain, or renew insurance required by the Contract Documents in a form acceptable to DISTRICT, or if any insurance company CONTRACTOR has obtained insurance from declares bankruptcy or is declared bankrupt, DISTRICT may order CONTRACTOR to stop the Work, or any portion of the Work, until the cause for the order has been eliminated. This right of DISTRICT to stop the Work shall not give rise to any duty on the part of DISTRICT to exercise this right for the benefit of CONTRACTOR or any other party and shall not be construed as an assumption by DISTRICT of supervisory control of the Work. CONTRACTOR shall bear all direct, indirect, and consequential costs of the order to stop the Work (including but not limited to fees and charges of engineers, attorneys, and other professionals, any additional expenses incurred by DISTRICT due to delays to others performing work under a separate contract with DISTRICT, and other obligations), and CONTRACTOR shall further bear the responsibility for maintaining the Progress Schedule and shall not be entitled to any extension of the Contract Time or increase in the Contract Price.

5.6.2 If such costs exceed the unpaid balance of the Contract Price, CONTRACTOR shall pay the difference to DISTRICT promptly upon demand; on failure of CONTRACTOR to pay, the surety shall pay on demand by DISTRICT. Any portion of such difference not paid by CONTRACTOR or surety within thirty (30) days following the mailing of a demand for such costs by DISTRICT shall earn interest at the maximum rate authorized by California law.

5.7 DISTRICT'S Right to Carry Out the Work

5.7.1 If CONTRACTOR defaults or fails within a reasonable time after written notice by DISTRICT to correct defective or nonconforming work or to remove and replace

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rejected work as required by DISTRICT, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents (including any requirements of the Progress Schedule), DISTRICT may, after seven (7) days written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising their rights under this paragraph, DISTRICT shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, DISTRICT may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work and suspend CONTRACTOR'S related services, take possession of CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and incorporate into the Work all materials and equipment stored at the site or for which DISTRICT has paid CONTRACTOR but is stored elsewhere. CONTRACTOR shall allow DISTRICT, DISTRICT's Representatives, agents and employees access to the site as may be necessary to enable DISTRICT to exercise their rights under this paragraph. All direct and indirect costs of DISTRICT in exercising such rights shall be charged against CONTRACTOR in an amount documented by DISTRICT, and a Change Order shall be issued incorporating the necessary revisions to the Contract Documents and a reduction in Contract Price.

5.7.2 If such costs exceed the unpaid balance of the Contract Price, CONTRACTOR shall pay the difference to DISTRICT promptly upon demand; on failure of CONTRACTOR to pay, the surety shall pay on demand by DISTRICT. Any portion of such difference not paid by CONTRACTOR or surety within thirty (30) days following the mailing of a demand for such costs by DISTRICT shall earn interest at the maximum rate authorized by California law.

5.8 DISTRICT Removal of Personnel

DISTRICT shall be able to object to and require CONTRACTOR to remove any person employed by CONTRACTOR (or their Subcontractors) in or about the execution or maintenance of the Work, who in the opinion of DISTRICT misconducts themselves or is incompetent or negligent in the proper performance of their duties or whose employment is considered by DISTRICT to be undesirable. Any person so removed shall be at CONTRACTOR'S sole expense and shall not be allowed on the site for any reason without DISTRICT'S written consent.

5.9 Use of Completed Portions

5.9.1 When the Work or any portion of it is sufficiently complete to be used or placed into service, DISTRICT shall have the right upon written notification to CONTRACTOR to utilize such portions of the Work and to place the operable portions into service and to operate same.

5.9.2 Upon said notice and commencement of use or operation by DISTRICT, CONTRACTOR shall be relieved of the duty of maintaining the portions so used or placed into operation; provided, however, that nothing in this Article shall be construed as relieving CONTRACTOR of the full responsibility for completing the Work in its entirety, for making good defective work and materials, for protecting the Work from

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damage, and for being responsible for damage and for the Work as set forth in the general provisions and other Contract Documents, nor shall such action by DISTRICT be deemed completion and acceptance, and such action shall not relieve CONTRACTOR, their sureties or insurers of the provisions in the Contract Documents on guarantees, indemnity, and CONTRACTOR'S insurance.

END OF ARTICLE

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ARTICLE 6 CONTRACTOR'S RESPONSIBILITIES

6.1 Observing Laws and Ordinances

6.1.1 CONTRACTOR shall keep themselves fully informed of all laws, ordinances, and regulations that in any manner affect those engaged or employed on the Work or the materials used in the Work or that in any way affect the conduct of the Work, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. If any discrepancy or inconsistency is discovered in the Contract Documents in relation to any such law, ordinance, regulation, order or decree, CONTRACTOR shall immediately report the same to DISTRICT's Representative in writing and cease operations on the affected part of the Work until receipt of instructions from DISTRICT's Representative as provided in paragraph 6.14.

6.1.2 CONTRACTOR shall at all times observe and comply with and shall cause all their agents, employees, suppliers, and Subcontractors to observe and comply with all laws, ordinances, regulations, orders, and decrees, and shall hold harmless, indemnify, and defend DISTRICT, DISTRICT's Representative, the Engineer/Architect, and their consultants, and each of their officers, directors, employees, and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree by CONTRACTOR, their employees, their agents, their Subcontractors, or their suppliers.

6.1.3 CONTRACTOR shall post on the jobsite all notices as prescribed by law or regulation.

6.2 Permits and Licenses

6.2.1 Certain permits are required for construction of the Work. These permits are hereby made a part of these Contract Documents, and all requirements shall be met solely and fully by CONTRACTOR. All costs incurred due to the permit requirements shall be included in the various bid items and no additional allowance will be made for them.

6.2.2 CONTRACTOR shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the Work, except as provided in the Special Provisions.

6.2.3 Copies of any permits and licenses, including current CONTRACTOR's licenses from the State of California, shall be provided to DISTRICT upon request.

6.3 Patents

CONTRACTOR shall assume all costs arising from the use of patented materials, equipment, devices, or processes used on or incorporated in the Work and shall hold harmless, indemnify and defend DISTRICT, DISTRICT's Representative, the Engineer/Architect, and their consultants, and each of their officers, employees, and

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agents from all lawsuits or actions of every nature for or on account of the use of any patented materials, equipment, devices, or processes, and all costs of defense and attorneys' fees incurred therein by any of the foregoing indemnified persons.

6.4 Safety

6.4.1 In accordance with generally accepted construction practices, CONTRACTOR shall be solely and completely responsible for conditions of the site, including safety of all persons and property during performance of the Work, and CONTRACTOR shall fully comply with all local, state and federal laws, rules, regulations, and orders relating to the safety of the public and workers.

6.4.2 The right of the Engineer/Architect or DISTRICT's Representative to conduct construction review or inspection of CONTRACTOR'S performance is not intended to include review or inspection of the adequacy of CONTRACTOR'S safety measures in, on, or near the site.

6.5 Emergencies

In emergencies affecting the safety or protection of persons or the Work or property at or adjacent to the site, CONTRACTOR, without special instruction or authorization from the Engineer/Architect or DISTRICT, is obligated to act to prevent threatened damage, injury, or loss. CONTRACTOR shall give DISTRICT prompt written notice if CONTRACTOR believes that any significant changes in the Work have resulted because of the action taken in response to an emergency. If the emergency was not due to the fault or negligence of CONTRACTOR, and DISTRICT determines that changes are required, DISTRICT shall authorize the changes by Change Order or Change Request.

6.6 Concerning Subcontractors, Suppliers, and Others

6.6.1 CONTRACTOR is prohibited from performing any of the Work with a Subcontractor who is ineligible to perform such Work pursuant to Section 1777.1 or 1777.7 of the Labor Code. CONTRACTOR agrees that in accordance with Public Contract Code Section 6109, a subcontract with an ineligible Subcontractor is void as a matter of law, amounts paid to the Subcontractor shall be returned to DISTRICT, and CONTRACTOR is responsible for paying wages of the Subcontractor's employees if the Subcontractor is allowed to perform any part of the Work.

6.6.2 CONTRACTOR shall not award work to Subcontractors in excess of fifty (50) percent of the Contract Price without prior written approval of DISTRICT. Except as provided by law, CONTRACTOR shall not employ any Subcontractor, supplier, or other person or organization (including but not limited to those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom DISTRICT may have reasonable objection.

6.6.3 CONTRACTOR shall give prompt written notice to DISTRICT as to the identity

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and qualifications of any Subcontractor, supplier, or other person or organization to whom CONTRACTOR intends to award work, and of CONTRACTOR'S intent to remove or replace a Subcontractor, supplier, or other person.

6.6.4 CONTRACTOR shall be fully responsible for all acts and omissions of their Subcontractors and suppliers and of persons and organizations directly or indirectly employed by them. Nothing in the Contract Documents shall create any contractual relationship between DISTRICT or the Engineer/Architect and any Subcontractor or supplier or other person or organization having a subagreement with CONTRACTOR nor shall it create any obligation on the part of DISTRICT or the Engineer/Architect to pay or to see to the payment due any Subcontractor, supplier, or other person or organization, except as may otherwise be required by law. DISTRICT may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR on account of specific work done. No Subcontractor, supplier, or other person or organization shall be a third party beneficiary of this Agreement.

6.6.5 The divisions and sections of any specifications and the identifications of any drawings shall not control CONTRACTOR in dividing the work among Subcontractors or suppliers or delineating work to be performed by any specific trade. The divisions of the specifications are complementary, and anything mentioned or shown in a division of the specifications or in a specific trade drawing shall be of like effect as if shown in all divisions of the specifications and in all drawings.

6.6.6 All work performed for CONTRACTOR by a Subcontractor, supplier or other person or organization will be in accordance with an appropriate subagreement between CONTRACTOR and the Subcontractor, supplier, or other person or organization which specifically binds the Subcontractor, supplier, or other person or organization to the applicable terms and conditions of the Contract Documents for the benefit of DISTRICT.

6.6.7 If requested in writing by DISTRICT, CONTRACTOR shall deliver to DISTRICT a copy of each subagreement with a Subcontractor, supplier, or other person or organization performing a part of the work within seven (7) days of DISTRICT'S request.

6.7 Assignment

6.7.1 The performance of the Agreement may not be assigned, except upon the written consent of DISTRICT. Consent will not be given to any proposed assignment that would relieve the original CONTRACTOR or their surety of their responsibilities under the Agreement nor will DISTRICT consent to any assignment of a part of the Work.

6.7.2 Upon obtaining a prior written consent of DISTRICT, CONTRACTOR may assign monies due or to become due them under the Agreement, to the extent permitted by law, but any assignment of monies shall be subject to all proper setoffs in favor of DISTRICT and to all deductions provided for in the Contract Documents, and

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particularly all monies withheld, whether assigned or not, shall be subject to being applied by DISTRICT for the completion of the Work in the event that CONTRACTOR should be in default.

6.7.3 No assignment of this Agreement will be approved unless it shall contain a provision that the funds to be paid to the assignee under the assignment are subject to a prior lien for services rendered or materials supplied for performance of the Work in favor of all persons, firms, or corporations rendering such services or supplying such materials, and that DISTRICT may withhold funds due until the Work is completed to DISTRICT'S satisfaction.

6.8 Time for Completion and Forfeiture Due to Delay

6.8.1 CONTRACTOR shall complete the Work and any designated portion of the Work within the Contract Time(s) set forth in the Agreement. Contract Time(s) shall include any early occupancy milestones and limited duration work set forth in the Agreement. Time is of the essence of this Agreement.

6.8.2 If CONTRACTOR fails to attain Substantial Completion of the Work or specified part of the Work within the applicable Contract Time, including any extensions granted by DISTRICT, CONTRACTOR is in default. In accordance with Government Code 53069.85, CONTRACTOR agrees to forfeit and pay DISTRICT the amount per day set forth in the Agreement for each and every day of delay. It is agreed that the specified daily sum is to be paid, not as a penalty, but as liquidated damages to compensate DISTRICT for increased administrative and engineering costs and other tangible and intangible costs. Such damages may, at DISTRICT'S option, be deducted from monies held by them which are payable to CONTRACTOR.

6.8.3 No forfeiture due to delay shall be made because of any delays in the completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of CONTRACTOR (including but not restricted to acts of God or of the public enemy, acts of the government, acts of DISTRICT, or acts of another contractor in the performance of a contract with DISTRICT, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather or delays caused by the failure of DISTRICT or the owner of a utility to provide for removal or relocation of main or trunk line facilities not indicated in the plans or specifications with reasonable accuracy). Except as provided for in Article 14, any such delays shall not entitle CONTRACTOR to any additional compensation, and the sole remedy of CONTRACTOR shall be an extension of time obtained in accordance with Article 14.

6.9 Prevailing Wage

6.9.1 Under the provisions of the California Labor Code, the Director of the Department of Industrial Relations has determined the prevailing rate of wages for the locality in which the Work is to be performed and DISTRICT has adopted said prevailing rate of wages. A copy of the prevailing wage rates can be found on-line with the State of

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California at <http://www.dir.ca.gov/dlsr/pwd>. A copy of such prevailing wage rates shall be posted on the jobsite by CONTRACTOR.

6.9.2 CONTRACTOR shall comply with Labor Code Section 1775. In accordance with said Section 1775, CONTRACTOR shall forfeit as a penalty to DISTRICT, up to two hundred dollars (\$200), as determined by the Labor Commissioner, for each calendar day or portion of a day for each worker paid less than the stipulated prevailing rates for such work or craft in which such worker is employed for any work done under the contract by them or, except as provided by the Labor Code, by any Subcontractor under them in violation of the provisions of the Labor Code, and in particular, Labor Code Sections 1770 to 1780, inclusive. In addition to said penalty and pursuant to Section 1775, the difference between the stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion of a day for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by CONTRACTOR.

6.9.3 CONTRACTOR shall forfeit as a penalty to DISTRICT \$25 for each worker employed in the execution of the Work by CONTRACTOR or any Subcontractor under them for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one calendar week in violation of the provisions of the Labor Code, in particular, Section 1810 to Section 1815 thereof, inclusive, except that work performed by employees of CONTRACTOR in excess of eight (8) hours per day and forty (40) hours during any one (1) week shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one half (1 1/2) times the basic rate of pay as provided in said Section 1815.

6.9.4 Qualification to engage in the performance of any of the Work requires that CONTRACTOR and Subcontractors maintain their current registration to perform public work pursuant to Labor Code Section 1725.5.

6.9.5 The Work is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

6.10 Apprentices

6.10.1 CONTRACTOR and any Subcontractor under them shall comply with the requirements of Sections 1777.5 and 1777.6 of the Labor Code in the employment of apprentices.

6.10.2 Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Department of Industrial Relations.

6.10.3 Willful violations of Section 1777.5 will result in forfeiture of one hundred dollars (\$100) for each calendar day of noncompliance, or up to three hundred dollars (\$300) for each calendar day of noncompliance for second and subsequent violations

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within a three-year period that result in apprenticeship training not being provided as required by the Labor Code, and may also result in debarment sanctions in the case of violations, as determined by the Labor Commissioner pursuant to Section 1777.7. Section 1777.7 also imposes requirements that, if not observed by CONTRACTOR, will result in CONTRACTOR's liability for Subcontractor violations of Section 1777.5.

6.11 Payroll Records

CONTRACTOR and each of their Subcontractors shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by them in connection with the Work. The records shall be in a format prescribed by the Labor Commissioner. The records may consist of printouts of payroll data maintained as computer records, if the printouts are in a format prescribed by the Labor Commissioner and are verified as required under this paragraph. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating that (1) the information contained in the payroll record is true and correct, and (2) CONTRACTOR (or the Subcontractor, as the case may be) has complied with the requirements of Sections 1771, 1811 and 1815 of the Labor Code for any of the work performed by their employees. The payroll records shall be submitted monthly to DISTRICT and directly to the Labor Commissioner and shall be available for inspection at all reasonable hours at the principal office of CONTRACTOR (or the Subcontractor, as the case may be) to the employee or their authorized representative on request, to the Division of Labor Standards Enforcement on request, and the public, provided that requests by the public must be made through DISTRICT or the Division of Labor Standards Enforcement in accordance with the requirements of Labor Code Section 1776. Copies shall be provided to the requesting entity within ten (10) days after receipt of a written request. Any copy of a payroll record made available to the public or any public agency by DISTRICT shall be marked or obliterated to prevent disclosure of individual workers' ~~names, addresses and~~ social security numbers. CONTRACTOR shall inform DISTRICT of the location address of payroll records of CONTRACTOR and each Subcontractor and notify DISTRICT of a change in any such location within five (5) working days. In the event CONTRACTOR or a subcontractor fails to comply with the above-specified 10-day period, CONTRACTOR or the subcontractor shall forfeit as a penalty to DISTRICT one hundred dollars (\$100) for each calendar day or portion of a day for each worker until strict compliance is effectuated. CONTRACTOR is not subject to a penalty under this paragraph due to the failure of a subcontractor to comply with this paragraph.

6.12 Underground Service Alert (USA) Contact Prior to Excavation

CONTRACTOR, except in an emergency, shall contact the appropriate regional notification center at least two (2) working days prior to commencing any excavation if the excavation will be conducted in an area that is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by DISTRICT, and obtain an inquiry identification number from that

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notification center. No excavation shall begin unless such an inquiry identification number has been assigned to CONTRACTOR or any Subcontractor of CONTRACTOR and DISTRICT has been given the identification number by CONTRACTOR.

6.13 Conformity with Contract Documents and Allowable Deviations

6.13.1 The work shall conform to the lines, grades, dimensions, tolerances, and material and equipment requirements shown on the plans or set forth in the specifications. Although measurement, sampling, and testing may be considered evidence as to such conformity, DISTRICT's Representatives shall be the sole judge as to whether the work or materials deviate from the plans and specifications, and their decision as to any allowable deviations shall be final.

6.13.2 Except as otherwise provided in the Contract Documents, all materials and equipment shall be installed, used and cleaned in accordance with the manufacturer's and supplier's instructions.

6.13.3 If specific lines, grades, and dimensions are not shown on plans, those furnished by DISTRICT's Representatives shall govern.

6.14 Errors or Discrepancies Noted by CONTRACTOR

6.14.1 If CONTRACTOR, either before commencing work or in the course of the Work, finds any discrepancy between the specifications and the Plans or between either of them and the physical conditions at the site of the Work or finds any error or omission in any of the plans or in any survey, they shall promptly notify DISTRICT's Representatives of the discrepancy, error, or omission. If CONTRACTOR observes that any plans or specifications are at variance with any applicable law, ordinance, regulation, order, or decree, they shall promptly notify DISTRICT's Representatives in writing of the conflict.

6.14.2 DISTRICT's Representatives, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to CONTRACTOR. Until such instructions are given, any work done by CONTRACTOR after the discovery of the error, discrepancy, or conflict which is directly or indirectly affected by the error, discrepancy, or conflict will be at their own risk. If CONTRACTOR believes that a defect or insufficiency exists in the design, materials, or specified method and fails to promptly notify DISTRICT's Representative in writing, CONTRACTOR waives any right to assert that defect or insufficiency in design, materials, or specified method at any later date in any legal, equitable, or arbitration proceeding against DISTRICT or related settlement conference.

6.15 Disputed Work

If there is a disagreement between DISTRICT and CONTRACTOR as to the interpretation of the Contract Documents and the disagreement becomes a dispute between DISTRICT and CONTRACTOR as to liability for work required, DISTRICT may direct CONTRACTOR to proceed with the work and accept payment in an amount

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as later agreed upon or as may be fixed in a court of law. In proceeding under protest, CONTRACTOR shall keep accurate records of their costs on the disputed portion of the Work and shall submit each day to DISTRICT's Representative a daily summary of the hours and classification of equipment and labor used on the disputed portion of the Work, as well as a summary of any materials or any specialized services that are used. Failure to submit this information to DISTRICT in the required manner shall result in any discrepancy between DISTRICT'S and CONTRACTOR'S records being resolved in favor of DISTRICT'S records. CONTRACTOR is cautioned that when proceeding under the provisions of this paragraph, they are not working on an approved "time and material" basis.

6.16 Public Convenience and Safety

6.16.1 CONTRACTOR shall so conduct their operations as to offer the least possible obstruction and inconvenience to the public, and they shall have under construction no greater length or amount of work than can be prosecuted properly with due regard to the convenience and safety of the public.

6.16.2 Convenient access to driveways, houses, and buildings along the line of work shall be maintained and temporary crossings shall be provided and maintained in good condition. Not more than one crossing or intersecting street or road shall be closed at any one time.

6.16.3 CONTRACTOR shall provide and maintain such fences, barriers, directional signs, lights, and flaggers as are necessary to give adequate warning to the public at all times of any dangerous conditions to be encountered as a result of the Work and to give directions to the public.

6.17 Responsibility for Loss, Damage, or Injuries

CONTRACTOR shall be responsible for all claims, demands, or liability from any cause arising out of or resulting from or in connection with the performance of the Work, subject to limitations set forth in paragraph 19.2. Such responsibility shall extend to claims, demands, or liability for loss, damage, or injuries occurring after completion of the Work as well as during the progress of the Work.

6.18 CONTRACTOR'S Responsibility for the Work

6.18.1 Until Final Acceptance, CONTRACTOR shall have the responsible charge and care of the Work and of the materials to be used (including materials for which they have received partial payment or materials which have been furnished by DISTRICT) and shall bear the risk of injury, loss, or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the Work.

6.18.2 CONTRACTOR shall rebuild, repair, restore, and make good all injuries, losses,

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or damages to any portion of the Work or the materials occasioned by any cause before its completion and acceptance and shall bear the related expenses. Where necessary to protect the Work or materials from damage, CONTRACTOR shall at their expense provide suitable drainage and erect such temporary structures as are necessary to protect the Work or materials from damage. The suspension of the Work for any cause whatever shall not relieve CONTRACTOR of their responsibility for the Work and materials as specified. If ordered by DISTRICT's Representative, CONTRACTOR shall at their expense properly store materials that have been partially paid for by DISTRICT or that have been furnished by DISTRICT. Such storage by CONTRACTOR shall be on behalf of DISTRICT, and DISTRICT shall at all times be entitled to the possession of such materials, and CONTRACTOR shall promptly return the same to the site for the Work when requested. CONTRACTOR shall not dispose of any of the materials so stored, except on written authorization from DISTRICT.

6.18.3 Notwithstanding the foregoing provisions of this Article, CONTRACTOR shall not be responsible for the cost of repairing or restoring damage to the Work, which damage is determined to have been proximately caused by the Act of God, in excess of five (5) percent of the contracted amount, provided the Work is built in accordance with accepted and applicable building standards and the approved Plans and specifications.

6.18.4 "Acts of God" shall include earthquakes in excess of a magnitude of 3.5 on the Richter Scale and tidal waves.

6.19 Preservation of Property

6.19.1 CONTRACTOR shall exercise due care to avoid injury to existing improvements or facilities, utilities, adjacent property, and trees and shrubbery that are not to be removed.

6.19.2 All trees and shrubbery that are not to be removed, and pole lines, fences, signs, survey markers and monuments, buildings and structures, conduits, pipelines under or above ground, sewer and waterlines, all highway or street facilities, and any other improvements or facilities within or adjacent to the Work shall be protected from injury or damage, and CONTRACTOR shall provide and install suitable safeguards to protect such objects from injury or damage. If such objects are injured or damaged by reason of CONTRACTOR'S operation, they shall be replaced or restored at CONTRACTOR'S expense to a condition as good as when CONTRACTOR entered upon the Work or as good as required by the Plans and specifications if any such objects are a part of the Work being performed.

6.19.3 All trees and plants, whether within or without the limits of work, shall be protected in place unless specified otherwise. Protection shall consist of adequate means to prevent tree trunks from being scarred or damaged and branches and limbs from being damaged or broken by CONTRACTOR'S operations. Trees encountered by CONTRACTOR shall not be removed without the consent of DISTRICT's Representative, unless specified otherwise.

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6.19.4 The fact that any pipe or other underground facility is not shown on the plans shall not relieve CONTRACTOR of their responsibility under this Article.

6.19.5 In addition to any requirements imposed by law, CONTRACTOR shall shore up, brace, underpin, and protect as may be necessary, all foundations and other parts of all existing structures adjacent to and adjoining the site of the Work which are in any way affected by the excavations or other operations connected with the performance of the Work. Whenever any notice is required to be given by DISTRICT or CONTRACTOR to any adjacent or adjoining landowner or other party before commencement of any work, such notice shall be given by CONTRACTOR.

6.20 Taxes

6.20.1. CONTRACTOR shall pay all sales, consumer, use, and other taxes.

6.20.2 NOTICE OF TAXABLE POSSESSORY INTEREST - The terms of this Agreement may result in the creation of a possessory interest. If such a possessory interest is vested in CONTRACTOR, CONTRACTOR may be subjected to the payment of property taxes levied on such interest.

6.21 CONTRACTOR Not Agent of DISTRICT

CONTRACTOR shall perform all work under this Agreement as an independent CONTRACTOR and shall not be considered an agent of DISTRICT, nor shall CONTRACTOR's Subcontractors or suppliers or employees be considered agents of DISTRICT. CONTRACTOR and not DISTRICT shall be solely responsible to any and all Subcontractors and suppliers and all those employed by them for their costs, expenses, fees and profits, if any, in performing the Work.

6.22 Inspection and Audit

6.22.1 DISTRICT shall have access to the Work and the right to audit all of CONTRACTOR's books, ledgers, records, correspondence, instructions, drawings, receipts, vouchers, memoranda, and other documents pertinent to all cost and pricing data used by CONTRACTOR in the determination of CONTRACTOR's bid for the Work, in pricing, negotiating, or costing work covered by a Change Order or claim, or otherwise relating to the Work, and CONTRACTOR shall preserve and make available at CONTRACTOR's office at all reasonable times all such records for a period of five (5) years after Final Progress Payment. In addition, pursuant to California Government Code Section 8546.7, this contract, and CONTRACTOR and DISTRICT as the contracting parties, are subject to the examination and audit of the California State Auditor, at the request of DISTRICT or as part of any audit of DISTRICT, for a period of three years after the final payment under the contract.

6.22.2 In the event of termination, the records relating to the Work, or part of it, affected

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by such termination shall be made available for five (5) years after any resulting final termination settlement. Records pertaining to claims, litigation, or the settlement of claims arising under or relating to the performance of the Work shall be made available until the disposition of such appeals, litigation, or claims.

6.23 Responsibility for Connecting to Existing Service and Utilities

At all points where the work constructed by CONTRACTOR connects to existing utilities and services, the actual work of making the necessary connection to the existing service or utility shall be arranged for by CONTRACTOR at no additional expense to DISTRICT (unless specifically indicated otherwise). Services and utilities included under (but not limited to) this responsibility are roads, ditches, electrical, sewer, mechanical utilities, water, fencing, and items of a similar nature. Connections shall be made at a time that will result in the least possible interference with existing services.

6.24 Cutting and Fitting

CONTRACTOR shall be responsible for all cutting of masonry and other materials, and all fitting, drilling, or patching which may be necessary to complete the Work or to make its several parts fit together properly, whether or not such work is expressly specified in the Contract Documents.

END OF ARTICLE

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ARTICLE 7 COMMENCEMENT, PROSECUTION, AND COMPLETION OF THE WORK

7.1 Commencement of the Contract Time; Notice of Award; Notice to Proceed

7.1.1 Contract Time shall be measured from the date of commencement stated in the Notice of Award.

7.1.2 CONTRACTOR shall start to perform field work and order materials after the date set forth in the Notice to Proceed and shall occupy the site no later than fourteen (14) days after that date. No work shall be done at the site or materials ordered prior to the date of Notice to Proceed unless authorized by DISTRICT in a Change Order.

7.2 Work to be Done

The work to be done consists of furnishing all labor, materials, methods or processes, implements, tools, and machinery that are required for or appurtenant to the construction and completion of the entire project designated in the Agreement, and which are necessary to leave the grounds in a neat condition. Any work not shown in the Plans or specifications but necessary to complete the Work according to laws and regulations shall be performed by CONTRACTOR as if in the Contract Documents.

7.3 Preconstruction Conference

Prior to commencement of work at the site, a conference will be held for review of the schedules, to establish procedures for handling Shop Drawings and other submittals and for processing Progress Payment Requests, and to establish a clear understanding among the parties as to the Work. CONTRACTOR shall attend this conference and shall require any or all of its Subcontractors and suppliers, as DISTRICT directs, to attend the conference.

7.4 Project Meetings

CONTRACTOR along with appropriate Subcontractors shall attend all project meetings requested by DISTRICT for the purpose of discussing and resolving matters concerning the various elements of the Work. Representatives attending such meetings shall have the authority to make binding decisions regarding any subject consistent with the stated purpose of the meeting. If CONTRACTOR and/or their Subcontractors fail to attend a meeting, DISTRICT may deduct from progress payments or retainage the costs of DISTRICT, the Engineer/Architect, and other representatives attending the meeting.

7.5 Continuing the Work

CONTRACTOR shall carry on the Work and maintain the Progress Schedule during all disputes or disagreements with DISTRICT. No work shall be delayed or postponed pending resolution of any disputes or disagreements, except as CONTRACTOR and

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DISTRICT may otherwise agree in writing. Suspension of the Work by CONTRACTOR during any dispute or disagreement with DISTRICT shall entitle DISTRICT to terminate the CONTRACT for breach, except as otherwise provided in Article 17.

7.6 Progress of the Work

If DISTRICT determines that CONTRACTOR is failing to maintain progress of the Work in accordance with the Progress Schedules and Contract Documents, the CONTRACTOR shall take steps as may be necessary to improve their progress, and DISTRICT may require them to increase their work force, or hours, or days of work, or the amount of construction plant or all of them, and to submit to DISTRICT for approval such supplementary schedules as may be deemed necessary to demonstrate the manner in which the required progress will be regained and maintained, all without additional cost to DISTRICT.

7.7 Working Hours

Except in connection with the safety or protection of persons or the Work or property at or adjacent to the site, and except as otherwise indicated in the Special Provisions, all work at the site shall be performed during normal working hours, and CONTRACTOR will not permit overtime work or the performance of work on Saturdays, Sundays, or any holidays without DISTRICT's written consent. Normal working hours shall be defined as the period occurring between the hours beginning at 7:00 a.m. and ending at 3:30 p.m., exclusive of Saturdays, Sundays, or holidays.

7.7.1 Work during other than normal working hours may be scheduled by CONTRACTOR if written permission is obtained from DISTRICT and CONTRACTOR agrees to pay all additional costs incurred by DISTRICT for inspection and administration of the overtime work.

7.8 Supervision

7.8.1 CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention and applying such skills and expertise as may be necessary to perform the work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for all means, methods, techniques, sequences and procedures of construction, and for providing adequate safety precautions, coordinating all portions of the Work under the Contract Documents, and for enforcement of order and cooperation among CONTRACTOR's employees and all Subcontractors and suppliers and others having a subagreement for a part of the Work. CONTRACTOR shall be responsible to see that the finished work complies accurately with the Contract Documents.

7.8.2 CONTRACTOR shall provide competent supervision of the Work. Unless personally present on the premises where the work is done, CONTRACTOR shall designate an authorized representative who shall have the authority to represent and act for CONTRACTOR, and any written or verbal directions or requests of DISTRICT's

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Representative delivered to such representative shall have the same force and effect as if delivered to CONTRACTOR. This authorized representative shall be present at the site of the Work at all times while work is actually in progress. When work is not in progress and during periods when work is suspended, CONTRACTOR shall make arrangements acceptable to DISTRICT's Representative for any emergency work that may be required.

7.8.3 Whenever CONTRACTOR or their authorized representative is not present on any particular part of the Work where the DISTRICT's Representative desires to give directions, these shall be received and obeyed by the superintendent or foreman who may have charge of the particular work in reference to which the directions are given.

7.8.4 The superintendent and similar authorized representatives of any Subcontractor, supplier, or other person or organization shall attend all meetings pertaining to the Work, as requested by DISTRICT or the Engineer/Architect.

7.9 Quality of Materials and Equipment; Substitutions

7.9.1 All equipment, materials, and supplies to be incorporated in the Work shall be new, unless otherwise specified. When the quality of a material, process, or article is not specifically set forth in the Plans and specifications, the best available quality of the material, process, or article shall be provided.

7.9.2 Whenever materials or equipment are specified or described in the Plans or specifications by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, the name shall be deemed to be followed by the words "or approved equivalent" and materials or equipment of other suppliers may be accepted by DISTRICT if sufficient information is submitted by CONTRACTOR to allow DISTRICT to determine that the material or equipment proposed is equivalent to that named. Approval of proposed equivalent materials or equipment is at the sole discretion of DISTRICT.

7.9.3 Requests for review of substitute items of material and equipment will not be accepted by DISTRICT from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to DISTRICT for acceptance of the substitute, certifying that the proposed item will perform adequately the functions called for by the general design, be similar and of equal substance to that specified, and be suited to the same use and capable of performing the same function as that specified. The application shall state whether or not acceptance of the substitute for use in the Work will require a change in the drawings or specifications to adapt the design to the substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair, and replacement service shall be indicated. The application shall also contain an itemized estimate of all increases or decreases in (1) the cost of, or the time required to perform any part of the

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Work, and the corresponding adjustments in the Contract Price and the Contract Time resulting directly or indirectly from evaluation and acceptance of the proposed substitute, including, but not as a way of limitation, costs and delays associated with redesign, or claims of other CONTRACTORS affected by the resulting substitute; and (2) increases or decreases in operating, maintenance, repair, replacement, or spare part costs, all of which will be considered by DISTRICT in evaluating the proposed substitute. DISTRICT may require CONTRACTOR to furnish, at CONTRACTOR's expense, additional data about the proposed substitute.

7.9.4 DISTRICT shall be the sole judge of acceptability, and no substitute shall be ordered or installed without DISTRICT's prior written acceptance.

7.9.5 CONTRACTOR assumes sole responsibility for verifying that the proposed substitute items are in accordance with the requirements of the Contract Documents, and that the dimensions, arrangement, design and construction details, and all other features of substitute items are suitable for their intended purpose.

7.9.6 In the event that a substitute item differs materially from the specified item of material or equipment, and said difference was not expressly identified in CONTRACTOR's request for the substitution, or the incorporation of the substitute into the Work results in a change(s) to the Work or in the function or general design of the project, which was not expressly identified in CONTRACTOR's request for the substitution, DISTRICT may require the removal and replacement of the substitute at CONTRACTOR's sole expense.

7.9.7 CONTRACTOR may submit data substantiating requests for substitutions of equivalent items at any time after notice of award. Under no circumstances shall CONTRACTOR be entitled to an increase in Contract Time as a result of the submission or review of a substitution request.

7.10 Storage of Materials and Equipment

7.10.1 All materials for use in the Work shall be stored by CONTRACTOR in such a manner as to prevent damage from exposure to the elements, contamination by foreign materials, or from any other cause. CONTRACTOR shall be entirely responsible for damage or loss by weather or other causes.

7.10.2 DISTRICT may require special methods for storage of materials and equipment. In addition, the storage of excavated material may require CONTRACTOR to make special arrangements. The specific requirements, if needed, are covered in the Special Provisions.

7.11 Advance Notification

7.11.1 At least forty eight (48) hours prior to start of construction and prior to any operations involving existing DISTRICT facilities, CONTRACTOR shall notify the

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DISTRICT's Representative.

7.11.2 It will be CONTRACTOR'S responsibility to determine and notify those agencies requiring advance notification for inspection or other purposes before beginning construction in any jurisdictional area of any agency. A minimum of forty eight (48) hours notice shall be given to those agencies before construction in the area unless specific advanced times and requirements are stated in these Contract Documents or related permits.

7.11.3 At least one (1) week before the start of construction, notification shall be given to police and fire departments under whose jurisdiction the Work lies, giving the expected starting and completion dates and the name and telephone number of the CONTRACTOR'S field representative who may be contacted on a twenty four (24) hour basis in the event of a condition requiring immediate correction.

7.12 Construction Power and Water

7.12.1 Unless otherwise specified in the General Requirements, CONTRACTOR shall make arrangements for developing water sources and shall supply all labor and equipment to collect, load, transport, and apply water as necessary for compaction of materials, concrete construction operations, testing, dust control, and other construction use.

7.12.2 Unless otherwise specified in the General Requirements, CONTRACTOR shall provide for the purchase of power or provide portable power for the Work. If necessary, the extension of utility lines shall be provided to the point of usage.

7.13 Disposal of Excess Excavated Soil Materials

Unless otherwise specified in the General Requirements, excess excavated soil material shall be removed and disposed of by CONTRACTOR off the project site at CONTRACTOR'S expense. Excess soil material shall be disposed of in accordance with local regulations.

7.14 Dust and Smoke Control

7.14.1 No fuel shall be used nor shall any operation be conducted that will emit into the atmosphere any smoke that is equal to Ringelmann No. 2 or darker.

7.14.2 No operation shall be conducted that will emit into the atmosphere any flying dust or dirt that is noticeable or that might constitute a nuisance.

7.14.3 Dust control operations shall be performed to prevent construction operations from producing dust in amounts harmful to, or causing a nuisance to, persons living nearby or occupying buildings in the vicinity of the Work. The use of water to clean streets will not be permitted in areas where earth shoulders will result in muddy public

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streets; other mechanical cleaning will be required in such areas.

7.14.4 Dry materials and rubbish shall be wet down to prevent blowing dust.

Excavated material leaving the site, or material being imported, shall be covered or wet down to prevent excessive dust from being created.

7.14.5 Construction activity that produces dust-causing disturbances shall be halted if winds exceed local code limits for construction activity.

7.15 Noise Control

Contractor shall abide by local noise ordinances.

7.16 Excavation Plans for Worker Protection

7.16.1 CONTRACTOR shall submit to DISTRICT for acceptance, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of any trench or trenches five (5) feet or more in depth. The plan shall be prepared specifically for the work by a registered civil or structural engineer who is licensed by the State of California. The plan shall be in an original format, not a reproduced copy, and shall include the engineer's original signature and seal. As a part of the plan, a note shall be included stating that the registered civil or structural engineer certifies that the plan complies with the CAL OSHA Construction Safety Orders, or stating that the registered civil or structural engineer certifies that the plan is not less effective than the shoring, bracing, sloping, or other provisions of the safety orders.

7.16.2 All shoring submittals shall include surcharge loads from adjacent embankments, construction loads and spoil bank. The submittal shall indicate the minimum horizontal distance from the top of trench to the edge of all surcharge loads for all cases of shoring and side slopes.

7.16.3 The detailed plan showing the design of shoring, etc., which CONTRACTOR is required to submit to DISTRICT for acceptance in advance of excavation, will not be accepted if the plan is based on subsurface conditions which are more favorable than those revealed by the investigations made by DISTRICT or the Engineer/Architect or their consultants; nor will the plan be accepted if it is based on soils related design criteria that are less restrictive than the criteria set forth in the report on the investigations of subsurface conditions.

7.16.4 Nothing contained in this paragraph shall be construed as relieving CONTRACTOR of the full responsibility for providing shoring, bracing, sloping, or other provisions which are adequate for worker protection.

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7.17 Construction Dewatering, Erosion Control, Stormwater Discharge

7.17.1 If dewatering is necessary, CONTRACTOR must comply with all requirements for permitting, establishing, operating, and monitoring a construction dewatering program. This program must meet all requirements of the California Regional Water Quality Control Board (Santa Ana Region), and the latest revision of the NPDES permit for General Dewatering and the Monitoring and Reporting Requirements specified by the Regional Water Quality Control Board for the permit the contract is operating under. Should the CONTRACTOR not be able to obtain a Monitoring and Reporting Program under the General Dewatering Permit in a timely manner, CONTRACTOR may obtain written approval to operate under DISTRICT'S Permit and Monitoring and Reporting Program.

7.17.2 CONTRACTOR shall employ methods and approved devices for the control of erosion and stormwater runoff within the Work area. All work must meet the current requirements for permitting, reporting, and implementing best management practices of the California Regional Water Quality Control Board (Santa Ana Region).

7.18 Record Documents

CONTRACTOR shall maintain in a safe place at the site one (1) record copy of all drawings, specifications, Change Orders, correspondence, field test records, CONTRACTOR'S daily reports and construction photographs, and written interpretations and clarifications in good order and annotated to show all changes made during construction. These record documents together with all approved samples and Shop Drawings will be available to DISTRICT for reference. CONTRACTOR will be required to review with DISTRICT the status of all record documents in connection with DISTRICT'S evaluation of a Progress Payment Request. Failure to maintain current record documents shall be just cause to withhold payments for undocumented work. Upon completion of the Work, these record documents, samples, and Shop Drawings will be delivered to DISTRICT.

7.19 Substantial Completion

7.19.1 When CONTRACTOR considers that the entire Work or specified part of the Work has progressed to the point where it is substantially complete, CONTRACTOR shall, in writing to DISTRICT, certify that the entire Work is substantially complete, submit to DISTRICT record documents required by the contract, and request that DISTRICT issue a Certificate of Substantial Completion. Within a reasonable time, CONTRACTOR and DISTRICT shall make an inspection of the Work to determine the status of completion. If DISTRICT does not consider the Work, or any specified part of the Work, substantially complete, DISTRICT will notify CONTRACTOR of the reasons in writing. CONTRACTOR shall then accomplish the requisite work and then recertify that the entire Work, or any specified part, is substantially complete. If DISTRICT considers the Work, or specified part, substantially complete, DISTRICT will prepare and deliver to CONTRACTOR a certificate which shall fix the date of Substantial

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Completion. There shall be attached to the certificate a list of items (which should be minor in scope and nature) to be completed or corrected before Final Progress Payment. Until Final Progress Payment or use by DISTRICT, CONTRACTOR shall continue to be responsible for maintaining the Work.

7.19.2 DISTRICT shall have the right to exclude CONTRACTOR from the Work, or specified part, after the date of Substantial Completion, but DISTRICT will allow CONTRACTOR reasonable access to complete or correct items on the list attached to the Certificate of Substantial Completion.

7.19.3 Unless otherwise provided in the Contract Documents, the Work, or a specified part of the Work, is not substantially complete until after successful completion of all specified preoperational, startup and demonstration tests, which shall serve as evidence that the Work, or a specified part of it, can be utilized for the purposes for which it is intended.

7.20 Final Inspection

Upon written notice from CONTRACTOR that the minor items described in the list attached to the Certificate of Substantial Completion have been completed, DISTRICT will make a final inspection with CONTRACTOR and will notify CONTRACTOR in writing of the results of this inspection as to the items of the Work that appear to be incomplete, nonconforming, or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

7.21 CONTRACTOR's Continuing Obligation

CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither any progress or Final Progress Payment by DISTRICT, nor the issuance of a Certificate of Substantial Completion, nor any payment by DISTRICT to CONTRACTOR nor any partial utilization by DISTRICT nor any act of acceptance by DISTRICT nor any failure to do so, nor any review and approval of the Shop Drawings or samples, nor any review of a Progress Schedule, nor any statement of acceptability by DISTRICT, nor any correction of defective work by DISTRICT will constitute an acceptance of work not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents except as provided in a waiver of claims at the time of making and acceptance of the Final Progress Payment.

7.22 Cleaning During Construction and Final Cleanup

7.22.1 During execution of work, the site, adjacent properties, and public areas shall be cleaned daily and waste materials, debris, and rubbish disposed of to assure that buildings, grounds, and public properties are maintained free from accumulations of waste materials and rubbish. CONTRACTOR shall provide containers for collection and disposal of waste materials, debris, and rubbish.

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7.22.2 Grease, dust, dirt, stains, labels, fingerprints, and other foreign materials shall be removed from exposed and semi-exposed surfaces. Marred surfaces shall be repaired, patched, and touched up to specified finish to match adjacent surfaces.

7.22.3 Upon completion and before making application for Substantial Completion or final inspection of the Work, CONTRACTOR shall clean all right ways, streets, borrow pits, and all other grounds occupied by them in connection with the Work of all rubbish, excess materials, temporary structures, and equipment. All parts of the Work and ground occupied by CONTRACTOR shall be left in a neat and presentable condition and returned to original grade unless otherwise specified.

7.23 Operation and Maintenance Manuals

Six (6) copies of all manufacturer's operation and maintenance manuals and data pertinent to equipment supplied shall be submitted. The six (6) manuals are in addition to the individual operation and maintenance manuals submitted with each final Shop Drawing submittal. The material shall be prepared and organized in three ring binders with divider tabs and labels, shall include a table of contents, and the following:

- 7.23.1.1 list of equipment furnished for project with name, address, and telephone number of vendor
- 7.23.1.2 list of serial numbers of equipment furnished
- 7.23.1.3 a copy of Shop Drawings for mechanical, electrical, and instrument equipment in final form
- 7.23.1.4 manufacturer's operation and maintenance instructions, preventative maintenance instructions, parts lists, and recommended spare parts
- 7.23.1.5 tabulation of motor nameplate horsepower, nameplate current, field measured current, overload relay setting, and catalog number
- 7.23.1.6 list of fuses, lamps, seals, and other expendable equipment and devices. Specify size, type, and ordering description. List name, address, and telephone number of vendor
- 7.23.1.7 for equipment systems, recommended step-by-step procedures for starting, operating, stopping, and trouble-shooting the equipment under all modes of operation
- 7.23.2 Drafts of the manuals shall be submitted 30 days prior to startup and testing. Manuals shall be submitted in their final form prior to Final Progress Payment application.

END OF ARTICLE

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ARTICLE 8 SITE CONDITIONS

8.1 Removal of Obstructions

CONTRACTOR shall remove and dispose of all structures, debris, or other obstructions of any character necessary to accommodate the Work. Where such obstructions consist of improvements not required by law to be removed by the owner, all such improvements shall be removed, maintained, and permanently replaced at CONTRACTOR'S expense.

8.2 Location of Utilities and Structures

DISTRICT has endeavored to determine the existence of utilities and structures at the site of the Work from the records of the owners of known utilities in the vicinity of the Work. Unless otherwise noted, the positions of these utilities as derived from such records are shown on the plans. Unless otherwise noted, no excavations were made to verify the locations shown for underground utilities. The service connections to these utilities are not shown on the plans. It shall be the responsibility of CONTRACTOR to determine the exact location of all service connections. CONTRACTOR shall make their own investigations, including exploratory excavations, to determine the locations and type of service connections, prior to commencing work which could result in damage to such utilities. If CONTRACTOR while performing work discovers utility facilities not identified by DISTRICT or in a different position than identified in the Contract Documents, they shall immediately notify DISTRICT and responsible utility in writing.

8.3 Main or Trunk Line Facilities

8.3.1. Pursuant to Section 4215 of the Government Code, DISTRICT has the responsibility to identify, with reasonable accuracy, main or trunk line facilities on the plans and specifications. In the event that main or trunk line utility facilities are not identified with reasonable accuracy in the Contract Documents, DISTRICT shall assume the responsibility for their timely removal, relocation, or protection.

8.3.2. No later than two (2) days in advance of the work, CONTRACTOR shall expose all known main and trunk line crossings in the immediate area in order to provide for grade and alignment adjustments, if necessary.

8.3.3 CONTRACTOR shall be compensated by DISTRICT for the costs of locating, repairing damage not due to the failure of CONTRACTOR to exercise reasonable care, and removing, relocating, protecting, or temporarily maintaining such main or trunk line utility facilities not indicated with reasonable accuracy in the plans and specifications, and for equipment in the project necessarily idled during such work. In this regard, CONTRACTOR will be required to perform such work in accordance with Article 14. Alternatively, DISTRICT may make changes in the alignment and grade of the Work to obviate the necessity to remove, relocate, or temporarily maintain the utility, or DISTRICT may make arrangements with the owner of the utility for such work to be done at no cost to CONTRACTOR.

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8.4 Service Connections

When it is necessary to remove, relocate or temporarily maintain a service connection, the cost of which is not required to be borne by the owner, CONTRACTOR shall bear all expenses incidental to work on the service connection. The work on the service connection shall be done in a manner satisfactory to the owner; it being understood that the owner of the service connection has the option of doing such work with their own forces or permitting the work to be done by CONTRACTOR

8.5 Other Utilities or Structures

8.5.1 When it is necessary to remove, relocate, or temporarily maintain a utility or structure which is in the position shown on the plans, the cost of which is not required to be borne by the owner, CONTRACTOR shall bear all expenses incidental to the work on the utility. The work on the utility shall be done in a manner satisfactory to the owner; it being understood that the owner of the utility has the option of doing such Work with their own forces or permitting the work to be done by CONTRACTOR.

8.5.2 When it is necessary to remove, relocate, or temporarily maintain a utility or structure which is not shown on the plans or is in a position different from that shown on the plans and were it in the position shown on the plans would not need to be removed, relocated, or temporarily maintained, and the cost of which is not required to be borne by the owner, DISTRICT will make arrangements with the owner of the utility for such work to be done at no cost to CONTRACTOR, or will require CONTRACTOR to do such work or will make changes in the alignment and grade of the work to obviate the necessity to remove, relocate, or temporarily maintain the utility. All work or changes in alignment and grade will be ordered in accordance with Article 13.

8.5.3 No representations are made that the obligations to move or temporarily maintain any utility or structure and to pay the associated cost is or is not required to be borne by the owner of such utility, and it shall be the responsibility of CONTRACTOR to investigate to find out whether or not this cost is required to be borne by the owner of the utility.

8.5.4 The right is reserved for governmental agencies and owners of utilities to enter at any time upon any street, alley, right way, or easement for the purpose of making changes in their property made necessary by the Work and for the purpose of maintaining and making repairs to their property.

8.6 Asbestos, PCBs, Petroleum, Hazardous Waste or Radioactive Material

8.6.1 If asbestos or materials containing asbestos, petroleum or petroleum products, hazardous material or waste, or radioactive material is generated, uncovered, or revealed and is not shown or indicated in Contract Documents to be within the scope of the work, CONTRACTOR shall immediately: (i) stop all Work in connection with such hazardous condition and in any area affected thereby (except in an emergency as required by Article

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6.5), and (ii) notify Owner and DISTRICT (and thereafter confirm such notice in writing) of any material that the CONTRACTOR believes may be material that is a hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law. Owner will investigate such material and issue a Change Order if required, in the manner specified in paragraph 8.8.2, unless and to the extent paragraph 8.6.2 applies. CONTRACTOR shall not be required to resume Work in connection with such hazardous condition or in any such affected area until after Owner has obtained any required permits related thereto and delivered to CONTRACTOR special written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (ii) specifying any special conditions under which such Work may be resumed safely.

8.6.2 If after receipt of such special written notice CONTRACTOR does not agree to resume such work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then DISTRICT may order such portion of the Work that is in connection with such hazardous condition or in such affected area to be deleted from the Work.

8.7 Hazardous Materials Brought to the Site by CONTRACTOR

8.7.1 DISTRICT shall not be responsible for any hazardous material, asbestos, PCB's, petroleum, hazardous waste, or radioactive materials brought to the site by CONTRACTOR, Subcontractors, suppliers, or anyone else for whom CONTRACTOR is responsible.

8.8 Differing Physical Conditions

8.8.1 The CONTRACTOR shall promptly notify the DISTRICT of the following work site conditions (hereinafter called differing physical conditions), in writing, upon their discovery and before they are disturbed:

1. Subsurface or latent physical conditions differing from those indicated by information about the site made available to Bidders prior to the deadline for submitting bids;
2. Unknown physical conditions of any unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character being performed.

8.8.2 DISTRICT will promptly investigate conditions which appear to be differing physical conditions. If the DISTRICT determines that the conditions are differing physical conditions and will materially affect costs, a Change Order will be issued adjusting the compensation for such portion of the Work in accordance with Article 14. If the DISTRICT determines that conditions are differing physical conditions and they will materially affect performance time, the CONTRACTOR, upon submitting a written

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request, will be granted an extension of time subject to the provisions of Article 14.

8.8.3 If the DISTRICT determines that the conditions do not justify an adjustment in compensation or extension of time, the CONTRACTOR will be notified in writing. This notice will also advise the CONTRACTOR of its obligation to notify the DISTRICT in writing if the CONTRACTOR disagrees.

8.8.4 Should the CONTRACTOR disagree with the decision, it may submit a written notice of potential claim to the DISTRICT before commencing the disputed work. In the event of such a dispute, the CONTRACTOR shall not be excused from any scheduled completion date provided by the Contract and shall proceed with all work to be performed under the Contract. However, the CONTRACTOR shall retain any and all rights provided by either Contract or law which pertain to the resolution of disputes and protests between the contracting parties. The CONTRACTOR shall proceed as provided in Articles 6 and 14.

8.8.5 The CONTRACTOR'S failure to give notice of differing physical conditions promptly upon their discovery and before they are disturbed shall constitute a waiver of all claims in connection therewith.

END OF ARTICLE

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ARTICLE 9 SHOP DRAWINGS AND SAMPLES

9.1 General

9.1.1 CONTRACTOR shall submit Shop Drawings to DISTRICT for review and approval in accordance with the schedule of Shop Drawing submissions. All submittals shall be identified as DISTRICT may require. For each Shop Drawing, CONTRACTOR shall include an electronic file, in PDF format, and ~~six-two (62)~~ paper copies, except ~~eight three (83)~~ paper copies shall be submitted for Shop Drawings related to electrical and instrumentation, unless otherwise specified in the Special Provisions. The data shown on the Shop Drawings shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show DISTRICT the materials and equipment CONTRACTOR proposes to provide and to enable DISTRICT to review the information for the limited purposes required by this Article.

9.1.2 CONTRACTOR shall also submit samples to DISTRICT for review and approval in accordance with the accepted schedule of Shop Drawing submissions. Each sample shall be identified clearly as to material, supplier, pertinent data such as catalog numbers and the use for which intended and otherwise as DISTRICT may require to enable DISTRICT to review the submittal for the limited purposes required by this Article. At least two of each sample shall be submitted unless otherwise specified in the Special Provisions.

9.1.3 Within twenty-one (21) days after receipt of Shop Drawings or sample submittals, DISTRICT will return an electronic file, in PDF format, to CONTRACTOR with a review action and remarks, as necessary. ~~three (3) paper copies of Shop Drawings, or in the case of samples, copies of transmittal documents, to CONTRACTOR with comments. If CONTRACTOR requires more than three (3) paper copies of Shop Drawings, then the number of Shop Drawings submitted by CONTRACTOR shall be incremented by the number of additional copies required by CONTRACTOR.~~

9.1.4 CONTRACTOR shall provide to DISTRICT, three (3) paper copies of approved Shop Drawings within seven (7) days of their approval.

9.2 Shop Drawings and Sample Submission Procedures

9.2.1 Before submitting each Shop Drawing or sample, CONTRACTOR shall have determined and verified:

- 9.2.1.1. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar information
- 9.2.1.2 all materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work

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9.2.1.3 all information relative to CONTRACTOR'S means, methods, techniques, sequences and procedures of construction, and safety precautions and programs

9.2.2 CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

9.2.3 The DISTRICT'S Shop Drawing Transmittal Form, a copy of which is included in the appendix, shall accompany all Shop Drawings and samples. Shop Drawings and samples shall be returned "un-reviewed", if not accompanied by a transmittal form or if the form is not completed in full.

9.2.4 At the time of each submission, CONTRACTOR shall give DISTRICT specific written notice of such variations, if any, that the Shop Drawing or sample submitted may have from the requirements of the Contract Documents. Such notice shall be in a written communication separate from the submittal. CONTRACTOR shall also cause a specific notation of each such variation to be made on each Shop Drawing and sample submitted to DISTRICT for review and approval.

9.2.5 DISTRICT will review and approve or disapprove or return as incomplete Shop Drawings and samples. DISTRICT'S review and approval or disapproval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed project as a functioning whole as indicated by the Contract Documents. DISTRICT'S review and approval or disapproval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by DISTRICT, and shall return the required number of corrected paper copies and corrected electronic files, in PDF format, of Shop Drawings and submit as required new samples for review and approval. Corrected Shop Drawings shall retain the number assigned to the Shop Drawing upon the first submittal and shall be given an R (for revision) and the number of revision of that Shop Drawing. Example: Submittal No. 15-R1 (Submittal No. 15, Revision 1). CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by DISTRICT on previous submittals.

9.2.6 DISTRICT'S review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called DISTRICT'S attention to each such variation at the time of submission as required by subparagraph 9.2.4 and DISTRICT has given written approval of each such variation by a specific written notation incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by DISTRICT relieve CONTRACTOR from responsibility for complying

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with the requirements of this Article.

9.2.7 No portion of the Work requiring a Shop Drawing submittal shall be started until the submittal has been reviewed by DISTRICT and returned to CONTRACTOR with a notation indicating that resubmittal is not required.

9.2.8 DISTRICT will review the initial submittal of Shop Drawings and sample submissions and one resubmittal without cost to CONTRACTOR. The cost of review of multiple resubmittals will be charged to CONTRACTOR.

END OF ARTICLE

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ARTICLE 10 SCHEDULES

10.1 General

10.1.1. CONTRACTOR shall prepare and submit to DISTRICT for review, a Progress Schedule showing the order in which CONTRACTOR proposes to carry out the Work, the dates on which the several salient features (including procurement of materials and equipment) will start and the contemplated dates for completing same. The Progress Schedule shall show the order in which CONTRACTOR proposes to accomplish the installation workdays by craft for each activity. The Progress Schedule shall be an amplification of, and shall concur with the interim and final completion requirements of the Contract Documents. The schedule shall show all of the work to be completed for each milestone and for partial utilization. The schedule breakdown shall be by divisions of work subdivided into areas or facilities in sufficient detail so that DISTRICT may readily evaluate CONTRACTOR'S progress at any given time during the course of the Work and shall be so arranged and itemized as to be of assistance to DISTRICT in the evaluation of CONTRACTOR'S Progress Payment Requests.

10.1.2 CONTRACTOR shall prepare and submit to DISTRICT for review, a schedule of Shop Drawing and sample submissions. This schedule shall consist of a list of the submittals to be made over the course of the project; anticipated and actual dates of submittal and return for both initial and resubmissions; and the anticipated dates of submittal approval so as not to delay the project. The schedule shall allow for review and processing time by DISTRICT.

10.1.3 CONTRACTOR shall prepare and submit to DISTRICT for review with the initial acceptable schedule, labor estimates contemplated or required by the schedule in a form acceptable to DISTRICT. Updated plan and actual expended labor estimate charts shall be submitted with each monthly or interim schedule submission when requested by DISTRICT.

10.2 Submittal of Schedules

10.2.1 The form and level of detail of the schedule shall be as detailed in the Special Provisions or as approved by DISTRICT. At a minimum, a schedule diagram shall be submitted that is neatly lettered and legibly drawn to a time scale.

10.2.2 CONTRACTOR shall enter on the schedules the actual progress on a monthly basis, or at such intervals as requested by DISTRICT, and shall deliver to DISTRICT three (3) copies of the schedule documentation.

10.2.3 Schedules are to be submitted as a part of each Progress Payment Request. Failure to submit an updated schedule and any corrections or clarifications that have been requested and accepted by DISTRICT may result in the withholding of a portion of the progress payment until CONTRACTOR submits schedule or updated schedule that is acceptable to DISTRICT. The amount withheld shall be in the amount of \$5,000 or 30

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percent of the progress payment amount, whichever is greater. If additional updated schedules are requested by DISTRICT they are to be provided within seven (7) days of the date of request, but do not constitute permission to submit additional Progress Payment Requests.

10.3 Review of Schedules

10.3.1 DISTRICT shall review schedule submittals. If, in the opinion of DISTRICT, the schedule (1) does not accurately reflect CONTRACTOR'S actual or anticipated progress or work plan or, (2) cannot be used to effectively evaluate CONTRACTOR'S progress or, (3) is not in compliance with this Article and other appropriate sections of the Contract Documents, it will be returned to CONTRACTOR for corrections or clarification. CONTRACTOR shall make the necessary corrections and resubmit or shall respond in detail to DISTRICT'S comments and request that the submittal be accepted without modification. Failure by CONTRACTOR to provide corrections or clarifications to schedule submittals as directed by DISTRICT shall constitute reason to withhold approval of any Progress Payment Request.

10.3.2 DISTRICT'S review of schedule submittals shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has, in writing, called DISTRICT'S attention to each such variation at the time of submission and DISTRICT has given written approval of each such variation; nor shall any approval by DISTRICT or DISTRICT'S Representative relieve CONTRACTOR from responsibility for compliance with any provision of the Contract Documents, except as specifically approved with respect to such variation.

10.4 Time of Performance

The Contract Time establishes the period and duration in which DISTRICT expects the Work to be performed. Any schedule that shows completion ahead of the Contract Time shall include additional supporting data to explain the basis of the shorter time for performance. DISTRICT may (1) notify CONTRACTOR that the Contract Time is being adjusted by Change Order to reflect the shorter schedule duration or (2) elect not to adjust the Contract Time and allow the use by all parties of the increased schedule flexibility that the shorter schedule represents. In any case, DISTRICT shall not be responsible for any costs to CONTRACTOR, actual or anticipated, resulting from delay of any cause that prevents completion of any part or all of the Work unless it prevents CONTRACTOR from meeting the interim or final completion requirements of the Agreement; nor shall DISTRICT be obligated to incur any additional costs for administration or inspection of accelerated work.

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10.5 Changes

It is understood that revisions to the schedule are inherent in the nature of construction. This may require that changes be made in the schedule to reflect the dynamic nature of the design and the work. Actions by DISTRICT, CONTRACTOR, or the Engineer/Architect that may affect the progress of any part or all of the work shall make use of the flexibility in the Progress Schedule, often expressed as schedule float or slack time, or as may result from changes in the sequencing of individual work items, to limit the impact of such actions. The concept of shared schedule flexibility shall not be limited by the inclusion of restraints, logic, or imposed dates into the schedule that cannot be reasonably justified. Excessive use of schedule flexibility by any party is contrary to this sharing concept. Excessive use of schedule flexibility by CONTRACTOR may be cause for denial of a request for an extension in Contract Time.

10.6 As-Built Schedule

After Substantial Completion, but prior to Final Progress Payment, CONTRACTOR shall submit an as built schedule. The schedule shall reflect (1) all as built critical paths, (2) all contract activities, including all added activities, with their actual start and finish dates, (3) the actual number of separate days during which work was performed on each activity, and (4) the actual number of installation workdays by craft that were required to complete each activity.

END OF ARTICLE

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ARTICLE 11 PAYMENTS TO CONTRACTOR

11.1 Schedule of Values

11.1.1 The schedule of values shall include quantities and unit prices aggregating the Contract Price, and shall subdivide the Work into component parts in sufficient detail to serve as the basis for Progress Payment Requests during the course of the Work. CONTRACTOR shall confirm in writing at the time of submission, that an appropriate amount of direct costs, supplemental costs, administrative expenses, contingencies, and profit have been allocated to each item of work.

11.1.2 If the bid form contains a bid item price for mobilization, the schedule of values shall distribute these costs such that no more than fifty (50) percent of the bid item amount shall be paid as mobilization in the first Progress Payment Request and at least five (5) percent of the bid item amount shall be paid in the Final Progress Payment Request as demobilization with the remainder paid in equal installments over the duration of the Work.

11.2 Measurement of Quantities for Unit Price Work

11.2.1 Unless otherwise specified, quantities of work shall be determined from measurements or dimensions in horizontal planes. However, linear quantities of pipe shall be determined by measurement along longitudinal axis.

11.2.2 Unless otherwise specified, volumetric quantities shall be the product of the mean area of vertical or horizontal sections and the intervening horizontal or vertical dimension.

11.2.3 Materials and items of work which are to be paid for on basis of measurement shall be measured in accordance with methods stipulated in the particular sections involved.

11.2.4 When payment is to be made on the basis of weight, the weighing shall be done on certified platform scales or, when approved by the DISTRICT, on a completely automated weighing and recording system. The CONTRACTOR shall furnish the DISTRICT with duplicate licensed weighmaster's certificates showing actual net weights. The DISTRICT will accept the certificates as evidence of weights delivered.

11.2.5 Units of measurement shall be in U.S. Customary Units, in accordance with General Provisions, Article 1.

11.3 Payment for Lump Sum and Unit Price Work

11.3.1 Work items for which quantities are indicated in the Schedule of Work Items (Bid) as "Lump Sum", or "L.S." shall be paid for at the price indicated in the Bid. Such

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payment shall be full compensation for the items of work and all work appurtenant thereto.

11.3.2 Unit price item quantities listed in the Schedule of Work Items (Bid) shall not govern final payment. Payment to CONTRACTOR shall be made only for actual quantities of Contract items constructed in accordance with the Contract Documents. If actual quantities differ from the quantities given in the Schedule of Work Items, payment shall be subject to the provisions of Paragraph 14.9 Unit Price Work, Article 14, Changes in Contract Price or Contract Time.

11.3.3 The unit and lump sum prices to be paid shall be full compensation for the items of work and all appurtenant work, including furnishing all materials, labor, equipment, tools, and incidentals.

11.3.4 Payment will not be made for materials wasted or disposed of in a manner not called for under the Contract Documents. This includes rejected material not unloaded from vehicles, material rejected after it has been placed, and material placed outside of plan lines. No compensation will be allowed for disposing of rejected or excess materials.

11.4 Progress Payments

11.4.1 DISTRICT shall, on or before the fifth day of each calendar month after actual construction work is started, except in case of the Final Progress Payment, cause an estimate in writing to be made by DISTRICT's Representative of the value of the total amount of the work completed by CONTRACTOR through the twenty fifth day of the preceding month. In estimating such value, DISTRICT's Representative may take into consideration, along with other facts and conditions deemed by them to be proper, the ratio of the difficulty or cost of the work done to the probable difficulty or cost of the work remaining to be done. This estimate will be provided to CONTRACTOR for inclusion into the Progress Payment Request to be submitted by CONTRACTOR.

11.4.2 DISTRICT shall retain five (5) percent of such estimated value as part security for fulfillment of the Agreement by CONTRACTOR and shall pay to CONTRACTOR the balance of such estimated value after deducting all previous payments and all sums to be kept or retained under the terms of the Agreement. Nothing herein shall require payment of a disputed amount or limit DISTRICT's ability to withhold an amount in respect of a disputed amount as provided for in Section 7107 of the Public Contract Code.

11.4.3 DISTRICT may condition payment of any undisputed contract amount, including Final Progress Payment and retention release, upon the release by CONTRACTOR of all claims related to that amount. Disputed claims of a stated amount may be expressly excluded by CONTRACTOR from such a release.

11.4.4 The following is a summary of the provisions of article 1.7 of Chapter 1 of Part 3 of Division 2 (commencing with Section 20104.50) of the Public Contract Code,

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regarding progress payments, and is subject to the actual provisions of that statute.

11.4.5 If DISTRICT fails to make any progress payment within thirty (30) days after receipt of an undisputed and properly submitted Progress Payment Request from CONTRACTOR, DISTRICT shall pay interest to CONTRACTOR equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure.

11.4.6 Upon receipt of a Progress Payment Request, DISTRICT shall act in accordance with both of the following:

11.4.6.1 Each payment request shall be reviewed by DISTRICT as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request.

11.4.6.2 Any payment request determined not to be a proper payment request suitable for payment shall be returned to CONTRACTOR as soon as practicable, but not later than seven (7) days after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing why the payment request is not proper.

11.4.7 The number of days available to DISTRICT to make a payment without incurring interest pursuant to subparagraph 11.4.5 shall be reduced by the number of days by which DISTRICT exceeds the seven (7) day return requirement set forth in subparagraph 11.4.6.

11.4.8 For purposes of this Article, a "progress payment" includes all payments due CONTRACTOR, except that portion of the final payment designated under this Agreement as retention.

11.4.9 If a higher retention amount is specified in the Notice Inviting Sealed Proposals, the higher amount shall supersede and replace all references in the Contract Documents indicating a five (5) percent retention amount.

11.5 Materials and Equipment Onsite

11.5.1 If unused materials and equipment are included in a Progress Payment Request by CONTRACTOR, DISTRICT may in its sole discretion determine whether to include payment for the unused materials and equipment or any portion thereof in the Progress Payment. If a determination is made to include any such materials or equipment, DISTRICT will determine and pay their value provided (i) such materials and equipment have been delivered on the ground and suitably stored at the site, or have been stored offsite subject to the control of DISTRICT, in a manner acceptable to DISTRICT and (ii) the timing of the advance delivery is reasonably necessary for the incorporation of the materials and equipment into the Work in accordance with the Progress Schedule approved under paragraph 10.1. When payment to CONTRACTOR is made for stored material and equipment, CONTRACTOR shall submit invoices marked "paid" by the supplier with the Progress Payment Request following such payment to CONTRACTOR

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documenting that CONTRACTOR has paid for said materials and equipment or the previously paid amount shall be deducted from remaining payments or retainage for stored materials and equipment not so properly documented.

11.5.2 If payment is requested on the basis of materials and equipment not incorporated into the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Progress Payment Request shall be accompanied by such data, satisfactory to DISTRICT, as will establish DISTRICT'S title to the material and equipment and protect DISTRICT'S interest, including applicable insurance.

11.5.3 In no event shall the quantity of material and equipment submitted for payment be in excess of the actual final installed quantity. Payments made according to this paragraph shall be no greater than ninety-five (95) percent of the unit price for the item to be installed regardless of the actual cost.

11.6 Final Progress Payment and Retention Release

11.6.1 When the Work, including minor items identified on the certificate of Substantial Completion, delivery of record documents, O&M Manuals, and final cleanup, has been completed to the satisfaction of DISTRICT'S Representatives, they shall make a final estimate of the total amount of work done and the amount to be paid under the terms of the Agreement. If DISTRICT finds the Work has been completed according to the Contract Documents, they shall accept the Work and pay the entire sum so found to be due after deducting all previous payments and all amounts to be retained under the provisions of the Agreement. All prior progress estimates and payments shall be subject to correction in the final estimate and payment. The retention payment shall not be due and payable until the expiration of thirty-five (35) days from the date of recording by the County a Notice of Completion of the Work by DISTRICT.

11.6.2 It is agreed by CONTRACTOR that no certificate given or payment made under the Agreement shall be conclusive evidence of performance of the Work and no payment shall be construed to be an acceptance of any defective work or improper materials.

11.6.3 CONTRACTOR further agrees that the payment of the final amount due under the Agreement shall release DISTRICT, DISTRICT'S Representative, the Engineer/Architect, and each of their officers, directors, employees, and agents from any and all claims or liability arising out of the Work related to the amount paid.

11.7 DISTRICT'S Right to Withhold and Use Certain Amounts

11.7.1 In addition to the amount that DISTRICT may retain in accordance with paragraph 11.4, DISTRICT may withhold a sufficient amount from any payment otherwise due to CONTRACTOR as in their judgment may be necessary to cover:

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11.7.1.1 payments which may be past due and payable for just claims against CONTRACTOR or any Subcontractors for labor or materials furnished in or about the performance of the Work

11.7.1.2 estimated or actual costs for correcting defective work not remedied

11.7.1.3 amounts claimed by DISTRICT as forfeiture due to delay or other offsets

11.7.2 DISTRICT may apply such withheld amounts to the payment of such claims at their discretion. In so doing, DISTRICT shall be deemed the agent of CONTRACTOR and any payments so made by DISTRICT shall be considered as a payment made under the Agreement by DISTRICT to CONTRACTOR, and DISTRICT shall not be liable to CONTRACTOR for such payment made in good faith. Such payments may be made without prior judicial determination of the claim or claims. DISTRICT will render to CONTRACTOR a proper account of such funds disbursed in behalf of CONTRACTOR.

11.8 Substitution of Securities for Amounts Withheld

11.8.1 Pursuant to Section 22300 of the Public Contract Code, CONTRACTOR may substitute securities for any monies withheld by DISTRICT to ensure performance of the Work. At the request and expense of CONTRACTOR, securities equivalent to the amount withheld shall be deposited with DISTRICT or with a state or federally chartered bank in California as the escrow agent. Such securities shall be released to CONTRACTOR at the same time as amounts retained would be released under paragraph 11.6 upon satisfactory completion of the Work, to the extent such securities have not previously been utilized or are not then being held by DISTRICT or the escrow agent for purposes as provided in this Agreement. Alternately, CONTRACTOR may request, and DISTRICT shall make, payment of retentions earned directly to the escrow agent at the expense of CONTRACTOR as provided in Section 22300 of the Public Contract Code.

11.8.2 If such securities are deposited with DISTRICT, DISTRICT shall determine their value. DISTRICT shall also be entitled in their discretion to sell, redeem, or otherwise convert them or portions thereof to cash in order to apply them to any of the purposes set forth in the Agreement for which amounts may be withheld from CONTRACTOR and used. CONTRACTOR shall furnish such documents as are deemed necessary by DISTRICT to enable DISTRICT to make such sales, redemptions, or conversions.

11.8.3 If the securities are deposited with an escrow agent, CONTRACTOR, escrow agent, and DISTRICT shall execute the form entitled "Escrow Agreement for Security Deposits in Lieu of Retention."

11.8.4 Securities eligible for investment under this paragraph shall be those listed in California Government Code Section 16430 or bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by CONTRACTOR and DISTRICT.

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11.8.5 CONTRACTOR shall be the beneficial owner of any securities substituted for monies withheld and shall receive any accrued interest.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 12 OTHER WORK ONSITE

12.1 Cooperation with Other Work

12.1.1 Nothing in the Contract Documents shall be interpreted as granting to CONTRACTOR exclusive occupancy of the site of the Work. CONTRACTOR must ascertain to their own satisfaction the scope of the project and the nature of any other contracts that have been or may be awarded by DISTRICT in the construction of the project, to the end that CONTRACTOR may perform the Work in the light of such other contracts, if any.

12.1.2 CONTRACTOR shall schedule their work and cooperate with all other forces working in the area so that all improvements in the project area may be installed in a logical, professional manner.

12.1.3 CONTRACTOR shall take due precautions to protect all improvements placed by others in the vicinity of their operations.

12.1.4 CONTRACTOR shall restrict operations of stockpiling material, equipment, spoil, etc., to within the easements, street right-of-way, or other designated areas as shown on the plans.

12.1.5 CONTRACTOR shall not cause any unnecessary hindrance or delay to any other contractor working in the area.

12.1.6 If through acts or neglect on the part of CONTRACTOR, any other contractor or subcontractor shall suffer loss or damage to their work, CONTRACTOR agrees to settle with such other contractor or subcontractor by agreement or arbitration, if such other contractor or subcontractor will so settle. If such other contractor or subcontractor shall assert any claim against DISTRICT, DISTRICT's Representative, the Engineer/Architect, or their consultants on account of any damage alleged to have been so sustained, DISTRICT shall notify CONTRACTOR who shall hold harmless, indemnify and defend DISTRICT, DISTRICT's Representative, the Engineer/Architect, and their consultants, and each of their officers, directors, employees, and agents against any such claim, including attorney's fees and any other costs incurred by the indemnified parties relative to any such claim, provided, however, that the foregoing shall not relieve any indemnified party from liability to the extent that such liability arises from such parties' active negligence.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 13 CHANGES IN THE WORK

13.1 Changes In the Work

13.1.1. Without invalidating the Agreement and without notice of any surety, DISTRICT may, at any time, by duly executed Change Order or Change Request, order changes consisting of additions, deletions, or other revisions in the Work. Upon receipt of that order, CONTRACTOR shall promptly proceed or continue with the work involved. All such work shall be executed under the applicable conditions of the Contract Documents. If a change under this Article causes an increase or decrease in the Contract Price or any extension or shortening of the Contract Time, DISTRICT will make an adjustment as provided in Article 14.

13.1.2 DISTRICT may present to CONTRACTOR an unsigned proposed Change Request requesting that CONTRACTOR submit a proposal for an adjustment in the Contract Price or the Contract Time for a proposed change in the Work. CONTRACTOR shall submit a proposed adjustment with all supporting data in accordance with Article 14 and the directions given in the Change Request within fourteen (14) days of receipt. The proposed adjustment shall include an itemized estimate of all costs and time for the performance that will result directly or indirectly from the changes described. Estimates shall be presented in sufficient detail and with documentation such that DISTRICT can (1) analyze all material, labor, equipment, subcontract, overhead costs and fees, and any other costs covering all aspects of the work involved in the change, whether such was added, deleted, changed, or impacted; (2) determine that the proposal reflects all impacts on the Work of the proposed change; and (3) establish that all provisions of the Contract Documents have been complied with. Any amount claimed for Subcontractors or suppliers shall be similarly supported.

13.1.3 DISTRICT may give instructions that may result in changes in the Work not involving an adjustment in the Contract Price or the Contract Time when such changes are necessary or expedient to the satisfactory performance and completion of the Work. These instructions shall be binding on CONTRACTOR. CONTRACTOR shall promptly notify DISTRICT when an instruction, direction, interpretation, or determination is received from any source that may cause any change in the Work. Any instruction, direction, interpretation, or determination from DISTRICT, the Engineer/Architect or any other source that causes a change in Contract Price or Contract Time shall be treated as a change under this Article provided that CONTRACTOR gives DISTRICT written notice stating the date, circumstances, specific order, and that CONTRACTOR regards the instruction as a change. Such written notification shall be given to DISTRICT within seven (7) days after receipt and before CONTRACTOR acts on said instruction, direction, interpretation, or determination. No claim, change, or notice by CONTRACTOR will be allowed if asserted after work has commenced on, or if notice is not provided within the stated time limit provided after receipt of the instruction, direction, interpretation, or determination from DISTRICT, the Engineer/Architect, or any other source.

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13.1.4 In making changes under this Article, DISTRICT may give consideration to a notice, proposal, or claim from CONTRACTOR, provided the proposal or claim is presented in accordance with the requirements of this Article and Article 14. CONTRACTOR shall provide DISTRICT any additional or supplemental information requested for purposes of evaluation of CONTRACTOR'S submittal, but such requests by DISTRICT will not constitute acceptance of the notice, proposal, or claim.

13.1.5 It shall be CONTRACTOR's responsibility to notify the surety of any change affecting the general scope of the Work or change in the Contract Price, and the amount of each applicable bond shall be adjusted accordingly. CONTRACTOR shall furnish proof of such adjustment to DISTRICT if requested.

13.2 Change Orders and Change Requests

13.2.1. Contract Price or Contract Time shall be changed only by Change Order. The basis for a subsequent change in Contract Price or Contract Time may also be authorized by Change Request duly executed by DISTRICT.

13.2.2 A Change Order duly executed by DISTRICT and CONTRACTOR provides for an all inclusive settlement for all changes and direct, supplemental, indirect, consequential, and cumulative costs and delays. CONTRACTOR'S signature represents a waiver of any and all rights to file a claim on account of these changes.

13.2.3 DISTRICT may use Change Requests to order changes in the Work, provide the basis for a subsequent adjustment in the Contract Price or the Contract Time, or authorize deviations in the Work. Amounts for work directed by a Change Request shall not be included in Progress Payment Requests until that Change Request has been incorporated into an approved Change Order.

13.2.4 An unsigned Change Request may be used by DISTRICT and CONTRACTOR to negotiate changes in the Work, or in the Contract Price or the Contract Time. A Change Request will be the instrument used by DISTRICT to direct work on a time and material basis as described in Article 14. A Change Order will be issued to incorporate the instruction to proceed with a change on a time and material basis into the Agreement after the actual cost of the work has been determined.

13.3 Waivers

13.3.1 No proposal or claim by CONTRACTOR for an adjustment under this Article shall be allowed for any costs or delay incurred more than seven (7) days before CONTRACTOR gives written notice, as required.

13.3.2 No proposal or claim by CONTRACTOR for an adjustment under this Article shall be allowed if made after the date of Final Progress Payment.

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13.3.3 Additional work performed without authorization of a Change Order or properly executed Change Request will not entitle CONTRACTOR to an increase in Contract Price or an extension of Contract Time, except in the case of an emergency.

13.3.4 CONTRACTOR acknowledges that there may be changes during the course of the Work and acknowledges that the probable effect of changes has been accounted for in the development of the Contract Price and Progress Schedule. Whenever CONTRACTOR makes a proposal or claim such proposal or claim shall include the total amount of adjustment in Contract Price and Contract Time to which the CONTRACTOR believes they are entitled. Except as DISTRICT and CONTRACTOR may otherwise agree in writing, CONTRACTOR shall be deemed to have waived (1) any adjustment to which it might otherwise be entitled where such proposal or claim fails to request such adjustments, (2) any increase in the amount of adjustment additional to that requested in the proposal or claim, and (3) any claim for reimbursement of impact allegedly resulting from the cumulative effect of the number, nature, or extent of any changes.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 14 CHANGES IN CONTRACT PRICE OR CONTRACT TIME

14.1 Changes in Contract Price or Contract Time

The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for all duties, responsibilities, and obligations required to perform the work. All duties, responsibilities, and obligations assigned or undertaken by CONTRACTOR shall be at their expense without change in the Contract Price except as set out below.

14.2 Proposal or Claims Substantiating Adjustments

14.2.1 Supporting data for any proposal or claim by CONTRACTOR shall include at a minimum a complete and detailed breakdown of the proposed price and a detailed explanation of any time impact for the change. The proposed price shall be based on the lowest reasonable cost consistent with sound construction practice. Trade estimating guides (such as NECA guides) shall not be used as the basis for determining labor rates. The breakdown shall include itemizations by trade of all labor with labor hours and hourly rates, equipment with hours of use and rates, and material by item with costs, all in sufficient detail to evaluate the cost of the individual components of the work, including copies of purchase orders, invoices, and subcontract change orders. CONTRACTOR must prove that additional costs arising out of the events were necessarily incurred despite CONTRACTOR's reasonable, prudent, and diligent efforts to prevent such costs.

14.2.2 CONTRACTOR's proposal and claim supporting data shall become due within fourteen (14) days of delivery of the unsigned Change Request or receipt by DISTRICT of written notice of claim (unless DISTRICT allows an additional period), and shall remain firm for a period of not less than sixty (60) days from receipt by DISTRICT of the proposal or supporting data. Any delay in the submittal of a proposal or claim will not justify or constitute basis for an increase in the Contract Price or the Contract Time. Proposals or claims shall be submitted on forms acceptable to DISTRICT.

14.2.3 Failure of CONTRACTOR to comply with the time requirements for written notice or for submittal of supporting data shall be considered a waiver by CONTRACTOR of any claim for an addition to the Contract Price or an adjustment to the Contract Time and CONTRACTOR agrees that no additional compensation or time adjustments are due if the provisions of Article 13 and this Article are not complied with.

14.2.4 Where the change in the Contract Price arises from changes in the schedule of all or part of the Work, or where a change in the Contract Time is requested, the proposal shall be based on a detailed analysis of the Progress Schedule, and shall cover all applicable elements affecting the work involved, including, but not limited to, labor crews, craft levels, equipment utilization, work during other than normal working hours, productivity and production rates, shop drawing preparation, submittal and review, material and equipment delivery, and testing and startup times.

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14.3 Methods for Determining Adjustments in the Contract Price

14.3.1 The methods to be used to determine an adjustment in the Contract Price required by changes ordered or negotiated according to these general provisions, or work covered by a proposal or a claim, also termed the "work involved," are limited to the following:

- 14.3.1.1 Contract Unit Prices: Where the work involved is covered or is of the same character as unit price work, by application of those unit prices to the quantities of the items involved (subject to the provisions covering unit price work). No additional allowances or charges shall be added to these unit prices.
- 14.3.1.2 Negotiated Unit Prices: Where the work involved is not covered by unit prices contained in the Contract Documents, unit prices may be negotiated on the basis of costs calculated in accordance with this Article.
- 14.3.1.3 Negotiated Lump Sum: By mutual acceptance of a lump sum price negotiated on the basis of CONTRACTOR's itemized estimate of the anticipated cost of the work involved.
- 14.3.1.4 Time and Material Work: Where DISTRICT and CONTRACTOR cannot agree on any of the methods described above, DISTRICT may direct CONTRACTOR to proceed with the work involved on the basis of actual costs. When time and material work is directed by DISTRICT, DISTRICT shall prescribe the required procedures for accounting of the allowed costs. These procedures shall include daily accounting of the material and equipment used and labor employed. Failure to submit this information for acknowledgement by DISTRICT within one (1) day after any part of the work is performed shall result in any discrepancy between DISTRICT's and CONTRACTOR's records being resolved in favor of the DISTRICT's records.
- 14.3.1.5 Estimated Adjustment: Where DISTRICT and CONTRACTOR cannot agree on any of the methods described, and DISTRICT does not wish to proceed on a time and material basis, DISTRICT shall establish a reasonable adjustment to the Contract Price for the work involved. The adjustment in the Contract Price and the Contract Time will be issued by Change Request, incorporated into the Agreement by Change Order and CONTRACTOR shall be paid on that basis. CONTRACTOR may file a claim if it does not agree with the adjustment.
- 14.3.1.6 Where the work involved is not covered by any of the preceding methods, and when payment is to be determined by a court of competent jurisdiction or other agreed method of dispute resolution, it is agreed that the actual

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cost method shall be the appropriate method for determining the cost of the work involved. Payroll, equipment, material, and other costs will only be allowable when determined from daily time sheets which expressly correlate to the work involved, that were prepared while work was in progress, clearly listing actual units and usage, and were submitted to DISTRICT as the work was performed.

14.3.2 CONTRACTOR shall provide to DISTRICT, if requested, proof of any burdens, including insurance costs, added to base wages to determine payroll costs described in this Article.

14.4 Labor, Installed Material and Equipment, and Subcontract Costs

14.4.1 Payroll costs for craft labor in the direct employ of CONTRACTOR assigned to the site and engaged in the work involved are reimbursable. Payroll costs shall include wages plus the necessary labor burdens, which may include social security, unemployment, worker's compensation, health and retirement benefits, vacation and holiday pay, and other payments according to prevailing wage rates but shall exclude profit sharing, bonuses, and similar remuneration's. Labor charges shall be allowed only for hourly labor directly involved in the work. Such personnel may include working foremen at the site. The cost of all salaried employees shall be considered as a part of allowances allowed in this Article. Labor rates shall be as actually paid based on certified payroll records or in accordance with general rates for various pay categories established by prevailing wage rates or by mutual agreement between DISTRICT and CONTRACTOR prior to the commencement of work. The expenses of performing work after regular hours, on weekends or holidays, shall be included in the above to the extent authorized by DISTRICT as set out in the Contract Documents.

14.4.2 Payments by CONTRACTOR to suppliers for all installed material and equipment in the work involved, including transportation and storage costs, and necessary suppliers field services are reimbursable. All cash deposits shall accrue to DISTRICT, if DISTRICT advances funds to CONTRACTOR with which to make payments. All trade discounts, rebates, and refunds and all returns from the sale of surplus items shall accrue to DISTRICT and CONTRACTOR shall make provisions so that they may be obtained. When required by DISTRICT, CONTRACTOR shall obtain competitive bids from suppliers nominated by DISTRICT and shall deliver such bids to DISTRICT for selection of a bid. When determining material and equipment costs, actual invoices segregating items associated with work involved shall be the record upon which actual costs shall be based.

14.4.3 Payments by CONTRACTOR to Subcontractors for work involved performed by Subcontractors are reimbursable. If required by DISTRICT, CONTRACTOR shall obtain competitive detailed bids from three (3) Subcontractors and shall deliver them to DISTRICT who will then determine which bid will be selected. When determining Subcontractor costs at any tier, the Subcontractor's cost shall be determined in the same

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manner as CONTRACTOR's costs. All subcontracts shall be subject to the provisions of this Article insofar as applicable.

14.5 Construction Equipment Costs

14.5.1 Equipment costs required solely in connection with the work involved reflecting rented or leased or owned equipment for individual construction equipment or machinery whose replacement value is in excess of \$1,000.00 is reimbursable. Transportation, loading and unloading, installation, dismantling, and removal costs shall be included only if such equipment is or was transported to the site solely to perform the work involved. All charges for equipment shall cease when the equipment is no longer necessary to perform the work involved. Equipment costs shall be computed using the same accounting and estimating rules regardless of whether related to added or deleted items of work.

14.5.2 For equipment owned, rented or leased by CONTRACTOR, CONTRACTOR shall be entitled to actual costs based on negotiated rental or lease rates, but in no event shall the amounts exceed the rates listed in the most current and appropriate "Labor Surcharge and Equipment Rental Rates" Guide (Guide) published by State of California Business, Transportation and Housing Agency, Department of Transportation, Division of Construction. Rates for equipment not included in the Guide shall be interpolated or extrapolated from the information contained in the Guide. In addition to the rental or leasing rate, operating costs shall not exceed the estimated hourly operation rate in the Guide. For multiple shift work, the allowable equipment rate for second or third shifts shall not exceed fifty (50) percent of the base rate. Costs for rented or lease equipment shall not be billed to DISTRICT in excess of the following:

<u>Actual or Anticipated Usage</u>	<u>Payment Rate</u>
Less than 8 hours	Hourly Rate
1 day but less than 7 days	75 percent of Hourly Rate
8 days but less than 30 days	50 percent of Hourly Rate
30 days or more	40 percent of Hourly Rate

14.6 Supplemental Costs

14.6.1 Costs of special consultants who are not employees in the direct employ of CONTRACTOR or any of the Subcontractors or suppliers, or special Subcontractors are reimbursable; provided that those costs are or were authorized by DISTRICT prior to proceeding with the work involved, and only if their activities are not covered by costs included under paragraph 14.4, or are not excluded by paragraph 14.7.

14.6.2 Sales, consumer, or similar taxes, royalty payments, and fees for permits and licenses, related solely to the work involved for which CONTRACTOR is liable, are reimbursable.

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14.6.3 Deposits to be lost for causes other than negligence of CONTRACTOR related solely to the work involved are reimbursable.

14.6.4 Increased costs of premiums for Bonds and Insurance resulting solely because of the work involved will be paid as an allowance in accordance with paragraph 14.8.

14.7 Costs Covered by CONTRACTOR'S Allowances

14.7.1 The cost of work involved shall not include any of the following costs, all of which are considered to be covered by CONTRACTOR'S allowances:

14.7.1.1 payroll costs and other compensation of (a) personnel employed by CONTRACTOR whether at the site or in CONTRACTOR'S principal or a branch office for management or administration of the Work, including, but not limited to, CONTRACTOR'S officers, executives, principals, general managers, project managers, construction managers, resident superintendents, nonworking foremen, estimators and schedulers, detailers, claims consultants, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, and (b) personnel employed by CONTRACTOR in CONTRACTOR'S principal or branch office in support of the performance, management or administration of the Work, including, but not limited to, engineers, architects, timekeepers, and clerks expenses of CONTRACTOR's principal, branch, and site offices except as authorized in writing by DISTRICT prior to proceeding with the work involved

14.7.1.2 expenses of CONTRACTOR'S principal, branch, and site offices except as authorized in writing by DISTRICT prior to proceeding with the work involved

14.7.1.3 any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the work involved and charges for delinquent payments

14.7.1.4 costs due to the fault or negligence of CONTRACTOR, including but not limited to deposits to be lost, costs to correct defective work, disposal of materials or equipment wrongly supplied, and making good any damage to property

14.7.1.5 cost of field supplies consumed in the performance of the work involved and purchase costs of small tools used or consumed in the performance of the work involved, which are individually valued at less than \$1,000.00. Consumables shall include such items as rags, nails, fasteners, weld rod, gases, lubricants, paper, grout, stakes, power and fuel for tools and equipment, chains, cables, hoses, water, and similar items normally used in the course of the Work. This allowance will apply to CONTRACTOR

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or a Subcontractor only if CONTRACTOR or the Subcontractor provides direct labor, equipment, and material cost elements in the performance of the work involved. If this allowance is proposed to exceed \$2,000, it must be supported by substantiating data.

- 14.7.1.6 costs associated with the preparation of Change Orders or Change Requests (whether or not ultimately authorized by DISTRICT), or the preparation of filing of claims
- 14.7.1.7 expenses of CONTRACTOR associated with anticipated lost profits or lost revenues, lost income or earnings, lost interest on earnings, or unpaid retainage
- 14.7.1.8 costs derived from the computation of a "home office overhead" rate by application of the Eichleay, Allegheny, Burden Fluctuation, or other similar methods
- 14.7.1.9 costs of special consultants or attorneys, whether or not in the direct employ of CONTRACTOR, employed for services specifically related to the resolution of a claim, dispute, or other matter relating to the acceptability of the Work
- 14.7.1.10 other administrative expense or contingent costs of any kind and the costs of any item not specifically and expressly included in these general provisions

14.8 CONTRACTOR Allowances for Changes and Additions to the Work

CONTRACTOR's allowances, which include (1) costs not directly chargeable under this Article, (2) expenses itemized in paragraph 14.7, and (3) profit, shall not exceed the following percentages of the various portions of the work involved. No other allowances in addition to these will be allowed.

<u>Cost Element</u>	<u>Allowances for Additions</u>	<u>Allowances for Deletions</u>
CONTRACTOR and lower tier subcontractor labor (percentage of direct labor) per 14.4.1	15%	(7.5%)
CONTRACTOR and lower tier Subcontractor installed equipment and materials per 14.4.2	15%	(7.5%)

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<u>Cost Element</u>	<u>Allowances for Additions</u>	<u>Allowances for Deletions</u>
Subcontractor costs resulting from direct subagreement with CONTRACTOR per 14.4.3	5%	(2.5%)
CONTRACTOR and lower tier Subcontractor owned or rented construction equipment per 14.5	15%	(7.5%)
Travel expenses, subsistence allowances, supplemental costs per 14.6, premium portion of direct labor costs, and other authorized costs	0%	0%
CONTRACTOR insurance and bond premiums per 14.6	1%	(1%)
CONTRACTOR or lower tier Subcontractor performing work, allowance for small tools and consumables per 14.7.1.5	2%, not to exceed \$2,000	0%

In calculating the allowances, the 2% allowance per 14.7.1.5 will be applied and added to direct labor, equipment, and material cost elements before calculating the 15% allowance per 14.4.1, 14.4.2 or 14.5. After the 15% allowance is added, the 5% allowance per 14.4.3 will be added when applicable, and then the 1% allowance per 14.6 will be added. No other compounding of the allowance percentages shall be permitted. Where a substitution is made replacing deleted work with other work, the allowances shall be calculated only on the net difference in the cost elements, using the allowances for additions if there is a net increase and the allowances for deletions if there is a net decrease.

14.9 Unit Price Work

14.9.1 Where the Contract Documents provide for unit price work, the Contract Price stated in the Agreement will include for all unit price work an amount equal to the sum of each unit price item times the estimated quantity for each item as indicated in the Agreement. Each unit price will be deemed to include an amount considered by

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CONTRACTOR to be adequate to cover all costs, including supplemental and administrative costs, and profit. The estimated quantities of unit price work indicated in the Agreement are given solely for the purpose of comparison of bids and determining the Contract Price for the Work as awarded.

14.9.2 CONTRACTOR shall promptly, after becoming aware of, and before proceeding with any significant quantities of affected work, notify DISTRICT in writing of any additional or reduced quantities for an item of unit price work that will require a twenty (20) percent or higher adjustment in the as awarded quantity for that item or an increase in Contract Price greater than five (5) percent.

14.9.3 Prior to Final Progress Payment, or before the total amount paid exceeds the established Contract Price, a Change Order will be issued to adjust the estimated quantities for unit price work and to correspondingly adjust the Contract Price.

14.9.4 If DISTRICT determines that the additional or reduced quantities for an item of unit price work justify an adjustment in the unit price, DISTRICT shall authorize such an adjustment. No adjustment shall be allowed under this paragraph unless the variation between actual and estimated quantities for all unit price work result in an increase or decrease in the Contract Price by more than five (5) percent.

14.9.5 In re-evaluating unit prices contained in the Contract Documents, CONTRACTOR and DISTRICT shall take into account increases or decreases in CONTRACTOR's supplemental and administrative costs for the performance of the Work solely as a result of the variation in quantities, as opposed to as a result of CONTRACTOR's fault or negligence, or bid estimate errors.

14.10 Adjustments in Contract Time

14.10.1 An extension in Contract Time will not be granted unless CONTRACTOR can demonstrate through an analysis of the Progress Schedule that the increase in the time to perform or complete the Work, or specified part of the Work, beyond the corresponding Contract Time(s) arise from unforeseeable causes beyond the control and without the fault or negligence of CONTRACTOR, and that such causes in fact lead to performance or completion of the Work, or specified part in question, beyond the corresponding Contract Time. An adjustment in the Contract Time will be based solely upon net increases in the time required for the performance or completion of the parts of the Work controlling achievement of the corresponding Contract Times(s) at the time that the incident that causes the change occurs. However, even if the time required for the performance or completion of controlling parts of the Work is extended, an extension in Contract Time will not be granted unless performance or completion of the controlling work necessarily extends beyond the Contract Time in question despite CONTRACTOR'S reasonable and diligent actions to guard against these effects. Examples of unforeseeable causes include: (1) acts of God or the public enemy; (2) acts of DISTRICT or the Engineer/Architect in its sovereign or contractual capacity; (3) acts of the government or another public entity in its sovereign capacity; (4) fires, floods,

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epidemics, quarantine restrictions; (5) archaeological finds; (6) strikes, freight embargoes; (7) unusually severe weather related conditions; (8) differing physical conditions, excluding conditions for which CONTRACTOR is responsible under Instructions to Bidders, Article 2; (9) unusually severe shortages of construction materials from such causes as area wide shortages, and industry wide strike, or a natural disaster that affects all feasible sources of supply, and (10) hazardous material conditions covered by Article 8, Paragraph 8.6.

14.10.2 Notwithstanding any provisions in the Contract Documents to the contrary, an extension of Contract Time shall be the sole remedy of CONTRACTOR for any delay of any kind. The only exception shall be if the delay has been caused solely by acts for which the DISTRICT is responsible and which delay is unreasonable under the circumstances involved, is not within the contemplation of the parties, and continues after CONTRACTOR'S notice to DISTRICT of such acts. DISTRICT'S exercise of any of their rights, or DISTRICT'S exercise of their remedies of stopping the Work or requiring correction or re-execution of any defective work shall not under any circumstances be construed as unreasonable interference with CONTRACTOR'S performance of the Work. No adjustment in the Contract Price under this paragraph shall be provided for any reason if: (1) performance would have been so extended by any other cause, including fault or negligence of CONTRACTOR; (2) an adjustment is provided or excluded under any other provision of the Contract Documents or; (3) delays merely prevent CONTRACTOR'S achievement of completion of the Work, or part in question, ahead of the corresponding Contract Times(s), including any authorized adjustments.

END OF ARTICLE

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ARTICLE 15 TESTS AND INSPECTIONS

15.1 Site Access

DISTRICT's Representatives, testing agencies, and governmental agencies with jurisdictional interest shall have access to the Work at reasonable times for their observation, inspection, and testing. CONTRACTOR shall provide proper and safe conditions for such access.

15.2 Inspection

15.2.1 DISTRICT's Representative shall at all times have access to the Work during construction and shall be furnished with every reasonable facility for ascertaining full knowledge respecting the progress, workmanship, and character of materials and equipment used and employed in the Work.

15.2.2 CONTRACTOR shall give DISTRICT timely notice of readiness of the Work for all required inspections, tests, or approvals. Inspections, tests, or observations by the Engineer/Architect, DISTRICT or their agents may be performed to provide information to DISTRICT on the progress of the Work. However, such information is not intended to fulfill CONTRACTOR'S obligations under the Contract Documents.

15.2.3 If any law, ordinance, rule, regulation, code or order of any public body, government entity, or court having jurisdiction requires any work to specifically be inspected, tested, or approved, CONTRACTOR shall assume full responsibility, pay all associated costs and furnish DISTRICT the required certificates of inspection, testing or approval. All inspections, tests, or approvals shall be performed by persons or organizations acceptable to DISTRICT.

15.2.4 CONTRACTOR shall test the whole Work, performing sufficient testing and inspection to support the warranty and guaranty requirements. All test and inspection reports will be provided to DISTRICT as requested.

15.2.5 Whenever CONTRACTOR varies the period during which work is carried on each day, they shall give due notice to DISTRICT's Representatives so that DISTRICT's Representatives may, if they wish, observe the work in progress. Any work done in the absence of DISTRICT's Representatives will be subject to rejection if proper notice was not given.

15.2.6 All installations, which are to be backfilled or otherwise covered, shall be inspected by DISTRICT's Representatives prior to backfilling or covering, and CONTRACTOR shall give due notice in advance of backfilling or covering to DISTRICT's Representatives so that DISTRICT's Representatives may observe the work to be concealed.

15.2.7 If any work that is to be inspected, tested, or approved is covered without written

GENERAL PROVISIONS

concurrence of DISTRICT, it must, if requested by DISTRICT, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense and will exclude the right to a time extension.

15.2.8 The inspection of the Work shall not relieve CONTRACTOR of their obligations to complete the Work as prescribed. Defective work shall be made good, and unsuitable materials and equipment may be rejected notwithstanding the fact that such defective work and unsuitable materials and equipment have been previously inspected by DISTRICT's Representatives or that payment has been included in a Progress Payment Request.

15.3 DISTRICT's Tests

15.3.1 CONTRACTOR shall furnish DISTRICT's Representative with a list of their sources of materials in sufficient time to permit proper inspection and testing of materials to be furnished from such listed sources in advance of their use. CONTRACTOR shall furnish without charge such samples as may be required by DISTRICT's Representative.

15.3.2 Inspection and tests will be made by DISTRICT's Representatives or their designated representative. It is understood that such inspections and tests if made at any point other than the point of incorporation in the Work in no way shall be considered as a guarantee of acceptance of such material nor of continued acceptance of material presumed to be similar to that upon which inspections and tests have been made.

15.3.3 Tests of materials shall be made in accordance with commonly recognized procedures of technical organizations and such special procedures as prescribed in the specifications. Materials shall be sampled and tested at such times during the progress of the Work as deemed desirable by DISTRICT's Representative, and CONTRACTOR shall cooperate in obtaining the samples.

15.3.4 DISTRICT will test materials or work in place after notification by CONTRACTOR that the work is ready for testing. All costs for retesting nonconforming work will be charged to CONTRACTOR.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 16 WARRANTY AND GUARANTEE, DEFECTIVE WORK

16.1 Guarantees

16.1.1 Besides guarantees required elsewhere, CONTRACTOR shall and hereby does guarantee all work for a period of one (1) year after the date of recording by the county of the Notice of Completion of the Work and shall repair and replace any and all such work, together with any other work which may be displaced in so doing, that may prove defective in workmanship and/or materials within the one (1) year period from the date of recording, without expense whatsoever to DISTRICT, ordinary wear and tear and unusual abuse or neglect excepted. In the event of failure to comply with the above mentioned conditions within seven (7) days after being notified in writing, DISTRICT is hereby authorized to proceed to have the defects repaired and made good at the expense of CONTRACTOR who hereby agrees to pay the cost and charges therefor immediately on demand.

16.1.2 The faithful performance bond and the payment bond shall continue in full force and effect for the guarantee period.

16.1.3 If, in the opinion of DISTRICT, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to DISTRICT or to prevent interruption of operations of DISTRICT, DISTRICT will attempt to give the notice required by this Article. If CONTRACTOR cannot be contacted or does not comply with DISTRICT'S request for correction within a reasonable time as determined by DISTRICT, DISTRICT may, notwithstanding the provisions of this Article, proceed to make such correction or provide such attention; and the costs of such correction or attention shall be charged to CONTRACTOR.

16.1.4 Action by DISTRICT under this Article shall not relieve CONTRACTOR of the guarantees provided in this Article or elsewhere in this Agreement.

16.1.5 This Article does not in any way limit the guarantee on any items for which a longer guarantee is specified or on any items for which a manufacturer gives a guarantee for a longer period. CONTRACTOR shall furnish DISTRICT all appropriate guarantee or warranty certificates upon completion of the Agreement.

16.2 Removal of Defective and Unauthorized Work

16.2.1 All work that has been rejected shall be remedied or removed and replaced by CONTRACTOR in an acceptable manner, and no compensation will be allowed for such removal, replacement, or remedial work. Any work done beyond the lines and grades shown on the plans or established by DISTRICT's Representative or any changes in, additions to, or deductions from the Work done without written authority will be considered as unauthorized and shall not be paid for. Work so done may be ordered remedied, removed, or replaced at CONTRACTOR's expense.

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16.2.2 Upon failure on the part of CONTRACTOR to comply promptly with any order of DISTRICT's Representative made under the provisions of this Article, DISTRICT's Representative shall have authority to cause rejected or unauthorized work to be remedied, removed, or replaced and to deduct the costs of making corrections from any monies due or to become due CONTRACTOR.

16.3 Defective Materials

16.3.1 All materials not conforming to the specifications shall be considered defective, and all such materials, whether in place or not, shall be rejected and shall be removed immediately from the site of the Work. No rejected material, the defects of which have been subsequently corrected, shall be used until permitted by DISTRICT's Representative.

16.3.2 Upon failure on the part of CONTRACTOR to comply with any requirement of DISTRICT's Representative made under the provisions of this Article, DISTRICT shall have authority to remove or replace defective material at the expense of CONTRACTOR.

16.4 Acceptance of Defective Work

Instead of requiring correction or removal and replacement of defective work, DISTRICT may, at their sole discretion, accept it provided a suitable reduction in the Contract Price can be established. In that case, if acceptance occurs prior to DISTRICT's recommendation of Final Progress Payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price. If the acceptance occurs after such recommendation, an appropriate amount shall be paid by CONTRACTOR to DISTRICT.

16.5 Warranty of Title

16.5.1 No materials, supplies, or equipment for the Work shall be purchased subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest in it or any part of it is retained by the seller or supplier.

16.5.2 CONTRACTOR warrants clear and good title to all materials, supplies, and equipment installed and incorporated in the Work and agrees upon completion of all work to deliver the premises together with all improvements and appurtenances constructed or placed by them to DISTRICT free from any claims, liens, encumbrances, or charges and further agrees that neither they nor any person, firm, or corporation furnishing any material or labor for any work shall have any right to a lien upon the premises or any improvement or appurtenance thereon, provided that this shall not preclude CONTRACTOR from installing metering devices or other equipment of utility companies or of municipalities, the title of which is commonly retained by the utility company or the municipality. Nothing contained in this Article, however, shall defeat or impair the right of such persons furnishing materials or labor under any bond given by CONTRACTOR for their protection, or any right under any law permitting such persons

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to look to funds due CONTRACTOR in the hands of DISTRICT. The provisions of this Article shall be inserted in all subcontracts and material contracts, and notices of this provision shall be given to all persons furnishing materials for the Work when no formal contract is entered into for such materials.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 17 SUSPENSION AND TERMINATION

17.1 Suspension for Convenience

17.1.1 Without invalidating the Agreement, and without notice to any surety, DISTRICT may, at any time, order CONTRACTOR in writing to stop, delay, or interrupt work for such a period of time as DISTRICT may deem appropriate. Upon receipt of that order, CONTRACTOR shall immediately proceed in accordance with any specific provisions or instructions, protect and maintain the Work, and make reasonable and diligent efforts to mitigate costs associated with the suspension order.

17.1.2 If any suspension of work under this Article causes an increase or decrease in CONTRACTOR's cost or the time required to perform or complete any part of the Work, DISTRICT shall make a change in Contract Price or Contract Time, as provided in Article 14; except that no change in Contract Price will be made for any suspension of work to the extent that performance would have been suspended anyhow by causes not meeting the criteria in Article 14, or for which an adjustment is provided or excluded under any other provision of the Contract Documents.

17.2 Termination for Breach

17.2.1 If CONTRACTOR refuses or fails to execute the Work or any separable part with such diligence as will ensure its completion within the time specified, including any extensions, or fails to complete the Work within such time, or if CONTRACTOR should be adjudged bankrupt, or if they should make a general assignment for the benefit of their creditors, or if a receiver should be appointed on account of their insolvency, or if they or any of their Subcontractors should violate any of the provisions of the Agreement, or if they should persistently or repeatedly refuse or should fail, except in cases for which an extension of time is provided, to supply enough properly skilled labor or proper materials to complete the Work in the time specified, or if they should fail to make prompt payment to Subcontractors or for material or labor or if they should persistently disregard laws, ordinances, or instructions given by DISTRICT or DISTRICT's Representative, DISTRICT may serve written notice upon CONTRACTOR and their surety of their intention to terminate the Agreement, said notice will contain the reasons for such intention to terminate the Agreement, and unless within ten (10) days after the service of such notice such violations shall cease and satisfactory arrangements for the corrections thereof be made, the Agreement shall upon the expiration of said ten (10) days cease and terminate. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished.

17.2.2 In the event of any such termination, DISTRICT shall immediately serve written notice upon the surety and CONTRACTOR, and the surety shall have the right to take over and perform the Work; provided, however, that if the surety within fifteen (15) days after the serving upon it of a notice of termination does not give DISTRICT written notice of their intention to take over and perform the Work or does not commence performance thereof within (30) days from the date of serving said notice upon surety,

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DISTRICT may take over the Work and prosecute the same to completion by contract or by any other method they may deem advisable for the account and at expense of CONTRACTOR, and CONTRACTOR'S surety shall be liable to DISTRICT for any excess cost or other damage occasioned DISTRICT thereby, and in such event DISTRICT may, without liability for so doing, take possession of and utilize in completing the Work such materials, appliances, plants, and other property belonging to CONTRACTOR that may be on the site of the Work. For any portion of such work that DISTRICT elects to complete by furnishing their own employees, materials, tools, and equipment, DISTRICT shall be compensated for such in accordance with the schedule of compensation for Time and Material Work in Article 14.

17.2.3 If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Work, including, but not limited to, all costs to DISTRICT arising from professional services and attorneys' fees and all costs generated to insure or bond the work of substituted contractors or subcontractors utilized to complete the Work, such excess shall be paid to CONTRACTOR. If such costs exceed the unpaid balance, CONTRACTOR shall pay the difference to DISTRICT promptly upon demand; on failure of CONTRACTOR to pay, the surety shall pay on demand by DISTRICT. Any portion of such difference not paid by CONTRACTOR or surety within thirty (30) days following the mailing of a demand for such costs by DISTRICT shall earn interest at the maximum rate authorized by California law.

17.2.4 The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to DISTRICT.

17.3 Termination for Convenience

17.3.1 DISTRICT may, without prejudice to any other right or remedy, terminate the Agreement in whole or in part at any time for its convenience by giving CONTRACTOR ten (10) days written notice. DISTRICT shall have the right, in that event, to take over any or all of CONTRACTOR'S materials, (whether stored on or off site) supplies, equipment, contracts or other obligations to complete the Work and CONTRACTOR shall assign them to DISTRICT upon DISTRICT'S request. CONTRACTOR shall proceed to complete any part of the Work, as directed by DISTRICT, and shall settle all their claims and obligations under the Agreement. CONTRACTOR shall be paid for all work executed and any expense sustained plus reasonable termination expenses. CONTRACTOR shall justify their claims as requested by DISTRICT with thorough, accurate records and data.

17.3.2 In any such termination for the convenience of DISTRICT, CONTRACTOR shall be paid for work completed in accordance with the Contract Documents prior to receipt of the notice of termination, and for reasonable termination settlement costs relating to commitments which had become firm prior to the termination; however, payment to CONTRACTOR will exclude any and all anticipated supplemental costs, administrative expenses, and profit on uncompleted work.

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17.3.3 If, after notice of Termination for Breach of contractor, it is determined that CONTRACTOR was not in default, the termination shall be deemed to have been for the convenience of DISTRICT. In such event, CONTRACTOR may recover from DISTRICT payment in accordance with this paragraph.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 18 DISPUTES

18.1 Resolution of Construction Claims

18.1.1 This Article is intended as a summary of the provisions of article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3 of Division 2 of the Public Contract Code ("Claims Resolution Statute") and is subject to the actual provisions of the Claims Resolution Statute. This article shall govern the resolution of any claim of \$375,000 or less which may be made by CONTRACTOR.

18.1.2 As used in this Article, "claim" is defined as a separate demand by CONTRACTOR for (a) a time extension, (b) payment of money or damages arising from the Work, payment for which is not otherwise expressly provided for or CONTRACTOR is not otherwise entitled to, or (c) an amount, the payment of which is disputed by DISTRICT.

18.1.3 CONTRACTOR shall make all claims in writing and include the documents necessary to substantiate the claims. Any claim by CONTRACTOR which is intended to invoke the procedures under the Claims Resolution Statute shall specify that the claim is being made pursuant to the Claims Resolution Statute. All claims by CONTRACTOR must be filed on or before the date of Final Progress Payment; provided, however, nothing in this Article is intended to extend the time limits or supersede notice requirements which may otherwise be provided within the Contract Documents for the filing of claims by CONTRACTOR including, but not limited to, those provided in Article 13 and Article 14.

18.1.4 For claims less than \$50,000, DISTRICT shall respond in writing within forty-five (45) days of receipt of the claim, or DISTRICT may request, in writing, within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims DISTRICT may have against CONTRACTOR. If additional information is thereafter required, it shall be requested and provided upon mutual agreement of DISTRICT and CONTRACTOR. If DISTRICT requests additional documentation, DISTRICT'S written response to the claim shall be submitted to CONTRACTOR within fifteen (15) days after receipt of the additional documentation, or within the same time period as used by CONTRACTOR in producing the additional documentation, whichever is greater.

18.1.5 For claims over \$50,000 but less than \$375,000, DISTRICT shall respond in writing within sixty (60) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims DISTRICT may have against CONTRACTOR. If additional information is thereafter required, it shall be requested and provided upon mutual agreement of DISTRICT and CONTRACTOR. If DISTRICT requests additional documentation, DISTRICT'S written response to the claim shall be submitted to CONTRACTOR within thirty (30) days after receipt of the additional documentation, or

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within the same time period as used by CONTRACTOR in producing the additional documentation, whichever is greater.

18.1.6 If CONTRACTOR disputes DISTRICT'S written response, or DISTRICT fails to respond within the time prescribed, CONTRACTOR may, by giving written notice to DISTRICT within fifteen (15) days of receipt of DISTRICT'S response (or within fifteen (15) days of DISTRICT'S failure to respond), demand an informal conference to meet and confer for settlement of the issues in dispute. Upon such demand, DISTRICT shall schedule a "meet and confer" conference within thirty (30) days.

18.1.7 If after the "meet and confer" conference, any portion of the claim remains in dispute, CONTRACTOR may file a claim pursuant to Government Code Section 900 et seq. If a court action is thereafter filed to resolve the claim, the court must, within the time specified by law, submit the matter to nonbinding mediation unless waived by mutual stipulation of DISTRICT and CONTRACTOR. If after the mediation process, the matter remains in dispute, the case must then be submitted to judicial arbitration pursuant to the applicable law.

END OF ARTICLE

GENERAL PROVISIONS

ARTICLE 19 MISCELLANEOUS

19.1 Personal Liability

No director, officer, employee, or agent of DISTRICT, DISTRICT's Representative, the Engineer/Architect, or their consultants shall have any individual or personal liability for any amount due to CONTRACTOR or for any obligations of DISTRICT under the Agreement or for any claim based on such obligations or their creation.

19.2 Indemnity

19.2.1 To the fullest extent permitted by law, CONTRACTOR shall indemnify and hold harmless DISTRICT, DISTRICT's Representative, the Engineer/Architect, and their consultants, and each of their directors, officers, agents, and employees from and against all claims, damages, losses, expenses, and other costs, including costs of defense and attorneys' fees, arising out of or resulting from or in connection with the performance of the Work, both on and off the site, provided that any of the foregoing (1) is attributable to personal injury, bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use, and (2) is caused in whole or in part by any act or omission of CONTRACTOR, any Subcontractor, any supplier, anyone directly or indirectly employed by any of them or anyone for whose acts or omissions any of them may be liable, regardless of whether or not it is caused in part by any act or omission of a party indemnified hereunder. However, to the extent that liability is caused by the active negligence or willful misconduct of a party indemnified hereunder, CONTRACTOR's indemnification obligation shall be reduced in proportion to the indemnified party's share of liability for its active negligence or willful misconduct, if any, but the acceptance or approval of CONTRACTOR's work by DISTRICT or any other indemnified party shall not reduce CONTRACTOR's indemnification obligation. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person indemnified in this subparagraph and subparagraph 19.2.5.

19.2.2 In addition to the obligations set forth in subparagraph 19.2.1 and in subparagraph 19.2.5, CONTRACTOR, at its sole cost and expense, shall defend each and every claim, demand, action and other proceeding within the scope of subparagraph 19.2.1 and subparagraph 19.2.5, initiated against any party indemnified under subparagraph 19.2.1 or subparagraph 19.2.5, regardless of whether the indemnified party is the sole party named in the claim, demand, action or other proceeding. Such obligation to defend shall apply upon tender to CONTRACTOR at any stage of the claim, demand, action or other proceeding. Any such defense must be conducted by knowledgeable and experienced legal counsel retained by CONTRACTOR at its cost and reasonably acceptable to DISTRICT. Without limiting anything else in any indemnity provision under subparagraph 19.2.1 or subparagraph 19.2.5, CONTRACTOR shall also pay the full cost to DISTRICT of the monitoring of, and, if necessary, participation by DISTRICT's legal counsel in, the defense of DISTRICT and the other indemnified parties.

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19.2.3 In any and all claims against the indemnified parties by any employee of CONTRACTOR, any Subcontractor, any supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under subparagraphs 19.2.1 and 19.2.5 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR, or any Subcontractor, or any supplier or other person under Worker's Compensation acts, disability benefit acts, or other employee acts.

19.2.4 The obligations of CONTRACTOR under subparagraphs 19.2.1 and 19.2.5 shall not extend to the liability of DISTRICT, DISTRICT's Representatives, the Engineer/Architect, and their consultants, and each of their directors, officers, employees, and agents, arising out of or resulting from or in connection with the preparation or approval of maps, drawings, opinions, reports, surveys, designs or Specifications, providing that the foregoing was the sole and exclusive cause of the loss, damage, or injury.

19.2.5 CONTRACTOR shall also indemnify and hold harmless DISTRICT, DISTRICT's Representative, the Engineer/Architect, and their consultants, and each of their directors, officers, employees, and agents from and against all losses, expenses, damages (including damages to the Work itself), attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect or refusal of CONTRACTOR to faithfully perform the work and all of CONTRACTOR'S obligations under the contract. Such costs, expenses, and damages shall include all costs, including attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party, and/or in defending against any claims or stop notices.

19.2.6 Without jeopardizing or compromising any of its other rights, DISTRICT shall have the authority to settle any claim, demand, action or other legal proceeding on terms determined by DISTRICT to be reasonable and in the best interests of DISTRICT and/or any party indemnified under paragraph 19.2. As part of its obligations pursuant to subparagraph and subparagraphs 19.2.1 and 19.2.5, within thirty (30) days of receiving an invoice from DISTRICT, CONTRACTOR shall reimburse DISTRICT for any and all: (i) judgments paid by DISTRICT; (ii) amounts paid by DISTRICT in settling such claim, demand, action or other proceeding; and (iii) any other legal or other costs and expenses reasonably incurred by DISTRICT in connection with such claim, demand, action or other proceeding. If CONTRACTOR fails to pay any such amount within the required time, the unpaid amount shall accrue interest at the legal rate.

19.2.7 In accordance with Public Contract Code Section 9201, DISTRICT shall timely notify CONTRACTOR if DISTRICT receives any third-party claim relating to the Work. DISTRICT shall be entitled to recover from CONTRACTOR the reasonable costs incurred by DISTRICT in providing such notification.

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19.3 Partial Invalidity

If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall nevertheless continue in full force without being impaired or invalidated in any way.

19.4 Waiver of Rights

Except as otherwise specifically provided in the Contract Documents, no action or failure to act by DISTRICT, the engineer/Architect, DISTRICT's Representatives, or CONTRACTOR shall constitute a waiver of any right or duty afforded any of them under the Contract Documents, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder.

END OF ARTICLE

SECTION 0
SPECIAL PROVISIONS

PROJECT NO. XXXXX

SECTION 0
SPECIAL PROVISIONS

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SECTION 00100

BID MODIFICATIONS

1.01 BASIS FOR DETERMINING LOWEST RESPONSIBLE BIDDER

See Paragraph 3.1.4 of Instructions to Bidders for specification on basis for determining lowest responsible bidder when there are any Alternative Bid Items (additive or deductive). If a different basis for determining lowest responsible bidder is desired when there are Alternative Bid Items, describe the basis here. It must be a method that ranks the bidders before the District learns who the low bidder is.

1.02 BIDDING ON SUBSTITUTE ITEMS

See language in Instruction to Bidders IB 1.7

1.03 TIME ALLOWED FOR ACCEPTANCE OF BIDS

Modify 60-day acceptance period as needed; see Instructions to Bidders IB 3.1.2.

END OF SECTION

SECTION 00110

DEFINITIONS

1.01 DEFINITIONS

List any terms specific to the project that are not found in Article 1, Definition of the General Provisions.

END OF SECTION

SECTION 00120

CLAIMS RESOLUTION

1.01 GENERAL

- A. This Section is intended as a summary of the provisions of Section 9204 of the Public Contract Code ("Claims and Disputes Statute") and is subject to the actual provisions of the Claims and Disputes Statute. Notwithstanding any provisions contained in the Claims Resolution Statute summarized in Article 18 of the General Provisions, this Section shall additionally govern the resolution of any claim which may be made by CONTRACTOR.
- B. For purposes of this Section, the following terms defined in the Claims and Disputes Statutes shall have the following meanings.
1. For purposes of this Section, "claim" as defined in the Claims and Disputes Statute means a separate demand by CONTRACTOR sent by registered mail or certified mail with return receipt requested for one or more of the following: (a) a time extension, including, without limitation, for relief from forfeiture due to delay assessed in the applicable amount per day set forth in the Agreement, pursuant to Section 6.8 or Section 14.10 of the General Provisions; (b) payment of money or damages arising from the Work, payment for which is not otherwise expressly provided for or to which CONTRACTOR is not otherwise entitled; or (c) payment of an amount that is disputed by DISTRICT.
 2. For purposes of this Section, CONTRACTOR is a "contractor" as defined in the Claims and Disputes Statute.
 3. For purposes of this Section, DISTRICT is a "public entity" as defined in the Claims and Disputes Statute.
 4. For purposes of this Section, the Work is a "public works project" as defined in the Claims and Disputes Statute.
 5. For purposes of this Section, any Subcontractor, including any lower tier Subcontractor, is a "subcontractor" as defined in the Claims and Disputes Statute.
- C. Upon receipt of a claim pursuant to this section, DISTRICT shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide to CONTRACTOR a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, DISTRICT and CONTRACTOR may, by mutual agreement, extend the time period provided in this subsection.
1. CONTRACTOR shall furnish reasonable documentation to support the claim.
 2. If DISTRICT needs approval from District Board of Directors to provide to CONTRACTOR a written statement identifying the disputed portion and the undisputed portion of the claim, and District Board of Directors does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return

receipt requested, DISTRICT shall have up to three days following the next duly publicly noticed meeting of District Board of Directors after the 45-day period, or extension, expires to provide to CONTRACTOR a written statement identifying the disputed portion and the undisputed portion.

3. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after DISTRICT issues its written statement. If the public entity fails to issue a written statement, paragraph 1.01.E shall apply.

D. If CONTRACTOR disputes DISTRICT's written response, or if DISTRICT fails to respond to a claim issued pursuant to this section within the time prescribed, CONTRACTOR may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, DISTRICT shall schedule a meet and confer conference within 30 days for settlement of the dispute.

1. Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, DISTRICT shall provide to CONTRACTOR a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after DISTRICT issues its written statement. Any disputed portion of the claim, as identified by CONTRACTOR in writing, shall be submitted to nonbinding mediation, with DISTRICT and CONTRACTOR sharing the associated costs equally. DISTRICT and CONTRACTOR shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.
2. For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.
3. Unless otherwise agreed to by DISTRICT and CONTRACTOR in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 18.1.7 of the General Provisions to mediate after litigation has been commenced.
4. This section does not preclude DISTRICT from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

E. Failure by DISTRICT to respond to a claim from CONTRACTOR within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of DISTRICT's failure to have responded to a claim, or its

failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

- F. Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.
- G. If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against DISTRICT because privity of contract does not exist, CONTRACTOR may present to DISTRICT a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that CONTRACTOR present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to DISTRICT shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, CONTRACTOR shall notify the subcontractor in writing as to whether CONTRACTOR presented the claim to DISTRICT and, if CONTRACTOR did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.
- H. A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) DISTRICT may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

END OF SECTION

SECTION 00200

THE WORK

1.01 GENERAL

The work to be done by the Contractor under these Specifications shall consist of performing all operations necessary for the construction of _____

at the locations, in the positions, to the elevations and dimensions and conforming to the design shown on the plans and in accordance with these specifications.

The Contractor shall furnish all transportation, materials (except where stipulated otherwise), equipment, labor, and supplies to complete installation of _____

together with all appurtenant work necessary or incidental to complete in a workmanlike manner the improvements as contemplated and as intended by the plans and these specifications.

1.02 LOCATION OF PROJECT SITE

Describe location of project site

1.03 DESCRIPTION OF THE WORK

Describe the major components of the work.

1.04 ORDER OF WORK

Indicate constraints on the project, such as work that is required to be completed within certain time frames, other work that is going on in the vicinity of the project, work sequences, etc.

1.05 WORK BY OTHERS

List work by others that is taking place in the vicinity of the project.

1.06 WORKING HOURS AND HOLIDAYS

Normal working hours are from _____, Monday through Thursday and alternate Fridays, excluding holidays. District inspection hours are from 7:00 a.m. to 3:30 p.m., Monday through Thursday and alternate Fridays. No work shall be performed on non-alternate Fridays, Saturdays, Sundays, or District holidays. See appendix for list of non-alternate Fridays and District holidays. In instances where contract time extends past the year's list of District holidays, regularly observed holidays shall be followed.

The Contractor shall be responsible for all costs associated with inspection services outside District inspection hours at the rate of \$175.00 per hour.

If working hours differ from the 7:00 a.m. to 3:30 p.m. period listed in General Provisions GP 7.7, the deviation should be noted here. Modify Monday through Friday work days as necessary to fit City and County work schedules.

1.07 OBSTRUCTIONS AND COORDINATION WITH OTHER WORK

At least forty-eight (48) hours prior to construction and prior to any operations involving existing Irvine Ranch Water District facilities, the Contractor shall notify the District's Representative.

Prior to construction, the Contractor shall expose all known utility crossings in order to provide for grade and alignment adjustments, if necessary.

END OF SECTION

SECTION 00210
INVESTIGATIONS AND REPORTS

1.01 INVESTIGATIONS AND REPORTS

A. The following investigations and reports are included herewith in Appendix:

- 1.
- 2.
- 3.

List reports in space above, and include copies in Appendix.

B. The following investigations and reports are available at District for review:

- 1.
- 2.
- 3.

List reports in space above, and arrange for reports to be available at Engineering Department counter.

END OF SECTION

SECTION 00220

LANDS AND RIGHTS-OF-WAY

1.01 LANDS AND RIGHTS-OF-WAY

See General Provisions GP 5.4 if lands and rights-of-way are to be furnished and/or paid for by someone other than the District.

END OF SECTION

SECTION 00300

CONTRACTOR'S INSURANCE

1.01 GENERAL

- A. Contractor's insurance coverage shall be as specified in the General Provisions, shall provide the following amounts of coverage, shall include additional insureds, and shall include additional information as set forth below.
- B. Builder's Risk Insurance, as specified in the General Provisions, shall not be required.

For projects that include vertical structures (such as buildings, concrete basins, or storage tanks) and are greater than \$10 million in estimated construction value: (1) Add a new lump sum Bid Item to the Bid Form titled "Builder's Risk Insurance" and (2) ~~delete~~replace Paragraph 1.01.B above, ~~with the following:~~

~~B. Replace General Provisions, Article 4.5 Builder's Risk Insurance, in its entirety with the following:~~

~~4.5 Builder's Risk Insurance~~

~~4.5.1 CONTRACTOR shall provide builder's risk insurance upon the Work, including completed work and work in progress and including coverage for collapse, earthquake and flood. Coverage shall also include transit, off-site storage, permission to occupy, waiver of subrogation, testing, extra expense and boiler & machinery.~~

~~4.5.2 Such insurance shall have a deductible clause not to exceed \$50,000, except for earthquake and high hazard flood. The deductible for earthquake and high hazard flood shall not exceed five (5) percent of the Contract Price.~~

~~4.5.3 The builder's risk insurance shall include as named insureds: DISTRICT, CONTRACTOR and all subcontractors.~~

1.02 COMMERCIAL GENERAL LIABILITY INSURANCE

- A. Bodily injury and property damage coverage shall be for not less than _____ (\$ _____) for each occurrence and for not less than _____ (\$ _____) per project aggregate.
- B. Products/Completed Operations coverage shall be for not less than _____ (\$ _____) aggregate.

1.03 AUTOMOBILE LIABILITY

- A. Contractor shall carry and maintain a business automobile policy or equivalent coverage for bodily injury and property damage on all owned, non-owned and hired automobiles or other licensed highway vehicles used in the performance of the Contract. The limit shall be for not less than _____ (\$ _____) for each accident.

Fill in insurance coverage amounts in blanks above. Suggested insurance coverages for varying exposure risks are:

	<u>1.02 General Liability</u>		
	<u>1.02A</u>	<u>1.02B</u>	
	<i>Bodily Injury</i>	<i>Products/</i>	
	<i>Property Damage</i>	<i>Completed</i>	<i>1.03</i>
	<i>Personal Injury</i>	<i>Operations</i>	<i>Auto</i>
	<u>(Occur/Aggr)</u>	<u>(Occur/Aggr)</u>	<u>Liability</u>
<i>Pipeline</i>	<i>\$1M/2M</i>	<i>\$1M/2M</i>	<i>\$2M</i>
<i>Pump Station/Well</i>	<i>\$2M/3M</i>	<i>\$2M/3M</i>	<i>\$2M</i>
<i>Reservoir/Treatment Plant/Chlorine</i>	<i>\$2M/4M</i>	<i>\$2M/4M</i>	<i>\$3M</i>

1.04 WORKER’S COMPENSATION INSURANCE AND EMPLOYER’S LIABILITY INSURANCE

- A. Worker’s Compensation Insurance coverage shall comply with statutory limits.
- B. Employer’s Liability Insurance shall be for not less than:

\$1,000,000 Each Accident
 \$1,000,000 Each Disease – Policy Limit
 \$1,000,000 Each Disease – Each Employee

- C. State Compensation Insurance Fund: Notwithstanding the requirements of General Provisions Section 4.2, DISTRICT will accept Workers Compensation Insurance from the State Compensation Fund (State Fund) that is not rated and that is evidenced on the State Fund’s certificate form. Except as provided above with respect to State Fund, all other insurance shall comply with all requirements of the General and Special Provisions.

1.05 ADDITIONAL INSURED

- A. Commercial General Liability Insurance shall include as additional insureds:_____

Fill in name of additional insured here. Include names of any municipality or homeowner association in which work occurs.

1.06 ADDITIONAL INFORMATION

- A. Certificates of Insurance shall:
 - 1. List all Endorsement forms that are part of said policy.
 - 2. List all entities required to be named as additional insureds.
 - 3. Include a statement that no less than 30 days written notice will be provided by certified mail to the District prior to any material change or cancellation of said policy.

END OF SECTION

SECTION 00400
SHOP DRAWINGS

1.01 SHOP DRAWING SUBMITTALS

- A. Shop drawings shall be submitted in accordance with Article 9 of the General Provisions.

Include any submittal requirements not called for by the General Provisions and General Requirements, such as whether more or less than six copies of each submittal are required, deviations from the 21-day turn-around time, etc.

END OF SECTION

SECTION 00500

CONSTRUCTION SCHEDULE

This specification section is for use on non-complex projects requiring few interfaces and minimal coordination with sub-contractors, material suppliers, and other projects.

1.01 CONSTRUCTION SCHEDULE

- A. The Contractor shall submit a construction progress schedule in compliance with Article 10 of the General Provisions. The schedule shall be a Gantt Chart, and shall show the various parts of the work in sufficient detail so as to identify the beginning and end of each of the various construction activities. The schedule shall include the following at the minimum:

Submittal milestones
All construction activities
Equipment/material procurement and deliveries
Permit imposed work times
Partial, substantial, and final completion milestones
Critical path activities

List any other activities or milestones that should be included in schedule. If particular scheduling software (e.g. Microsoft Project) is required, list it above.

1.02 SCHEDULE CONSTRAINTS

List any scheduling constraints that the Contractor should incorporate into the construction schedule.

END OF SECTION

SECTION 00500A

CONSTRUCTION SCHEDULE

This specification section is for use on complex projects requiring several interfaces and coordination with sub-contractors and other projects.

1.01 CONSTRUCTION SCHEDULE

- A. CONTRACTOR shall submit a construction progress schedule in compliance with Article 10 of the General Provisions. The schedule shall show the various parts of the work in detail so as to identify the beginning and end of each of the various construction activities. The schedule shall include the following at the minimum:

Submittal milestones
All construction activities
Equipment/material procurement and deliveries
Permit imposed work times
Partial, substantial, and final completion milestones
Critical path activities

List any other activities or milestones that should be included in schedule.

- B. Within ten (10) days after Notice of Award, DISTRICT will schedule and conduct a Preconstruction Scheduling Conference to commence development of the required project schedule. At this meeting, scheduling requirements will be reviewed with CONTRACTOR. CONTRACTOR shall be prepared to review and discuss methodology for the schedule and sequence of operations plus cost and manpower loading methodology.
- C. CONTRACTOR shall submit Construction Schedule to DISTRICT for review within thirty (30) days after Notice of Award. CONTRACTOR's Construction Schedule shall be comprised of a detailed Network Diagram as described in Paragraph F. All on site construction activities shall be cost loaded. The cost value of all on site construction activities shall equal the Contract value.
- D. Time extensions shall not be granted nor delay damages paid until a delay occurs which is beyond the control and without the fault or negligence of CONTRACTOR and its SUBCONTRACTORS or SUPPLIERS, at any tier and which extends actual performance of the work beyond the current Contract Completion Date. If the delay occurs along a path which the current approved Construction Schedule update projects late completion prior to addition of any DISTRICT caused delay, then the time extension allowed will be only for the additional delay demonstrated by the approved Time Impact Analysis. Time extensions shall be granted only if they are clearly demonstrated by CONTRACTOR through the submittal of a Time Impact Analysis which demonstrates the estimated impact on the end date of the work; is based upon the updated Construction Schedule current as of the month the delay occurred; and demonstrates that the delay cannot be mitigated, offset, or eliminated through such actions as revising the intended sequence of work or other means. Since float time within the Construction Schedule is jointly owned, it is acknowledged that DISTRICT caused delays on the project may be offset by DISTRICT caused time savings (e.g. critical path submittals returned in less time than allowed by the Contract, approval of substitution requests which result in a savings of time to CONTRACTOR). In such an event, CONTRACTOR shall not be

entitled to receive a time extension or delay damages until all DISTRICT caused time savings are exceeded and the Contract completion date is also exceeded.

- E. Upon DISTRICT's request, CONTRACTOR shall participate in the review of CONTRACTOR's Construction Schedule submissions (including the original material, all update submittals, and any resubmittals). All revisions shall be submitted within fifteen (15) calendar days after DISTRICT's review.
- F. The Detailed Network Diagram shall provide a workable plan for performing the work, establish and clearly display the critical elements of the work, forecast completions of the construction, and match the Contract duration in time. Exclusive of those activities for submittal review and material fabrication and delivery, activity durations shall not be less than one (1) nor more than thirty (30) calendar days, unless otherwise approved by DISTRICT. In addition to the detailed network diagram, CONTRACTOR shall submit the following reports with the original submittal:
 - 1. Predecessor/ Successor Report or a list showing the predecessor activities and successor activities for each activity in the schedule sorted by Early Start.
 - 2. Activity Report sorted by activity number or a list showing each activity in the schedule.
- G. An updated Construction Schedule shall be submitted to DISTRICT with the submittal of CONTRACTOR's monthly payment request. For those activities started but not yet completed at the time of submittal, the updated schedule shall reflect the percentage complete, as agreed between CONTRACTOR and DISTRICT, and an estimate of the remaining duration. The monthly update of the construction schedule shall include a copy of the following:
 - 1. A bar chart diagram showing target versus actual dates for each activity remaining to be completed.
 - 2. The Predecessor/Successor report sorted by Early Start.
 - 3. The Activity Report sorted by activity number.
 - 4. The updated network diagram or the data necessary to produce such a diagram on computer diskette(s), as agreed with DISTRICT.
- H. Upon approval of a change order or issuance of a notice to proceed with a change, the approved change shall be reflected in the next schedule update submittal by CONTRACTOR.
- I. If completion of any part of the work, the delivery of equipment or materials, or submittal of CONTRACTOR submittals is behind the updated Construction Schedule, and will impact the end date of the work past the contract completion date, CONTRACTOR shall submit in writing, a recovery plan acceptable to DISTRICT for completing the work by the current Contract completion date, if requested by DISTRICT.

1.02 SCHEDULE CONSTRAINTS

List any scheduling constraints that the Contractor should incorporate into the construction schedule.

END OF SECTION

SECTION 00600

PERMITS

1.01 PERMITS OBTAINED BY DISTRICT

A. The District has obtained or applied for and not yet received the following permits required to construct the project. Proper notification to the agencies affected is the responsibility of the Contractor. The Contractor shall conform to the requirements of the permits and all costs therefor shall be included in the contract prices bid for the items involved. Copies or sample copies of these permits are included in the Appendix of these specifications.

1. Permits that have been obtained.

Permits which may be required; delete those that are not required, list any other permits that are required.

- a. California Regional Water Quality Control Board (CRWQCB) NPDES Permit.
- b. City of Irvine Encroachment or Construction Permit.
- c. City of Tustin Encroachment or Construction Permit.
- d. Orange County EMA Public Property Encroachment Permit.
- e. State of California, Department of Fish and Game Permit.
- f. California Department of Safety and Health Administration, Mining and Tunneling Classification.
- g. United States Army Corps of Engineers Construction Permit.
- h. The Irvine Company Entry Permit
- i. Atchison, Topeka and Santa Fe Railroad Encroachment Permit.
- j. CALTRANS
- k. Encroachment or Construction Permits for Cities of Newport Beach, Costa Mesa, Santa Ana, and Lake Forest.

List other permits as required.

2. Permits that have been applied for but not yet received.

*List permits that have been applied for but not yet received.
Include copies of Standard Conditions for permits that have not been received.*

1.02 PERMITS TO BE OBTAINED BY CONTRACTOR

List permits that Contractor is to obtain. IRWD should obtain all permits unless special circumstances prevent doing so.

1.03 PERMIT-REQUIRED INSPECTION COSTS

CONTRACTOR shall pay the cost of inspection by Permit Issuer for work that is required by permit conditions to be performed on weekends or outside normal working hours. See individual permits for information on weekend work.

END OF SECTION

SECTION 00700

CONNECTIONS TO EXISTING SERVICES

1.01 COSTS OF CONNECTION EXISTING SERVICES

*General Provisions Article GP 6.24 calls for Contractor to make connections to existing services at no additional expense to District. If service connections are to be done by others, **connections and responsibility for costs** should be specified here.*

END OF SECTION

SECTION 00800

SPECIAL STORAGE REQUIREMENTS

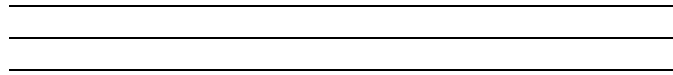
1.01 SPECIAL STORAGE REQUIREMENTS

General Provisions Article GP 7.10.2 indicates special methods may be required for storing excavated materials and materials and equipment in general. If such special methods are required, they should be specified here.

END OF SECTION

PROJECT TECHNICAL SPECIFICATIONS

SECTION 1



PROJECT NO. XXXXX _____

SECTION 1
GENERAL REQUIREMENTS

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Section 1 – General Requirements

Revised 7/2019

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SECTION 01000

INITIAL SUBMITTAL REQUIREMENTS

General Provisions Article GP 2.5 calls out timing for submittals after the Notice of Award is issued. Deviations from this requirement should be listed here.

SECTION 01100

CONSTRUCTION SURVEY STAKING

1.01 SURVEY STAKING FOR CLEARING LANDS AND RIGHTS-OF-WAY:

- A. District shall provide field markers along both sides of the construction right-of-way (except where a side is contiguous with an improved road, street, or property) at horizontal curve BCs and ECs, at angle points, and at 100-foot-maximum intervals in horizontal curves and 500-foot-maximum intervals along horizontal tangent runs.
- B. Markers will be wooden laths in open terrain and painted marks on structures and pavements.

1.02 SURVEY STAKING FOR CONSTRUCTING PIPELINES

- A. For use in constructing pipelines, construction stakes and grade sheets shall be provided by District as follows based upon the CONTRACTOR'S pipeline installation drawings:
- B. For pipelines not installed in tunnels or casings, one stake will be set at 50-foot intervals, for water lines, 25-foot intervals for sewer lines, and at all angle points and grade breaks. One additional reference stake and/or witness lath will be provided for each pipeline appurtenance. Stakes will be set at the surface of the ground or painted on the paved surface of the ground or painted on the paved surface along a mutually acceptable offset to the centerline of the pipeline. The offset shall be constant both as to side and distance from centerline for runs of not less than 2,000 feet where physically practicable with the provided easements. Station, offset, and cut/fill to flow line will appear on these stakes. The elevation of each point and the cut/fill to the pipe invert will be given on grade sheets. The Contractor shall exercise care in determining what offset is to be used, if sloping of the trench is anticipated. In no instance will the DISTRICT'S Representative stake safety sloping. It shall be the CONTRACTOR'S responsibility to accurately transfer the line and grade for the facility to the trench bottom. Pavement scoring, cutting, and removal shall be accomplished from this same set of construction stakes. No additional stakes will be set for such purpose.
- C. For pipe inside tunnels, two benchmarks and principal control monuments shall be provided for line and grade inside the tunnel or casing. The exact location of these benchmarks and monuments will be dictated by conditions at the site.

1.03 SURVEY STAKING FOR CONSTRUCTING STRUCTURES AND APPURTENANCES

- A. District shall provide survey staking and reference points.
- B. Major structures will be controlled by two lines set at right angles to each other, along two faces of the structure, the ends of each line to be beyond the limits of the work, and with elevations only marked on at least two of these control points.
- C. Minor structures, manways, and appurtenances will have a stake set along the pipeline construction offset, with the respective pipeline station for its centerline shown.
- D. Stakes will be provided after site rough grading has been completed.

1.04 SURVEY STAKING FOR CONSTRUCTING JACKING PITS AND RECEIVING PITS

- A. The Contractor shall submit to the DISTRICT'S Representative a separate diagram for each jacking and receiving pit showing the desired control and offset. No more than six (6) stakes will be set for each such pit. Grade sheets (with diagram) will show the stake elevations and the pipeline elevations calculated from the elevations and grades shown on the construction drawings.
- B. District shall provide survey staking and reference points.

1.05 CONSTRUCTION STAKING PROVIDED BY THE DISTRICT SHALL BE SUBJECT TO THE FOLLOWING CONDITIONS

- A. The request for construction stakes shall be received in writing at least three (3) working days in advance of needed staking on the form provided in the Appendix.
- B. The stakes, reference markers, and other survey points shall be carefully preserved. Otherwise, the Contractor will be charged for their replacement and will assume any expense resulting from their loss or disturbance. Should the DISTRICT'S Representative be required to reset construction stakes, the cost for such resetting will be at the then current per diem rates. The full charges will include additional administrative and supervisory time charges as billed to the District and will be deducted by the District from the progress payments to the Contractor for the month in which the surveying work is done, and thereon paid to the DISTRICT'S Representative.
- C. Unless otherwise specified, the construction staking provided by the DISTRICT'S Representative will be only for those items specified to be constructed or reconstructed on the plans or in the specifications. Any additional construction stakes required for the replacement of existing improvements that have been

removed or disturbed at the CONTRACTOR'S option shall be the CONTRACTOR'S responsibility.

1.06 COMMENCEMENT OF WORK

- A. Work shall not proceed until construction stakes, which constitute instructions from the DISTRICT'S representative, are provided.

END OF SECTION

SECTION 01110

COMPACTION TESTING

1.01 REQUIREMENTS

- A. The District shall perform all compaction tests on backfill.
- B. The request for compaction testing shall be made to the District in writing at least forty-eight (48) hours before the Contractor is ready for compaction tests to be taken.
- C. The Contractor shall make available construction equipment necessary to assist the DISTRICT'S Representative in taking the tests.
- D. If the backfill should fail the compaction test, the Contractor shall pay the cost of retesting.
- E. If the Contractor is not ready to have compaction tests taken at the time and in the locations indicated on the written request, the Contractor shall be responsible for all standby charges and/or return visit costs to take the requested tests.
- F. If the Contractor plans to use imported sand or other imported material for backfill, a sample of the material to be used for the backfill shall be delivered to the District for testing, prior to the commencement of backfilling. If the test fails, the Contractor shall pay the cost of retesting.

END OF SECTION

SECTION 01120

EROSION CONTROL

1.01 REQUIREMENTS

- A. The Contractor shall employ methods and approved devices for the control of erosion within the project construction area during the contract period.
- B. All work shall be in accordance with the grading code of _____ and any special requirements of the California Regional Water Quality Control Board, Santa Ana Region.

List jurisdictional agency having authority over grading operations.

- C. Erosion Control Plans are required from October 15 to May 15, and shall be submitted to the District for approval prior to September 25. If plans are not submitted by September 25, or within 21 days from Notice of Award for projects that commence work after September 25, DISTRICT will withhold 30 percent of progress payment amount until plans are submitted and approved.
- D. Loose excavated material shall not be placed or stored in waterways or storm drain channels.
- E. All excess excavated soil and materials shall be removed and disposed of in a proper and legal manner by the Contractor.
- F. All disturbed surface areas shall be shaped to facilitate drainage and avoid ponding and restored to near natural or preconstruction conditions. Work under this section shall also extend to include those erosion control measures indicated on the plans.
- G. In the event that erosion control repairs or corrections are required, if CONTRACTOR does not initiate erosion control repair or corrective action within four (4) hours of notification by DISTRICT, DISTRICT may take action it deems necessary to prevent erosion. CONTRACTOR shall be responsible for all costs of repairs performed by DISTRICT.

END OF SECTION

SECTION 01130

DEWATERING

1.01 GENERAL

- A. No excavation shall take place below the water level until the area has been dewatered. Dewatering shall be done in such a manner as to protect adjacent structures.
- B. Dewatering shall consist of furnishing all permits, plans, labor, equipment and materials, and performing all work to design, construct, and operate dewatering systems, dispose of the water from the operation and maintain in a safe and dewatered condition the areas on which the construction work will be performed, and remove the dewatering system upon completion of the work. If CONTRACTOR is unable to obtain a permit with a project specific monitoring and reporting program in a timely manner from the Regional Water Quality Control Board, CONTRACTOR may request and on approval be allowed to perform dewatering under DISTRICT dewatering permit and monitoring and reporting program.
- C. Dewatering systems shall be equipped with meters that register in gallons in order to measure dewatering volumes.

1.02 DEWATERING PLAN

- A. CONTRACTOR shall submit for the DISTRICT'S review, drawings and data showing proposed plan for dewatering of all work areas, which shall include the planned method of dewatering, excavation plan, location and capacity of such facilities as dewatering wells, well points, pumps, sumps, collection and discharge lines, standby units proposed, receiving streams, and protective fills and ditches required for control of ground-water and surface water. The plan for dewatering shall be submitted within fifteen (15) days after the date of receipt of the Notice to Proceed. CONTRACTOR shall furnish such other information as may be required for the complete understanding and analysis of the dewatering and excavation plan by DISTRICT. Information on groundwater conditions may be found in the Soil Investigation Reports listed in Section 00210, Investigations and Reports of the Special Provisions. CONTRACTOR is advised that the reports present conditions which existed at the time of the investigation.
- B. Review by DISTRICT will not relieve CONTRACTOR of the responsibility for the adequacy of the dewatering and excavation plan, compliance with dewatering permit requirements or for furnishing all equipment, labor, and materials necessary for performing the various parts of the work. If, during the progress of the work, it is determined by DISTRICT that the dewatering system and excavation plan are inadequate, not in compliance with discharge requirements, or

CONTRACTOR'S plan of construction is inoperative, CONTRACTOR shall, at CONTRACTOR'S expense, furnish, install, and operate such additional dewatering equipment and make such changes in other features of the plan or operation as may be necessary to perform the work in a manner satisfactory to the DISTRICT. CONTRACTOR shall, at CONTRACTOR'S expense, pay any fines or penalties assessed against CONTRACTOR, DISTRICT, Owner, ENGINEER, or their affiliates by the Regional Water Quality Control Board and other applicable agencies as a result of noncompliance with dewatering discharge requirements under CONTRACTOR'S or DISTRICT'S permit (whichever permit CONTRACTOR is performing dewatering under). In addition, CONTRACTOR shall be subject to, at DISTRICT's discretion, a fee by DISTRICT as compensation for DISTRICT administrative costs associated with each non-compliance occurrence. The fee shall be in an amount to pay DISTRICT's actual costs, or \$2,000, whichever is greater.

1.03 DEWATERING REPORTING

CONTRACTOR shall comply with all permit and monitoring and reporting requirements for the permit under which CONTRACTOR is operating. Specifically, CONTRACTOR shall:

- A. Prepare a report which shall include the following:
 - 1. Characterization of the proposed wastewater discharge
 - 2. The estimated average and maximum daily flow rates
 - 3. A schedule detailing the frequency and duration of the planned discharge(s)
 - 4. The affected receiving water(s)
 - 5. A description of the proposed treatment system (if appropriate)
 - 6. A map showing the path from the point of initial discharge to the ultimate location of the discharge
- B. Submit report from Paragraph A to: (1) the RWQCB and copy DISTRICT five (5) days prior to the planned discharge if CONTRACTOR is operating under CONTRACTOR'S permit, or (2) DISTRICT for submittal to the RWQCB ten (10) days prior to the planned discharge if CONTRACTOR is operating under DISTRICT's permit.
- C. Not commence work until receiving written acknowledgement on the information provided to DISTRICT from paragraph A.
- D. CONTRACTOR shall be responsible for conducting monitoring required under the permit and any additional monitoring requested by the RWQCB. All monitoring and report preparation shall be conducted as specified in the permit under which dewatering is occurring. If CONTRACTOR is operating under the DISTRICT permit, reports shall be forwarded to DISTRICT by the 20th of the month for submittal by DISTRICT to the RWQCB. This report shall include a cover letter noting any violations and stating what action was taken to correct these violations. If CONTRACTOR is operating under CONTRACTOR'S

permit, copies of reports that CONTRACTOR submits to the RWQCB shall be provided to DISTRICT.

END OF SECTION

SECTION 01200

REQUESTS FOR INFORMATION (RFI)

1.01 GENERAL

- A. CONTRACTOR shall submit a Request for Instruction (RFI) to DISTRICT if CONTRACTOR:
1. requires instruction pursuant to General Provision Article 6.15, Errors or Discrepancies Noted by CONTRACTOR,
 2. raises a question requiring clarification,
 3. requests product or material changes,
 4. requests design changes, or
 5. requires other information from DISTRICT.

1.02 RFI SUBMITTAL PROCEDURE

All RFIs shall be submitted on DISTRICT Forms and shall include all backup information. Backup information shall include, but not be limited to, CONTRACTOR verified field measurements, quantities, dimensions, installation requirements, materials, catalog number, and any other information that will assist the DISTRICT in reviewing the RFI. A copy of RFI form can be found in Appendix.

1.03 DISTRICT RESPONSE

Within seven (7) days of receipt of RFI, DISTRICT will either return a response to the RFI or notify CONTRACTOR when a response will be issued.

1.04 COMMENCEMENT OF RFI-RELATED WORK

No portion of the work requiring instruction from DISTRICT shall begin until RFI has been reviewed by DISTRICT and returned to CONTRACTOR with instruction or with notation indicating DISTRICT response is not necessary.

END OF SECTION

SECTION 01300

TRAFFIC REGULATION

1.01 GENERAL

- A. Traffic shall be maintained at those locations indicated and in conformance with the plans and specifications.
- B. Furnish, construct, maintain, and remove detours, road closures, lights, signs, barricades, fences, flares, miscellaneous traffic devices, flagmen, drainage facilities, paving, and such other items and services as are necessary to adequately safeguard the public from hazard and inconvenience. All such work shall comply with the ordinances, directives, permits, and regulations of authorities with jurisdiction over the public roads in which the construction takes place and over which detoured traffic is routed by the Contractor.
- C. Prior to the start of construction operations, notification shall be given to the police and fire departments in whose jurisdiction the project lies, giving the expected starting date, completion date, and the name and telephone number of the responsible person who may be contacted at any hour in the event of a condition requiring immediate correction.

1.02 CONSTRUCTION SIGNING

- A. Construction signing used for handling traffic and public convenience shall conform to the latest edition of the State of California, Department of Transportation, "Manual of Traffic Controls for Construction and Maintenance Work Zones" and "Work Area Traffic Control Hand-book" (WATCH) published by Buildings News Incorporated. In case of conflict between the two previously referenced manuals with regard to recommended sign spacing, the manual, which is more stringent, shall be used.
- B. Signs shall be illuminated or reflectorized when they are used during hours of darkness. Cones, pylons, barricades, or posts used in the diversion of traffic shall be provided with flashers or other illumination if in place during hours of darkness.
- C. A 24-hour emergency service shall be maintained to remove, install, relocate, and maintain warning devices. The names and telephone numbers of three persons responsible for this emergency service shall be furnished to the agency having jurisdiction over traffic control for the project. If any of these persons do not promptly respond or the jurisdictional agency deems it necessary to call out other forces to accomplish emergency service, the Contractor will be held responsible for the cost of such emergency service.

1.03 VEHICULAR TRAFFIC CONTROL

- A. Traffic control within the _____ shall conform to the ordinances and regulations of the _____.

List the jurisdictional agency having authority over traffic control.

- B. The failure of the Contractor to maintain construction signing, delineators, or barricading at all times to the satisfaction of the _____ shall be sufficient cause for closing down the work until such equipment is in satisfactory condition. All costs associated with the stoppage of work, loss of production, costs of restart, etc., shall be borne by the Contractor.
- C. A minimum 2-foot clearance between the curb face or edge of pavement, and a 5-foot clearance between the edge of excavation and the edge of any traffic lane shall be maintained at all times. Shoring members, beams, or other obstructions shall not be permitted within the 2-foot clearance between the edge of excavation and the edge of any traffic lane. Any projections or activity within 2 feet to 5 feet from the adjacent traffic lane must be protected by a solid concrete barrier (K-rail). "NO PARKING" signs shall be placed as necessary.
- D. Work areas adjacent to the existing traffic lane shall be delineated in accordance with the requirements for the normal posted speed limit. The Contractor shall post signing, barricades, and delineators to provide clear guidance to traffic as approved by the jurisdictional agency having authority over traffic control.

1.04 PEDESTRIAN TRAFFIC CONTROL AND SAFETY

- A. Fencing or other means of securement shall be provided to preclude unauthorized entry to any excavation during all nonworking hours on a 24-hour basis including weekends and holidays. Fencing shall be a minimum of 6 feet high around the entire excavation, and shall consist of a minimum 9-gage chain link type fence sturdy enough to prohibit toppling by children or adults. There shall be no openings under the wire large enough for any child to crawl through. Gates shall be locked if no adult is in attendance. Warning signs shall be placed at 50-foot centers on the outside of the fence with the statement "DEEP HOLE DANGER."

1.05 ACCESS TO ADJACENT PROPERTIES

- A. Reasonable access from public streets to all adjacent properties shall be maintained at all times during construction. Prior to restricting normal access from public streets to adjacent properties, each property owner or responsible person shall be informed of the nature of the access restriction, the approximate duration of the restriction, and the best alternate access route for that particular property.

1.06 PERMANENT TRAFFIC CONTROL DEVICES

- A. Existing permanent traffic control signs, barricades, and devices shall remain in effective operation unless a substitute operation is arranged for and approved as a portion of vehicular traffic control above. Replacement work shall be in accordance with the ordinances and regulations of the _____.

List the jurisdictional agency having authority over traffic control.

- B. Restriping of Streets

Any permanent restriping that is required shall be done by the Contractor. The Contractor is cautioned to check with the _____ to ascertain the extent and specifications for restriping. Full compensation for restriping within the _____

_____ shall be included in the contract unit price for which such work is appurtenant thereto. Temporary striping required for traffic control during construction shall also be done by the Contractor with full compensation to be included in the contract unit price for which such work is appurtenant, and no additional allowance shall be given. Temporary striping includes any striping required on any pavement replaced prior to the final surface course. The Contractor shall remove any permanent striping that conflicts with the detour plan and all detour striping completely, prior to replacement of any final striping, by sandblasting only. Painting out existing striping shall not be permitted. Any damaged or obliterated raised pavement markers shall also be replaced in accordance with the appropriate standard with compensation for such work and materials included in the unit contract price for which such work is appurtenant.

List the jurisdictional agency having authority over traffic control and the limits of street restriping.

- C. Traffic Control Wire Loops

Traffic control wire loops which are cut, removed, or otherwise disturbed for construction of the pipeline shall be replaced to the exact original position. Replacement work shall be in accordance with Section 86-5.01A of the State of California, Department of Transportation, Standard Specifications. The number of turns in the loop shall be in accordance with the manufacturer's specifications for the vehicle detector.

Detector lead-in conductors, cable, inductive loop conductor, and epoxy shall conform to the provisions of Section 86 of the State of California, Department of Transportation, Standard Specifications. The cable shall not be spliced. Splices to lead-in conductors shall be made in pull boxes and soldered, wrapped, and waterproofed after sensitivity check at tuning turn on. Inductive loop wires shall be labeled in the pull box, identifying the loop and the direction of current flow. Saw cuts for inductive loop wire shall be of a width such that the loop wires will fit within the cut snugly but without need for forcing of the wire.

Damaged traffic signal conduits shall be replaced to the nearest pull box, including new wire, back to the terminal, and/or back to the signal controller to the satisfaction of the agency having jurisdiction over the equipment.

Damaged traffic loops or signal conduit shall be repaired before proceeding to the construction phase. Two traffic signal vehicle heads shall be visible at all times to vehicular traffic at signalized intersections during construction.

1.07 PAYMENT

Payment for conforming to all of the traffic control and pedestrian safety requirements of these specifications shall be considered to be included in the contract unit or lump-sum price paid for the various items of work wherein maintenance of traffic control and detours is required. No additional allowance will be given for maintenance of traffic control and detours.

END OF SECTION

SECTION 01400

PRECONSTRUCTION AND POST CONSTRUCTION CONFERENCES

1.01 PRECONSTRUCTION CONFERENCE

- A. Upon issuance of Notice to Proceed, or earlier when mutually agreeable, DISTRICT will arrange a preconstruction conference.
- B. CONTRACTOR'S superintendent, DISTRICT, Engineer/Architect representatives of utilities, major subcontractors and others involved in performance of the Work, and others necessary to agenda shall attend Preconstruction Conference.
- C. DISTRICT will preside at conference.
- D. Purpose of Conference: To establish working understanding between parties and to discuss Construction Schedule, shop drawing and other submittals, cost breakdown of major lump sum items, processing of submittals and applications for payment, and other subjects pertinent to execution of the Work.
- E. Agenda will include:
 - 1. Adequacy of distribution of Contract Documents.
 - 2. Distribution and discussion of list of major subcontractors and suppliers.
 - 3. Proposed progress schedules and critical construction sequencing.
 - 4. Major equipment deliveries and priorities.
 - 5. Project coordination.
 - 6. Permits and Permit Conditions.
 - 7. Environmental (CEQA) Mitigation Requirements.
 - 8. Designation of responsible personnel.
 - 9. Procedures and Processing of:
 - a. Field decisions
 - b. Proposal requests

- c. Submittals
 - d. Change Orders
 - e. Applications for Payment
 - f. Record Documents
10. Use of Premises:
 - a. Office, construction, and storage areas
 - b. DISTRICT'S requirements
 11. Construction facilities, controls, and construction aids
 12. Coordination of construction with DISTRICT operations and others
 13. Temporary utilities
 14. Safety and first aid procedures
 15. Security procedures
 16. Housekeeping procedures
- F. DISTRICT will record minutes of meeting and distribute copies of minutes within seven (7) days of meeting to participants and interested parties.

1.02 POST CONSTRUCTION MEETING

- A. Meet with DISTRICT and inspect the Work eleven (11) months after the date of recording by the County of the Notice of Completion of the Work.
- B. Arrange meeting at least seven (7) days before meeting.
- C. Meet in DISTRICT'S office or other mutually agreed upon place.
- D. Inspect the Work and draft list of items to be completed or corrected.
- E. Review service and maintenance contracts, and take appropriate corrective action when necessary.
- F. Complete or correct defective work and extend correction period accordingly.

- G. Require attendance of Superintendent, appropriate manufacturers and installers of major units of constructions, and affected subcontractors.

END OF SECTION

SECTION 01410

CONSTRUCTION SAFETY PROCEDURES

1.01 GENERAL

- A. CONTRACTOR shall assure that each employee is trained in the work practices necessary to safely perform his/her job.
- B. CONTRACTOR shall assure that each employee is instructed in the known potential hazards related to his/her job and the process, and the applicable provisions of the emergency action plan for the plant or facility as covered during CONTRACTOR safety orientation.
- C. CONTRACTOR shall document that each employee has received and understood the training required. The documentation shall contain the identity of the employee, the date of training, and the means used to verify that the employee understood the training. Documentation shall be submitted to DISTRICT upon request.
- D. CONTRACTOR shall advise DISTRICT of any unique hazards presented by the CONTRACTOR'S work.
- E. CONTRACTOR shall immediately notify DISTRICT of any hazards found or discovered during the course of the work.
- F. CONTRACTOR shall submit copy of OSHA T1 Annual Trench Excavation Permit upon request.

1.02 CONSTRUCTION SAFETY

- A. CONTRACTOR shall submit a Construction Safety Plan detailing the methods and procedures for complying with California Labor Code Section 6401.7, Federal, and local health and safety laws, rules and requirements for the duration of the contract time. The plan shall include the following:
 - 1. Identification of the Safety Officer (or Consultant), who will prepare, initiate, maintain and supervise safety programs, and procedures.
 - 2. Procedures for providing workers with an awareness of safety and health hazards expected to be encountered in the course of construction.
 - 3. Safety equipment appropriate to the safety and health hazards expected to be encountered during construction.

4. Methods for minimizing employees' exposure to safety and health hazards expected during construction.
 5. Procedures for reporting safety or health hazards.
 6. Procedures to follow to correct a recognized safety and health hazard.
 7. Procedures for investigation of accidents, injuries, illnesses and unusual events that have occurred at the construction site.
 8. Periodic and scheduled inspections of general work areas and specific workstations.
 9. Training for employees and workers at the jobsite.
 10. Methods of communication of safe working conditions, work practices and required personal protection equipment.
- B. CONTRACTOR shall assume responsibility for every aspect of Health and Safety on the jobsite, including the health and safety of Subcontractors, suppliers, and other persons on the jobsite.
- C. CONTRACTOR'S Safety Officer shall periodically review job safety information and reports and make recommendations concerning worker health and safety at the jobsite.
- D. CONTRACTOR shall employ health and safety measures specified by the Safety Officer, as necessary, for workers in accordance with OSHA guidelines.
- E. CONTRACTOR shall transmit to DISTRICT copies of reports and other documents related to accidents or injuries encountered during construction.

1.03 SAFETY PROCEDURES

- A. Accident Prevention:
1. Exercise precautions throughout construction for protection of persons and property.
 2. Observe safety provisions of applicable Laws and Regulations.
 3. Guard machinery and equipment, and eliminate other hazards.

4. Make reports required by authorities having jurisdiction, and permit safety inspections of the Work.
 5. Before commencing construction Work, take necessary action to comply with provisions for safety and accident prevention.
- B. Barricades:
1. Place barriers at ends of excavations and along excavations to warn pedestrian and vehicular traffic of excavations.
 2. Provide barriers with flashing lights after dark.
 3. Keep barriers in place until excavations are entirely backfilled and compacted.
 4. Barricade excavations to prevent persons from entering excavated areas in streets, roadways, parking lots, treatment plants, or other public or private areas.
- C. Warning Devices and Barricades: Adequately identify and guard hazardous areas and conditions by visual warning devices and, where necessary, physical barriers.
1. Devices shall conform to minimum requirements of OSHA and State agency which administers OSHA regulations where Project is located.
- D. Hazards in Public Right-of-Way:
1. Mark at reasonable intervals, trenches and other continuous excavations in public right-of-way, running parallel to general flow of traffic, with traffic cones, barricades, or other suitable visual markers during daylight hours.
 - a. During hours of darkness, provide markers with torches, flashers, or other adequate lights.
 2. At intersections or for pits and similar excavations, where traffic may reasonably be expected to approach head on, protect excavations by continuous barricades.
 - a. During hours of darkness, provide warning lights at close intervals.
- E. Hazards in Protected Areas: Mark or guard excavations in areas from which public is excluded, in manner appropriate for hazard.

- F. Above Grade Protection: On multi-level structures, provide safety protection that meets requirements of OSHA and State agency which administers OSHA regulations where Project is located.
- G. Protect existing structures, trees, shrubs, and other items to be preserved on Project site from injury, damage or destruction by vehicles, equipment, worker or other agents with substantial barricades or other devices commensurate with hazards.
- H. Fences: Enclose site of the Work with fence adequate to protect the Work against acts of theft, violence and vandalism.

END OF SECTION

SECTION 01420
CONFINED SPACES

1.01 GENERAL

- A. Attention is directed to the provisions of :
1. Article 108 of the General Industry Safety Orders, Title 8, California Code of Regulations.
 2. Article 4 of the Construction Safety Orders, Title 8, California Code of Regulations.
- B. The General Industry Safety Orders define a confined space as a space that: (1) is large enough and so configured that a person can bodily enter and perform work, and (2) has limited or restricted means for entry and exit, and (3) is not designed for continuous occupancy.
- C. Confined spaces shall be as described above, and shall include the interior of storm drains, sewers, vaults, utility pipelines, manholes, reservoirs, and any other such structure which is similarly surrounded by confining surfaces so as to permit an oxygen deficient atmosphere or the accumulation of dangerous gases or vapors.
- D. A Permit Required Confined Spaces is defined as a confined space that has one or more of the following characteristics:
1. Contains a hazardous atmosphere,
 2. Contains a liquid or solid materials that can engulf an entrant,
 3. A configuration that can trap and suffocate an entrant,
 4. Mechanical or electrical hazards, or
 5. Contains any other recognized serious safety and health hazard.
 6. Contains unknown atmospheric environment.

The general industry regulations define a Non-Permit Required Confined Space as a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or physical harm.

- E. Confined spaces shall be considered permit-required confined spaces (PRCS) until proven safe from atmospheric hazards by testing and ventilation; and until evaluated as safe from any other serious safety or health hazards.

1.02 CONFINED SPACE OPERATING PROCEDURES

- A. CONTRACTOR shall submit confined space operating and rescue procedures to the DISTRICT for record keeping purposes. Procedures shall conform to the applicable provisions of Article 108, General Industry Safety Orders, Title 8, California Code of Regulations.
- B. CONTRACTOR shall test for the presence of combustible or dangerous gases and/or oxygen deficiency in confined spaces using an approved device immediately prior to a worker entering the confined space, and at intervals frequent enough to ensure a safe atmosphere during the time a worker is in such a structure. A record of such tests shall be kept at the jobsite.
- C. Employees shall not be permitted to enter a confined space, where tests indicate the presence of a hazardous atmosphere, unless the employee is wearing suitable and approved respiratory equipment, or until such time that continuous forced air ventilation has removed the hazardous atmosphere from the confined space.
- D. Confined spaces that contain or that have last been used as containers of toxic gases, light oils, hydrogen sulfide, corrosives, or poisonous substances, shall, in every case, be tested by means of approved devices or chemical analysis before being entered without wearing approved respiratory equipment.
- E. Sources of ignition shall be prohibited in any confined space until after the atmosphere within the confined space has been tested and found safe.
- F. Reservoirs, vessels, or other confined spaces having openings or manholes in the side as well as in the top shall be entered from the side openings or manholes when practicable.
- G. CONTRACTOR shall coordinate entry operations with DISTRICT when both CONTRACTOR personnel and DISTRICT personnel will be working together as authorized entrants into a permit-required confined space.
- H. CONTRACTOR shall submit to DISTRICT a photocopy of the canceled permit at the conclusion of the entry operation. This information is for record-keeping purposes only, and is not intended to provide enforcement of confined space regulations.

END OF SECTION

SECTION 01430

HAZARDOUS SUBSTANCES COMMUNICATION

1.01 REFERENCE

- A. General Requirements Section 01430

1.02 GENERAL

- A. The following hazardous substances are known to be present or will be encountered during performance of the work.
 - 1. *List all hazardous substances, or if none, indicate “none” in the space above. A listing of hazardous substances for various District facilities as compiled by local fire departments is available from the IRWD Water Quality Department.*
- B. Material Safety Data Sheets (MSDS) for each known hazardous substance can be found in the Appendix.

1.03 PROCESS OVERVIEW

For projects where work on existing chlorine, ammonia, or other hazardous chemical facility will take place, describe the existing process and known potential hazards.

SECTION 01435

HAZARDOUS SUBSTANCE PROCEDURES

1.01 REFERENCES

- A. California Health and Safety Code, Section 25117.
- B. United States Code of Federal Regulation (CFR), Title 29 and Title 40.
- C. State of California Code of Regulations (CCR), Title 8 and Title 22.
- D. Steel Structure Painting Council – PA Guide 3.
- E. 29 CFR 1910.1000.
- F. 29 CFR 1910.134.
- G. Steel Structure Painting Council:
 - 1. Guide 61 – Guide for Containing Debris Generated During Paint Removal Operations.
 - 2. Guide 71 – Guide for the Disposal of Lead-Contaminated Surface Preparation Debris.

1.02 GENERAL

- A. CONTRACTOR shall inform DISTRICT and other affected persons of hazardous substances that are brought onto the jobsite or suspected hazardous substances which are encountered during performance of the work. CONTRACTOR shall notify such agencies as required to be notified by law or by regulation of the presence of hazardous substances.
- B. Definitions
 - 1. Hazardous substance: Defined as any substance included in the list (Director's List) of hazardous substances prepared by the Director, California Department of Industrial Relations, pursuant to Labor Code Section 6382. Includes hazardous waste as defined herein.
 - 2. Hazardous waste: A waste or combination of wastes as defined in 40 CFR 261.3, or regulated as hazardous waste in California pursuant to Chapter 11, Division 4.5, Title 22, California Code of Regulations, and Chapter

6.5, Division 20, California Health and Safety Code, or those substances defined as hazardous wastes in 49 CFR 171.8.

- C. CONTRACTOR shall provide plans, procedures, and controls to be used when encountering hazardous substances during performance of the work.
- D. Prior to commencing work, and where it is known or suspected that hazardous substances will be encountered, CONTRACTOR shall submit a copy of its hazard communication program to DISTRICT. Program shall describe CONTRACTOR'S communication procedures and shall give evidence of employees training for complying with procedures.
- E. CONTRACTOR shall designate a Certified Industrial Hygienist to issue instructions and recommendations for worker safety in the event a hazardous substance is encountered.
- F. CONTRACTOR shall file request for adjustment of Contract Price or Time due to the finding of hazardous materials at the work-site, in accordance with Article 14 of the General Provisions.

1.03 HAZARDOUS SUBSTANCE PROCEDURES

- A. For work where hazardous substances will be present or encountered, CONTRACTOR shall:
 - 1. Submit to DISTRICT a Site Safety and Health Plan. A copy of the plan shall be made available to the jobsite while work is being performed.
 - 2. Submit to DISTRICT a Materials Disposal Plan.
 - 3. Submit to DISTRICT a Material Safety Data Sheet (MSDS) for each hazardous substance proposed to be used or encountered at the jobsite. MSDS shall be submitted prior to commencing work.
 - 4. Exercise extreme care when handling or disposing of materials or substances that are listed as hazardous substances in Section 8-339 of California Occupational Safety and Health Regulations, Title 8, California Code of Regulations, or in Title 26 (Toxics) of the California Code of Regulations, or as evidenced by the manufacturer's MSDS.
 - 5. Immediately notify DISTRICT of any spill of material that is, or contains, a hazardous substance, including, but not limited to, motor oil, hydraulic fluid, or other petroleum products and hazardous materials or wastes used or generated on site. DISTRICT personnel will notify the proper

authorities of the spill and will specify the necessary measures to be taken by the CONTRACTOR to neutralize and/or remove the hazardous substance.

- B. For work where materials suspected of containing hazardous substances are encountered, CONTRACTOR shall immediately comply with the requirement set forth above in Paragraph A, as well as the following:

1. Sampling and Testing

Contractor shall sample and test all materials suspected of containing hazardous substances to determine if they are classifiable as hazardous wastes that must be disposed of at a Class I disposal site, or non-hazardous wastes that must be disposed of at a Class II or Class III disposal site. All sampling and testing shall be performed by a laboratory that complies with and is certified under the Environmental Laboratory Accreditation Program (ELAP) of the California Department of Health Services.

2. Hazardous Substances that may be Encountered

All the materials listed below that are to be disposed of from the site shall be sampled and analyzed for hazardous constituents. Analytical reports shall be submitted to the DISTRICT prior to disposing of each material.

- a. Sandblast Media, sealant, soil
- b. Wastewater, sediments
- c. Metals analyses will include the following 17 metals:

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Cobalt, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium and Zinc

3. Handling Samples

- a. Each sample shall have an identifying sample number assigned by the CONTRACTOR when the sample is taken. Sample number shall be included on the sampling chain of custody and in all reports, correspondence, and other documentation related to the sample. Each sample shall have a sampling chain of custody. Chain of custody shall show the name and organization of each person having custody of the sample, and shall also show the sample number, job name and location, time of day and date sample taken, material sampled, and tests to be performed.

District's Representative will witness sampling and may take samples for DISTRICT records and for additional analyses if required. Notify the DISTRICT at least 24 hours prior to sampling.

- b. District's Representative will witness sampling and may take samples for DISTRICT records and for additional analyses if required.
- c. District's Representative will review laboratory analysis results and will obtain a Hazardous Waste Generator's EPA ID Number if required.

4. Disposal

- a. District's Representative will give CONTRACTOR written notice to dispose of all or a portion of material at a Class I disposal site if the District's Representative determines that such disposal is required based on review of analytical results of samples collected in accordance with sampling plan. Non-hazardous waste shall be disposed of in either a Class II or Class III facility dependent on material composition and landfill requirements.
- b. Remove and handle the material as hazardous until the District's Representative has reviewed the required laboratory analysis and determined the appropriate classification. Materials from different sites shall not be transported or mixed until the material is determined to be non-hazardous. Excavation materials shall be stored or stockpiled at each site until classified.
- c. Transport materials in accordance with all local, state, and federal laws, rules, and regulations. Submit hazardous waste shipping manifests to the DISTRICT'S Representative within five (5) days of offhaul. Include the name, address, EPA Identification Number and Hauler License Number of the transport company and the EPA Identification Number of the disposal site.

1.04 SUBMITTALS

A. Site Safety and Health Plan

- 1. Plan shall be approved by a Certified Industrial Hygienist and shall comply with all applicable requirements of the Federal Resource

Conservation and Recovery Act, Title 8, Title 22, and Title 26 of the California Code of Regulations, and all applicable regulations of all local, state, and federal agencies having jurisdiction over the safety and health hazards of all phases of the work to be performed.

2. Submit name of individual who has been designated as the site safety and health supervisor.

B. Materials Disposal Plan

1. Prepare a materials disposal plan that complies with all applicable requirements of the Federal Resource Conservation and Recovery Act, Title 8, Title 11, and Title 26 of the California Code of Regulations; and all applicable regulations of all local, state and federal agencies having jurisdiction over the disposal of removed materials, and other waste, whether hazardous or non-hazardous. Submit a copy of the plan for the DISTRICT'S Representative prior to disposing of any material.
2. Submit permission to dispose of material from disposal site owner prior to disposing of any material. Include name, address, and telephone number of disposal site and of owner.
3. Hazardous wastes:
 - a. CONTRACTOR shall prepare and DISTRICT shall accept all hazardous waste manifests prior to use.
 - b. Submit manifests, Bill of Lading, land disposal restriction, or other documentation required by applicable regulations governing transport and disposal of hazardous wastes for disposal of hazardous substances within five (5) days of transport. Manifests or Bill of Lading (or other listed documentation) shall identify disposed material and source, show quantity of disposed material in pounds or tons, and show method used for final disposition as buried, incinerated, chemically treated and/or other means.
 - c. Submit proof that the transporter and disposal site are regulated by the State to handle and dispose of hazardous wastes.

D. Sampling and Analysis, Laboratory Designation, and Test Results

1. Submit project sampling plan prior to any sampling. Include collection methods, locations, and frequencies. Include analytical methods for each material sampled.

2. Submit name and Environmental Laboratory Accreditation Program Certificate number of laboratory that will sample and test suspected hazardous substances. Include statement of laboratory's certified testing areas and analyses that laboratory is qualified to perform. Submit prior to any laboratory testing.
3. Submit laboratory analysis results of samples taken per sampling plan. Specify any deviations from original sampling plan.

END OF SECTION

SECTION 01440

TEMPORARY FACILITIES AND CONTROLS

1.01 CONSTRUCTION WATER

General Provisions Article GP 7.12.1 requires Contractor to provide construction water. If other arrangements have been made, they should be described here.

1.02 CONSTRUCTION POWER

General Provisions Article GP 7.12.2 requires Contractor to provide construction power. If other arrangements have been made, they should be described here.

1.03 DUST CONTROL

A. Submit a plan detailing the means and methods for controlling dust generated by work on the site at or below ambient dust levels for the DISTRICT'S acceptance. The plan shall also make provision for the control of paint overspray generated during painting operations. The plan shall detail equipment and methods for monitoring compliance with the plan.

B. One or more operable street sweeping machines with vacuums in combination with a water truck for dust abatement purposes shall be maintained on the jobsite.

General Provisions Article 7.14 lists dust and smoke control requirements. If special precautions are required, include above, as appropriate.

1.04 NOISE ABATEMENT

Add specifications as needed.

1.05 DISPOSAL OF EXCESS EXCAVATED SOIL MATERIALS

General Provisions Article GP 7.13 calls for Contractor to dispose of excess soil materials off site. If alternative disposal sites have been identified, their location should be noted here.

1.06 TEMPORARY FACILITIES

Add specifications as needed.

1.07 CULTURAL RESOURCES

If work is to be performed in archeologically or paleontologically sensitive areas, include language here describing the nature of the sensitive cultural resource. If monitoring during construction is required, describe the monitoring program and state who will perform monitoring.

1.08 BIOLOGICAL RESOURCES

If work is to be performed in biologically sensitive areas or in NCCP areas, include language here describing the nature and extent of the areas. If necessary, include NCCP documents in appendix. If mitigation is required, describe here.

END OF SECTION

SECTION 01500

EQUIPMENT AND EQUIPMENT SYSTEMS OPERATION

1.01 GENERAL

This section describes the intended function and operation of equipment and equipment systems.

1.02 EQUIPMENT FUNCTIONS

Describe individual equipment items and their intended function.

1.03 EQUIPMENT SYSTEM FUNCTIONS

Describe equipment systems and their intended function. Include P&ID and other operating descriptions from Preliminary Design Report for the project.

SECTION 01510

TESTING, TRAINING, AND FACILITY START-UP

1.01 SUMMARY

- A. ~~This section includes equipment~~~~A.—Section Includes: Equipment~~ and system testing and start-up, services of manufacturer's representatives, training of DISTRICT'S personnel, and final testing requirements for the complete facility.

1.02 CONTRACT REQUIREMENTS

~~The contract requirements include~~~~A. Testing, training, and start-up are requisite to the following, at a minimum.~~

~~Satisfactory~~~~satisfactory~~ completion of ~~the Contract.~~

- A. ~~B.—Complete~~ testing, training, and start-up within the Contract Time.
- B. ~~Realistic~~~~C.—Allow realistic~~ durations in the Progress Schedule for testing, training, and start-up activities.
- C. ~~The CONTRACTOR shall furnish~~~~D. Furnish~~ labor, power, chemicals, tools, equipment, instruments, and services required for, and incidental to, completing ~~all start-up and functional~~ testing ~~defined herein, performance testing, and operational testing.~~
- D. ~~The CONTRACTOR shall provide~~~~E. Provide~~ competent, experienced technical representatives of equipment manufacturers for assembly, installation and testing guidance, and operator training.

1.03 START-UP AND TESTING PROCESS OVERVIEW

- A. This ~~sections specification~~ describes ~~the start-up and testing a~~ process. The following definitions are provided for terms that are used in this ~~sections specification~~ and which describe the steps of the process. Figure 1 located at the end of this section summarizes the process.
- B. Start-up Plan: A complete written outline and schedule of the work that describes the entire start-up and testing process that will be performed to meet the requirements of the Contract Documents. Every effort has been made by the

DISTRICT to point the CONTRACTOR to the various specifications within the Contract Documents pertaining to start-up and testing. This does not relieve the CONTRACTOR from reviewing the Contract Documents for individual equipment requirements not shown herein~~this specification.~~

- ~~C.~~ Factory Acceptance/Source Performance Testing: Factory Acceptance Testing (FAT) is the testing that ~~which~~ takes place at the manufacturer's/supplier's facility to test equipment performance and fabrication prior to shipment of the equipment to the job site. ~~Factory pump test, or a control panel test, for example.~~
- ~~C.D.~~ Factory/Field Demonstration Test: Factory/Field Demonstration Test (F/FDT) is the testing of equipment performance and fabrication witnessed by DISTRICT. This testing is independent and separate from the manufacturer's/supplier's testing conducted as part of FAT.
- ~~D.E.~~ General Start-up and Testing: These tasks include initial ~~Initial~~ adjustments, alignments, inspections ~~and~~, testing, ~~etc.~~, which are performed to confirm equipment is installed correctly and ready to be operated. As a result the CONTRACTOR shall submit Certificates of Proper Installation (COPI) and InterNational Electrical Testing Association (NETA) test forms ~~Line flush, lubrication check, electrical integrity tests, instrument calibrations, for example.~~
- ~~F.~~ Individual Equipment Functional Testing: Individual Equipment Functional Testing includes verification of factory/source performance test results, performing factory/field demonstration test to confirm equipment being provided meets the contract requirements such as, but not limited to, ~~equipment operating tests which verify proper operation of the equipment. An individual pump functional test would include testing~~ flow, pressure, amps, vibration, ~~and~~ motor controls.
- ~~E.G.~~ DISTRICT Training: Training shall comprise of two identical sessions, one in the morning on day 1 and the second in the afternoon on day 2. The training shall include equipment training and operational system/facility training. Mechanical training shall be required for all equipment provided by the CONTRACTOR and shall be given by DISTRICT approved qualified individuals. Operational system/facility training shall cover the system process, ~~associated instrument loops, and remote~~ controls, ~~operations and items unique to the facility. for example.~~
- ~~F.~~ Certification of Proper Installation: A written report from the equipment supplier and the equipment installer which certifies that the equipment tests are complete and the equipment performs satisfactorily.
- ~~H.~~ Equipment Control /System Testing: The Control System Testing shall test the wiring and controls and occur in three sequential steps as follows.

1. The first step is the Loop Check Testing (LCT), which shall occur in two phases. The first phase, LCT1, is an independent test performed by the CONTRACTOR and unwitnessed by the DISTRICT. The second phase, LCT2, is the CONTRACTOR repeating the successful LCT1 in the presence of, and witnessed by, the DISTRICT.
 2. The second step is the Operational Train Testing (OTT), which shall occur in two phases. The first phase, OTT1, is an independent test that includes the functionality of the field panel MCC, LCP or VCP performed by the CONTRACTOR and unwitnessed by the DISTRICT. The second phase, OTT2, is the CONTRACTOR repeating the successful OTT1 in the presence of, and witnessed by, the DISTRICT.
 3. The third step is the System Acceptance Testing (SAT), which is a single test witnessed by the DISTRICT. SAT shall prove the wiring and controls of the entire system.
- G-I. Reliability Acceptance Testing: The Reliability Acceptance Test (RAT) is a continuous~~Operational Testing: A~~ test of the entire facility which demonstrates that the individual equipment operates as a system and meets the operational requirements of the facility design. The entire system/facility shall operate for seven (7) continuous days without failure. Any failure shall require the testing to restart at day zero. Operational requirements to test shall include, but are not limited to, system control features and facility, station performance requirements, such as flow and pressure~~for example.~~

1.04 START-UP PLAN

- A. The CONTRACTOR shall submit a~~A. Submit~~ start-up plan for all pieces~~each piece~~ of equipment and each system provided under the Contract Documents, not less than ninety (90)~~sixty (60)~~ days prior to the factory/source performance~~planned initial equipment~~ or factory/field test, whichever is first. The system start-up plan. Plan shall address all operating requirements set forth herein.
- B. The start-up plan shall include a detailed schedule with the following activities identified.
 1. Factory Acceptance Testing
 2. General Start-up and Testing:
 - a. Certificate of Proper Installation (COPI)
 - b. HVAC Start-up and Testing
 - c. Mechanical Final Inspection
 - d. Instrument/in Section 01500, Equipment Calibration

- e. InterNational Electrical Testing Association (NETA)/Electrical Testing
- 3. Factory/Field Demonstration Test (F/FDT)
- 4. Individual and Equipment Functional Testing:
 - a. Certification of Proper System Operation (COPO)-
- 5. DISTRICT Training
- B. ~~Provide a Schedule with the Following Activities Identified:~~
 - 1. ~~Manufacturer's services~~
 - 2. ~~Installation certifications~~
 - 3. ~~Operator training~~
 - 4. ~~_____~~
 - a. Equipment Training
 - b. Operational System/Facility Process Training
 - c. Submit to the DISTRICT the training syllabus and proposed training material for review and approval at least three weeks prior to each training session.
- 2.6. Submission of Operation and Maintenance Manual
- 7. Control System Testing:
 - a. Loop Check Testing (LCT)
 - i.) Submit Loop Check Testing forms with all loops identified and numbered.
 - 5. ~~Performance testing~~
 - 6. ~~Functional testing~~
 - a-b. ~~7. Operational Train Testing (OTT)testing~~
 - i.) Submit OTT forms with all loops identified and numbered, the description of the test, the action and the expected reaction shown.
 - c. System Acceptance Testing (SAT)
 - i.) Submit SAT plan with all loops identified and numbered with the action and expected reaction.
- 8. Reliability Acceptance Testing (RAT)

9. The CONTRACTOR shall prepare and maintain an onsite Start-up and Testing Binder with the following tabs.

- a. Factory Acceptance Testing
- b. HVAC Start-up and Testing
- c. Certificate of Proper Installation (COPI)
- d. NETA/Electrical Testing Results
- e. Factory/Field Demonstration Test (F/FDT)
- f. Instrument/Equipment Calibration
- g. DISTRICT Verification Check Sheet
- h. Equipment Start-up/Certificate of Proper Operation (COPO)
- i. Equipment Training Manuals
- j. Loop Check Test Forms (LCT1 and LCT2).
- k. Operational Train Testing Forms (OTT1 and OTT2)
- l. System Acceptance Testing Forms (SAT)
- m. Operational System/Facility Training
- n. Reliability Acceptance Testing
- o. Record Keeping. RFI/Submittal/Change Order Logs with documents as requested.

C. The tabs in the Start-up and Testing Binder shall be filled with test logs and forms for each task as listed. The CONTRACTOR shall submit blank forms for review, as needed, and shall be completed as the tasks occur.

The start-up plan shall include a

~~C. Provide testing plan with test logs for each item of equipment and each system when specified. Include testing of alarms, control circuits, capacities, speeds, flows, pressures, vibrations, sound levels, and other parameters.~~

~~A.D. D. Provide~~ summary of shutdown requirements for existing systems, which are necessary to complete start-up of new equipment, and systems.

~~B.E. The CONTRACTOR shall revise~~E. Revise and update start-up plan weekly based upon the DISTRICT'S review comments, actual progress, ~~and/or~~ to accommodate changes in the sequence of activities.

1.05 FACTORY ACCEPTANCE/SOURCE PERFORMANCE TESTING

~~A. As part of FAT, the CONTRACTOR shall independently test~~Test the equipment for proper performance at point of manufacture or assembly prior when specified.

~~A. B. Equipment that is to shipping the product. At the DISTRICT'S discretion, the DISTRICT-witnessed testing under F/FDT shall be witnessed either in person at the factory or in the field or, if available, via remote viewing. It shall be the~~

equipment manufacturer's responsibility to provide the necessary equipment and bear all cost associated with remote viewing.

- B. Performance testing shall include~~tested includes~~, but is not limited to, the following:-

List all items of equipment that are to be tested (i.e. pumps, meters, etc.)

1. ~~1.~~ Demonstrate that all equipment meets specified performance requirements.
2. Confirm equipment materials of construction comply with the specified requirements.
- ~~2.3.~~ 2. Provide certified ~~copies of~~ test results.
- ~~3.4.~~ 3. Do not ship equipment until certified ~~test result~~~~copies~~ have received written acceptance from DISTRICT. Written acceptance does not constitute final acceptance.

C. Factory Witnessed Test

Factory Witnessed Pump Test: ~~1.06 FACTORY WITNESSED PUMP TESTS~~

1. ~~A.~~ Pumps having a motor drive of 100 horsepower or greater shall undergo factory witnessed pump testing. Each pumping unit, complete with the actual job motor drive, shall be tested at the factory in the presence of the DISTRICT ~~Representative~~. Tests shall be performed in accordance with the applicable provisions of AWWA E101 or the standards of the Hydraulic Institute. To successfully pass a laboratory performance test, a pumping unit shall meet all performance requirements specified.

- ~~B.~~ DISTRICT ~~will~~shall pay all costs for DISTRICT ~~'S Representative~~ to travel to and from the location of the laboratory performance test, and all costs incurred during testing. Should results of the tests indicate, in the opinion of the DISTRICT District's Representative that the equipment~~pumps~~ fail to meet any of the specified requirements, the DISTRICT District's Representative will notify the CONTRACTOR of such failure. -The manufacturer shall thereupon, at no expense to the DISTRICT, make such modifications and perform additional testing as may be necessary to comply with these specifications. Any additional costs for travel and subsistence associated with additional testing for failed performance tests shall be reimbursed to the DISTRICT by the CONTRACTOR.

1.0607 GENERAL START-UP AND TESTING

A. ~~A.~~ Mechanical Systems:

1. ~~1.~~ Remove rust preventatives and oils applied to protect equipment during construction.
2. ~~2.~~ Flush lubrication systems and dispose of flushing oils. Recharge lubrication system with lubricant recommended by manufacturer.
3. ~~3.~~ Flush fuel system and provide fuel for testing and start-up. At completion of test, fill fuel tank.
4. ~~4.~~ Install and adjust packing, mechanical seals, O-rings, and other seals. Replace defective seals.
5. ~~5.~~ Remove temporary supports, bracing, or other foreign objects installed to prevent damage during shipment, storage, installation and construction.
6. ~~6.~~ Check rotating machinery for correct direction of rotation and for freedom of moving parts before connecting driver.
7. ~~7.~~ Perform cold alignment and hot alignment to manufacturer's tolerances.
8. ~~8.~~ Adjust V-belt tension and variable pitch sheaves.
9. ~~9.~~ Inspect hand and motorized valves for proper adjustment. Tighten packing glands to insure no leakage, but permit valve stems to rotate without galling. Verify valve seats are positioned for proper flow direction.
10. ~~10.~~ Tighten leaking flanges or replace flange ~~gaskets~~~~gasket~~. Inspect screwed joints for leakage.
11. ~~11.~~ Install gratings, safety chains, handrails, shaft guards, and sidewalks prior to operational testing.

B. ~~B.~~ Electrical Systems:

1. ~~1.~~ Perform NETA testing as called out in Section 16950, Electrical Testing insulation resistance tests on wiring except 120-volt lighting, wiring, and submit completed test forms for approval prior to energizing control wiring inside electrical equipment. panels.

- ~~2. Perform continuity tests on grounding systems.~~
- ~~3. Test and set switchgear and circuit breaker relays for proper operation.~~
- ~~4. Perform direct current high potential tests on all cables that will operate at more than 2,000 volts. Obtain services of an approved, certified independent testing lab to perform tests.~~
- ~~5. Check motors for actual full load amperage draw. Compare to nameplate value.~~

C. ~~C.~~ Instrumentation Systems:

1. ~~Field 1.~~ ~~Bench or field~~ calibrate/verify instruments and make required adjustments and control point settings per Section 17200, Miscellaneous Instrumentation Equipment. Provide data on DISTRICT'S~~DISTRICT'S~~ calibration sheets.
2. ~~2.~~ Leak test pneumatic controls and instrument air piping.
3. ~~3.~~ Energize transmitting and control signal systems, verify proper operation, ranges, and settings.

D. Heating, Ventilation and Air Conditioning (HVAC) Start-up and Testing

1. The CONTRACTOR shall provide for a qualified manufacturer's representative to start-up the HVAC system.
2. Ensure that the system is properly charged with the manufacturer's recommended refrigerant.
3. Verify that all drains and drip pans/shields are installed and operational to protect surrounding equipment and materials.
4. Provide a Third Party Tester who does not work for or associated with the CONTRACTOR their sub or supplier to balance and verify the HVAC system complies with the specifications.
5. The Third Party Tester shall mark and secure all valves, vents and dampeners at the correct positions after balancing is complete.
6. The CONTRACTOR shall co-sign the report along with the Third Party Tester.

E. Certificate of Proper Installation (COPI)

1. At Completion of General Start-up and Testing, the CONTRACTOR shall furnish a written report prepared and signed by manufacturer's authorized representative, CONTRACTOR, supplier or electrical CONTRACTOR certifying equipment is ready for operation and the following has been completed.
 - a. Has been properly installed, adjusted, aligned, and lubricated.
 - b. Is free of any stresses imposed by connecting piping or anchor bolts.
 - c. Verify that the anchorage is of the size, type, quantity and location as required by the Structural Engineer or as recommended by the manufacturer.
 - d. Verify the lubrication system has flushed and filled with the type and quantity required by the specifications and approved by the manufacturer.
 - e. Verify that the fuel system has been flushed and filled with the proper fuel.
 - f. Verify proper voltage and rotation and that the controls, protective devices, instrumentation, and control panels furnished as part of the equipment package are properly installed, calibrated, and functioning.
 - g. Certify that the equipment is suitable for satisfactory full-time operation under full load conditions and that it operates within the allowable limits for vibration.

F. DISTRICT Piping and Valve Verification

1. The CONTRACTOR shall obtain from, and complete in collaboration with, the DISTRICT Verification Check Sheet. The DISTRICT Verification Check Sheet will include non-electrical items that require testing prior to start-up and testing. At the CONTRACTOR's discretion, the CONTRACTOR may prepare their own checklist for the DISTRICT'S review and acceptance.
2. All valves and piping hydrostatically tested as required per the technical specifications of the Contract Documents have passed the required testing.
3. All pipelines, reservoirs, tanks and equipment have been disinfected and passed Bac-T testing as required by specifications in the Contract Documents.

4. All valves closed for construction isolation by the DISTRICT have been put back into service and the system is ready to commence testing at full operational conditions.

1.07 08 INDIVIDUAL EQUIPMENT FUNCTIONAL TESTING

A. Factory/Field Demonstration Test (F/FDT)

1. The CONTRACTOR shall coordinate and schedule time for the DISTRICT to visit the manufacturer's facility to inspect and test all electrical and control panels. This shall include the Control Panels (CP), Local Control Panels (LCP), Vendor Control Panels (VCP), Switchgears (SWGR), Switchboards (SWBD), Motor Control Centers (MCC), stand-alone Variable Frequency Drives (VFD), and Reduced Voltage Soft-Starters (RVSS). The equipment shall be tested in the field after shipment. At the DISTRICT'S discretion the DISTRICT may choose, if available, to remotely view the test or perform the testing at the project site. If the DISTRICT chooses to remotely view the test it shall be upon the manufacturer to provide all the necessary equipment and bear all cost associated with the remote viewing. Prior to F/FDT, the manufacturer shall verify that each panel matches the size, layout and form as shown on the submittal and confirm it functions per the schematics and control descriptions shown in the Contract Documents.

B. Field Performance Testing (FPT)

The CONTRACTOR shall demonstrate~~A. — Functionally test mechanical and electrical equipment for proper operation after general start-up and testing tasks have been completed.~~

1. ~~B. — Demonstrate~~ proper rotation, alignment, speed, flow, pressure, vibration, sound level, adjustments, and calibration as required in specifications. Perform initial checks in the presence of, and with the assistance of, the manufacturer's representative.
2. Conduct continuous 8-hour test under full load conditions. Replace parts that operate improperly.
3. The CONTRACTOR shall provide to the DISTRICT a complete report that the equipment meets the operational requirements of the Contract Documents.

1.08 CERTIFICATE OF PROPER OPERATION (COPO)

A. At completion of Individual Equipment Functional Testing, the CONTRACTOR shall furnish written report prepared and signed by manufacturer's authorized representative, certifying the following.

1. Equipment meets the contract requirements related to operational performance.
2. Equipment provides the flow, pressure as specified in the Contract Documents.
3. Equipment meets the noise and vibration requirements.

~~A.B. The CONTRACTOR shall demonstrate~~C. Demonstrate proper operation of each instrument loop function including alarms, local and remote controls, instrumentation and other equipment functions. Generate signals with test equipment to simulate operating conditions in each control mode.

C. The CONTRACTOR shall submit the signed COPO to the DISTRICT and place a copy in the Start-up and Testing Binder.

~~D. Conduct continuous 8-hour test under full load conditions. Replace parts which operate improperly.~~

1.09 DISTRICT APPROVAL ~~CERTIFICATE OF PROPER~~ INSTALLATION

~~A. At Completion of Functional Testing, Furnish Written Report Prepared and Signed by Manufacturer's Authorized Representative, Certifying Equipment:~~

- ~~a. 1. Has been properly installed, adjusted, aligned, and lubricated.~~

All of the work described in sections 1.04 to 1.08 shall be completed and documentation submitted for approval to the DISTRICT prior to commencing any of the tasks specified in sections 1.10 to 1.16.

1.10 EQUIPMENT ~~2. Is free of any stresses imposed by connecting piping or anchor bolts.~~

- ~~3. Is suitable for satisfactory full-time operation under full load conditions.~~
- ~~4. Operates within the allowable limits for vibration.~~

5. ~~Controls, protective devices, instrumentation, and control panels furnished as part of the equipment package are properly installed, calibrated, and functioning.~~
 6. ~~Control logic for start-up, shutdown, sequencing, interlocks, and emergency shutdown have been tested and are properly functioning.~~
- ~~B. Furnish Written Report Prepared and Signed by the Electrical and/or Instrumentation Subcontractor Certifying:~~
1. ~~Motor control logic that resides in motor control centers, control panels, and circuit boards furnished by the electrical and/or instrumentation subcontractor has been calibrated and tested and is properly operating.~~
 2. ~~Control logic for equipment start-up, shutdown, sequencing, interlocks and emergency shutdown has been tested and is properly operating.~~
- ~~C. Co-sign the reports along with the manufacturer's representative and subcontractors.~~

1.10 TRAINING FOR DISTRICT OF OWNERS PERSONNEL

- A. The training of DISTRICT personnel shall include the following, at a minimum, in addition to the specific requirements listed in the technical specifications.
1. ~~A. Provide operations and maintenance training for items of mechanical, electrical and instrumentation equipment. Utilize manufacturer's representatives to conduct training sessions. Coordinate with DISTRICT to develop content for training sessions.~~
 2. ~~B. Coordinate training sessions to prevent overlapping sessions. Each training session shall be provided in two identical sessions. Arrange sessions so that individual operators and maintenance technicians do not attend a maximum of two more than 2 sessions per week.~~
- ~~C. Provide Operation and Maintenance Manual for specific pieces of equipment or systems one month prior to training session for that piece of equipment or system.~~
- ~~D. Satisfactorily complete functional testing before beginning operator training.~~
3. ~~E. CONTRACTOR shall coordinate the training periods with DISTRICT personnel and manufacturer's representatives, and shall submit a complete training schedule for all each piece of equipment or system for which training is to be provided. Training shall be based upon equipment as provided to the DISTRICT. Such training schedule shall be submitted~~

not less than 21 calendar days prior to the time that the associated training is to be provided and shall be based on the current plan of operation.

4. Satisfactorily complete Individual Equipment Functional Testing, COPI and COPO before conducting operator training.
5. The training session for each piece of equipment or system shall include all appurtenances associated with that equipment or system, including LCP, VCP instruments or devices necessary for the equipment to operate correctly.

1.11 LOOP CHECK TESTING

- A. The CONTRACTOR shall refer to Section 17332, Instrumentation and Control System Testing and Start-up, for complete LCT requirements.
- B. Analog and discrete signals may be simulated during LCT1 and LCT2 testing.
- C. Loop Check Testing shall prove that the installed wiring matches the submitted termination locations, verifies correct polarity, contact status Normally Open (NO) or Normally Closed (NC) and labeling.
- D. LCT1 shall be completed, and all corrections made prior to submitting the LCT1 test form for DISTRICT approval.
- E. LCT2 may only proceed after the DISTRICT approves LCT1 submittal.
- F. The CONTRACTOR shall provide all tools and equipment required for the LCT1 and LCT2 testing.
- G. LCT2 shall be completed, and all necessary corrections made and witnessed, prior to submitting the LCT2 test form for DISTRICT approval. The CONTRACTOR shall proceed to OTT1 when LCT2 submittal is accepted and approved by the DISTRICT.

1.12 EQUIPMENT/SYSTEM OPERATIONAL TRAIN TESTING (OTT)

- A. The ~~A.~~ CONTRACTOR shall refer to Section 17332, Instrumentation and Control System Testing and Start-up, for complete OTT requirements.
- B. OTT shall include all start, stop, warning, alarm and fail operations in local/remote and auto/manual as shown in the Contract Documents.
- C. OTT may be conducted with water or with process fluids.

- D. The OTT testing shall be performed “End to End” from the field device through field panels to SCADA and the auto dialer.
- E. Instruments/field devices shall be operated through the sensing element in situ under the system conditions or, where required, with the use of an external source.
- F. OTT1 shall be completed, and all corrections made prior to submitting the OTT1 test form for approval by the DISTRICT and proceeding to OTT2. OTT2 may only proceed after DISTRICT approves OTT1.
- G. OTT 2 shall be completed, and all corrections made prior to submitting the OTT2 test form for approval by the DISTRICT. The CONTRACTOR shall proceed to SAT when OTT2 is witnessed, accepted and approved by the DISTRICT.
- H. The CONTRACTOR shall provide all tools and ~~shall jointly develop and coordinate~~ equipment required for the OTT1 and OTT2 testing.
- I. The CONTRACTOR shall provide and construct any temporary loops, tanks, equipment as required to complete the OTT testing.

1.13 SYSTEM ACCEPTANCE TESTING (SAT)

- A. System Acceptance Testing shall prove that the individual trains work together as a system. The testing shall include both auto and manual functionality in local and remote modes. SAT shall confirm that the system can adjust to changes in flow, pressure, level, starts, stops and other such actions due to changes in set points, system demands, failures and other such actions.
- ~~A.B. The SAT is a single phase test conducted as a whole system with all components online and system operational. The facility will be tested as if the facility were online and operational. testing. Operation shall comply with requirements set forth in Section 01500, Equipment and Equipment Systems Operation.~~
- C. The SAT testing shall be “End to End” from the field device through to SCADA and the Auto Dialer.
- D. SAT may be conducted either with water or process fluids at the DISTRICT’S discretion.
- E. Instruments/field devices shall be operated through the sensing element using changing system conditions. This may occur by the opening or closing of valves to manipulate system conditions.
- F. The CONTRACTOR shall provide all tools and equipment required for the SAT testing.

G. The CONTRACTOR shall provide and construct any temporary loops, tanks, equipment as required to complete the SAT testing.

1.14 FACILITY AND PROCESS TRAINING OF DISTRICT PERSONNEL

A. Facility and process training shall be a joint effort by the CONTRACTOR and the DISTRICT. The DISTRICT shall take the lead in developing the training agenda requesting assistance from the CONTRACTOR as necessary.

B. The training shall explain the design intent, the process, operational options, limitations and overall integration with the DISTRICT'S system.

C. Any and all confined spaces or hazardous conditions shall be explained and identified.

D. Any and all facility or system disconnects or isolation valves or other devices shall be shown and identified.

E. SCADA and PLC programing shall be presented with emphasis on any new or unique programing features.

1.15 RELIABILITY ACCEPTANCE TESTING (RAT)

A. Reliability Acceptance Testing (RAT) shall be performed by the DISTRICT operating the entire facility to the system under normal conditions. The DISTRICT shall operate the facility as intended by starting, stopping, rotating equipment, changing set points and other such action required to properly operate the facility. The test shall run for seven (7) consecutive days without any failures of any equipment, instruments or vendor package controls or programming. Any failure shall re-start the test to day zero and testing shall continue until seven (7) consecutive days of operation without failure has been achieved.

~~A.B. Conduct RAT B.~~ Conduct operational test of the entire facility after completion of Facility Process Training, ~~operator training.~~ Demonstrate satisfactory operation of equipment and systems in actual operation.

C. The DISTRICT shall notify the CONTRACTOR of any failure at the first opportunity during working hours. The CONTRACTOR shall provide a contact list for failure response to the DISTRICT prior to the start of the RAT.

D. In the event that an item of equipment cannot be tested continuously for seven (7) days, provide information for an alternative test. For high horsepower equipment where testing will impact Time of Use (TOU) energy limitations, describe an intermittent test procedure.

- ~~E.~~ The in the event of failure, CONTRACTOR shall make required repairs, adjustments, and replacements.
- ~~C.~~ Conduct operational test for continuous 7-day period.
- ~~B.F.~~ ~~D.~~ DISTRICT will provide operations personnel, power, fuel, and other consumables for duration of operational test.
- ~~C.G.~~ ~~E.~~ Immediately correct defects in material, workmanship, or equipment which became evident during RAT operational test.
- ~~D.H.~~ ~~F.~~ Repeat RAT operational test when malfunctions or deficiencies cause shutdown or partial operation of the facility or results in performance that is less than specified.
- ~~G.~~ In the event an item of equipment cannot be tested continuously for seven (7) days, provide information for an alternative test, or modify the seven (7) day test period. For high horsepower equipment where testing will impact Time of Use (TOU) energy limitations, describe an intermittent test procedure. Identify TOU constraints.

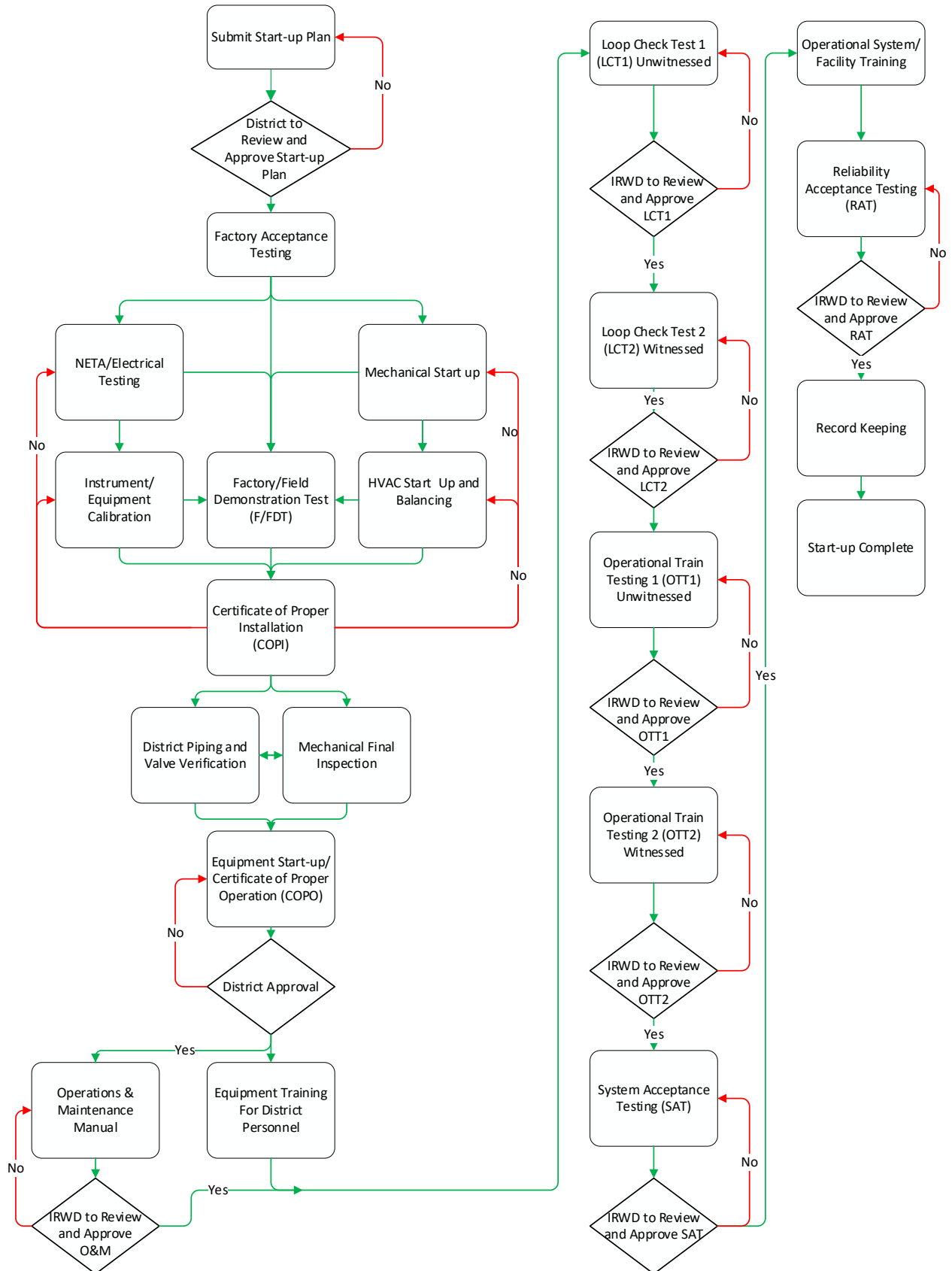
1.1612 RECORD KEEPING

- A. Maintain and submit the following records generated during start-up ~~Submit Following Records Generated During Start-up and testing phase~~ Testing Phase of project. ~~Project:~~
1. Daily logs of equipment testing identifying all tests conducted and outcomes ~~outcome~~.
 2. Logs of time spent by manufacturer's representatives performing services on the job site.
 3. Equipment lubrication records.
 4. Electrical phase, voltage, and amperage measurements.
 5. Insulation resistance measurements.
 6. Data sheets of control loop testing including testing and calibration of instrumentation devices and set points.
 7. The CONTRACTOR shall provide within the Start-up and Testing Binder, current copies of the RFI, submittal and change order logs. The CONTRACTOR shall have on site and readily available for reference, as

required elsewhere in the Contract Documents, all RFI, submittals and change orders for review during start-up.

END OF SECTION

FIGURE 1: START-UP AND TESTING PROCESS OVERVIEW



SECTION 01520

CLOSEOUT PROCEDURES

1.01 FINAL CLEANING

- A. Perform final cleaning prior to inspections for Final Acceptance.
- B. Use cleaning materials which are recommended by manufacturers of surfaces to be cleaned.
- C. Prevent scratching, discoloring, and otherwise damaging surfaces being cleaned.
- D. Clean roofs, gutters, downspouts, and drainage systems.
- E. Broom clean exterior paved surfaces and rake clean other surfaces of sitework. Police yards and grounds to keep clean.
- F. Remove dust, cobwebs, and traces of insects and dirt.
- G. Clean grease, mastic, adhesives, dust, dirt, stains, fingerprints, paint, blemishes, sealants, plaster, concrete, and other foreign materials from sight-exposed surfaces, and fixtures and equipment.
- H. Remove non-permanent protection and labels.
- I. Polish glossy surfaces to clear shine.
- J. Vacuum carpeted and soft surfaces.
- K. Clean light fixtures and replace burned-out or dim lamps.

1.02 WASTE DISPOSAL

- A. Surplus materials, waste products, and other debris shall be disposed off-site

1.03 TOUCH-UP AND REPAIR

- A. Touch-up, repair, or replace finished surfaces on structures, equipment and installation that have been damaged prior to inspection for final acceptance.

1.04 CLOSEOUT DOCUMENTS

- A. Submit following closeout documents upon completion of the Work, and at least 7 days prior to application for Final Payment:
1. Project Record Documents, including:
 - Record drawings
 - Testing reports
 - Survey data
 - Instrument calibration sheets

Add other items as may be required.
 2. Operation and Maintenance Manuals
 3. Warranties and Bonds.
 4. Spare Parts

END OF SECTION

SECTION 01600

DISTRICT FURNISHED EQUIPMENT

1.01 EQUIPMENT FURNISHED BY DISTRICT

List equipment and include scheduled delivery date(s). Include copy of purchase order in appendix. List any equipment or parts that are necessary for installing equipment.

1.02 DISTRICT RESPONSIBILITIES

- A. Arrange for and deliver necessary shop drawings, installation instructions, product data and samples to CONTRACTOR.
- B. Arrange and pay for product delivery to site in accordance with construction schedule.
- C. Deliver supplier's bill of materials to CONTRACTOR.
- D. Inspect deliveries jointly with CONTRACTOR.
- E. Submit claims for transportation damage.
- F. Arrange for replacement of damaged, defective, or missing items.
- G. Arrange for manufacturer's warranties, bonds, service, and inspections, as required.

1.03 CONTRACTOR RESPONSIBILITIES

- A. Designating required delivery date for each DISTRICT furnished product.
- B. Reviewing shop drawings, product data and samples.
- C. Submitting notification of discrepancies or anticipated problems.
- D. Receiving and unloading products at site.
- E. Promptly inspecting products jointly with DISTRICT and recording shortages, damaged or defective items.
- F. Handling products at site, including uncrating and storage.
- G. Protecting products from damage.

- H. Installing, including assembly, connections, adjustments, tests, and finish products in accordance with Contract Documents.
- I. Providing operating oils, lubricants, and incidental materials required for complete installation.
- J. Repairing or replacing items damaged after receipt until Date of Acceptance of the Work by DISTRICT.

1.04 DELIVERY

- A. If DISTRICT fails to deliver products in accordance with approved Construction Schedule, adjustments will be made to Contract Time and Contract Price as stipulated in General Provisions.

END OF SECTION

SECTION 01700

EARLY OCCUPANCY OF PORTIONS OF WORK

1.01 PORTIONS OF WORK SCHEDULED FOR EARLY OCCUPANCY

- A. CONTRACTOR shall complete following portions of Work for DISTRICT'S utilization including specified testing, training of DISTRICT'S personnel, and other preparations necessary for DISTRICT'S occupancy or use:

Designate portions of work scheduled for early occupancy. List early occupancy milestones and associated liquidated damage rates on the Agreement form.

1.02 SUBSTANTIAL COMPLETION CERTIFICATIONS

- A. Certificates of Substantial Completion will be executed for each designated portion of Work prior to DISTRICT occupancy. Such certificate of substantial completion will describe the portion of the Work to be occupied by DISTRICT, items that may be incomplete or defective, date of occupancy by DISTRICT, and other information required by DISTRICT and CONTRACTOR.

1.03 FOLLOWING OCCUPANCY

- A. Occupancy by DISTRICT will relieve CONTRACTOR of responsibility for injury or damage to the above-listed completed portions of the Work resulting from use by DISTRICT or from the action of the elements, or from other cause, except CONTRACTOR operations or negligence.
- B. After DISTRICT occupancy, allow access for DISTRICT'S personnel, access for others authorized by DISTRICT, and access by DISTRICT for operation of equipment and systems.
- C. Following Occupancy, DISTRICT will provide power to operate equipment and systems, and repair damage caused by DISTRICT occupancy.
- D. CONTRACTOR will not be required to reclean early occupied portions of Work prior to final acceptance, except for cleanup made necessary by CONTRACTOR's operations.
- E. Guarantee period for portions of the Work occupied by DISTRICT shall commence with date of Certificate of Substantial Completion of portions of Work for use by DISTRICT. Progress payment retentions for portions of the Work occupied by DISTRICT will be released as part of the retention for the total Work.

- F. DISTRICT'S use of occupied facilities shall not relieve CONTRACTOR from responsibility for correcting defective work or materials.
- G. No partial acceptance of the Work will be made and no acceptance other than the final acceptance of the completed Work will be made except for those portions of Work designated for early occupancy by DISTRICT.

END OF SECTION

SECTION 01800

TESTING AND LABORATORY SERVICES

Add specifications as needed.

SECTION 01810
SPECIAL MEETINGS

Add specifications as needed.

SECTION 01820

SPECIAL CONTRACT CLOSE OUT

Add specifications as needed.

SECTION 01830

SPECIAL SIGNAGE

Modify this specification as needed for the number of signs and location of the project.

Contractor shall furnish and install *one/two* project signs. The District inspector and *City of xxx or County of Orange* shall approve sign locations in the field. Dimensions of the signs shall be 4-feet by 8-feet mounted on 4-inch by 4-inch wooden posts. Signs shall be white with black letters and include the District logo, project name, District Public Affairs phone number: (949) 453-5500 and website, contractor's name and emergency contact information, and the scheduled completion date. An example of the sign layout is included in the appendix to these specifications.

SECTION 01840

BASIS OF MEASUREMENT FOR PAYMENT

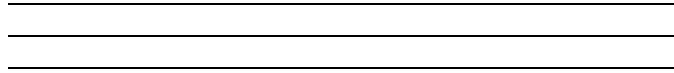
Add specifications as needed.

SECTION 01900
GENERAL DESIGN REQUIREMENTS

Add specifications as needed.

PROJECT TECHNICAL SPECIFICATIONS

SECTIONS 2 – 17



PROJECT NO. XXXXX _____

*Include Sections 2 through 17 following
this page, or reference the document
that contains Sections 2-17.*

APPENDIX

APPENDIX

Table of Contents

Shop Drawing Transmittal Form

Survey Request Form

Soil Testing Request Form

Dewatering Report Form

Request for Information Form

Contract Change Request Form

Contract Change Order Form

Progress Payment Form

Certificate of Substantial Completion Form

Escrow Agreement for Security Deposits in Lieu of Retention Form

IRWD Alternating Friday Closure Schedule

IRWD Holiday Schedule

Project Sign Example

General Dewatering Permit Order No. R8-2009-0045 (Amends R8-2007-0041)

General Dewatering Permit Order No. R8-2007-0041

General Dewatering Permit Order No. R8-2015-0004

Appendix

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Irvine Ranch Water District

15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
(949) 453-5300

Project: _____

Project No.: _____

Contractor: _____

Address: _____

To: Irvine Ranch Water District
P.O. Box 57000
Irvine, CA 92619-7000

Date: _____

Attention: _____
IRWD PROJECT MANAGER

Phone No.: _____

Fax No.: _____

e-mail: _____

SHOP DRAWING TRANSMITTAL

SUBJECT OF SUBMITTAL: _____

SPECIFICATION SECTION(S): _____

CONTRACTOR'S CERTIFICATION: Check and complete either statement below:

Contractor has verified that the material or equipment contained in this submittal meets all the requirements specified in or shown on the contract documents with no exceptions.

Contractor has verified that the material or equipment contained in this submittal meets all the requirements specified in or shown on the contract documents except for the following deviations:

REQUIREMENT:

Contractor shall use this **Transmittal Form** for submittal of shop drawings to the Owner's Representative. The procedure governing shop drawings submittal is contained in the General Provisions of the Specifications. Failure to comply with all the requirements specified therein will constitute grounds for return of the shop drawings for proper resubmittal.

Contractor's Authorized Signature

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Irvine Ranch Water District

15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
(949) 453-5300

Project: _____

Project No.: _____

Contractor: _____

Address: _____

To: Irvine Ranch Water District
 P.O. Box 57000
 Irvine, CA 92619-7000

Date: _____

Attention: _____
 IRWD PROJECT MANAGER

Phone No.: _____

Fax No.: _____

e-mail: _____

SURVEY REQUEST

TYPE OF SURVEY	DESCRIPTION, STRUCTURE, STA.	OFFSET	STATION	DESIRED BY:	
				TIME	DATE
1					
2					
3					
4					
5					

ADDITIONAL INSTRUCTIONS, REMARKS, ETC., BY NUMBER:

Appendix

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Irvine Ranch Water District

15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
(949) 453-5300

Project: _____

Project No.: _____

Contractor: _____

Address: _____

To: Irvine Ranch Water District
 P.O. Box 57000
 Irvine, CA 92619-7000

Date: _____

Attention: _____
 IRWD PROJECT MANAGER

Phone No.: _____

Fax No.: _____

e-mail: _____

SOIL TESTING REQUEST

TYPE OF TEST	DESCRIPTION, STRUCTURE, STA. TO STA., ETC...	DESIRED BY:	
		TIME	DATE
1			
2			
3			
4			
5			

ADDITIONAL INSTRUCTIONS, REMARKS, ETC., BY NUMBER:

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Irvine Ranch Water District

15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
(949) 453-5300

Date: _____

Company: _____

Address: _____

Telephone No.: _____

Fax No.: _____

ATTENTION:

Project: _____

Project Number: _____

RE: WEEKLY DEWATERING REPORT

Pursuant to the General Requirements (Section 5-3) of the Contract, this is to inform you that construction activities for the week ending _____:

- Required no dewatering.
- Required dewatering. The wastewater was pumped to a settlement box and then discharged to surface waters.

Estimated Volume of Water (gallons/day): _____

- Required dewatering. The dewatering method used was:

Estimated Volume of Water (gallons/day): _____

Refer to attached report for laboratory test results.

Name of Lab performing testing: _____

Contact Person

Telephone #

Sincerely,

Name

Title

Date

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Weekly Dewatering Report (continued)

Summary of Monitoring and Reporting Requirements:

(Note: This is a summary to help facilitate compliance with the monitoring and reporting requirements. The contractor responsible for complying with all permit requirements and this summary in no way modifies the permit requirements.)

Sampling:

- Each time a dewatering system is turned off and restarted. (If there is no discharge from the system then the sampling procedures begin as if it is a new discharge when the system is restarted.)
- Samples must be taken at the scheduled intervals regardless of holidays or other non-working days for the contractor.
- For a continuous discharge, the interval between sampling events must not exceed seven days. If the contractor wishes to change sample days after the discharge has begun and the initial samples have been collected, then the change must be made in a way that the interval between samples does not exceed the seven day requirement.
- If there is more than one discharge point, each one is considered a separate discharge and must be sampled separately.
- Flow must be measured daily.

IF THERE IS ANY INDICATION THAT DEWATERING REQUIREMENTS ARE NOT BEING MET, DEWATERING MUST BE STOPPED AND CONTACT THE IRWD INSPECTOR IMMEDIATELY. THE CONTRACTOR IS RESPONSIBLE FOR ANY PENALTIES ASSESSED.

CONTRACT CHANGE REQUEST



Irvine Ranch Water District

15600 Sand Canyon Avenue
 P.O. Box 57000
 Irvine, CA 92619-7000
 (949) 453-5300

C.R. No. _____

Project No. _____

Project Title _____

Date: _____

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS \pm
TOTAL =			

DAYS \pm

1. NET AMOUNT THIS CHANGE REQUEST	=		
2. ORIGINAL CONTRACT AMOUNT	=		
3. TOTAL PREVIOUS CHANGE ORDERS	=		
4. TOTAL BEFORE THIS CHANGE REQUEST (2+3)	=		
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=		

We hereby agree to make the above change subject to the terms of this change order for the sum of

_____ Dollars

 Date Contractor By:

IRVINE RANCH WATER DISTRICT	DATE	
IRWD Engineer or Consulting Engineer	_____	<input type="checkbox"/> Change Initiated by the District
Engineering Manager	_____	<input type="checkbox"/> Change Initiated by the Contractor
Executive Director of Technical Services	_____	

NOTE: The documents supporting this Change Request, including any drawings and estimates of cost, if required are attached hereto and made a part hereof. This Change Request shall not be considered as such until it has been signed by the Owner and the Contractor. Upon final approval, distribution of copies will be made as required.
 CHANGES: All workmanship and materials called for by this Change Request shall be fully in accordance with the original Contract Documents insofar as the same may be applied without conflict to the conditions set forth by this Change Request. The time for completing the contract will not be extended unless expressly provided for in this Change Request

Appendix

CONTRACT CHANGE ORDER



Irvine Ranch Water District

15600 Sand Canyon Avenue
 P.O. Box 57000
 Irvine, CA 92619-7000
 (949) 453-5300

C.O. No. _____

Final _____

Project No. _____

Project Title _____

Date: _____

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
TOTAL			

DAYS ±

1. NET AMOUNT THIS CHANGE ORDER	=		
2. ORIGINAL CONTRACT AMOUNT	=		
3. TOTAL PREVIOUS CHANGE ORDER(S)	=		
4. TOTAL BEFORE THIS CHANGE ORDER (2+ 3)	=		
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=		

We hereby agree to make the above change subject to the terms of this change order for the sum of: _____

----- Dollars

 Date Contractor By:

SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
_____ IRWD Engineer or Consulting Engineer	_____ Date	Department Director Approval Required <input type="checkbox"/> Executive Director Approval Required <input type="checkbox"/> General Manager Approval Required <input type="checkbox"/> Board Approval Required <input type="checkbox"/>
_____ Engineering Manager	_____ Date	
_____ Executive Director of Technical Services	_____ Date	
_____ General Manager	_____ Date	
		_____ Purchase Order No.

NOTE: The documents supporting this Change Order, including any drawings and estimates of cost, if required are attached hereto and made a part hereof. This Change Order shall not be considered as such until it has been signed by the Owner and the Contractor. Upon final approval, distribution of copies will be made as required. The parties mutually agree the pricing set forth in this Change Order are complete and fair compensation for the entirety of the work authorized under this Change Order and that no additional compensation is warranted nor shall it be allowed.

CHANGES: All workmanship and materials called for by this Change Order shall be fully in accord with the original Contract Documents insofar as the same may be applied without conflict to the conditions set forth by this Change Order. The time for completing the contract will not be extended unless expressly provided for in this Change Order.

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Irvine Ranch Water District

15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
(949) 453-5300

CONTRACTOR: Insert Name
Insert Address
Insert Telephone Number

PROJECT:

PROJECT NO.:

P. O. NO.:

PROGRESS PAY REQUEST NO.:
FOR PERIOD ENDING:

DATE PREPARED:
CONTRACT START DATE:
CONTRACT COMPLETION DATE:

CONTRACT SUMMARY

DAYS	CONTRACT AMOUNT	% COMPLETED	COMPLETED TO DATE
ORIGINAL CONTRACT			
CHANGE ORDERS			
TOTALS			
LESS 5% RETENTION			
LESS STOP PAYMENT NOTICES			
TOTAL DUE TO DATE			
LESS PREVIOUS PAYMENTS			
AMOUNT OF THIS PAYMENT			

DATE

IRVINE RANCH WATER DISTRICT

DATE

Amount of Payment

DATE

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Irvine Ranch Water District

Certificate of Substantial Completion

Project

Title: _____

_____ Project No: _____

Contractor: _____

Contract Start (Award) Date: _____ Contract Time: _____

Contract Completion Date: _____

Date of Substantial Completion: _____

The work performed under this contract has been inspected by the District and its representatives, and is hereby accepted by the District as being substantially completed on the above date.

Substantial Completion is defined as meaning all work is complete except for minor corrections to work that has already been performed, and the date of substantial completion is the date when this level of completion has been achieved, in accordance with the contract documents, as modified by any change orders.

A list of all of the items remaining to be corrected is appended hereto. All such work shall be corrected to the satisfaction of the District before final acceptance of the project, otherwise the Contractor does hereby waive any and all claims to all moneys retained by the District under the Contract to cover the value of all such uncorrected items.

The Contractor hereby accepts the above conditions of substantial completion:

Contractor's Authorized Representative

Date

Irvine Ranch Water District's Authorized Representative

Date

The following items or supplementary sheets listing such items remaining to be corrected are hereby made a part of this document by reference thereto:

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ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into by and between IRVINE RANCH WATER DISTRICT whose address is 15600 Sand Canyon Avenue, Irvine, California 92618-3102

hereinafter called "DISTRICT," and _____
whose address is _____

_____ hereinafter called "Contractor" and _____
whose address is _____

_____ hereinafter called "Escrow Agent."

For the consideration hereinafter set forth, the DISTRICT, Contractor, and Escrow Agent agree as follows:

(1) Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by DISTRICT pursuant to the Construction Contract entered into between DISTRICT and Contractor for _____ in the amount of _____ dated _____, (hereinafter referred to as the "Contract"). Alternatively, on written request of the Contractor, the DISTRICT shall make payments of the retention earnings directly to the Escrow Agent. When the Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the DISTRICT within ten (10) days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between DISTRICT and Contractor. Securities shall be held in the name of Irvine Ranch Water District, and shall designate the Contractor as the beneficial owner.

(2) The DISTRICT shall make progress payments to the Contractor for those funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.

(3) When the owner makes payment of retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until the time that the escrow created hereunder is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the DISTRICT pays the Escrow Agent directly.

(4) Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the DISTRICT. These expenses and payment terms shall be determined by the DISTRICT, Contractor, and Escrow Agent.

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(5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the DISTRICT.

(6) Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from DISTRICT to the Escrow Agent that DISTRICT consents to the withdrawal of the amount sought to be withdrawn by Contractor.

(7) The Owner shall have a right to draw upon the securities in the event of default by Contractor. Upon seven (7) days' written notice to the Escrow Agent from DISTRICT of the default, Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the DISTRICT.

(8) Upon receipt of written notification from the DISTRICT certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

(9) Escrow Agent shall rely on the written notifications from the DISTRICT and Contractor pursuant to Sections (5) through (8), inclusive, of this agreement and the DISTRICT and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

(10) The names of the persons who are authorized to give written notice or to receive written notice on behalf of DISTRICT and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of DISTRICT:

On behalf of Contractor:

Title

Title

Name

Name

Signature

Signature

Address

Address

On behalf of Escrow Agent:

_____ Title

_____ Name

_____ Signature

_____ Address

At the time the Escrow Account is opened, the DISTRICT and Contractor shall deliver to Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date first set forth above.

DISTRICT:

CONTRACTOR:

_____ Title

_____ Title

_____ Name

_____ Name

_____ Signature

_____ Signature

Order No. R8-2009-0045

NPDES No. CAG918002

General Dewatering Permit
(San Diego Creek/Newport Bay)
(Amends R8-2007-0041)

Order No. R8-2007-0041

NPDES No. CAG918002

General Dewatering Permit
(San Diego Creek/Newport Bay)

Order No. R8-2015-0004

NPDES No. CAG998001

General Dewatering Permit
(Non-San Diego Creek/Newport Bay)

July 22, 2019

Prepared by: C. Kessler / M. Cortez

Submitted by: K. Burton

Approved by: Paul A. Cook



CONSENT CALENDAR

2019 VAULT LID REPLACEMENT CONSULTANT SELECTION

SUMMARY:

Eleven concrete vaults housing domestic water system appurtenances in northern Irvine cannot be accessed due to damage to the vaults' lids. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement in the amount of \$137,867 with RCE Consultants to provide engineering services for the 2019 Vault Lid Replacement project.

BACKGROUND:

Eleven vaults located within Irvine Boulevard, Modjeska and Orchard Hills Drive have metal lids with damaged hardware making them prone to vibrating ajar and opening unintentionally. The vault sites are reflected in a location map attached as Exhibit "A". The current lids are spring-assisted, two-leaf lids that are normally secured in the closed position with bolts. Due to wheel-loading and vibrations from vehicular traffic including large semitrailer trucks and commercial vehicles, the threaded female connections on the lids have become stripped and the lid hinges have also been damaged. To assure the lids do not open unintentionally, the lids have been tack-welded or paved over.

There are two types of vaults that will be rehabilitated in this project: six-foot by six-foot vaults (standard) that typically house a bottom drain assembly and 12-foot by 12-foot vaults (oversized) that house multiple appurtenances, e.g. a 36-inch main line butterfly valve, an air vacuum assembly and a blow-off assembly. The oversized vaults have lids that are set within the vault's top concrete deck at pavement grade.

The goals of the project are to:

- Replace each of the vault lids to minimize the risk of unintentional opening;
- Modify the existing butterfly valve operating wheels with valve stem extensions to allow staff to operate the valves at the street surface and thereby eliminating the need for permit-required confined space entry; and
- Replace, repair, or modify the damaged concrete decks of the oversized vaults to allow improved drivability within Irvine Boulevard. The large concrete decks currently have heavy cracking and spalling.

In May 2019, staff issued a Request for Proposal for the design to four consultants: Gannett Fleming, Infrastructure Engineering Corporation, MurraySmith and RCE Consultants. Staff received proposals from all four firms. Staff reviewed and evaluated the proposals and recommends awarding the design contract to RCE Consultants. While each firm has the experience and expertise to complete the project, RCE Consultants demonstrated exceptional

understanding of the scope of work and project approach. The consultant selection matrix is attached as Exhibit “B” and RCE Consultants’ proposal and fee are attached as Exhibit “C”.

FISCAL IMPACTS:

Project 10542 is included in the FY 2019-20 Capital Budget; the budget is sufficient for the project’s design phase. Funding will be provided by the replacement fund for domestic water.

ENVIRONMENTAL COMPLIANCE:

This project is categorically exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301, which provides exclusion for minor alteration of public facilities.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 16, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT IN THE AMOUNT \$137,867 WITH RCE CONSULTANTS TO PROVIDE ENGINEERING SERVICES FOR THE 2019 VAULT REHABILITATION, PROJECT 10542.

LIST OF EXHIBITS:

Exhibit “A” – Location Maps

Exhibit “B” – Consultant Selection Matrix

Exhibit “C” – RCE Consultants’ Proposal and Fee Schedule

EXHIBIT "A"

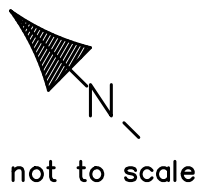
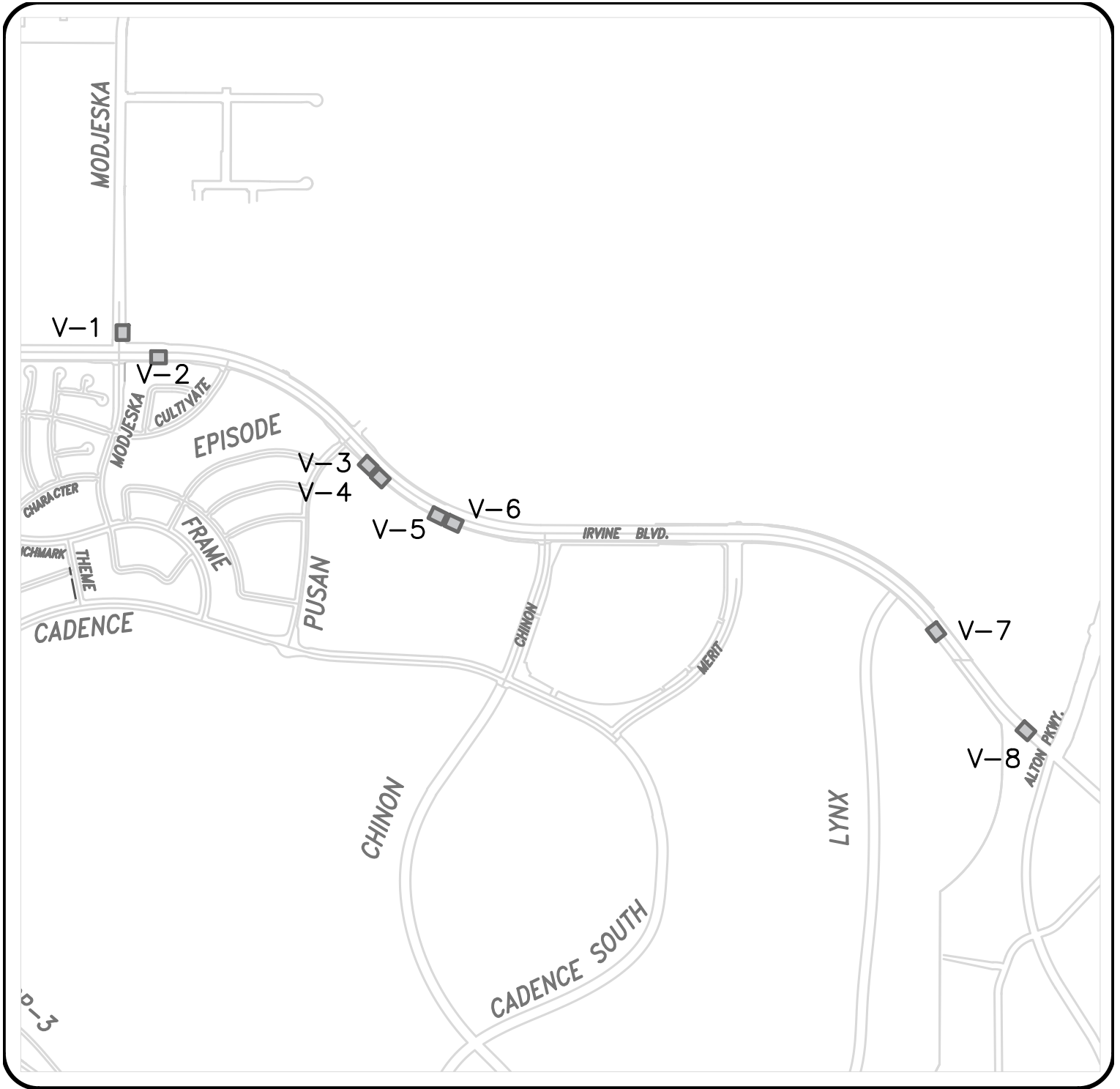
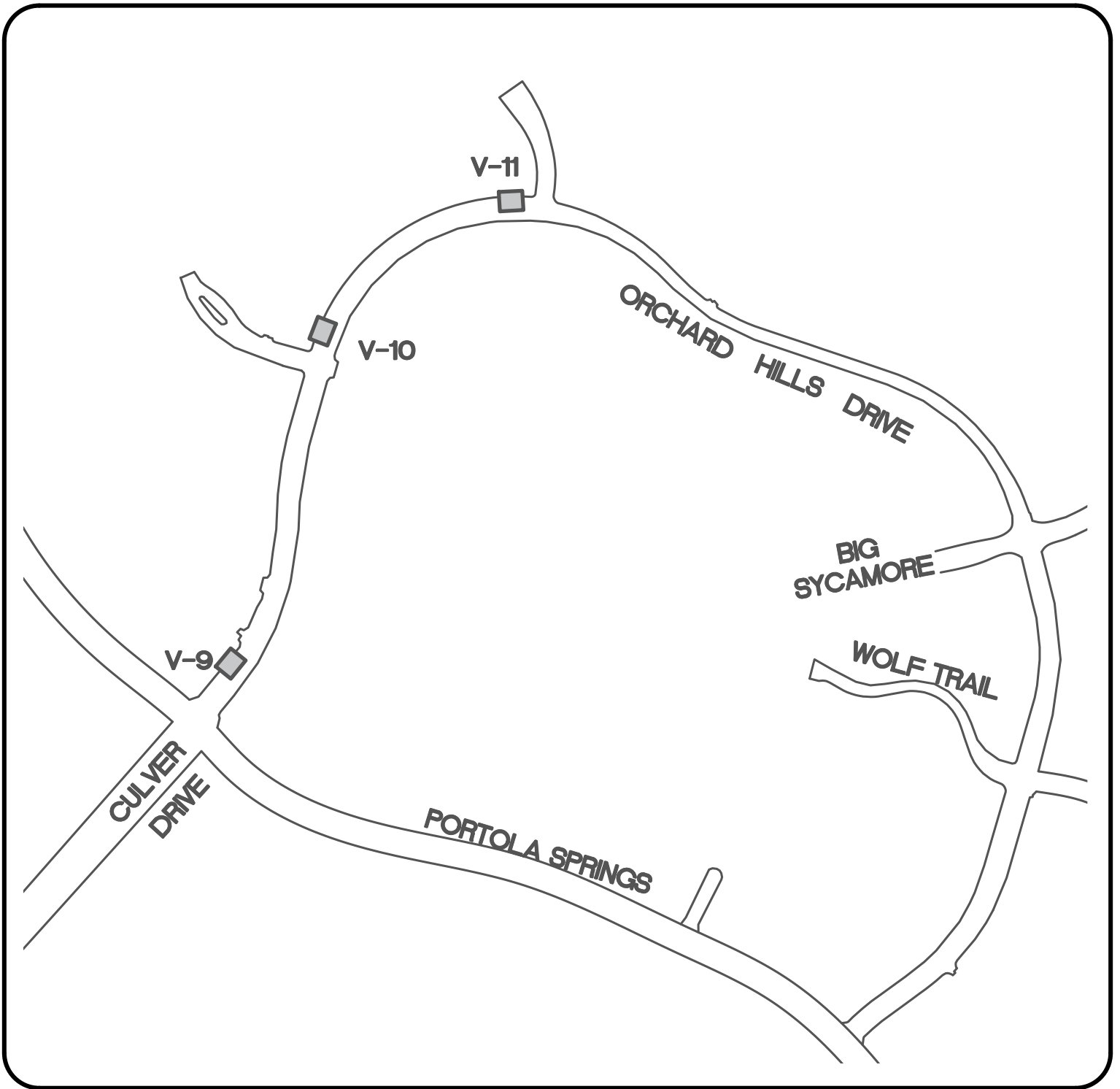


EXHIBIT "A"
LOCATION MAP



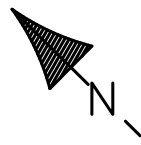

N
not to scale

EXHIBIT "A"
LOCATION MAP

Exhibit "B" 2019 Vault Replacement - Consultant Selection Matrix

	Weights	Gannett Fleming	Infrastructure Engineering Corp	MurraySmith	RCE Consultants
TECHNICAL APPROACH	50%				
Project Approach/Scope of Work	50%	3	2	4	1
Man Hour Estimates	50%	3	4	1	2
Weighted Score (Technical Approach)		3.00	3.00	2.50	1.50
EXPERIENCE	50%				
Firm/Team	100%	3	2	4	1
Traffic Engineering (TC plans) Project Manager Project Engineer Structural Engineer		TCE Inc Mirko Maher 20 yrs Keenan Bull 17 yrs Ben Porritt	Civil Works Engineering Rob Weber 28 yrs Aric Gnesa Said Hilmy 29 yrs	Carlos Silva 29 yrs Tom Bloomer 19 yrs Mitra Im 5 yrs	TCE Inc 30 yrs Frank Cahill 20 yrs Victoria Whitaker Rende Consulting
Weighted Score (Experience)		3.00	2.00	4.00	1.00
COMBINED WEIGHTED SCORE		3.00	2.50	3.25	1.25
MAN-HOURS		hrs	hrs	hrs	hrs
Task 1 Project Management		107	58	98	90
Task 2 Design		401	292	348	378
Task 3 Construction Phase Services		139	106	106	137
TOTAL HOURS		647	456	552	605
Number of Drawings (Excluding Traffic Control)		12 dwgs	15 dwgs	9 dwgs	14 dwgs
Number of Traffic Control Drawings		5 dwgs	11 dwgs	11 dwgs	11 dwgs
Project Management & Design Manhours/dwg		30 hrs/dwg	13 hrs/dwg	22 hrs/dwg	19 hrs/dwg
FEE					
Task 1 Project Management		\$21,605	\$20,105	\$21,160	\$19,158
Task 2 Design		\$94,846	\$80,005	\$63,094	\$94,352
Task 3 Construction Phase Services		\$24,319	\$24,953	\$21,737	\$24,357
TOTAL FEE		\$140,770	\$125,063	\$105,991	\$137,867
Average Design Cost/manhour		\$236.52 \$/hr	\$273.99 \$/hr	\$181.30 \$/hr	\$249.61 \$/hr
Number of Drawings		17 dwgs	26	20 dwgs	25 dwgs
Project Management & Design Fee/dwg		\$6,850.06 \$/dwg	\$3,850.38 \$/dwg	\$4,212.70 \$/dwg	\$4,540.40 \$/dwg
Professional Liability Insurance		YES	YES	YES	YES
General Liability Insurance		YES	YES	YES	YES
DIR		YES	YES	YES	YES
FORCED RANKINGS:					
1 - Best					
2 - Second best					
3 - Third best					
4 - Fourth best					

Note: This page is intentionally left blank.



ENGINEERING PROPOSAL

Prepared for:

Irvine Ranch Water District

Engineering Design Services for the 2019 Vault Lid Rehabilitations

July 3, 2019

24422 Avenida de la Carlota, Suite 300
Laguna Hills, California 92653
Phone 949.453.0111 | rceconsult.com



July 3, 2019

Irvine Ranch Water District
Attn: Christian Kessler
Project Manager
3512 Michelson Drive
Irvine, CA 92618

Reference: Request for Proposal for Engineering Design Services for the 2019 Vault Lid Rehabilitation

Dear Mr. Kessler,

Irvine Ranch Water District's (IRWD) Vault Lid Rehabilitation project requires an understanding of the challenges associated with operations and maintenance as well as practical utility and traffic control design. The RCE team can bring that experience to this project. We have assembled a team of professionals with a depth and breadth of experience uniquely suited for this assignment. The team will be led by Mr. Frank Cahill who while serving as the District Engineer for East Orange County Water District (EOCWD) worked closely with the operations and maintenance staff to develop practical solutions in real time to problems similar to IRWD's project. This experience has further honed Mr. Cahill's technical prowess and makes him the logical choice to lead this project.

Further, we have reviewed the Request for Proposal (RFP), attended the pre-proposal meeting, and conducted a review of the locations in preparation of this proposal. In the course of that review and preparation we have identified several key success factors that we believe are addressed in our proposal

- Appropriate design to minimize IRWD operational time within travel lanes.
- Eliminate where practical, confined space access requirements including the use of valve access at the street surface
- Provide safe travel conditions for the general public with practical and drivable alternatives.
- Maximize longevity of the vaults and minimize future pavement related failures within the roadway.

We trust that our proposal adequately portrays our enthusiasm and qualifications to assist IRWD with this assignment. Our project team stands ready to meet with you to further describe our approach, fees, and qualifications to complete this assignment. Thank you for the opportunity to compete for this work. We look forward to hearing from you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rick Clark', written over a horizontal line.

Richard L. Clark, P.E.
Principal

A handwritten signature in black ink, appearing to read 'Patrick F. Cahill', written over a horizontal line.

Patrick F. Cahill, P.E.
Project Manager



24422 Avenida de la Carlota, Suite 300
Laguna Hills, California 92653
Phone 949.453.0111 | rceconsult.com



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EXECUTIVE SUMMARY

The demands and requirements of this project are an excellent fit with RCE's strengths. We pride ourselves on innovative thinking and the ability to get things done.

The challenges this project presents are as follows:

- Three (3) large vaults with decaying pre-cast concrete slabs and non-performing vault lids
- Location of all eleven (11) vaults in busy City of Irvine streets

The eight (8) smaller vaults will be rehabilitated similar to the vault that was rehabilitated recently and is acceptable to IRWD. However, the three larger vaults present a challenge. We will provide a practical solution to this challenge which will provide IRWD operations staff access to the vaults and eliminate the traffic problems associated with the existing vault lids.

We don't recommend the cutting down of the vault walls and the lowering of the top slab on these large vaults. This will lead to "reflective" cracking in the new asphalt after a short time which will only lead to problems with the City of Irvine. From our preliminary investigation, it does not appear that there is enough vertical distance available to drop the top slabs far enough to allow for a road bed that would perform adequately. In order to provide IRWD with a very practical solution that deals with the problem and doesn't lead to future problems, we propose to replace the top slabs and vault lids with new structures that will last under high traffic volume and allow access to the underground valves from the surface of the street without having to undertake confined space access protocol to operate the valves.

We will investigate the options at the outset of the project but we will not entertain impractical and esoteric solutions. This project, while challenging is not out of the realm of experienced engineering practice. It requires a certain wisdom that only comes from competence in dealing with utilities in public streets. The RCE team brings this necessary insight along with the resources to get the project done efficiently while providing an effectual solution.

In our experience the following aspects must be considered and incorporated into the design:

- Minimizing impact to existing IRWD customers
- Selection of a solution to suit IRWD's interests
- Pavement restoration per the City of Irvine's standards
- Traffic control to minimize impact to the City of Irvine motorists
- Public safety throughout construction



We elaborate on these aspects of the project in the following "Project Understanding" section of this proposal.

Having this understanding, we present a talented team of professionals. This team will be led by our Project Manager, Mr. Frank Cahill, P.E., who has thirty years of experience managing projects of a similar nature throughout Southern California. Mr. Rich Clark, P.E., a noted expert in the infrastructure industry, will augment our team by applying his thirty plus years of infrastructure experience. Mr. Clark will provide technical oversight, value engineering, and constructability reviews.

Enclosed within this proposal is the detailed scope of services to accomplish the work encompassed by your RFP.

The sealed cost proposal is included separately.



PROJECT UNDERSTANDING

We understand that the purpose of this project is to rehabilitate eleven (11) vaults in heavily travelled streets. The existing vault lids have become worn and damaged as a result of traffic volumes. Also, traffic vibrations have in several instances activated the vault lid spring assists creating a hazard for the general public. IRWD has bolted and/or welded many of the vault lids, but that now impacts maintenance and operational access creating an unsafe condition for IRWD forces.

We attended the pre-proposal meeting and reviewed the information provided. After having taken into account our other commitments, we can commit to undertaking this project and can comply with the schedule as outlined in the RFP.

The important aspects to be considered are:

- **Minimizing impact to existing IRWD customers**
We will design the improvements such that the impact to the existing IRWD customers will be minimized during construction of the vault lids.
- **Selection of a solution to suit IRWD's interests**
When we recommend a solution, we not only comply with IRWD's standards but also consider future operations and maintenance of the vaults plus other site specific issues that may come to bear on the project. As mentioned above, our solution will be uniquely practical as opposed to an academic proposal. For instance we do not recommend lowering the large vault top slabs below the surface of the street and constructing an asphalt surface over the vault. Furthermore we do not recommend the use of LIDAR as a means of recording the three-dimensional location of the appurtenances in the vaults. This is not warranted and it would in fact be detrimental to the project with regards to schedule and cost. Although LIDAR provides a point cloud of data it would require multiple "set-ups" and more time within the travel lane. We recommend that the key measurements be obtained and field reconnaissance time minimized.
- **Pavement restoration per the City of Irvine's standards**
The City may require half street-width pavement restoration (grind and overlay). We will negotiate with the City and incorporate it's requirements into the project documents.



- Traffic control
We have teamed with David Kuan of Traffic Control Engineering, Inc. to ensure that the City's requirements are thoroughly incorporated into the bid documents. David is a traffic control expert and has been providing traffic control designs exclusively for several years. He is thoroughly familiar with the City's requirements. Each location requires a unique Traffic Control plan so there are significant Traffic Control drawings associated with this project.
- Public safety throughout construction
Public Safety is always a primary concern that we consider in all our public works projects. With this in mind we design the improvements so that not only are the final installations suitable for the public right-of-way but also that the contractor can operate without endangering the public during construction. Furthermore, the contractor's work should not cause an "attractive nuisance" which might unwittingly invite public curiosity etc.

We have completed a similar project to this recently for South Cost Water District. Please refer to the "References and Representative Projects" section of this proposal. In that case we removed the tops of existing vaults and raised the walls to the surface so that a vault lid could be installed to allow easier access to the underground valves. This project provided valuable insight into underground vault engineering which we will bring to bear on IRWD's project.



SCOPE OF WORK

We will provide the following scope of services. Our separate fee proposal is based on this scope of services.

Task 1 – Project Management

A. Meetings

We will attend four (4) one-hour meetings, as outlined in the RFP. We will provide agendas five (5) days in advance of each meeting and minutes to the attendees within seven (7) days of each meeting.

We will also attend the vault reconnaissance inspections. We have included sixteen (16) hours of staff time for this effort due to the number of vaults and the confined space access requirements. Based on conversations with IRWD Staff, this proposal assumes that the Field Reconnaissance will be non-permit access and RCE Staff members will only need confined space training.

B. Facility Information Request

Based on our review of the record drawings, we will prepare a detailed list of items required to be measured and documented at the vault reconnaissance inspections.

C. Quality Assurance / Quality Control

We will provide our quality assurance system to ensure a superior quality finished product. This system includes quality control checks at each stage of the process and before each submittal of the project documents to IRWD.

Task 2 – Design

A. Construction Drawings

Based on the information provided in the RFP we anticipate the following drawings in the set:

1. Title Sheet
2. General Notes, List of Public Agencies and Utilities, Location & Vicinity Maps, Legend, Quantities, etc.
3. Standard Symbols Legend, Abbreviations, Sheet Index Map, List of Drawings.
4. Vault 1 – Site Plan, Cross-Section, Construction Details
5. Vault 2 – Site Plan, Cross-Section, Construction Details
6. Vault 3 – Site Plan, Cross-Section, Construction Details
7. Vault 4 – Site Plan, Cross-Section, Construction Details



8. Vault 5 – Site Plan, Cross-Section, Construction Details
9. Vault 6 – Site Plan, Cross-Section, Construction Details
10. Vault 7 – Site Plan, Cross-Section, Construction Details
11. Vault 8 – Site Plan, Cross-Section, Construction Details
12. Vault 9 – Site Plan, Cross-Section, Construction Details
13. Vault 10 – Site Plan, Cross-Section, Construction Details
14. Vault 11 – Site Plan, Cross-Section, Construction Details
15. Vault 1 – Traffic Control
16. Vault 2 – Traffic Control
17. Vault 3 – Traffic Control
18. Vault 4 – Traffic Control
19. Vault 5 – Traffic Control
20. Vault 6 – Traffic Control
21. Vault 7 – Traffic Control
22. Vault 8 – Traffic Control
23. Vault 9 – Traffic Control
24. Vault 10 – Traffic Control
25. Vault 11 – Traffic Control

Traffic Control Plans

The scope of work for the traffic Control plans for this project is as follows:

1. Define the Traffic Control necessary for the project.
2. Retrieve necessary base plans, i.e., Striping Plan, Signal Plan; Construction plans from various sources. Compile base plans on an AutoCAD base map for each location.
3. Field review to determine existing street system, driveways that may be affected, and existing traffic conditions.
4. Develop traffic control strategies and coordinate with IRWD to select the most cost effective plan.
5. Finalized traffic control plan, consistent with City's standards including signing, legends, and other construction detour standards.
6. Submit to IRWD for City's review/approval.



Our Traffic Control subconsultant has reviewed the vault locations and compiled the following traffic control requirements for each location:

Vault	Street	Location
V-1	Modjeska	North of Irvine Blvd. - Maintain one northbound lane and closure of southbound left turn lane.
V-2	Irvine Blvd.	East of Modjeska - Maintain one eastbound lane (15' min) this location may require phased construction to maintain one southbound lane.
V-3 & V-4	Irvine Blvd.	South of Pusan - Maintain one southbound lane (15' min.)
V-5 & V-6	Irvine Blvd.	North of Chinon - Maintain one southbound lane (15' min.) V-6 may require phased construction to maintain one southbound lane.
V-7	Irvine Blvd.	South of Magazine Rd. - Maintain one southbound lane (15' min.) This location may require phased construction to maintain one southbound lane.
V-8	Irvine Blvd.	North of Alton Pkwy - Closure of southbound thru lane and right turn/bike lane.
V-9	Culver Dr.	North of Portola Pkwy - Southbound right turn lane and bike lane closure.
V-10	Culver Dr.	North of Settler - Southbound curb lane and bike lane closure.
V-11	Culvert Dr.	West of Furrow - Westbound curb lane and bike lane closure.

Assumptions:

1. Attendance by our traffic control sub-consultant at one meeting is included in this proposal.
2. Traffic and all roadways to be restored during non-working hours.
3. No temporary traffic striping/signal design is included.
4. Maintain min. one lane of traffic in each direction on the right side of existing median.
5. No street closure/detour is included.

B. Project Manual

At the 60% submittal, we will provide a draft of the Project Manual. We will submit five (5) sets of the Project Manual to IRWD for review at the 90% submittal and three sets at the 100% completion level, in standard IRWD color coded format. At final submittal stage, we will submit one copy of the Project Manual along with two (2) compact disks, one with the electronic files in Microsoft Word format, the other containing a single pdf of the Project Manual.



C. Project Meetings

RCE will attend project related meetings as outlined in Task 1-A above.

D. Project Schedule

We have included an overall project schedule in this proposal. We will update it as the work progresses. This schedule shows the design, bid and construction phases.

E. Opinion of Probable Cost

We will prepare and submit an itemized opinion of probable construction cost at each of the 60%, 90% and 100% design completion levels.

F. Design Deliverables

We will submit six (6) sets of the plans on 11"x17" sheets, two (2) sets on 22"x34" sheets and one pdf of the entire set to IRWD for review at each of the 60%, 90%, 100% draft completion levels. We will also submit the final signed and sealed mylars after all comments have been incorporated. We will submit the final electronic files on two (2) separate compact disks, one containing the AutoCAD files, the other containing a single pdf of the entire construction drawing set.

G. Bid Period Assistance

We will provide information and clarification of the bid documents to the bidders. We have included the preparation of one (1) addendum during the bid period if requested by IRWD.

H. Permits

We will identify the permits required, prepare the applications and secure the permits with the City of Irvine. The permit fees are not included in our fee estimate and will be reimbursed by IRWD separately (without surcharge).

I. Liquidated Damages Calculations

We will assist with the calculation of liquidated damages based on IRWD's standard liquidated damage calculation form.

Task 3 – Construction Phase Service

It is our understanding that this work will be authorized as a variance to the contract prior to construction. We have reviewed the RFP scope of services and agree with the proposed tasks.

ASSUMPTIONS & EXCLUSIONS:

- IRWD to provide existing facility record drawings of IRWD owned facilities.
- IRWD to provide facility access, permits, and traffic control for Field Reconnaissance.



- This proposal assumes non-permitted access and RCE staff participating in the Field Reconnaissance will have confined space training.

PROJECT TEAM

Firm Overview

RCE Consultants, Inc., is a civil engineering firm specializing in providing design and construction management services to Cities and Special Districts, as well as residential community land development. Started in 2004 by two civil engineers, who combined have over 60 years' experience serving the Southern California region, the company is built on the strong foundation of their collective experience.

The **mission** of RCE is to focus on specialized areas of expertise by providing each of our clients the same excellent service, constant communication, and quality product that they have come to expect from our firm. Principal involvement on every assignment is the foundation by which the company operates.

Combined with our focus on responsiveness, providing services that meet and exceed our client's expectations, forms the core of our company. We have built our individual reputations on these same values and have assembled a team of like-minded professionals.

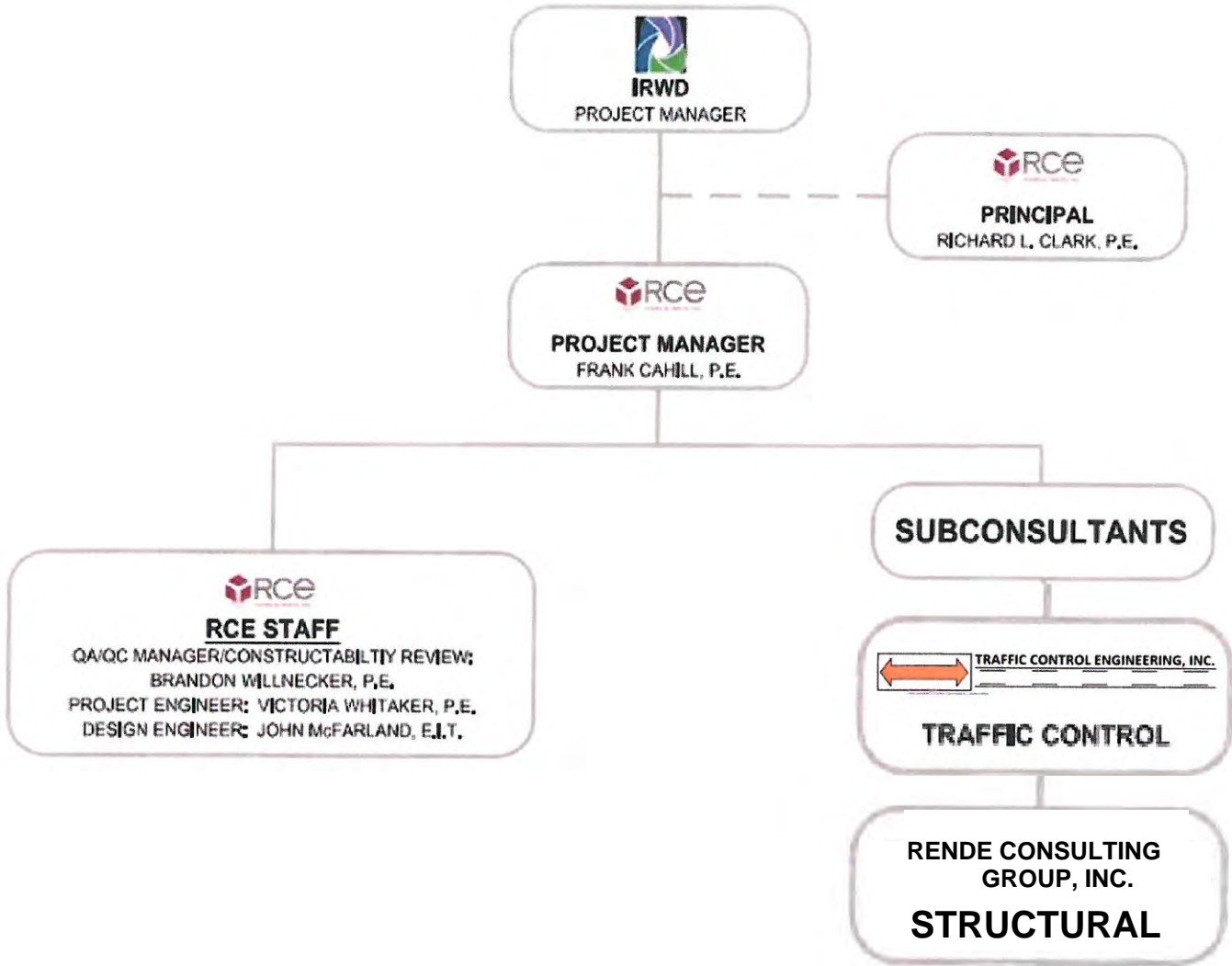
A list of major services in which RCE specializes follows:

- Water/ transmission and distribution systems
- Roadway design
- Utility master plans
- Construction Engineering
- Residential/Commercial Land Development Engineering

Within each of these specialties RCE has developed a team of skilled professionals to find effective solutions to complex issues. Their professionalism, pride of ownership, and attention to detail is brought to bear on each and every project.

Primary Staff

RCE has assembled a team of uniquely qualified and highly talented professionals to assist IRWD with this project. The members of the team have recent and relevant experience having completed projects of similar scale and complexity for several Water Districts and Cities throughout Southern California.





Mr. Frank Cahill, P.E.

The project team will be led by Mr. Cahill. He has thirty years' of experience in civil engineering and brings a strong technical and managerial background. He has been with RCE since its inception, providing excellent customer service and maintaining a high level of quality control. Mr. Cahill has managed most of the water infrastructure improvement projects over the years, including pump station designs and pipeline appurtenances. This includes the City of Redlands CIP Water Main Replacements, East Orange County Water District's Retail Zone Water Improvements, Moulton Niguel Water District's Recycled Water Main Expansion projects, and South Coast Water District's Vault Upgrades (See References and Representative Projects below). These projects required the RCE team to provide fresh insight and develop infrastructure solutions in an urban setting. Mr. Cahill provided both the leadership required to deal with the complexities of the project environment and the lateral thinking required to maximize return on investment.

Mr. Rich Clark, P.E

Mr. Clark has over thirty three years' experience, providing comprehensive consulting services for public and private clients throughout Southern California and abroad. His experience and training combine both a hands-on technical experience and a practical business background. Mr. Clark's expertise includes a blend of engineering design and business acumen that provides an additional depth of understanding related to project funding, value engineering, cash flow analysis, and capital budgeting in an engineering environment. Mr. Clark has applied this skill set to a number of infrastructure projects, providing a creative approach to project phasing and capital expenditure. Mr. Clark will serve as the Principal-in-Charge for IRWD's project.

Ms. Victoria Whitaker, P.E.

Ms. Whitaker has a strong background in infrastructure design and has been assisting clients with the preparation of plans and permitting for the last twenty years. Ms. Whitaker will serve as the project's QA/QC and Constructability Review. She is a detailed oriented engineer whose thoroughness will ensure that IRWD's final product is complete in each aspect.

Mr. Christian Kesler, E.I.T.

Mr. Kesler has over two years experience with the design of pump stations, sewer lift stations, water modeling, treatment systems, field sampling, system design and calculations. Christian has the ability to make educated decisions and solve difficult problems.

See enclosed resumes for further information on each team member.



REFERENCES AND REPRESENTATIVE PROJECTS

Although this is a fairly unique project, it is well within the realm of Water System Infrastructure design. RCE has completed a project very similar to this one for South Coast Water District recently. We have included this project below along with other recent water system infrastructure projects for local Water Districts and Municipalities.

	City of Redlands	GSWC	MNWD	SCWD	EOCWD	CVWD
	Water Main Replacement	Water Main Replacement	Recycled Water Projects	Valve Vault Rehabilitation	Retail Zone Water System Improvements	Ave 60 Transmission Main Extension
Feasibility Study			X	X	X	X
Survey & Mapping	X	X	X	X	X	X
Water Main Design	X	X	X	X	X	X
Permitting	X	X	X	X	X	X
Cost Estimating	X	X	X	X	X	X
Construction Admin.			X	X	X	X

The following project descriptions provides more specific details related to each of the projects depicted in the RCE Experience summary matrix:

City of Redlands CIP Water Main Replacement – RCE assisted the City of Redlands with the replacement of the existing aged infrastructure throughout the City of Redlands. The project included approximately twenty-one (21) locations in which the water main system required replacement. The work included preliminary and final design, survey, permitting, utility coordination and coordination to minimize interruptions in service to the existing users. The total scope of the work included approximately 29,000 linear feet of ductile iron and steel pipe. A major portion of this pipeline was designed within Caltrans right-of-way. We procured the Caltrans Encroachment permits and incorporated Caltrans requirements into the pipeline design.

Reference: Bassam Alzamar – 909.798.7584



Golden State Water Company – RCE is currently assisting GSWC with the installation of approximately 4,280 LF of 12-inch and 8-inch PVC. The project includes the installation of 10 fire hydrants, the reconnection of 130 domestic services and the reconnection of 4 large services (4-inch and larger). The work also includes approximately 1,000 LF of jack and bore installation across Caltrans right of way. This work involves processing plans through and obtaining permits from Caltrans.

Reference: Conde Ventura – 310.436.6950

Moulton Niguel Water District (MNWD) Recycled Water Projects – RCE assisted MNWD with several of its recycled water pipeline projects. The scope of the work included survey, design and permitting for approximately 12,600 linear feet of 12" C900 PVC pipe and a pressure reducing station. The pipeline was constructed through three arterial and several residential streets. The scope of work also included utility coordination, base map preparation, plan and profile pipeline design, traffic control design, coordination with the City, construction staking and construction administration.

Reference: Matt Collings – 949.425.3552

East Orange County Water District Retail Zone Water System Improvements – RCE assisted EOCWD with its replacement of approximately 3,000 linear feet of old 8" and 12" diameter water mains in the North Tustin area. We completed the design, analyzed bids and assisted the District in awarding the construction contract. The project was fast tracked due to an imminent County of Orange paving project which required the design *and construction* of the pipelines to be complete in a five month period.

Reference: Lisa Ohlund – 714.538.5815

South Coast Water District (SCWD) Emergency Pipeline Replacement – RCE provided feasibility, design, and construction administration services for the rehabilitation of six underground vaults. These were large vaults containing 42" , 30" and 24" ball valves. We raised the walls of the vaults and designed a new top slab with large spring-assisted vault lids providing easier access for the operations and maintenance staff.

Reference: Marissa Potter – 858.227.5792 (currently with Santa Fe Irrigation District)

Coachella Valley Water District (CVWD) Avenue 60 Transmission Main Extension – RCE was selected to provide design services for the 11,000 foot extension of CVWD's 24-inch transmission main in Avenue 60 in Coachella. The project included coordination with Caltrans, Southern Pacific Railroad, and Riverside County. A portion of the project was installed using trenchless techniques.

Reference: Carrie Oliphant – 760.398.2651



We strongly encourage you to contact our references. We are confident that they will share their experiences working with RCE and substantiate our commitment to responsiveness, critical thinking, problem solving, and customer service. If you would like additional reference information, please do not hesitate to contact us.

SCHEDULE

As mentioned above, we have analyzed our current contracted workload and based on that, we can confidently commit to undertaking this project. We will provide the services detailed in the scope of work section above in the timeline represented below.



BUDGET

See attached sealed envelope with prepared man-hour allocation and fees.

JOINT VENTURE / SUBCONSULTANTS

RCE will be the lead design firm (DIR Number: 1000055160) and will contract only with the following specialty consultants for the services specified below:

4Front Inc.: (DIR Number: PW-LR-1000404627)

Traffic Control Engineering:

Rende Consulting Group, Inc.

Project Management

Traffic Control Plans

Structural Engineering

CONFLICT OF INTEREST

We know of no personal or organizational conflict of interest regarding this proposal.

CONTRACT

RCE has previously worked with IRWD and is prepared to sign IRWD's Professional Services Agreement.

INSURANCE

RCE maintains appropriate insurance coverage, as specified in Section X of the Professional Services Agreement.

**RCE Consultants Fee for IRWD's 2019 Vault Lid Rehabilitation Project
Design Services - Revised**

Description	Principal	Sr. Project Manager	PE/Project Coordinator	E3/Senior Designer	Designer/CAD	Word Processor/Admin Support	Sub Consultants & Other Direct Costs	Subtotals		Fee
	\$ 282.00	\$ 225.00	\$ 182.00	\$ 138.00	\$ 118.00	\$ 77.00	\$ 0.00	Hrs.	\$	
Task 1 - Project Management*										\$ -
A. Project Meetings (60%, 90%, 100% and Final)		4.0	4.0	2.0		4.0		14.0	\$	2,212.00
A. Reconnaissance		8.0	16.0				\$1,900.00	24.0	\$	6,612.00
B. Facilities Information Request		2.0	4.0	8.0			\$1,000.00	14.0	\$	3,282.00
C. Quality Assurance/Quality Control	4.0	8.0	14.0	8.0	4.0			38.0	\$	7,052.00
Task 1 - Project Management Subtotal	4.0	22.0	38.0	18.0	4.0	4.0	\$ 2,900.00	90.0	\$	19,158.00
									\$	-
Task 2 - Design									\$	-
60% Submittal*							\$500.00	0.0	\$	500.00
Title Sheet		0.5	0.5	1.0	4.0			6.0	\$	813.50
Sheets 2 and 3: List of Drawings, Abbreviations, Location & Vicinity Maps, Legend, Quantities, etc.		0.5	0.5	2.0	4.0			7.0	\$	951.50
Sheets 4 -11: Small Vault Plans		5.0	10.0	24.0	16.0			55.0	\$	8,145.00
Sheets 12-14: Large Vault Plans		3.0	8.0	24.0	16.0			51.0	\$	7,331.00
90% Draft Submittal*							\$500.00	0.0	\$	500.00
Title Sheet [1 sht]			0.5		2.0			2.5	\$	327.00
Sheets 2 and 3: List of Drawings, Abbreviations, Location & Vicinity Maps, Legend, Quantities, etc. [2 shts]		0.5	0.5	1.0	4.0			6.0	\$	813.50
Sheets 4 -11: Small Vault Plans [5 shts]		2.0	8.0	16.0	12.0			38.0	\$	5,530.00
Sheets 12-14: Large Vault Plans [3 shts]		2.0	6.0	12.0	12.0			32.0	\$	4,614.00
Sheets 15 - 25: Traffic Control Plans [10 shts]		1.0		2.0	4.0		\$20,000.00	7.0	\$	20,973.00
100% Draft Submittal*								0.0	\$	-
Title Sheet			0.5		1.0		\$500.00	1.5	\$	709.00
Sheets 2 and 3: List of Drawings, Abbreviations, Location & Vicinity Maps, Legend, Quantities, etc.		0.5	0.5	1.0	4.0			6.0	\$	813.50
Sheets 4 -11: Small Vault Plans		1.0	3.0	4.0	8.0			16.0	\$	2,267.00
Sheets 12-14: Large Vault Plans		1.0	3.0	4.0	4.0			12.0	\$	1,795.00
Sheets 15 - 25: Traffic Control Plans				2.0	2.0		\$13,000.00	4.0	\$	13,512.00
Final Submittal*								0.0	\$	-
Title Sheet			0.5		1.0		\$500.00	1.5	\$	709.00
Sheets 2 and 3: List of Drawings, Abbreviations, Location & Vicinity Maps, Legend, Quantities, etc.			0.5	1.0	2.0			3.5	\$	465.00
Sheets 4 -11: Small Vault Plans		0.5	1.0	4.0	4.0			9.5	\$	1,318.50
Sheets 12-14: Large Vault Plans		0.5	1.0	3.0	4.0			8.5	\$	1,180.50
Sheets 15 - 25: Traffic Control Plans				1.0	2.0		\$3,100.00	3.0	\$	3,474.00
Project Manual		10.0	16.0	24.0		6.0		56.0	\$	8,936.00
Bid Period Assistance		1.0	4.0	4.0				9.0	\$	1,505.00
Permits		2.0	8.0	8.0				18.0	\$	3,010.00
Liquidated Damages Calculations		1.0	2.0					3.0	\$	589.00
Project Schedule		1.0	8.0					9.0	\$	1,681.00
Opinion of Probable Construction Cost at each submittal		1.0	2.0	6.0	4.0			13.0	\$	1,889.00
Task 2 - Design Subtotal	0.0	34.0	84.0	144.0	110.0	6.0	\$ 38,100.00	378.0	\$	94,352.00
								0.0	\$	-
Totals	4.0	56.0	122.0	162.0	114.0	10.0	\$ 41,000.00	468.0	\$	113,510.00

* \$1,000 included per submittal for printing and copying

**RCE Consultants Fee for IRWD's 2019 Vault Lid Rehabilitation Project
Construction Services - Revised**

Description	Principal	Sr. Project Manager	PE/Project Coordinator	Designer/CAD	Word Processor /Admin Support	Other Direct Costs	Subtotals	
	\$ 282.00	\$ 225.00	\$ 182.00	\$ 118.00	\$ 77.00		Hrs.	Fee
								\$
Task 3 - Construction Services								
Project Meetings (5 total) including Minutes and Travel Time	1.0	10.0			5.0	\$100.00	16.0	\$ 3,017.00
Contractor RFIs		5.0	10.0				15.0	\$ 2,945.00
Minor Plan Revisions	1.0	1.0	4.0	11.0			17.0	\$ 2,533.00
Site Visits (4)		2.0	12.0				14.0	\$ 2,634.00
Shop Drawing Review (15 total including 2nd reviews)		4.0	40.0				44.0	\$ 8,180.00
Record Drawings	1.0	2.0	8.0	20.0		\$500.00	31.0	\$ 5,048.00
Task 3 - Construction Services Total	3.0	24.0	74.0	31.0	5.0	\$600.00	137.0	\$ 24,357.00

Total Tasks 1, 2 & 3

\$137,867.00

Travel Mileage is included under "Other Direct Costs"

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July 22, 2019

Prepared by: J. Zepeda

Submitted by: W. Chambers

Approved by: Paul A. Cook



CONSENT CALENDAR

FIRST AMENDMENT OF AMENDED AND RESTATED ENERGY MANAGEMENT SERVICES AGREEMENT WITH HYBRID-ELECTRIC

SUMMARY:

In May 2018, IRWD entered into an *Amended and Restated Energy Management Services Agreement (DRES Portfolio B)* (“Agreement”) with Hybrid-Electric Building Technologies West Los Angeles 2, LLC to install battery systems for energy storage at various IRWD sites, including the Deep Aquifer Treatment System (DATS) site in Santa Ana. Staff recommends that the Board authorize the General Manager to execute the first amendment of the Amended and Restated Agreement in order to correct several misstatements including that IRWD leases the DATS site from the City of Santa Ana; clarifies IRWD’s leasehold interest; and confirms that the City of Santa Ana consented to the installation of the battery system at the site.

BACKGROUND:

On May 3, 2018, the Board authorized the General Manager to execute an Amended and Restated Energy Management Services Agreement (DRES Portfolio B) between IRWD and Hybrid-Electric Building Technologies West Los Angeles 2, LLC as provided in Exhibit A for energy management services related to battery based energy storage systems to be hosted at IRWD sites. In the agreement’s general terms and conditions, IRWD is represented as being the owner of, and holding fee title to, the premises of the energy storage system sites. In the case of the DATS site, IRWD is under a lease agreement with the City of Santa Ana through June 2039 and is not the owner of the premises.

The proposed amendment to the agreement’s general terms and conditions is necessary to correctly represent IRWD to the DATS site. This amendment corrects IRWD’s leasehold interest, and confirms that the City of Santa Ana consented to the installation of the battery system at the DATS site. The proposed first amendment to the amended and restated agreement is provided as Exhibit “B”.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15378.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 16, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE FIRST AMENDMENT OF AMENDED AND RESTATED ENERGY MANAGEMENT SERVICES AGREEMENT (DRES PORTFOLIO B) WITH HYBRID-ELECTRIC TECHNOLOGIES WEST LOS ANGELES 1, LLC, (AS ASSIGNEE HYBRID-ELECTRIC BUILDING TECHNOLOGIES WEST LOS ANGELES 2, LLC, A DELAWARE LIMITED LIABILITY COMPANY.

LIST OF EXHIBITS:

Exhibit "A" – Amended and Restated Energy Management Services Agreement (DRES Portfolio B) with Hybrid-Electric Building Technologies West Los Angeles 2, LLC, a Delaware limited liability company.

Exhibit "B" – First Amendment of Amended and Restated Energy Management Services Agreement (DRES Portfolio B) with Hybrid-Electric Building Technologies West Los Angeles 1, LLC, (as assignee of Hybrid-Electric Building Technologies West Los Angeles 2, LLC), a Delaware limited liability company.

EXHIBIT "A"

AMENDED AND RESTATED ENERGY MANAGEMENT SERVICES AGREEMENT (DRES PORTFOLIO B)

This AMENDED AND RESTATED ENERGY MANAGEMENT SERVICES AGREEMENT (DRES Portfolio B) (the "Agreement" or the "Portfolio B Agreement") is made and entered into as of May 3, 2018 (the "Effective Date"), by and between (a) HYBRID-ELECTRIC BUILDING TECHNOLOGIES WEST LOS ANGELES 2, LLC, a Delaware limited liability company ("WLA 2" and "Provider"), and (b) IRVINE RANCH WATER DISTRICT, a California water district formed and existing pursuant to Section 34000 *et seq.* of the California Water Code ("Host Customer"). Capitalized terms not otherwise defined herein shall have the meaning given to them in the General Conditions (defined below) or elsewhere in this Agreement.

RECITALS

A. Host Customer, HYBRID-ELECTRIC BUILDING TECHNOLOGIES WEST LOS ANGELES 1, LLC, a Delaware limited liability company ("WLA 1"), and HYBRID-ELECTRIC BUILDING TECHNOLOGIES IRVINE 1, LLC, a Delaware limited liability company, entered into that certain Energy Management Services Agreement, dated August 17, 2016 (the "Original Agreement"), with respect to the following Premises (as defined in the Original Agreement): Michelson Water Recycling Plant (MWRP), Deep Aquifer Treatment System (DATS), Los Alisos Water Recycling Plant (LAWRP), Potable Treatment Plant (PTP), Desalter Wells 21/22, and Dyer Road Well #10.

B. Pursuant to Section 18.1(c) of Schedule 5 (General Terms and Conditions) of the Original Agreement, effective as of February 23, 2017, the Parties replaced the Original Agreement in its entirety with that certain Energy Management Services Agreement (DRES Portfolio B), dated February 23, 2017 (the "Original Portfolio B Agreement"), and that certain Energy Management Services Agreement (DRES Portfolio A), dated February 23, 2017 (the "Original Portfolio A Agreement").

C. The Parties acknowledge that the preamble of the Original Portfolio B erroneously identified WLA 2 as WLA 1, and both WLA 1 and WLA 2 are parties to the Original Portfolio B Agreement.

D. Effective on or before the date hereof, WLA 1 assigned all of its right, title, and interest in and to the Original Portfolio B Agreement to WLA 2, and pursuant to Section 18.3 of Schedule 5 (General Terms and Conditions) of the Original Portfolio B Agreement, the Parties desire to amend and restate the Original Portfolio B Agreement in its entirety.

AGREEMENT

In consideration of the mutual promises set forth below, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. Incorporation of General Conditions. Provider and Host Customer incorporate by reference those certain General Terms and Conditions of this Agreement set forth on Schedule 5, attached hereto and made a part hereof ("General Conditions"). Any conflict between the General

Conditions and any of the provisions otherwise set forth herein shall be resolved in favor of the provisions set forth below.

2. Energy Management Services. Subject and pursuant to the terms and conditions of this Agreement, including Schedules 2 and 3 of this Agreement, Provider shall provide the Energy Management Services (defined in Schedule 2 of this Agreement) to Host Customer.

3. Market Products & Utility Incentive Programs.

3.1 Provider has the right to utilize the capabilities of the Energy Storage Systems to provide the Vested Market Products and receive the benefits under the Vested Utility Incentive Programs, and Provider shall be entitled to all revenues and other benefits arising from, and/or with respect to, such Vested Market Products and Vested Utility Incentive Programs. Notwithstanding the foregoing, Provider's use of the Energy Storage Systems in connection with the Vested Market Products and Vested Utility Incentive Programs shall not excuse Provider from its obligation to provide the Energy Management Services and be bound by the performance obligations as set forth in this Agreement.

3.2 Subject to the foregoing and subject to Host Customer's prior written approval of each new Utility Incentive Program (other than the Vested Utility Incentive Programs) as account holder of the Local Electric Utility, which such approval will not be unreasonably withheld, Provider may utilize the Energy Storage Systems to provide Market Products other than Vested Market Products and obtain revenues and other benefits from Utility Incentive Programs other than Vested Utility Incentive Programs; provided, however, that Provider and Host Customer shall each be entitled to fifty percent (50%) (unless otherwise agreed by the Parties in writing) of the revenues and benefits, after deduction therefrom of such identified costs and expenses as the Parties have agreed in writing, from such Market Product (other than Vested Market Products) and Utility Incentive Programs (other than Vested Utility Incentive Programs).

4. Services Term. The Services Term of this Agreement shall commence on the Effective Date and shall continue, unless terminated earlier pursuant to the provisions of the Agreement, until June 30, 2027; provided, however, that if the term of any Vested Utility Services Agreement is extended beyond June 30, 2027, the Services Term shall be automatically extended to such date to be coterminous with such Vested Utility Services Agreement.

5. Schedules: The following Schedules attached hereto are hereby incorporated into this Agreement:


Schedule 1	Site-Specific Information and Requirements: Description of the Premises, Energy Storage Systems and Scope of Work; Access Procedures
Schedule 2	Energy Management Services
Schedule 3	Performance Guarantee and Payments
Schedule 4	Notice Information
Schedule 5	General Terms and Conditions


[Signatures On Following Page]

IN WITNESS WHEREOF and in confirmation of their consent to the terms and conditions contained in this Agreement and intending to be legally bound hereby, Provider and Host Customer have executed this Agreement effective as of the Effective Date.

Provider:

HYBRID-ELECTRIC BUILDING TECHNOLOGIES WEST LOS ANGELES 2, LLC
a Delaware limited liability company

By: 
Name: Chris Calavitta
Its: President

By: 
Name: Dan Cary
Its: Authorized Signatory

Host Customer:

IRVINE RANCH WATER DISTRICT
a California water district

By: 
Name: PAUL COOK
Its: GENERAL MANAGER

SCHEDULES

Schedule 1 – Site Specific Information and Requirements

The following are the locations of each of the Premises subject to the terms of this Agreement:

Sr. No.	Premises Name	Premises Address	Delivery Service Account No.	Energy Storage System Size (kW / kWh)	SGIP Proportional Costs	Ancillary Schedules	Allocated MGCS	Allocated Bonus Threshold	Allocated Service Fee
1	Deep Aquifer Treatment System (DATS)	1704 W Segerstrom, Santa Ana, CA	3-019-4269-44	1,000 kW / 6,000 kWh	[redacted]	Schedule A-1	[redacted]	[redacted]	[redacted]
2	Los Alisos Water Recycling Plant (LAWRP)	22312 Muirlands Blvd, Lake Forest, CA	3-000-1728-62	1,000 kW / 5,600 kWh	[redacted]	Schedule A-2	[redacted]	[redacted]	[redacted]
3	Potable Treatment Plant (PTP)	26 Waterworks Way, Irvine, CA	3-028-2318-42	500 kW / 2,000 kWh	[redacted]	Schedule A-3	[redacted]	[redacted]	[redacted]
4	Desalter Wells 21/22	1221 Edinger Ave, Tustin, CA	3-038-5671-27	250 kW / 1,100 kWh	[redacted]	Schedule A-4	[redacted]	[redacted]	[redacted]
5	Baker Water Treatment Plant	21082 Wisteria, Lake Forest, CA	3-044-6859-28	1,000 kW / 6,000 kWh	[redacted]	Schedule A-5	[redacted]	[redacted]	[redacted]
			Total:	3,750 kW / 20,700 kWh			[redacted]	[redacted]	[redacted]

For each Premises, Host Customer and Provider shall complete the Form of Project Worksheet attached as Attachment A. Collectively, the Premises listed above in this Schedule 1 are the “ESS Portfolio”. This Schedule 1 will be updated from time to time as the Parties agree to add or remove Premises and Energy Storage Systems from the ESS Portfolio, and the Ancillary Schedules will be modified, updated, and replaced as the Energy Storage Systems may be moved, removed, or relocated from time to time in accordance with this Agreement.

ACCESS PROCEDURES

As provided in Section 7.2(d) of the General Conditions, access to the Premises shall be subject to all reasonable procedures adopted from time to time by Host Customer to which Provider has received written notice, including but not limited to, the procedures set forth below.

NON-EMERGENCY ACCESS – Provider shall contact Host Customer to schedule all non-emergency access to the Premises which shall be conducted Monday through Friday between the hours of 6:30 a.m. and 3:30 p.m. Such access shall require at least twenty-four (24) hours prior written notice to Host Customer for scheduling purposes.

EMERGENCY ACCESS – Provider shall be permitted by Host to access the Premises twenty-four (24) hours a day, seven (7) days a week for emergency purposes, as reasonably determined by Provider. Provider shall notify Host as promptly as reasonably possible of any and all emergency situations, and within twenty-four (24) hours of such access, Provider shall provide Host Customer with a written explanation of the emergency.

CONSTRUCTION ACCESS – Provider’s employees, agents, and contractors must abide by the reasonable procedures for access to the Premises as specified by Host Customer during construction, maintenance, and repair of the Energy Storage Systems.

ATTACHMENT A

1. **Known Restrictions.** In accordance with Section 7.2(f) of the General Conditions, the following information references any and all known restrictions on the use of the Premises for the construction, ownership, use, and operation of the Energy Storage System, including any land use restrictions, known underground structures or equipment, or limitations arising under permits or applicable law, as well as any additional Environmental Documents, reports or studies in the possession or control of Host Customer, which shall each have been delivered to Provider as of the Effective Date:

- Los Alisos Water Recycling Plant (LAWRP): Easement Constraints Map, prepared by Borchard Surveying & Mapping, Inc., dated February 15, 2005.

- Desalter Wells 21 & 22: (a) Phase 1 and Limited Phase 2 Environmental Site Assessment, prepared for Host Customer by AECOM Technical Services, Inc., dated March 2010, (b) ALTA survey prepared RBF Consulting, dated February 2010, and (c) approval may be required by the City of Tustin if the Energy Storage System is constructed outside of the Premises.

- Aesthetic Requirements. With respect to the following locations, and depending upon where the Energy Storage Systems are installed at each of the following locations, Provider may be required to incorporate the following aesthetic elements into the design of the Energy Storage Systems:

- DATS. May require a sound attenuation wall.

- Wells 21 / 22. May require a surrounding wall to match the current Premises perimeter wall.

- Baker Water Treatment Plant

- Noise Requirement. Prior to the date hereof, Host Customer has provided Provider with a copy of that certain IRWD Baker WTP Phase 2 Noise Level Survey (the "Baker Plant Noise Survey") that identifies the existing baseline noise levels at the Baker Water Treatment Plant. Provider agrees to enclose the Energy Storage System to be installed at the Baker Water Treatment Plant on all four sides with a CMU block sound attenuating wall with acoustic sound panels on the interior of the enclosure. The block wall shall be of sufficient height, as reasonably determined by a qualified consultant, to maintain noise levels at or below the existing levels described in Baker Plant Noise Survey. Provider agrees to perform a noise survey consistent with the methodology and approach used in the Baker Plant Noise Survey following the construction of the Energy Storage System at the Baker Water Treatment Plant to confirm that when the Energy Storage System is operating, the noise levels described in the Baker Plant Noise Survey are not being exceeded. In the event such post-construction noise survey indicates that the baseline noise levels are being exceeded, Provider shall implement such additional mitigation measures, as reasonably approved by the Host Customer, to ensure the noise levels are at or below the baseline noise conditions identified in the Baker Plant Noise Survey.

- Constraints Map. Constraints Map, prepared by Fuscoe Engineering, date April 14, 2008.

2. **Host Customer Disclosures.** Host Customer hereby makes the following disclosures to Provider with respect to the Premises identified below:

- With respect to the PTP facility:
 - The location proposed by Provider as of the Effective Date will encroach on both an SCE easement and an Orange County Flood Control District easement. Provider will be required to obtain any required consents, approvals, or encroachment permit from both SCE and the Orange County Flood Control District.
 - Design approval from The Irvine Company is also required per the Special Land Use Restrictions encumbering the applicable Premises.
- With respect to the PTP location, design approval may be needed from the Irvine Community Development Company.
- With respect to the DATS, the approval needed from the City of Santa Ana will be submitted and processed by Provider on behalf of Host Customer upon receipt of finalized thirty percent (30%) design for the DATS premises from the Provider.
- With respect to the Baker Water Treatment Plant, IRWD may construct the Baker Solar System (defined in Section 4(a)(xiii) of Schedule 3 of the Agreement).

Scheduled Downtime

With reference to Section 4.3(c) of the General Conditions, Host Customer discloses the following estimated annual maintenance requirements at each of the Premises and the impact thereof:

Sr. No.	Premises Name	Downtime Duration	Impact to Electrical Load
1	Deep Aquifer Treatment System (DATS)	Two weeks per year	50% reduction during one week of Downtime Duration and 100% impact during other week of Downtime Duration
2	Los Alisos Water Recycling Plant (LAWRP)	Two weeks per year	25% reduction during Downtime Duration
3	Potable Treatment Plant (PTP)	Two weeks per year	50% reduction during Downtime Duration
4	Desalter Wells 21/22	One week per year	100% reduction during Downtime Duration
5	Baker Water Treatment Plant	Up to 3 weeks per year	Up to 50% reduction for up to 2 weeks of Downtime Duration per year, and up to 75% reduction for up to 1 week of Downtime Duration per year

IRWD will endeavor to restrict downtime to off-peak and non-LCR hours or weekends if and when possible.

Schedule 2 - Energy Management Services

From and after the Commercial Operation Date, and continuing through the remainder of the Term of this Agreement, Provider shall provide the following energy management services to Host Customer (“Energy Management Services”):

1. ***Energy Analytics and Portfolio Planning:*** Provider will, at its own cost and expense, use historic, current and forecasted electrical load data and software analytics capable of analyzing energy and equipment data at each Host Customer site where an Energy Storage System is in operation, to identify opportunities and recommend strategies to (a) improve energy efficiency, (b) optimize energy resources, (c) reduce greenhouse gas emissions, and (d) maximize revenues through Demand Response Programs, Utility Incentive Programs, and the sale of Market Products. In the event that such recommendations require additional capital or operating expenses, Provider may, but shall not be obligated to, implement such recommendations upon mutually agreeable terms with Host Customer. To the extent reasonably possible, such recommendations will be structured so as to provide incremental benefits to Host Customer without requiring capital outlay by Host Customer (unless otherwise agreed by Host Customer) or negatively impacting the benefits of the demand management services being provided under this Agreement or any Utility Services Agreements. Prior to the date hereof, Provider has developed a baseline of energy usage and electricity expenses for each of the Premises for purposes of comparing Cost Saving with and without operation of the Energy Storage System.

2. ***Demand Management:*** Provider will install, operate and maintain Energy Storage Systems and analytics software at each Premises for purposes of reducing Host Customer’s energy costs and greenhouse gas emissions, improving energy efficiency, and enhancing reliability in accordance with provisions in Schedule 3 attached hereto. For purposes of clarity, Provider’s obligations to install, operate, and maintain the Energy Storage Systems and be bound by the obligations as set forth in this Agreement shall apply irrespective of whether all or any portions of any Energy Storage Systems are installed under a Third Party Lease.

3. ***Demand Response:*** Provider will, from time to time, make recommendations to Host Customer as to whether the Energy Storage Systems may be used to generate incremental revenues or cost savings from Host Customer participation in demand response programs (“Demand Response Programs”), whether or not Host Customer is already participating in such Demand Response Programs as of the Effective Date. Notwithstanding Section 3 of this Agreement or Section 5.4 of the General Conditions, any incremental revenues or cost savings associated with participation in such Demand Response Programs will be retained by Host Customer and, to the extent made possible through operation of the Energy Storage Systems or energy efficiency measures installed or provided by Provider, shall be included in the calculation of Cost Savings, as defined in Schedule 3 below. Host Customer acknowledges that this service depends, among other things, on the existence of opportunities that may or may not be available in the market and is being offered on a good-faith-efforts basis for the mutual benefit of both Host Customer and Provider.

4. ***Energy Management Web Portal:*** Provider will make available to Host Customer via a password-protected user interface, an energy management web portal that (a) will display Host Customer’s energy usage, kWh battery throughput, peak demand reduction enabled by the Energy

Storage Systems and estimated Cost Savings on a Billing Period and annual basis, and (b) will be repaired and maintained by Provider at its sole cost and expense. To the extent reasonably possible (technically and financially), Provider shall also make available to Host Customer energy and equipment data from the Energy Storage Systems for purposes of load profiling, asset performance tracking, carbon/greenhouse gas emissions reporting and equipment fault detection.

5. **24/7 System Monitoring:** Provider will, at its own expense, install an Internet connection and/or telephone line for remote monitoring of the Energy Storage Systems, and will monitor operation and performance of the Energy Storage Systems, 24 hours per day and 7 days per week in a manner compliant with Host Customer's IT security policy and standards.

Schedule 3 - Performance Guarantee and Payments

1. Additional Defined Terms. As used in this Schedule 3, and elsewhere in this Agreement, the following terms shall have the following meanings:

“Billing Period(s)” means each of the consecutive time periods applicable to Host Customer during which the Local Electric Utility assesses and bills for energy charges, costs, and expenses and demand charges for each of the Premises listed in Schedule 1.

“Cost Savings” means, for each Billing Period during the Term, (a) the difference between (i) the imputed electrical energy costs and demand charges for each utility service account at each Premises where an Energy Storage System is in operation, calculated by Provider using System Data from the Energy Storage System meter, utility meter and/or site (shadow) meter at such Premises, using the tariffed rates and schedules applicable to each Premises, and assuming that the Energy Storage System was not in operation, and (ii) the actual electrical energy costs and demand charges for each utility service account at each Premises where an Energy Storage System is in operation, calculated by Provider using System Data from the Energy Storage System meter, utility meter and/or site (shadow) meter at such Premises (with the Energy Storage System in operation), plus (b) any incremental revenues or cost savings from participation in Demand Response Programs (per Section 3 of Schedule 2 to this Agreement) received by, or accrued for the benefit of, Host Customer to the extent made possible through operation of the Energy Storage Systems, Energy Management Services, or as otherwise provided by Provider.

“Minimum Guaranteed Cost Savings” or “MGCS” means, for a given Term Year, [redacted], as such amount is appropriately adjusted from time to time as provided in this Schedule, subject to Section 5 of this Schedule 3.

“Lost Savings” means, for a given Term Year, the difference between the Minimum Guaranteed Cost Savings for such Term Year and the Cost Savings for such Term Year; provided, however, if the Lost Savings are less than zero, the Lost Savings shall be deemed to be zero.

“Term Year” means twelve (12) consecutive Billing Periods for the first Premises in the ESS Portfolio that commences commercial operations, beginning with the first Billing Period for such Premises commencing on or after its Commercial Operation Date; the Term Year as established for such first Premises shall also apply to each other Premises, using the twelve billing periods for each such Premises that most closely approximate the Term Year; provided, the last Term Year ends at the end of the last full Billing Period prior to the end of the Services Term, and the initial Term Year and last Term Year may not have twelve (12) Billing Periods for each Premises.

2. Minimum Guaranteed Cost Savings; Performance Incentive. Subject to Section 4 below, in each Term Year from and after the Commercial Operation Date and continuing during the remainder of the Services Term, Provider will provide Host Customer with Cost Savings equal to at least the Minimum Guaranteed Cost Savings.

a. If Provider fails to provide Cost Savings equal to at least the Minimum Guaranteed Cost Savings for any Term Year, then Provider shall pay Host Customer any Lost Savings for such Term Year, reduced by any Cost Savings in excess of the Minimum Guaranteed

Cost Savings and (if earned) Performance Incentive (defined below) for the twelve (12) month period immediately following such Term Year (the “True-Up Period”), which shall be applied to reduce the Lost Savings for the prior Term Year. Provider shall make such payment within thirty (30) days following the end of the True-Up Period. Notwithstanding the foregoing to the contrary, if this Agreement is terminated prior to the expiration of the Services Term for any reason other than an Event of Default by Provider, Provider shall not be obligated to provide Cost Savings in excess of the Minimum Guaranteed Cost Savings for the final Term Year (which may be a partial Term Year) of the Services Term. In such an event, however, Provider will pay Host Customer any outstanding Lost Savings owed to Host Customer for the year preceding the final Term Year within thirty (30) days following such termination; provided, however, that the amount of such outstanding Lost Savings shall be reduced by both (i) the amount of any Cost Savings in excess of the prorated (and, if applicable, adjusted pursuant this Agreement) Minimum Guaranteed Cost Savings for the final Term Year, and (ii) (if earned) the Performance Incentive for the final Term Year.

b. Subject to Section 5 of this Schedule 3, if Provider provides Cost Savings in excess of [redacted] (the “Bonus Threshold”) for any Term Year, then to the extent such excess amount is not credited against the Lost Savings for the prior Term Year as provided in paragraph (a) of this Section 2, within thirty (30) days following the conclusion of such Term Year, Host Customer shall pay Provider the amount equal to [redacted] of the Cost Savings in excess of the Bonus Threshold (the “Performance Incentive”). The Bonus Threshold shall be adjusted proportionately with any adjustment to the MGCS as provided herein.

c. If on any date an amount(s) would otherwise be payable by either Party to the other, then, on such date, each Party’s obligation to make payment will be automatically replaced by an obligation upon the Party by whom the larger aggregate amount would have been payable to pay to the other Party the excess of the larger aggregate amount over the smaller aggregate amount.

d. Subject to Section 5 of this Schedule 3, the following numerical examples demonstrate the calculation of the amounts owed pursuant to this Schedule 3 (without regard for the timing of such payments), assuming that all Energy Storage Systems are installed and operating during an entire Term Year and there are no adjustments or prorations as provided in Section 4 of this Schedule 3 below or elsewhere in this Agreement:

Payment Examples					
	Example 1: Base Case Scenario	Example 2: Insufficient Savings	Example 3: Insufficient Savings	Example 4: Excess Savings	Example 5: Excess Savings
MGCS	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Cost Savings ¹	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Lost Savings ²	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Service Fee	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Performance Incentive ³	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Net Total to Host ⁴	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Net Total to Provider ⁵	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
¹ Assumed Cost Savings for each example. ² Lost Savings equals greater of (a) MGCS minus Cost Savings, or (b) zero. ³ Performance Incentive equals greater of (a) [redacted] of (Cost Savings less Bonus Threshold), or (b) zero. ⁴ Net Total to Host equals Cost Savings plus Lost Savings minus Service Fee minus Performance Incentive. ⁵ Net Total to Provider equals Service Fee plus Performance Incentive minus Lost Savings.					

3. Service Fee. Subject to Section 5 of this Schedule 3, and in partial consideration for the services provided by Provider hereunder, on the last day of each month from and after the Commercial Operation Date and continuing through the remainder of the Services Term, Host Customer shall pay Provider the amount equal to [redacted] per month, or [redacted] annually (the “Service Fee”), which amount shall be initially prorated on a per kW basis as the Commercial Operation Date for each of the Energy Storage Systems in the ESS Portfolio is achieved. For sake of clarity, the Service Fee is an aggregate amount for the services provided by Provider hereunder and does not apply to each individual Energy Storage System.

4. Adjustments. Notwithstanding any provision herein to the contrary:

a. The Minimum Guaranteed Cost Savings is intended to apply to the entire ESS Portfolio, on a cumulative aggregate basis, installed on each and all of the Premises listed on Schedule 1. Material changes to the quantity and profile of energy usage at the Premises may affect Provider’s ability to provide Cost Savings in excess of the Minimum Guaranteed Cost Savings. Accordingly, the parties agree to promptly meet and in good faith discuss a fair and equitable proration and/or adjustment to the Minimum Guaranteed Cost Savings and the Bonus Threshold if any of the events identified in this Section 4.a below occurs during any Term Year with respect to some or all of the ESS Portfolio and/or Premises, and in the event the parties do not agree to such an equitable proration and/or adjustment, either party shall be entitled to exercise its rights and remedies under this Agreement with respect to such disagreement.

i. Some of the Energy Storage Systems have not been installed and/or have not commenced operations, and/or Energy Management Services have not begun to be provided at some or all of the Premises;

ii. Any act or omission by Host Customer (or any of its employees, contractors, or agents) impairs an Energy Storage System’s ability to safely store and discharge

energy or Provider's ability to monitor or control the Energy Storage System or provide the Energy Management Services and/or Market Products;

iii. The sale, foreclosure, or other transfer of ownership of any Premises, relocation of any Energy Storage System, or a reduction in the installed capacity of the Energy Storage Systems;

iv. Any theft, destruction, casualty, condemnation, or other damage or disruption affects an Energy Storage System in any way that impairs its ability to safely store and discharge energy or Provider's ability to monitor or control the Energy Storage System, except to the extent caused by the manufacturer of the Energy Storage System, Provider, or its employees, contractors, or agents;

v. A Disruption Period occurs;

vi. A Host Customer Default, including Provider suspending the Energy Management Services as a result of a Host Customer Default;

vii. Host Customer fails to provide access to any Premises or an Energy Storage System as required by Section 7.2(d) of the General Conditions;

viii. A Force Majeure Event;

ix. Host Customer elects to have the Local Electric Utility apply a different tariff or rate category to any of the Premises and such rate or tariff has a detrimental impact on Provider's ability to achieve or generate expected Cost Savings or receive payment under any Utility Incentive Program;

x. Any significant deviation in the amount or characteristics of the electrical demands at the Premises from actual Local Electric Utility provided demand data for the period of July 2014 through June 2015 (except for the Baker Water Treatment Plant, which period was January 2017 through December 2017), not resulting from the Energy Management Services or Provider's acts or omissions;

xi. Reduction in the installed capacity of the ESS Portfolio installed pursuant to this Agreement;

xii. Failure of the Energy Storage System and/or Premises to qualify for or otherwise obtain funding from the SGIP; and

xiii. Host Customer has not installed a solar photovoltaic generating facility at the Baker Water Treatment Plant that is at least 1.25 megawatt (ac) in size (the "Baker Solar System") and/or the Baker Solar System is not operating during some or all of any Term Year, except for the scheduled downtime for the Baker Water Treatment Plant as described in Attachment A attached to Schedule 1 of the Agreement.

b. Each Party agrees to notify the other as soon as practicable upon becoming aware of the occurrence of any event described in paragraph (a) above or any circumstance that

could reasonably be expected to require changes in the operational characteristics of one or more of the Energy Storage Systems or materially impact Provider's ability to meet its obligations (including milestone deadlines), or otherwise interfere with Provider's performance, under this Agreement and/or any Utility Services Agreement.

5. Reallocations. Upon written notice to Host prior to the last Commercial Operation Date for all of the Energy Storage Systems to be installed under this Agreement, Provider shall have the right to remove and transfer any of the Premises under this Agreement to the Original Portfolio A Agreement ("Removed Premises") or add and accept under this Agreement any of the Premises in the Original Portfolio A Agreement ("Additional Premises").

a. In the case of any Removed Premises:

i. both the MGCS and Bonus Threshold under this Agreement shall be reduced by the amount of the Allocated MGCS and Allocated Bonus Threshold for the Removed Premises as set forth in the table in Schedule 1 of this Agreement;

ii. the Service Fee under this Agreement shall be reduced by the amount of the Allocated Service Fee for the Removed Premises as set forth in the table in Schedule 1 of this Agreement; and

iii. the row in the table in Schedule 1 of this Agreement relating to the Removed Premises, any attachments to Schedule 1 of this Agreement relating to the Removed Premises, and any references to the Removed Premises in Attachment A of Schedule 1 of this Agreement shall be deleted from Schedule 1 of this Agreement.

b. In the case of any Additional Premises:

i. both the MGCS and Bonus Threshold under this Agreement shall be increased by the amount of the Allocated MGCS and Allocated Bonus Threshold for the Additional Premises as set forth in the table in Schedule 1 of the Original Portfolio A Agreement;

ii. the Service Fee under the this Agreement shall be increased by the amount of the Allocated Service Fee for the Additional Premises as set forth in the table in Schedule 1 of the Original Portfolio A Agreement; and

iii. the row in the table in Schedule 1 of the Original Portfolio A Agreement relating to the Additional Premises, any attachments to Schedule 1 of the Original Portfolio A Agreement relating to the Additional Premises, and any references to the Additional Premises in Attachment A of Schedule 1 of the Original Portfolio A Agreement shall be added to Schedule 1 of this Agreement.

c. From and after any such transfer pursuant to this Section 5 of Schedule 3, any references herein to "Premises" shall refer to such Premises as modified pursuant to this Section 5 of Schedule 3.

Schedule 4 – Notice Information

If to Host Customer:

Irvine Ranch Water District
15600 Sand Canyon Ave.
P.O. Box 57000
Irvine, CA 92619-7000
Attn: General Manager

If to Provider:

Hybrid-Electric Building Technologies West Los Angeles 2, LLC,
c/o Electrodes Holdings, LLC
125 West 55th St
New York NY 10019
Attention: Will Demas
Tel: (212) 231-1337
Email: William.demas@macquarie.com

With a copy (which shall not constitute notice) to:

Macquarie Capital Legal
125 West 55th St
New York NY 10019
Tel: (212) 231-1773
Email: maccapadvlegalna@macquarie.com

With a copy (which shall not constitute notice) to:

Advanced Microgrid Solutions, Inc.
25 Stillman St., Suite 200
San Francisco, CA 94107
Email: notices@advmicrogrid.com

Schedule 5 – General Terms and Conditions

1. DEFINITIONS.

1.1 Definitions. In addition to other terms specifically defined elsewhere in these General Conditions or the Agreement, where capitalized, the following words and phrases shall be defined as follows:

“Adverse Environmental Condition” means any: (a) violation of, breach of or non-compliance with any Environmental Laws with respect to the Premises, other than such violation, breach, or non-compliance caused by Provider or the Energy Storage Systems, and (b) the presence or release of, or exposure to, any Hazardous Materials at, to, on, in, under or from the Premises other than caused by Provider or the Energy Storage Systems.

“Affiliate” means, with respect to any specified Person, any other Person directly or indirectly controlling, controlled by or under common control with such specified Person.

“Applicable Law” means, with respect to any Person, any constitutional provision, law, statute, rule, regulation, ordinance, treaty, order, decree, judgment, decision, certificate, holding, injunction, registration, license, franchise, permit, authorization, guideline, Governmental Approval, consent or requirement of any Governmental Authority having jurisdiction over such Person or its property, enforceable at law or in equity, including the interpretation and administration thereof by such Governmental Authority.

“Assign” means to sell, transfer or assign, and “Assignment” means the occurrence of any of the foregoing.

“Bankruptcy Event” means with respect to a Party that either:

(a) such Party has (i) applied for or consented to the appointment of, or the taking of possession by, a receiver, custodian, trustee or liquidator with respect to itself or of all or a substantial part of its property; (ii) admitted in writing its inability, or be generally unable, to pay its debts as such debts become due; (iii) made a general assignment for the benefit of its creditors; (iv) commenced a voluntary case under any

bankruptcy law; (v) filed a petition seeking to take advantage of any other law relating to bankruptcy, insolvency, reorganization, winding up, or composition or readjustment of debts; (vi) failed to controvert in a timely and appropriate manner, or acquiesced in writing to, any petition filed against such Party in an involuntary case under any bankruptcy law; or (vii) taken any corporate or other action for the purpose of effecting any of the foregoing; or

(b) a proceeding or case has been commenced without the application or consent of such Party in any court of competent jurisdiction seeking (i) its liquidation, reorganization, dissolution or winding-up or the composition or readjustment of debts, or (ii) the appointment of a trustee, receiver, custodian, liquidator or the like of such Party under any bankruptcy law, and such proceeding or case has continued undefended, or any order, judgment or decree approving or ordering any of the foregoing shall be entered and continue unstayed and in effect for a period of sixty (60) days.

“Business Day” means any day other than Saturday, Sunday or any other day on which banking institutions in San Francisco, California are required or authorized by Applicable Law to be closed for business.

“Commercial Operation Date” means the date an Energy Storage System commences commercial operations for the provision of Energy Management Services pursuant to this Agreement, as such date shall be established and provided by written notice by Provider to Host Customer.

“Confidential Information” means information about operations, including business plans, strategies, financial information, proprietary, licensed, and/or technical information regarding the financing, design, operation and maintenance of the Energy Storage System.

“Control Area Operator” means the entity responsible for managing the bulk power grid where the Premises are located, and may be the Local Electric Utility or a regional transmission operator.

“Disruption Period” is defined in Section 4.3(b).

“Early Termination Date” means any date on which this Agreement terminates other than by reason of expiration of the then applicable Term.

“Effective Date” has the meaning set forth in the preamble to this Agreement.

“Energy Management Services” has the meaning set forth in Schedule 2 of this Agreement.

“Energy Storage System” means a battery or other technology system, together with related software, components devices, meters, and such other interconnection, communication, monitoring, fire, safety, and other equipment and facilities, to be installed by Provider at each of the Premises referenced in this Agreement that will be used by Provider to meet Provider’s obligations to Host Customer to provide the Energy Management Services as set forth in this Agreement.

“Energy Storage System Operations” means Provider’s operation, maintenance and repair of the Energy Storage Systems performed in accordance with the requirements herein.

“Environmental Attributes” means any and all products from or characteristics of the Energy Storage Systems or the Energy Management Services associated with Energy Storage Systems, whether existing as of the Effective Date or subsequently created, including, without limitation, carbon trading credits and/or allowances, renewable energy credits or certificates, energy efficiency credits, emissions reduction credits, emissions allowances, green tags, tradable renewable credits, Green-e®-certified products, or any other benefit or incentive under programs for energy storage or discharge from batteries.

“Environmental Documents” means reports, agreements, plans, inspections, tests, studies or other materials concerning the presence of Hazardous Materials at, from or on the Premises, including, but not limited to, soil reports, design drawings, environmental reports, sampling results or other documents relating to Hazardous Materials that have been identified or may be present on, in or under the Premises.

“Environmental Law” means any and all federal, state, local, provincial and foreign, civil and criminal laws, statutes, ordinances, orders,

common law, codes, rules, regulations, judgments, decrees, injunctions relating to the protection of health and the environment, worker health and safety, and/or governing the handling, use, generation, treatment, storage, transportation, disposal, manufacture, distribution, formulation, packaging, labeling, or release to the environment of or exposure to Hazardous Materials, including any such requirements implemented through Governmental Approvals.

“Expiration Date” means the date on which this Agreement terminates by reason of expiration of the Term.

“Financing Party” means, as applicable (a) any Person (or its agent) from whom Provider (or an Affiliate of Provider) leases an Energy Storage System, (b) any Person (or its agent) who has made or will make a loan to or otherwise provides financing to Provider (or an Affiliate of Provider) with respect to an Energy Storage System, or (c) any Person acquiring a direct or indirect interest in Provider or in Provider’s interest in this Agreement or an Energy Storage System.

“Force Majeure Event” means any act or event that prevents the affected Party from performing its obligations in accordance with this Agreement, if such act or event is beyond the reasonable control, and not the result of the fault or negligence, of the affected Party and such Party had been unable to overcome such act or event with the exercise of reasonable due diligence (including the expenditure of reasonable sums). Subject to the foregoing conditions, “Force Majeure Event” shall include without limitation the following acts or events: (i) natural phenomena, such as storms, hurricanes, floods, lightning, volcanic eruptions and earthquakes; (ii) explosions or fires arising from lightning or other causes; (iii) acts of war or public disorders, civil disturbances, riots, insurrection, sabotage, epidemic, terrorist acts, or rebellion; (iv) strikes or labor disputes; (v) action or inaction by a Governmental Authority (unless Host Customer is a Governmental Authority and Host Customer is the Party whose performance is affected by such action or inaction). A Force Majeure Event shall not be based on the economic hardship of either Party.

“General Conditions” means the provisions of this Schedule 5.

“Governmental Approval” means any approval, consent, franchise, permit, certificate, resolution,

concession, license, interconnection agreement, or authorization issued by or on behalf of any applicable Governmental Authority, including any such approval, consent, order or binding agreements with or involving a governmental authority under Environmental Laws.

“Governmental Authority” means any federal, state, regional, county, town, city, or municipal government, whether domestic or foreign, or any department, agency, bureau, or other administrative, regulatory or judicial body of any such government. Governmental Authority includes the Local Electric Utility and the Control Area Operator.

“Hazardous Materials” means any hazardous or toxic material, substance or waste, including petroleum, petroleum hydrocarbons or petroleum products, petroleum by-products, radioactive materials, asbestos or asbestos-containing materials, gasoline, diesel fuel, pesticides, radon, urea formaldehyde, mold, lead or lead-containing materials, polychlorinated biphenyls; and any other chemicals, materials, substances or wastes in any amount or concentration which are regulated under or for which liability can be imposed under any Environmental Law.

“Host Customer” has the meaning set forth in the preamble of this Agreement, together with its successors and assigns.

“Host Customer Default” means one or more of the following events shall be defaults with respect to Host Customer:

(a) A Bankruptcy Event shall have occurred with respect to Host Customer;

(b) Host Customer fails to pay Provider any undisputed amount due Provider under this Agreement within thirty (30) days from receipt of notice from Provider of such past due amount; and

(c) Host Customer breaches any material representation, covenant, or other term of this Agreement and fails to cure such breach within thirty (30) days after Provider’s notice of such breach, or if such breach cannot be reasonably cured within such thirty (30) day period, Host Customer fails to commence such cure within such thirty (30) day period and diligently and continuously pursue such cure until completion.

“Host Customer Indemnified Parties” means Host Customer, and its permitted successors and assigns and their respective directors, officers, members, shareholders and employees.

“Indemnified Persons” means Host Customer Indemnified Parties or Provider Indemnified Parties, as the context requires.

“Installation Work” means the construction and installation of the Energy Storage Systems and the start-up, testing and acceptance (but not the operation and maintenance) thereof, all performed by or for Provider at the Premises.

“kW” means kilowatt.

“kWh” means kilowatt hour.

“Liens” means mortgages, pledges, liens (including mechanics’, labor or materialman’s lien), charges, security interests, encumbrances and/or claims of any nature.

“Local Electric Utility” means the local electric distribution owner and operator providing electric distribution and interconnection services to Host Customer at the Premises, together with all other energy providers or energy service providers of Host Customer.

“Losses” means all losses, liabilities, claims, demands, suits, causes of action, judgments, awards, damages, cleanup and remedial obligations, interest, fines, fees, penalties, costs and expenses (including all attorneys’ fees and other costs and expenses incurred in defending any such claims or other matters or in asserting or enforcing any indemnity obligation).

“Market Products” means products and services that the Energy Storage Systems are capable of providing from time to time, including, without limitation, with respect to Local Electric Utility demand response programs, wholesale energy sales, ancillary utility services, generation capacity credits, grid support, resource adequacy benefits, and products and services provided under any Utility Service Agreement.

“Party” or “Parties” means Provider and Host Customer, and their permitted successors and assignees.

“Person” means an individual, partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture, firm, or other entity, or a Governmental Authority.

“Premises” means the premises at which the Energy Storage Systems are located as set forth in Schedule 1 of this Agreement. The Premises includes the entirety of any structures and underlying real property and interest therein held by Host Provider. If the context so requires, “Premises” may refer to a particular premises at which a particular Energy Storage System is located or all of the premises on which all of the Energy Storage Systems in the ESS Portfolio are located. Compensation for locating the Energy Storage Systems on Premises, including consideration for site license, is included in the current financial arrangement on Cost Savings between Host Customer and Provider. Notwithstanding the foregoing, to the extent any Energy Storage System is installed on a Third Party Premises, the Premises with respect to such Energy Storage System shall not mean the Third Party Premises, but shall refer only to the applicable Host Customer property, including, without limitation, such portion of the Host Customer property utilized by Provider to interconnect the Energy Storage System to the Host Customer’s electrical system.

“Provider” has the meaning set forth in the preamble of this Agreement, together with its successors and assigns.

“Provider Default” means one or more of the following events shall be defaults with respect to Provider:

(a) A Bankruptcy Event shall have occurred with respect to Provider;

(b) Provider fails to pay Host Customer any undisputed amount owed under this Agreement within thirty (30) days from receipt of notice from Host Customer of such past due amount; and

(c) Provider breaches any material representation, covenant or other term of this Agreement and fails to cure such breach within thirty (30) days after Host Customer’s notice of such breach, or if such breach cannot be reasonably cured within such thirty (30) day period, Provider fails to commence such cure within such thirty (30)

day period and diligently and continuously pursue such cure until completion.

“Provider Indemnified Parties” means Provider, and its permitted successors and assigns and their respective directors, officers, members, shareholders and employees.

“Representative” means officers, directors, members, managers, employees, agents, contractors and consultants, and Affiliates, lenders, and potential assignees of this Agreement or acquirers of Provider or its Affiliates (provided and on condition that such potential assignees be bound by a written agreement restricting use and disclosure of Confidential Information).

“SCE” means Southern California Edison Company.

“Security Interest” means a security interest granted to a Financing Party in an Energy Storage System.

“Services Term” means the time period described in Section 4 of this Agreement.

“Site-Specific Requirements” means the site-specific information and requirements as may be set forth in Schedule 1 of this Agreement.

“Stated Rate” means a rate per annum equal to the lesser of (a) the “prime rate” (as reported in *The Wall Street Journal*) plus two percent (2%) or (b) the maximum rate allowed by Applicable Law.

“System Data” means all data generated by the meter(s) installed with the Energy Storage Systems and otherwise regarding the operation and discharge of the Energy Storage Systems and software utilized in connection with providing, and the sale and accounting of, the Energy Management Services, Market Products, Environmental Attributes, Incentives, or Utility Incentive Programs.

“Tax Incentives” means any and all depreciation (including accelerated depreciation), installation or production-based incentives, investment tax credits, deductions, tax-related grants, tax-related subsidies, and other tax benefits associated with the construction, ownership, maintenance, or operation of the Energy Storage Systems.

“Term” means the term of this Agreement, which shall commence on the Effective Date and shall continue until ninety (90) days following the Services Term.

“Termination Date” means the date on which this Agreement ceases to be effective, including on an Early Termination Date or the Expiration Date.

“Third Party Lease” means any lease, license, easement, or other agreement by Provider (or its Affiliates) and a Person other than Host Customer (or any of its Affiliates) made with respect to the installation, construction, and operation of an Energy Storage System in the ESS Portfolio.

“Third Party Premises” means any property and/or premises identified in a Third Party Lease that will be occupied or used by Provider in connection with the installation, construction, and operation of an Energy Storage System in the ESS Portfolio.

“Utility Incentive Programs” means any grants, subsidy, credit, or other incentive programs that are (or may become) available and for which any of the Premises and/or the Energy Storage Systems may be eligible and Provider elects to pursue, including, without limitation, Self-Generation Incentive Program (the “SGIP”) and the Automated Demand Response program (“ADR”), and other similar programs that may be established from time to time during the Term.

“Utility Services Agreement” means an agreement between Provider and a Local Electric Utility, Control Area Operator, or other Person made with respect to Market Products.

“Vested Market Products” means the Market Products being provided or sold under the Vested Utility Services Agreement.

“Vested Utility Incentive Programs” means the following Utility Incentive Programs: (a) SGIP, and (b) ADR, subject to the last sentence of Section 3.5 of these General Conditions.

“Vested Utility Services Agreement” means those certain: (a) Demand Response Energy Storage Agreement, by and between Hybrid-Electric Building Technologies West Los Angeles 1, LLC, and Southern California Edison Company, dated November 3, 2014, as amended by Amendment No. 1, dated December 18, 2015; Amendment No. 2, dated January 26, 2016; and Amendment No. 3, dated March 23, 2016, and (b) Demand Response

Energy Storage Agreement, by and between Hybrid-Electric Building Technologies West Los Angeles 2, LLC, and Southern California Edison Company, dated November 3, 2014, as amended by Amendment No. 1, dated December 18, 2015; Amendment No. 2, dated January 26, 2016; and Amendment No. 3, dated March 23, 2016, each as amended, amended and restated, and otherwise modified from time to time.

1.2 Interpretation. The captions or headings in these General Conditions are strictly for convenience and shall not be considered in interpreting this Agreement. Words in this Agreement that impart the singular connotation shall be interpreted as plural, and words that impart the plural connotation shall be interpreted as singular, as the identity of the parties or objects referred to may require. The words “include”, “includes”, and “including” mean include, includes, and including “without limitation” and “without limitation by specification.” The words “hereof”, “herein”, and “hereunder” and words of similar import refer to this Agreement as a whole and not to any particular provision of this Agreement. Except as the context otherwise indicates, all references to “Articles” and “Sections” refer to Articles and Sections of these General Conditions.

2. TERM; TERMINATION; RELOCATION

2.1 Removal of Energy Storage System at Expiration. Upon the expiration or earlier termination of this Agreement, Provider shall, at Provider’s expense (except as otherwise provided herein), remove all of its tangible property comprising the Energy Storage Systems from the Premises on a mutually convenient date but in no case later than ninety (90) days after the Termination Date. The Premises including Host Customer’s facilities and improvements that improve the Premises (whether existing on the date hereof or thereafter installed in accordance with the provisions of Section 7.2(d)(iii) below) shall be returned to their original conditions other than incidental and subsurface hardware (all of which may remain at the Premises) and ordinary wear and tear. For purposes of Provider’s removal of an Energy Storage System, Host Customer’s covenants pursuant to Section 7.2 shall remain in effect until the date of actual removal of the Energy Storage System. Provider shall leave the Premises in neat and clean order. If Provider fails to remove or commence substantial efforts to remove an Energy Storage System by the required date, Host

Customer shall have the right, at its option, to remove the Energy Storage System to a public warehouse and restore the related Premises to its original condition, other than incidental and subsurface hardware (all of which may remain at the Premises) and ordinary wear and tear, and Provider shall reimburse Host Customer for its reasonable cost of such removal; provided, if Host Customer elects to remove and store an Energy Storage System, it shall exercise reasonable care to do so in a manner consistent with good electrical practices.

2.2 Provider Conditions. In the event that any of the events or circumstances set forth in the subsections of this Section 2.2 occur from time to time during the Term of this Agreement, Provider may, after conferring with Host Customer to determine if the events or circumstances can be resolved in a manner acceptable to Provider in its reasonable discretion, remove such Energy Storage System and terminate this Agreement with respect to the affected Premises or terminate this Agreement in its entirety. If Provider terminates this Agreement, neither Party shall have any further liability to the other hereunder, except for any liabilities that may have accrued prior to such termination. If Provider removes a given Host Customer site from the Premises, neither Party shall have any further liability with respect to such site or related Energy Storage System, except for any liabilities that may have accrued prior to such removal.

(a) Provider determines that the Premises, or portion thereof, is (i) insufficient to accommodate an Energy Storage System, or (ii) unsuitable for the construction or operation of an Energy Storage System, the provision of the Energy Management Services, or the sale of the Market Products, or (iii) the permits, consents, licenses, and approvals required for the construction, installation, and operation of an Energy Storage System (including, such consents and approvals set forth in Section 2 (Host Customer Disclosures) of Attachment A attached to Schedule 1 hereto) are not obtained.

(b) There exist site conditions (including Adverse Environmental Conditions) or construction requirements that were not known as of the Effective Date and that could reasonably be expected to materially increase the cost of Installation Work at a given site, or damage or adversely affect the electricity production from an

Energy Storage System as designed, in each case as determined by Provider in its sole discretion.

(c) There is a material adverse change in the regulatory environment, Incentives or federal or state tax code (including the expiration of any incentive program or tax incentives in effect as of the Effective Date) that could reasonably be expected to adversely affect the economics of this Agreement for Provider and its investors.

(d) Provider is unable to obtain financing for an Energy Storage System on terms and conditions satisfactory to Provider as determined in its sole discretion.

(e) There has been a material adverse change in the rights of Host Customer to occupy the Premises, or relevant portion thereof, or Provider to construct, operate or maintain an Energy Storage System on the Premises.

(f) Provider has not received evidence reasonably satisfactory to it that the Host Customer's current interconnection services are adequate to support the Energy Storage Systems, or that such interconnection services can be upgraded at a cost satisfactory to Provider unless Host Customer has agreed to pay for any such upgrades required.

(g) There has been a material adverse change in Host Customer's creditworthiness.

(h) Events or circumstances arise or occur that materially impact or interfere with Provider's ability to meet the schedule or perform the obligations required of Provider under any Utility Service Agreement.

(i) The sale, foreclosure, or other transfer of ownership of any Premises and/or by Host Customer.

(j) Provider does not receive funding for the Energy Storage Systems under the SGIP.

(k) Provider fails to obtain and/or enter into a Third Party Lease required for the installation and operation of an Energy Storage System or fails to obtain all Governmental Approvals necessary or required to construct,

maintain, and operate an Energy Storage System on the applicable Third Party Premises, in each case, on terms and conditions acceptable to Provider, or any Third Party Lease entered into by Provider, or Governmental Approvals obtained by Provider, in connection with this Agreement terminates or expires.

(l) Host Customer has not completed all requirements under CEQA (as provided in Section 3.2 hereof), including the resolution of all claims, disputes, protests, and appeals, or the lapsing of all appeal periods with no appeals having been made, within 90 days following the Effective Date.

2.3 Relocation. During the Term, Host Customer shall have the right to relocate any Energy Storage System to another suitable location at a Premises owned by Host Customer (or any of its Affiliates), provided that such new location is suitable for the installation, use, and operation of the applicable Energy Storage System as reasonably determined by Provider, and subject to Provider's rights in Section 2.2 above (a "Relocation"). Host Customer will provide written notice of any Relocation to Provider at least one hundred eighty (180) days prior to the effective date of such Relocation, and following such Relocation the Parties shall (a) amend and revise Schedule 1 of this Agreement to identify the substitute Premises, (b) provide such consents or releases as required by any lender, investor, or Financing Party, and (c) otherwise amend this Agreement as reasonably required by either Party to affect the Relocation. The Parties agree to work together reasonably and in good faith to undertake and complete any Relocation in a manner that minimizes the disruption to the provision of the Energy Management Services and Provider's obligations under its Utility Services Agreements. Host Customer shall pay all costs and expense associated with any Relocation, including with respect to the removal of the Energy Storage System from, and restoration of, the affected Premises, and the installation and testing of the Energy Storage System at such new location, together with applicable interconnection fees and expenses at the new location, as well as other reasonable, out-of-pocket expenses incurred by Provider in connection with the Relocation.

3. CONSTRUCTION, INSTALLATION AND TESTING OF STORAGE SYSTEM.

3.1 Installation Work.

(a) Provider and Host Customer will cooperate reasonably and in good faith on the design, permitting, construction, interconnection and installation of the Energy Storage Systems, including so as to enable Provider, or its Affiliate, to meet their obligations under this Agreement and any Utility Services Agreement. The Energy Storage Systems shall be compatible with the Host Customer's operations, systems and equipment in place on the Premises as of the Effective Date or (if approved by Provider pursuant to Section 7.2(d)(iii)) subsequently installed following the Effective Date, and shall not unreasonably interfere with the operation, maintenance, or replacement of such systems and equipment.

(b) The Energy Storage Systems shall be integrated with the Premises' electrical systems, and subject to applicable codes and utility tariffs, shall be capable of charging from grid supplied energy and shall be capable of discharging to the Premises. The Energy Storage Systems shall be completed pursuant to approved project plans, specifications, samples, material lists, and equipment lists (the "Plans and Specifications") which (except for the make and model of the components of the Energy Storage Systems) shall be approved by Host Customer, not be unreasonably withheld, conditioned, or delayed. Host Customer shall have the right to condition such approval upon conformance of the Plans and Specifications with Host Customer's reasonable requirements related to the Premises' electrical systems with which the Energy Storage Systems will be integrated, to the location of the Energy Storage Systems on Host Customer property or to the adjacency or proximity to Host Customer facilities and operations, including, without limitation, the requirements of Host Customer's latest edition of its "Construction Manual for the Construction of Water, Sewer, and Reclaimed Water Facilities" (the "Construction Manual") to the extent the provisions of such Construction Manual are applicable to the installation and operation of the Energy Storage Systems. Provider shall submit a draft of the Plans and Specifications to Host Customer at the 30% and 90% design completion, and Host Customer will have a period of fourteen (14) calendar days from its receipt of the Plans and Specifications to review and either indicate its approval or request reasonable changes. Provider shall cause its design engineer to review and respond to any requested changes. Host Customer will retain final authority to review and reasonably approve the Plans and Specifications and working drawings for the

installation of the Energy Storage Systems and any material modifications thereto, but such authority and approval will not relieve Provider's sole responsibility therefor. Provider shall perform the Installation Work in a manner that minimizes inconvenience to and interference with the use of the Premises to the extent commercially practical.

(c) Installation of the Energy Storage Systems by Provider shall include all site restoration, including landscaping, paving, relocation of facilities, to the reasonable satisfaction of Host Customer. Provider will furnish, at its expense, third party inspection, soil compaction testing and surveys as reasonably required by Host Customer.

(d) To the extent a solar photovoltaic generating system, or other qualifying generating facility (generally, a "Qualifying Generator"), owned, or contracted for through a third party, by Host Customer is located on or near the Premises, and would enable the Energy Storage System to qualify for a federal, state, or local investment tax credit, grant, or other Incentive, the Parties shall work together cooperatively and in good faith to enable the Energy Storage System to qualify for such Incentive, including, without limitation, enabling the Energy Storage System to be charged and recharged with energy produced by the Qualifying Generator, and installing such controllers, meters, and other equipment and facilities as reasonably necessary or required to enable the Energy Storage System to qualify for such Incentive. Notwithstanding the foregoing, the Energy Storage System installed at the Baker Water Treatment Plant shall not be charged from the Baker Solar System. Provider agrees to reasonably cooperate in good faith in connection with Host Customer's construction of the Baker Solar System.

3.2 California Environmental Quality Act. Host Customer shall act as the lead agency to review the projects undertaken under this Agreement pursuant to the California Environmental Quality Act, California Public Resources Code, Section 21000, *et seq.* ("CEQA"). It is anticipated that Host Customer will obtain CEQA compliance through a notice of exemption; provided, however, that the Parties acknowledge and agree that Host Customer shall determine the appropriate CEQA compliance documentation for the Project and shall prepare such documents, and all studies, reports, surveys, and analysis required in connection with such

documents, and be responsible for all environmental commitment and mitigation costs and environmental commitment and mitigation measures arising therefrom, at Host Customer's sole cost and expense, but, for clarity, not costs described in Section 3.1(c), 3.3(a), Attachment A to Schedule 1 (aesthetic requirements), or any other costs of obtaining permitting or Governmental Approvals required under this Agreement to be borne by Provider.

3.3 Approvals; Permits; Compliance with Applicable Law.

(a) Host Customer shall assist Provider in obtaining all necessary consents, approvals and permits required to perform Provider's obligations under this Agreement, and those related to the Local Electric Utility, any Governmental Approval, and Incentive program, and any consents, waivers, approvals or releases required pursuant to any applicable contract. Provider shall be responsible for obtaining all permits associated with the construction, operation, and decommissioning of the Premises and Energy Storage Systems. Provider shall be solely responsible for all costs associated with obtaining permits, consents, approvals, waivers or releases.

(b) Provider shall comply with all Applicable Laws in connection with the Premises and Energy Storage Systems in all material respects. Provider's design, development, permitting, financing, construction, operation, maintenance, repair, replacement and decommissioning of the Energy Storage Systems shall be subject to the safety and operational specifications of SCE and applicable Governmental Authorities.

3.4 Energy Storage System Acceptance Testing.

(a) Provider shall conduct testing of the Energy Storage Systems in accordance with such methods, acts, guidelines, standards and criteria reasonably accepted or followed by energy storage system integrators in the United States.

(b) If the results of such testing indicate that an Energy Storage System is capable of providing the Energy Management Services, and the Energy Storage System has obtained all necessary approvals from authorities having jurisdiction and SCE for operation, then Provider

shall send a written notice to Host Customer to that effect and identifying the Commercial Operation Date.

3.5 Utility Incentive Programs.

Host Customer agrees to cooperate with Provider in connection with its provision of the Energy Management Services, and the application and receipt of payment and other benefits by Provider under any Utility Incentive Programs, including, without limitation, providing such information, authorization, and reporting necessary to receive payments and other benefits under any Utility Incentive Programs. Unless otherwise agreed by the Parties, Provider shall be solely responsible for the cost and expense of applying for, and shall be entitled to all compensation and benefits from, any Utility Incentive Programs, and to the extent Host Customer acquires any right, interest, or possession in or to such compensation and/or benefits, Host Customer shall promptly transfer, assign, and deliver the same to Provider. Notwithstanding the foregoing, or any provision of this Agreement to the contrary, the Parties shall share equally in any compensation received under the ADR program.

4. STORAGE SYSTEM OPERATIONS.

4.1 Provider as Owner and Operator. The Energy Storage Systems will be owned by Provider or Provider's Financing Party and will be operated and maintained and, as necessary, repaired by Provider at its sole cost and expense, provided, any repair or maintenance costs incurred by Provider as a result of Host Customer's negligence or breach of its obligations hereunder shall be reimbursed by Host Customer. The Energy Storage Systems shall, in the normal course, charge from the grid or from solar or other onsite generation, as applicable, and discharge to the Premises such that the Energy Storage Systems are capable of delivering the Energy Management Services and Market Products. Such operation of the Energy Storage Systems may be done remotely.

4.2 Metering.

(a) Provider may use the existing electricity metering devices at the Premises in connection with providing the Energy Management Services and shall install and maintain one or more additional utility-grade kilowatt-hour (kWh) meters for the measurement of electrical energy discharged by the Energy

Storage Systems and for the measurement of electrical energy delivered by the Local Electric Utility used to charge the Energy Storage Systems. Upon Host Customer's reasonable written request, Provider shall furnish a copy of all technical specifications and accuracy calibrations for each such additional meter(s).

(b) Host Customer shall take all actions necessary to ensure Provider has real-time telemetered access to the electricity meters at the Premises, including those owned or operated by the Local Electric Utility, for measuring electric energy provided by the Local Electric Utility to the Premises.

4.3 Energy Storage System Disruptions.

(a) Premises Repair and Other Energy Storage System Disruptions. In the event that (x) Host Customer repairs the Premises for any reason not directly related to damage caused by the Energy Storage System, and such repair requires the partial or complete temporary disassembly or movement of an Energy Storage System, (y) any termination, amendment, or modification (other than as approved by Provider) of, or any act or omission by Host Customer under, any generating facility interconnection agreement ("GFIA"), made (or may hereafter be made) by and between Host Customer and Southern California Edison Company (or any amendment or successor agreement thereto) which is (or will be) utilized, or relied upon, by Provider in connection with any Energy Storage System, results in a disruption or outage in the Energy Storage System operation, or (z) any act or omission of Host Customer or Host Customer's employees, Affiliates, agents or subcontractors (collectively, a "Host Customer Act") results in a disruption or outage in Energy Storage System production, including, without limitation, a Host Customer Default, then, in either case, Host Customer shall (i) pay Provider for all work required by Provider to disassemble or move the Energy Storage System and to re-install and test the Energy Storage System, (ii) continue to pay the Service Fee, and (iii) reimburse Provider for any lost or reduced revenue as provided in Section 4.3(b).

(b) Lost Revenue During Disruptions. During any time that an Energy Storage System has reduced or no operations due to a disruption described in Section 4.3(a) (any such time, the "Disruption Period"), Host

Customer shall reimburse Provider for any lost or reduced revenue or other benefits from the Vested Market Products and Vested Utility Incentive Programs that are not delivered or received during the Disruption Period due to such reduced or non-operation. The lost revenue and other benefits from Vested Market Products and Vested Utility Incentive Programs for the Disruption Period shall be based on the average rate that such Vested Market Products and Vested Utility Incentive Programs provided revenue or other benefits over the same time period during the prior calendar year if such data are available (or, if the data are not available or the disruption occurs within the first twelve (12) months of operation, the average over the full period of operation).

(c) Estimated Annual Maintenance. As set forth under the heading *Scheduled Downtime* in Section 2 (Host Customer Disclosures) of Attachment A attached to Schedule 1 of this Agreement (the "Scheduled Downtime"), Host Customer has disclosed to Provider that the electric load at each Premises will be reduced for annual maintenance. Once scheduled by Host Customer, Host Customer shall promptly provide Provider with advance notice of the time period in which it will perform such annual maintenance, and Provider may use such time period to maintain and repair the Energy Storage Systems. Provided Host Customer satisfies the notice obligations set forth in this Section 4.3(c), the Scheduled Downtime shall not be considered a Disruption Period.

4.4 Software. Host Customer acknowledges that it has no rights, express or implied, in or to the software used in connection with or related to the Energy Storage Systems or the Energy Management Services.

5. DELIVERY OF ENERGY MANAGEMENT SERVICES.

5.1 Performance Guaranty. Provider shall provide the Minimum Guaranteed Cost Savings as set forth in Schedule 3 of this Agreement.

5.2 (a) Environmental Attributes. Host Customer's purchase of Energy Management Services does not include Environmental Attributes that are generated from, associated with, or enabled by the Energy Storage System, Energy Management Services, Vested Market Products, or Vested Utility Incentive Programs, each of which

shall be owned by Provider or Provider's Financing Party. Host Customer disclaims any right to Environmental Attributes based upon the installation or operation of the Energy Storage System at the Premises. Host Customer will cooperate with Provider to enable Provider to secure the benefits of any Environmental Attributes, and shall, at the request of Provider, execute any document or agreement and take such actions as are reasonably necessary to fulfill the intent of this Section 5.2.

(b) Tax Incentives. Host Customer's purchase of Energy Management Services does not include the Tax Incentives that are generated from, associated with, enabled by, or the eligibility of which depends on the installation and operation of the Energy Storage System. These Tax Incentives shall be owned by Provider or Provider's Financing Party for the duration of the Energy Storage System's operating life. Host Customer will cooperate with Provider to enable Provider to secure the benefits of any Tax Incentives, and shall, at the request of Provider, execute any document or agreement and take such actions as are reasonably necessary to fulfill the intent of this Section 5.2. Without limiting Provider's other rights hereunder, in the event that Host Customer breaches its obligations under this Section 5.2 and, as a result thereof, the value of the Tax Incentives associated with the Energy Storage Systems is reduced, Host Customer shall pay to Provider the value of such reduction.

Subject to the foregoing, and the other rights of Provider under this Agreement, nothing in this Agreement shall limit or restrict Host Customer's ability to utilize the Premises in connection with any energy efficiency or other similar programs to the extent the same do not conflict with Provider's provision of Market Products (including Provider's obligations under any Utility Services Agreement), are not provided to Host Customer by Provider hereunder in connection with the Energy Management Services or as a result of the Energy Storage Systems, or have not been applied for under any Utility Incentive Program.

5.3 Title to Energy Storage System. Throughout the duration of this Agreement, Provider or Provider's Financing Party shall be the legal and beneficial owner of the Energy Storage Systems at all times, and the Energy Storage Systems shall remain the personal property of Provider or Provider's Financing Party and shall

not attach to or be deemed a part of, or fixture to, the Premises. The Energy Storage Systems shall at all times retain the legal status of personal property as defined under Article 9 of the Uniform Commercial Code. Host Customer covenants that it will use reasonable commercial efforts to place all Parties having an interest in or lien upon the real property comprising the Premises, or any portion thereof, on notice of the ownership of the Energy Storage Systems and the legal status or classification of the Energy Storage Systems as personal property. Host Customer authorizes Provider to file any and all financing statements or precautionary fixture filings to provide such notice to lien holders of the Premises or of Host Customer. If there is any mortgage or fixture filing against the Premises which could reasonably be construed as attaching to an Energy Storage System as a fixture of the Premises, Host Customer shall provide, at Provider's request, a disclaimer or release from such lien holder. If Host Customer is the fee owner of the Premises, Host Customer consents to the filing by Provider, on behalf of Host Customer, of a disclaimer of the Energy Storage Systems as a fixture of the Premises in the office where real estate records are customarily filed in the jurisdiction of the Premises. If Host Customer is not the fee owner, Host Customer will, at Provider's request, use commercially reasonable efforts to obtain such consent from such owner.

5.4 Market Products.

(a) Subject to Section 3 (Market Products & Utility Incentive Programs) of this Agreement, Provider shall have the right to discharge or otherwise use the Energy Storage Systems to sell or otherwise benefit from any Market Products or services that any Energy Storage System is capable of providing from time to time. Except to the extent specified in this Agreement to the contrary, including Section 3 (Market Products & Utility Incentive Programs) of this Agreement, all revenue or other benefits from using the Energy Storage Systems to deliver Market Products shall be the sole property of Provider. Host Customer shall take such actions and execute such documents as are requested by Provider from time to time to evidence Provider's ownership of and entitlements to the Vested Market Products and any benefits therefrom, and shall not independently sell, convey or otherwise provide to any third party any Market Product, or participate or allow the Premises to participate in any demand response or other similar program. Notwithstanding the foregoing, Provider's right to

dispatch an Energy Storage System shall not excuse Provider from its obligation to provide the Energy Management Services and be bound by the performance guaranty as set forth in Section 5.1.

(b) Host Customer shall not sell, assign, subscribe, pledge, provide or otherwise commit the electrical load of the Premises to any Person other than Provider for Energy Management Services, Vested Market Products, or the Vested Utility Incentive Programs.

6. LOCAL ELECTRIC UTILITY CHARGES AND INVOICES.

6.1 Host Customer remains and shall be solely responsible for all Local Electric Utility charges relating to the Premises, including all fees and charges relating to electricity provided to the Premises and the Energy Storage Systems.

6.2 Provider shall invoice Host Customer monthly, within thirty (30) days following the end of each Billing Period, for all amounts owed by or to Host Customer in respect of a Premises. Provider will net all amounts owed by or to Host Customer in respect of a Billing Period and generate one net invoice for each Billing Period. If multiple Premises have the same Billing Period, Provider may issue an aggregate net invoice in respect of such Premises. Host Customer may withhold payment of amounts disputed in good faith until resolution of the dispute and shall pay all undisputed amounts within ten (10) Business Days following its receipt of the invoice. All late payments, including disputed amounts withheld by Host Customer and subsequently determined to be owing, shall bear interest at the Stated Rate from the date on which Host Customer received the original invoice through the date on which the amount is paid. Host Customer shall make all payments by wire transfer to the account specified by Provider from time to time. Provider may offset any amounts that it may owe Host Customer against any amounts that Host Customer may owe Provider and that are past due.

7. GENERAL COVENANTS.

7.1 Provider's Covenants. Provider covenants and agrees to the following:

(a) Notice of Damage or Emergency. Provider shall (i) promptly notify Host Customer if it becomes aware of any damage to or loss of the use of an Energy Storage System

or any event or circumstance that could reasonably be expected to adversely affect an Energy Storage System, (ii) immediately notify Host Customer if it becomes aware of any event or circumstance relating to an Energy Storage System or the Premises that poses a significant risk to human health, the environment, the Energy Storage System or the Premises.

(b) Governmental Approvals; Incentives. Except as otherwise provided for herein, while providing the Installation Work, Energy Management Services, and Energy Storage System Operations, Provider shall obtain and maintain and secure, at its cost and expense, all Governmental Approvals required to be obtained and maintained and secured by Provider and to enable Provider to perform such obligations, and all Environmental Attributes and Incentives and Rebates associated with the capacity of storage installed.

(c) Health and Safety. Provider shall take all necessary and reasonable safety precautions with respect to providing the Installation Work, Energy Management Services, and Energy Storage System Operations that shall comply with all Applicable Laws pertaining to the health and safety of persons and real and personal property. Provider will not bring onto or store at the Premises any Hazardous Materials, except for such substances that are necessary for the Installation Work, the maintenance of the Energy Storage Systems and/or incorporated into the Energy Storage Systems and, in any case, that are in full compliance with all Environmental Laws. Without limiting its obligations under Section 16.1 below, Provider will be responsible for damage to Host Customer facilities caused by the use, operation, or malfunctioning of the Energy Storage Systems, including bodily injury, property damage, except to the extent such damage is not caused by Provider or the Energy Storage Systems.

(d) Liens. Other than a Financing Party's Security Interest in or ownership of an Energy Storage System, Provider shall not directly or indirectly cause, create, incur, assume or suffer to exist any Liens on or with respect to the Premises or any interest therein, in each case to the extent such Lien arises from or is related to Provider's performance or non-performance of its obligations hereunder. If Provider breaches its obligations under this Section 7.1(d), it shall (i) immediately notify Host Customer in writing, (ii) promptly cause such Lien to be discharged and

released of record without cost to Host Customer, and (iii) defend and indemnify Host Customer against all costs and expenses (including reasonable attorneys' fees and court costs at trial and on appeal) incurred in discharging and releasing such Lien.

(e) Host Customer Access. Host Customer and its consultants and guests, shall be allowed to visit, conduct tours of and inspect the Energy Storage Systems; provided that any such visitor shall comply with the safety and security protocols of Provider and any such visitor shall be subject to the same confidentiality provisions as Host Customer contained in Section 15.1. Host Customer shall have the right to access the Premises without prior notice to Provider in the event of an imminent loss of life or property damage or other emergency, provided that following any such access, Host Customer promptly notified Provider of the same.

7.2 Host Customer's Covenants. Host Customer covenants and agrees as follows:

(a) Notice of Damage or Emergency. Host Customer shall (i) promptly notify Provider if it becomes aware of any damage to or loss of the use of an Energy Storage System or any event or circumstance that could reasonably be expected to adversely affect an Energy Storage System, (ii) immediately notify Provider it becomes aware of any event or circumstance that poses an imminent risk to human health, the environment, an Energy Storage System or the Premises.

(b) Liens. Host Customer shall not directly or indirectly cause, create, incur, assume or suffer to exist any Liens on or with respect to the Energy Storage Systems or any interest therein. If Host Customer breaches its obligations under this Section, it shall immediately notify Provider in writing, shall promptly cause such Lien to be discharged and released of record without cost to Provider, and shall indemnify Provider against all costs and expenses (including reasonable attorneys' fees and court costs at trial and on appeal) incurred in discharging and releasing such Lien.

(c) Consents and Approvals. Host Customer shall comply with Applicable Law in connection with providing Provider with access to the Premises and in performing any of its obligations under this Agreement. Host Customer

shall ensure that any authorizations required in order to enter into this Agreement and make the Premises available to Provider for the purposes of this Agreement, are obtained or provided in a timely manner. To the extent that only Host Customer is authorized to request, obtain or issue any necessary approvals, Governmental Approvals, Environmental Attributes, Incentives, rebates or other financial incentives (including, if applicable, any agreement required to interconnect the Energy Storage Systems with the Local Electric Utility grid), Host Customer shall cooperate with Provider to obtain or issue such approvals, Governmental Approvals, rebates or other financial incentives in the name of Provider. Host Customer shall provide to Provider copies of all Governmental Approvals applicable to the Premises, other than those obtained by Provider or to which Provider is a party.

(d) Access to Premises, Grant of License. Host Customer hereby grants to Provider a commercial license coterminous with the Term, containing all the rights necessary for Provider to use and occupy portions of the Premises for the installation, operation, repair, maintenance and removal of the Energy Storage Systems pursuant to the terms of this Agreement, including, subject to the access procedures set forth in Schedule 1, attached to this Agreement, ingress and egress rights to the Premises and access to electrical panels and conduits to interconnect or disconnect the Energy Storage Systems with the Premises' electrical wiring for Provider and its Affiliates, employees, contractors and subcontractors. Without limiting the foregoing:

(i) (A) Provider shall have access to the Premises and Energy Storage Systems during the Term of this Agreement and for so long as needed after termination to remove the Energy Storage Systems pursuant to the applicable provisions herein, and (B) Host Customer will not interfere with or handle any Provider equipment or the Energy Storage Systems without prior written authorization from Provider; provided, however, that Host Customer shall at all times have access to and the right to observe the Installation Work or Energy Storage System removal.

(ii) Subject to the access procedures set forth in Schedule 1, attached to this Agreement, Host Customer will allow access to the Local Electric Utility, one or more independent engineers, and representatives of Governmental Authorities for the purposes of inspecting the

Energy Storage System and the Premises to ensure compliance with Applicable Law (including any Governmental Approvals), and with the requirements associated with any Incentives and Environmental Attributes and any agreements between Provider and the Local Electric Utility, and for such other purposes as are permitted or required under any such agreement between Provider and the Local Electric Utility. Without limiting the foregoing, the Local Electric Utility will be allowed, at any time during Term, to enter the Premises during normal business hours on any Business Day.

(iii) Host Customer shall have the right to modify or improve the Premises, consistent with sound utility engineering practices regarding, and functionally related to, Host Customer's provision of water, sewer and recycled water services; provided, however, that Host Customer shall not modify or improve the Premises in any manner that could (or may) affect or interfere with the operations, maintenance, repair, or removal of any Energy Storage System, the provision of the Energy Management Services, or the sale or provision of the Market Products, without Provider's prior written consent, which such consent may be granted or withheld in Provider's sole discretion. For purposes of clarity, nothing in this Section 7.2(d)(iii) shall limit Host Customer's relocation rights set forth in Section 2.3 of these General Conditions, and Provider consents to the installation of the Baker Solar System.

(e) Temporary storage space during installation or removal. Host Customer shall provide sufficient space at the Premises for the temporary storage and staging of tools, materials and equipment and for the parking of construction crew vehicles and temporary construction trailers and facilities reasonably necessary during the Installation Work, Energy Storage System Operations or Energy Storage System removal, and access for rigging and material handling. The Parties acknowledge that the provided temporary storage space will be dependent on the available space at each Premises. Provider shall submit to the Host Customer a layout site plan of the temporary storage space needed at each individual Premises, and Host Customer will endeavor to make some or all of such space (or alternative space) available to Provider as is reasonably feasible.

(f) Site-Specific Requirements. On or before the Effective Date, Host Customer shall

identify and set forth on Attachment A attached to Schedule 1 of this Agreement and unless previously delivered, Host Customer shall, to the extent the same are known and available, deliver to Provider copies of, all Environmental Documents. Thereafter, Host Customer agrees to provide copies of any new Environmental Documents within ten (10) days of receipt of same. Host Customer hereby agrees to furnish such other documents in Host Customer's possession or control with respect to Governmental Approvals compliance with Environmental Law or Hazardous Materials with respect to the Premises as may be reasonably requested by Provider from time to time.

(g) Environmental Conditions. Notwithstanding anything to the contrary in this Agreement, Host Customer shall operate and maintain the Premises to comply with the requirements of all applicable Environmental Laws that limit or govern the conditions or uses of the Premises, without impairing or interfering with Provider's construction, operation and ownership of the Energy Storage Systems or occupancy of the Premises. In no event shall Provider have any liability or obligation with respect to any Adverse Environmental Condition on, in, or under the Premises, or operations or maintenance of the Premises required to comply with Environmental Laws with respect to Adverse Environmental Conditions not related to the Energy Storage Systems. Host Customer shall indemnify, hold harmless and defend Provider from and against all claims, pay costs and expenses, and conduct all actions required under Environmental Laws with respect to Adverse Environmental Conditions at, on or under the Premises not related to the Energy Storage Systems.

(h) Provision of Information. Host Customer shall allow Provider to measure, and shall otherwise give Provider, or give Provider access to, all data associated with energy usage, energy and utility service and delivery costs for the Premises. Within ten (10) Business Days of receiving them, Host Customer shall provide to Provider copies of all invoices and/or electricity bills for electricity services from the Local Electric Utility for the Premises.

(i) Designation as Agent. Host Customer shall designate Provider to act on Host Customer's behalf as its agent, aggregator or representative, in respect of Host Customer's Local Electric Utility service accounts subject to

this Agreement, including with respect to managing and operating all aspects of the Energy Storage Systems and receiving any payments from, or paying any penalties to, the Local Electric Utility in respect of the Energy Storage Systems. Host Customer shall provide Provider or the Local Electric Utility written authorization, in a form reasonably acceptable to Provider and the Local Electric Utility, for Provider to obtain Host Customer information and meter data concerning Host Customer's Local Electric Utility service accounts subject to this Agreement.

8. REPRESENTATIONS & WARRANTIES.

8.1 Representations and Warranties of Both Parties. In addition to any other representations and warranties contained in this Agreement, each Party represents and warrants to the other as of the Effective Date that:

(a) It is duly organized and validly existing and in good standing in the jurisdiction of its organization;

(b) It has the full right and authority to enter into, execute, deliver, and perform its obligations under this Agreement;

(c) It has taken all requisite corporate or other action to approve the execution, delivery, and performance of this Agreement;

(d) This Agreement constitutes its legal, valid and binding obligation enforceable against such Party in accordance with its terms, except as may be limited by applicable bankruptcy, insolvency, reorganization, moratorium, and other similar laws now or hereafter in effect relating to creditors' rights generally;

(e) There is no litigation, action, proceeding or investigation pending or, to the best of its knowledge, threatened before any court or other Governmental Authority by, against, affecting or involving any of its business or assets that could reasonably be expected to adversely affect its ability to carry out the transactions contemplated herein;

(f) Its execution and performance of this Agreement and the transactions contemplated hereby do not and will not constitute a breach of any term or provision of, or a default under, (i) any contract, agreement or Governmental Approval to which it or any of its

Affiliates is a party or by which it or any of its Affiliates or its or their property is bound, (ii) its organizational documents, or (iii) any Applicable Laws; and

(g) Its execution and performance of this Agreement and the transactions contemplated hereby do not and will not require any consent from a third party, including any Governmental Approvals from any Governmental Authority, except as provided in Sections 3.2 and 3.3 of these General Conditions, and Section 2 (Host Customer Disclosures) of Attachment A attached to Schedule 1 of this Agreement.

8.2 Representations of Host Customer. Host Customer represents and warrants to Provider as of the Effective Date that:

(a) Host Customer acknowledges that it has been advised that Provider may grant a Security Interest in the Energy Storage System to a Financing Party;

(b) To Host Customer's knowledge, the granting of the Security Interest will not violate any term or condition of any covenant, restriction, lien, financing agreement, lease or security agreement affecting the Premises;

(c) Host Customer is the owner of, and holds fee title to, the Premises, and subject to the matters disclosed under the Host Customer Disclosure section of Schedule 1, attached to the Agreement, Host Customer has all rights, title, and authority necessary or required to permit Provider to install, construct, operate, maintain, and remove the Energy Storage System on each of the Premises, and otherwise permit Provider to exercise its rights, pursuant to this Agreement. Host Customer is a public agency, and as such, there are no, and shall not be any, leases, mortgages, security interests, or other interest in or lien upon the portion of the Premises occupied and/or used by Provider pursuant to this Agreement;

(d) To Host Customer's knowledge, there exists no event or condition which constitutes a default, or would, with the giving of notice or lapse of time, constitute a default under this Agreement;

(e) To Host Customer's knowledge, Host Customer has identified and disclosed to Provider in Schedule 1 of this Agreement (i) all

Environmental Documents, (ii) all Governmental Approvals or other restrictions imposed under Applicable Laws with respect to the use of the Premises that could affect the construction and operation of the Energy Storage Systems, and (iii) all environmental reports, studies, data or other information relating to the use of the Premises by Provider within the Host Customer's possession or control;

(f) The Premises is in compliance with Environmental Laws, and that Host Customer holds and is in compliance with all Governmental Approvals required for the ownership and any current operations or activities conducted at the Premises; and

(g) Host Customer has identified in Schedule 1 and delivered to Provider all material reports and information concerning the presence or release of Hazardous Materials on, in or under the Premises.

Any Financing Party shall be an intended third-party beneficiary of this Section 8.2.

8.3 EXCLUSION OF WARRANTIES BY PROVIDER. EXCEPT AS EXPRESSLY SET FORTH IN SECTIONS 5.1 AND THIS SECTION 8, THE INSTALLATION WORK, STORAGE SYSTEM OPERATIONS, AND ENERGY MANAGEMENT SERVICES PROVIDED BY PROVIDER TO HOST CUSTOMER PURSUANT TO THIS AGREEMENT SHALL BE "AS-IS WHERE-IS." NO OTHER WARRANTY TO HOST CUSTOMER OR ANY OTHER PERSON, WHETHER EXPRESS, IMPLIED OR STATUTORY, IS MADE AS TO THE INSTALLATION, DESIGN, DESCRIPTION, QUALITY, MERCHANTABILITY, COMPLETENESS, USEFUL LIFE, FUTURE ECONOMIC VIABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE OF THE ENERGY STORAGE SYSTEMS, THE ENERGY MANAGEMENT SERVICES OR ANY OTHER SERVICE PROVIDED HEREUNDER OR DESCRIBED HEREIN, OR AS TO ANY OTHER MATTER, ALL OF WHICH ARE EXPRESSLY DISCLAIMED BY PROVIDER.

8.4 EXCLUSION OF WARRANTIES BY HOST CUSTOMER. EXCEPT AS EXPRESSLY SET FORTH IN THIS SECTION 8 OR ELSEWHERE IN THIS

AGREEMENT, THE PREMISES PROVIDED BY HOST CUSTOMER TO PROVIDER PURSUANT TO THIS AGREEMENT SHALL BE "AS-IS WHERE-IS." NO OTHER WARRANTY TO PROVIDER OR ANY OTHER PERSON, WHETHER EXPRESS, IMPLIED OR STATUTORY, IS MADE AS TO THE QUALITY, MERCHANTABILITY, COMPLETENESS, USEFUL LIFE, FUTURE ECONOMIC VIABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE OF THE PREMISES, OR AS TO ANY OTHER MATTER, ALL OF WHICH ARE EXPRESSLY DISCLAIMED BY HOST CUSTOMER.

9. TAXES AND GOVERNMENTAL FEES.

9.1 Host Customer Obligations.

Host Customer shall reimburse and pay for any documented taxes, fees or charges imposed or authorized by any Governmental Authority and paid by Provider due to Provider's sale of the Energy Management Services to Host Customer. Provider shall notify Host Customer in writing with a detailed statement of such amounts, which shall be invoiced by Provider and payable by Host Customer. Host Customer shall timely report, make filings for, and pay any and all sales, use, income, gross receipts or other taxes, and any and all franchise fees or similar fees assessed against it due to its purchase of the Energy Management Services. This Section 9.1 excludes taxes specified in Section 9.2.

9.2 Provider Obligations. Subject to Section 9.1 above, Provider shall be responsible for all income, gross receipts, ad valorem, personal property, possessory interest, or other similar taxes and any and all franchise fees or similar fees assessed against it due to its ownership of the Energy Storage Systems. Provider shall not be obligated for any taxes payable by or assessed against Host Customer based on or related to Host Customer's overall income or revenues or any real property taxes or assessments with respect to the Premises.

10. FORCE MAJEURE.

10.1 Excused Performance. Except as otherwise specifically provided in this Agreement, neither Party shall be considered in breach of this Agreement or liable for any delay or failure to comply with this Agreement (other than the intentional failure to pay amounts due hereunder), if and to the extent that such delay or

failure is attributable to the occurrence of a Force Majeure Event, provided the Party claiming relief under this Article 10:

(a) no more than one (1) Business Day after the initial occurrence of the claimed Force Majeure, gives the other Party written notice describing the particulars of the occurrence;

(b) within four (4) Business Days of providing notice of occurrence of the Force Majeure, provides evidence reasonably sufficient to establish that the occurrence constitutes a Force Majeure as defined in this Agreement;

(c) exercises all reasonable efforts necessary to minimize delay caused by such Force Majeure Event;

(d) notifies the other Party in writing of the cessation or termination of said Force Majeure Event; and

(e) resumes performance of its obligations hereunder as soon as practicable thereafter.

10.2 Termination in Consequence of Force Majeure Event. If a Force Majeure Event shall have occurred that has affected a Party's substantial performance hereunder and that has continued for a continuous period of one hundred eighty (180) days, then the non-affected Party shall be entitled to terminate this Agreement upon ninety (90) days' prior written notice to the affected Party. If substantial performance resumes within such ninety (90) day period, this Agreement shall not terminate and shall remain in full force and effect, and the remainder of this Section 10.2 shall not be applicable. If at the end of such ninety (90) day period such substantial performance has not resumed, this Agreement shall automatically terminate. Upon such termination for a Force Majeure Event, neither Party shall have any liability to the other (other than any such liabilities that have accrued prior to such termination).

11. DEFAULT.

11.1 Host Customer's Remedies following Provider Default. If a Provider Default has occurred and is continuing, in addition to other remedies expressly provided herein, and subject to Article 12, Host Customer may terminate this Agreement and exercise any other remedy it may have at law, in equity, or under this Agreement.

11.2 Provider's Remedies following a Host Customer Default. If a Host Customer Default has occurred and is continuing, in addition to other remedies expressly provided herein, and subject to Article 12, Provider may terminate this Agreement and exercise any other remedy it may have at law, in equity, or under this Agreement.

11.3 Removal of Energy Storage System. Upon any termination of this Agreement pursuant to this Article 11, Provider will remove the Energy Storage Systems pursuant to Section 2.1 hereof; provided that, in the event that Provider terminates this Agreement as a result of a Host Customer Default, Host Customer shall bear all costs of Energy Storage Systems decommissioning and removal.

12. LIMITATIONS OF LIABILITY.

12.1 Except in connection with a breach of the confidentiality obligations hereunder, amounts owed to a third Person pursuant to the indemnification obligations hereunder, or as otherwise expressly provided herein (including, without limitation, Section 4.3 hereof), neither Party shall be liable to the other Party or its Indemnified Persons for any special, punitive, exemplary, indirect, or consequential damages, losses or damages for lost revenue or lost profits, whether foreseeable or not, arising out of, or in connection with this Agreement. Notwithstanding the foregoing, amounts payable or benefits lost by Provider and/or its Affiliates under any Vested Utility Services Agreement or any Vested Utility Incentive Programs will be deemed "direct" damages for which recovery will not be barred by this Agreement, including this Section 12.1.

13. ASSIGNMENT.

13.1 Assignment by Provider. Provider shall not Assign this Agreement or any interest herein without the prior written consent of Host Customer, which shall not be unreasonably

withheld if the party to which the Agreement is being assigned is in the same or better financial standing as Provider. Host Customer will work in good faith with Provider and the party to which the Agreement is being assigned to agree upon the documentation that may be required in connection with the Assignment.

If Host Customer fails to respond to a request for consent within ten (10) business days following delivery thereof, such consent shall be deemed granted; provided, however, that, without the prior consent of Host Customer, Provider may (i) Assign this Agreement to an Affiliate of Provider or to a third Person that acquires the Energy Storage Systems and, in each case, is in the same or better financial standing as Provider and agrees in writing to assume all of Provider's rights and obligations under this Agreement, or (ii) Assign this Agreement as collateral security in connection with any financing of any Energy Storage System. In the event that Provider provides written notice to Host Customer of any Financing Party with respect to this Agreement, then Host Customer shall comply with the provisions set forth in Annex A of these General Terms and Conditions and agrees to provide such estoppels and acknowledgments as Provider may reasonably request from time to time. Any Financing Party shall be an intended third-party beneficiary of this Section 13.1. Any Assignment by Provider without any required prior written consent of Host Customer shall not release Provider of its obligations hereunder.

13.2. Acknowledgment of Collateral Assignment. In the event that Provider provides written notice to Host Customer of any Financing Party with respect to this Agreement, then Host Customer hereby acknowledges:

(a) The collateral assignment by Provider to the Financing Party of Provider's right, title and interest in, to and under this Agreement, as consented to under Section 13.1.

(b) The Financing Party as such collateral assignee shall be entitled to exercise any and all rights of lenders generally with respect to Provider's interests in this Agreement.

(c) It has been advised that Provider has granted a first priority perfected security interest in the Energy Storage System to the Financing Party and that the Financing Party has relied upon the characterization of the Energy

Storage System as personal property, as agreed in this Agreement in accepting such security interest as collateral for its financing of the Energy Storage System.

Any Financing Party shall be an intended third- party beneficiary of this Section 13.2.

13.3 Assignment by Host Customer. Host Customer shall not assign this Agreement or any interest therein, without Provider's prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed; provided, however, that, without the prior consent of Provider, Host Customer may, upon at least 90 days prior written notice to Provider, assign this Agreement to an Affiliate of Host Customer or another Governmental Authority or to a third party that acquires a fee simple interest in and to the Premises and agrees in writing to assume all of Host Customer's rights and obligations under this Agreement. Any Assignment by Host Customer without the prior written consent of Provider shall not release Host Customer of its obligations hereunder.

14. NOTICES.

14.1 Notice Addresses. Unless otherwise provided in this Agreement, all notices and communications concerning this Agreement shall be in writing and addressed to the other Party (or Financing Party, as the case may be) at the addresses set forth in Schedule 4 of this Agreement, or at such other address as may be designated in writing to the other Party from time to time.

14.2 Notice. Unless otherwise provided herein, any notice provided for in this Agreement shall be hand delivered, sent by registered or certified U.S. Mail, postage prepaid, or by commercial overnight delivery service and shall be deemed delivered to the addressee or its office when received at the address for notice specified above when hand delivered, upon confirmation of sending when sent by facsimile (if sent during normal business hours or the next Business Day if sent at any other time), on the Business Day after being sent when sent by overnight delivery service (Saturdays, Sundays and legal holidays excluded), or five (5) Business Days after deposit in the mail when sent by U.S. mail.

14.3 Address for Invoices. All invoices under this Agreement shall be sent to the address provided by Host Customer. Invoices shall be sent either by regular first class mail postage prepaid or by electronic mail.

15. CONFIDENTIALITY AND DATA.

15.1 Confidentiality Obligation. If either Party provides Confidential Information to the other or, if in the course of performing under this Agreement or negotiating this Agreement a Party learns Confidential Information regarding the facilities or plans of the other, the receiving Party shall (a) protect the Confidential Information from disclosure to third parties with the same degree of care accorded its own confidential and proprietary information, and (b) refrain from using such Confidential Information, except in the negotiation and performance of this Agreement. Notwithstanding the above, a Party may provide such Confidential Information to its Representatives, in each case whose access is reasonably necessary. Each such recipient of Confidential Information shall be informed by the Party disclosing Confidential Information of its confidential nature and shall be directed to treat such information confidentially and shall agree to abide by these provisions. In any event, each Party shall be liable (with respect to the other Party) for any breach of this provision by any entity to whom that Party improperly discloses Confidential Information. The terms of this Agreement (but not its execution or existence) shall be considered Confidential Information for purposes of this Article, except as set forth in Section 15.3 or as otherwise agreed by the Parties. All Confidential Information shall remain the property of the disclosing Party and shall be returned to the disclosing Party or destroyed after the receiving Party's need for it has expired or upon the request of the disclosing Party.

15.2 Permitted Disclosures. Notwithstanding any other provision herein, neither Party shall be required to hold confidential any information that:

(a) Becomes publicly available other than through the receiving Party;

(b) Is required to be disclosed by a Governmental Authority, under Applicable Law or pursuant to a validly issued subpoena or required filing, but a receiving Party subject to any such

requirement shall promptly notify the disclosing Party of such requirement;

(c) Is independently developed by the receiving Party; or

(d) Becomes available to the receiving Party without restriction from a third party under no obligation of confidentiality.

In addition, without limiting any of the foregoing, Provider may, without Host Customer's consent, provide to the Local Electric Utility, Control Area Operator, Governmental Authority, equipment suppliers, service providers and financing providers all design, operational, testing, maintenance and repair data in connection with the Energy Storage System, any and all System Data, and any and all information related to Host Customer or the Premises in connection with the Energy Storage System and Energy Management Services.

The Parties acknowledge that Host Customer is a public entity and is subject to the California Public Records Act, Gov. Code § 6250, et seq., and the regulations promulgated thereunder (the "PRA") and the Ralph M. Brown Act, Gov. Code § 54950, et seq., and related provisions of the California Constitution Art. 1, §3. Host Customer acknowledges that Provider considers certain of its Confidential Information to be market sensitive utility procurement related information (including power purchase agreements), which are required to remain confidential pursuant to Cal. Pub. Util. Code § 454.5, Cal. Pub. Util. Comm., General Order 66-C, and Cal. Pub. Util. Comm. Decision 06-06-066, and certain of Provider's Confidential Information contain Provider's trade secrets, including, without limitation, the pricing, terms, conditions, and structure of this Agreement. In light of the foregoing, unless otherwise agreed in writing by Provider, Host Customer agrees, subject to Provider's advance of funding or other method acceptable to Host Customer for Provider to bear Host Customer's reasonable expenses, to oppose any and all public records requests seeking the disclosure of Provider's Confidential Information on the grounds that such Confidential Information is exempt from disclosure under official information privilege (Gov. Code, §§ 6254, subd. (k); Evid. Code § 1040), the trade secret privilege (Gov. Code, §§ 6254, subd. (k); Evid. Code § 1060), the public interest exemption (Gov. Code, § 6255), and any other available grounds permitted under the PRA, the Ralph M. Brown Act or other

applicable law. In the event that Host Customer is compelled by a court of competent jurisdiction to disclose any part of Provider's Confidential Information, to the extent consistent with such court order Host Customer agrees to use its best efforts, in cooperation with Provider, to further redact and protect such portions thereof that Provider identifies as trade secrets or proprietary, confidential, or market sensitive information. Host Customer further acknowledges that Provider is releasing the Confidential Information to Host Customer in strict reliance upon the confidentiality obligations imposed by this Agreement.

15.3 Goodwill and Publicity. Neither Party shall use the name, trade name, service mark, or trademark of the other Party in any promotional or advertising material without the prior written consent of such other Party. Provider shall provide Host Customer with press materials from which press releases and public statements can be derived. If additional information is required, the Parties shall coordinate and cooperate with each other when making public announcements related to the execution and existence of this Agreement, and each Party shall have the right to promptly review, comment upon, and approve any publicity materials, press releases, or other public statements by the other Party that refer to, or that describe any aspect of, this Agreement. A description of restrictions of energy use data must be included on the Provider's web portal. At no time will either Party acquire any rights whatsoever to any trademark, trade name, service mark, logo or other intellectual property right belonging to the other Party.

15.4 Enforcement of Confidentiality Obligation. Each Party agrees that the disclosing Party would be irreparably injured by a breach of this Article 15 by the receiving Party or its Representatives or other Person to whom the receiving Party discloses Confidential Information of the disclosing Party and that the disclosing Party may be entitled to equitable relief, including injunctive relief and specific performance, in the event of any breach of the provisions of this Article 15. To the fullest extent permitted by Applicable Law, such remedies shall not be deemed to be the exclusive remedies for a breach of this Article 15, but shall be in addition to all other remedies available at law or in equity.

15.5 Ownership and Use of Data. Provider shall at all times own the System Data. Notwithstanding anything in this Article 15 to the

contrary, Provider shall be entitled to use the System Data for any purpose, including marketing and publicity, so long as the System Data does not identify Host Customer or the Premises. Provider shall grant a non-exclusive license for the use of data generated by meter(s) installed to the Host Customer. Host Customer may use the data for energy management, climate reporting, marketing materials and public presentations with the prior written consent of Provider which shall not be unreasonably withheld and provided within 48 hours.

16. INDEMNITY.

16.1 Provider's Indemnity. Subject to Article 12, Provider agrees that it shall indemnify and hold harmless Host Customer Indemnified Parties from and against any and all Losses incurred by Host Customer Indemnified Parties to the extent arising from or out of the following: (a) a third party claim for injury to or death of any Person or loss or damage to property of any Person to the extent arising out of Provider's negligence or willful misconduct, or (b) violation by Provider of its confidentiality obligations under Section 15, or (c) damage to Host Customer facilities and Host Customer's customer property caused by the use, operation, or malfunctioning of the Energy Storage Systems in violation of this Agreement, including bodily injury, property damage, and other costs arising from such damage to Host Customer's facilities. Provider shall not, however, be required to reimburse or indemnify any Host Customer Indemnified Party for any Loss to the extent such Loss is due to the negligent act or omission (other than a failure to perform an act for which Provider is responsible under this Agreement or applicable law or a failure to correct or to require Provider to correct a condition created by Provider and for which Provider is obligated to correct) or willful misconduct of any Host Customer Indemnified Party. Notwithstanding the foregoing to the contrary, with respect to claims made by a third party alleging the infringement of intellectual property rights covering the Energy Storage Systems, Provider's only obligations hereunder shall be to cooperate with Host Customer to extend the indemnification protection provided by the manufacturer(s) of the Energy Storage Systems to Host Customer.

16.2 Host Customer's Indemnity. Subject to Article 12, Host Customer agrees that it shall indemnify and hold harmless Provider Indemnified Parties from and against any and all

Losses incurred by Provider Indemnified Parties to the extent arising from or out of the following: (a) any third party claim injury to or death of any Person or loss or damage to property of any Person to the extent arising out of Host Customer's negligence or willful misconduct, (b) any breach of Host Customer's obligations to avoid creating any Liens in connection with the Energy Storage Systems, (c) any failure by Host Customer to have full and encumbered rights to grant the access to Provider as set forth in Section 7.2(d), (d) violation by Host Customer of its confidentiality obligations under Section 15, or (e) damage to the Energy Storage Systems or other personal property of Provider caused by Host Customer or its employees, contractors, tenants, licensees, or agents. Host Customer shall not, however, be required to reimburse or indemnify any Provider Indemnified Party for any Loss to the extent such Loss is due to the negligent act or omission (other than a failure to perform an act for which Host Customer is responsible under this Agreement or applicable law or a failure to correct or to require Host Customer to correct a condition created by Host Customer and for which Host Customer is obligated to correct) or willful misconduct of any Provider Indemnified Party.

17. INSURANCE.

17.1 Generally. Host Customer and Provider each shall maintain the following insurance coverages in full force and effect throughout the Term either through insurance policies or acceptable self-insured retentions: (a) Workers' Compensation Insurance as may be from time to time required under applicable federal and state law, (b) Commercial General Liability Insurance for bodily injury, personal injury, property damage, pollution liability, and contractual liability, with limits of not less than \$2,000,000 general aggregate, \$1,000,000 per occurrence, and (c) automobile insurance covering owned (if any), hired, and non-owned vehicles used by Provider in the amount of \$2,000,000 per accident. Additionally, Provider shall carry employer's liability insurance with a minimum limit of \$2,000,000 per occurrence and excess or umbrella liability insurance for commercial general liability having a per occurrence and aggregate limit of not less than \$5,000,000. Notwithstanding the foregoing, Provider shall be required to obtain or maintain directly the insurance coverage required herein notwithstanding that it and Host Customer, are named as additional insureds in one or more

policies meeting the requirements herein by a contractor to Provider. Host Customer shall submit any claim it receives arising out of or in respect of Installation Work to Provider, and to the extent that one or more policies meeting the requirements herein are obtained by a contractor to Provider, and it will be Provider's or Provider's carrier's responsibility to tender the claim to such contractor or its carrier.

17.2 Certificates of Insurance. Each Party, upon request, shall furnish current certificates evidencing that the insurance required under Section 17.1 is being maintained.

17.3 Additional Insureds. Each Party's insurance policy shall be written on an occurrence basis and shall include the other Party as an additional insured with respect to policies of liability insurance as its interest may appear.

17.4 Insurer Qualifications. All insurance maintained hereunder shall be maintained with companies either rated no less than A- as to Policy Holder's Rating in the current edition of Best's Insurance Guide (or with an association of companies each of the members of which are so rated) or having a parent company's debt-to-policyholder-surplus ratio of 1:1.

18. MISCELLANEOUS.

18.1 Integration; Exhibits; Parties Identified; Split Agreement.

(a) This Agreement, together with the Exhibits and Schedules attached thereto or incorporated by reference, constitute the entire agreement and understanding between Provider and Host Customer with respect to the subject matter thereof and supersedes all prior agreements relating to the subject matter hereof which are of no further force or effect. The Exhibits and Schedules attached to this Agreement, including these General Conditions as incorporated by reference, are integral parts of this Agreement and are an express part of this Agreement.

(b) Unless expressly provided to the contrary in this Agreement, as used in this Agreement, the term "Provider" as applied to any Energy Storage System, Premises, or Energy Management Services shall mean the party identified as the Provider on Schedule 1 of this Agreement. From time to time during the Term, upon the request of either party, the parties agree

to update, amend, and revise Schedule 1 of this Agreement to reflect the correct party that is the Provider under this Agreement for any Premises, and to the extent necessary, to execute (or cause to be executed) a written assignment and assumption agreement or joinder to bind any new party to the terms and conditions of this Agreement. Unless expressly provided to the contrary in this Agreement, no Provider shall have any right, benefit, obligation, or liability under this Agreement with respect to the Premises, Energy Storage System, or Energy Management Systems located in an Premises, for which such party is not the Provider.

(c) Given that this Agreement covers multiple Premises, at the request of either Party, the Parties agree to divide or duplicate this Agreement into two or more separate agreements for the different (or different groups of) Premises, provided that each such separate agreement shall be the same terms and conditions set forth herein, with such adjustments as agreed to by the Parties hereto as necessary to reflect the intent of, and preserve the rights and benefits of the Parties under, this Agreement. For sake of clarity, the Minimum Guaranteed Cost Savings is intended to apply to all of the Premises on a cumulative and aggregate basis, and following the division or duplication of this Agreement into multiple agreements, such Minimum Guaranteed Cost Savings shall continue to apply to all of the Premises, unless the Parties otherwise agree in writing, each in its sole discretion.

18.2 Conflict. In the event of a conflict between the provisions of these General Conditions and the balance of this Agreement, the provisions of the balance of this Agreement shall prevail.

18.3 Amendments. This Agreement may only be amended, modified or supplemented by an instrument in writing executed by duly authorized representatives of Provider and Host Customer.

18.4 Industry Standards. Except as otherwise set forth herein, for the purpose of this Agreement the normal standards of performance within the power generation industry in the relevant market shall be the measure of whether a Party's performance is reasonable and timely. Unless expressly defined herein, words having well-known technical or trade meanings shall be so construed.

18.5 Cumulative Remedies. Except as set forth to the contrary herein, any right or remedy of Provider or Host Customer shall be cumulative and without prejudice to any other right or remedy, whether contained herein or not.

18.6 Limited Effect of Waiver. The failure of Provider or Host Customer to enforce any of the provisions of this Agreement, or the waiver thereof, shall not be construed as a general waiver or relinquishment on its part of any such provision, in any other instance or of any other provision in any instance.

18.7 Survival. The obligations under Sections 2.1 (Removal of Energy Storage System), Section 7.1(d) (Provider Covenant), Sections 7.2(d), (e), (f) and (g) (Host Customer Covenants), Section 8.3 (Exclusion of Warranties), Article 9 (Taxes and Governmental Fees), Article 12 (Limitation of Liability), Article 14 (Notices), Article 15 (Confidentiality), Article 18 (Miscellaneous), or pursuant to other provisions of this Agreement that, by their sense and context, are intended to survive termination of this Agreement shall survive the expiration or termination of this Agreement for any reason.

18.8 Governing Law. This Agreement shall be governed by and construed in accordance with the domestic laws of the State of California without reference to any choice of law principles. The Parties agree that the courts of the State of California shall have jurisdiction over any action or proceeding arising under this Agreement to the fullest extent permitted by Applicable Law. Each of the Parties waives to the fullest extent permitted by Applicable Law any objection it may have to the laying of venue of any action or proceeding under this Agreement any State courts described in this Section 18.

18.9 Severability. If any term, covenant or condition in this Agreement shall, to any extent, be invalid or unenforceable in any respect under Applicable Law, the remainder of this Agreement shall not be affected thereby, and each term, covenant or condition of this Agreement shall be valid and enforceable to the fullest extent permitted by Applicable Law and, if appropriate, such invalid or unenforceable provision shall be modified or replaced to give effect to the underlying intent of the Parties and to the intended economic benefits of the Parties.

18.10 Relation of the Parties. Subject to Section 7.2(i), the relationship between Provider and Host Customer shall not be that of partners, agents, or joint ventures for one another, and nothing contained in this Agreement shall be deemed to constitute a partnership or agency agreement between them for any purposes, including federal income tax purposes. Provider and Host Customer, in performing any of their obligations hereunder, shall be independent contractors or independent parties and shall discharge their contractual obligations at their own risk.

18.11 Successors and Assigns. This Agreement and the rights and obligations under this Agreement shall be binding upon and shall inure to the benefit of Provider and Host Customer and their respective successors and permitted assigns.

18.12 No Dedication. Neither Party shall be considered to have dedicated its property to the public or any portion thereof as a result of this Agreement or its performance thereunder. Neither Party shall claim that the other has dedicated its property to the public or any portion.

18.13 Counterparts. This Agreement may be executed in one or more counterparts, all of which taken together shall constitute one and the same instrument

18.14 Electronic Delivery. This Agreement may be duly executed and delivered by a Party by execution electronic, "pdf" delivery of the signature page of a counterpart to the other Party.

18.15 Sovereign Immunity. To the extent permitted by Applicable Law, Host Customer hereby waives any defense of sovereign immunity that Host Customer might otherwise have in connection with any action taken by Provider to enforce its rights against Host Customer in respect of Host Customer's obligations arising under this Agreement.

18.16 No Third Party Beneficiaries. Except as otherwise expressly provided herein, this Agreement is intended for the sole benefit of the Parties hereto, and shall not imply or create any rights on the part of, or obligations to, any other Person; except that the Financing Parties shall be third-party beneficiaries of the rights of Provider hereunder.

ANNEX A
of General Conditions

Certain Agreements for the Benefit of the Financing Parties

Host Customer acknowledges that Provider will be receiving financing accommodations from one or more Financing Parties and that Provider may sell or assign an Energy Storage System or this Agreement and/or may secure Provider's obligations by, among other collateral, a pledge or collateral assignment of this Agreement and a first security interest in the Energy Storage System. In order to facilitate such necessary sale, conveyance, or financing, and with respect to any such Financing Party, Host Customer agrees as follows:

(a) Consent to Collateral Assignment. Host Customer consents to either the assignment, sale or conveyance to a Financing Party or the collateral assignment by Provider to a Financing Party, of Provider's right, title and interest in and to this Agreement.

(b) Notices of Default. Host Customer will deliver to each Financing Party, whose name and address and requirement to be given notices under this Section has been provided to Host Customer in a written notice given by Provider or such Financing Party to Host Customer, concurrently with delivery thereof to Provider, a copy of each notice of default given by Host Customer under this Agreement, inclusive of a reasonable description of Provider default. No such notice will be effective absent delivery to the Financing Party. Host Customer will not mutually agree with Provider to cancel, modify or terminate this Agreement without the written consent of the Financing Party.

(c) Rights Upon Event of Default. Notwithstanding any contrary term of this Agreement:

i. The Financing Party, shall be entitled to exercise, in the place and stead of Provider, any and all rights and remedies of Provider under this Agreement in accordance with the terms of this Agreement and only in the event of Provider's or Host Customer's default. The Financing Party shall also be entitled to exercise all rights and remedies of secured parties generally with respect to this Agreement and the Energy Storage Systems.

ii. The Financing Party shall have the right, but not the obligation (unless the Financing Party has succeeded to Provider's interests under this Agreement), to pay all sums due under this Agreement and to perform any other act, duty or obligation required of Provider thereunder or cause to be cured any default of Provider thereunder in the time and manner provided by the terms of this Agreement. Nothing herein requires the Financing Party to cure any default of Provider under this Agreement or (unless the Financing Party has succeeded to Provider's interests under this Agreement) to perform any act, duty or obligation of Provider under this Agreement, but Host Customer hereby gives it the option to do so.

iii. Upon the exercise of remedies under its security interest in an Energy Storage System, including any sale thereof by the Financing Party, whether by judicial proceeding or under any power of sale contained therein, or any conveyance from Provider to the Financing Party (or any assignee of the Financing Party) in lieu thereof, the Financing Party shall give notice to Host Customer of the transferee or assignee of this Agreement. Any such exercise of remedies shall not constitute a default under this Agreement.

iv. Upon any default not reasonably susceptible to cure by a Finance Party, including, without limitation, rejection or other termination of this Agreement pursuant to any process undertaken with respect to Provider under the United States Bankruptcy Code, at the request of the Financing Party made within ninety (90) days of such default, Host Customer shall enter into a new agreement with the Financing Party or its designee having the same terms and conditions as this Agreement.

(d) Right to Cure.

i. Host Customer will not exercise any right to terminate or suspend this Agreement unless it shall have given the Financing Party prior written notice by sending notice to the Financing Party (at the address provided by Provider) of its intent to terminate or suspend this Agreement, specifying the condition giving rise to such right, and the Financing Party shall not have caused to be cured the condition giving rise to the right of termination or

suspension within thirty (30) days after such notice or (if longer) the periods provided for in this Agreement. The Parties agree that the cure rights described herein are in addition to and apply and commence following the expiration of any notice and cure period applicable to Provider. The Parties respective obligations will otherwise remain in effect during any cure period; provided that if such Provider default reasonably cannot be cured by the Financing Party within such period and the Financing Party commences and continuously pursues cure of such default within such period, such period for cure will be extended for a reasonable period of time under the circumstances, such period not to exceed additional ninety (90) days.

ii. If the Financing Party (including any Host Customer or transferee), pursuant to an exercise of remedies by the Financing Party, shall acquire title to or control of Provider's assets and shall, within the time periods described in Sub-section (c)(i). above, cure all defaults under this Agreement existing as of the date of such change in title or control in the manner required by this Agreement and which are capable of cure by a third person or entity, then such person or entity shall no longer be in default under this Agreement, and this Agreement shall continue in full force and effect.

Note: This page is intentionally left blank.

EXHIBIT "B"

FIRST AMENDMENT OF AMENDED AND RESTATED ENERGY MANAGEMENT SERVICES AGREEMENT (DRES PORTFOLIO B)

This FIRST AMENDMENT OF AMENDED AND RESTATED ENERGY MANAGEMENT SERVICES AGREEMENT (DRES Portfolio B) (“First Amendment”), is made and entered into as of _____, 2019 (the “**Effective Date**”), by and between (a) HYBRID-ELECTRIC BUILDING TECHNOLOGIES WEST LOS ANGELES 1, LLC (as assignee of HYBRID-ELECTRIC BUILDING TECHNOLOGIES WEST LOS ANGELES 2, LLC), a Delaware limited liability company (“**Provider**”), and (b) IRVINE RANCH WATER DISTRICT, a California water district formed and existing pursuant to Section 34000 *et seq.* of the California Water Code (“**Host Customer**”).

RECITALS

A. The parties entered into that certain Amended and Restated Energy Management Services Agreement (DRES Portfolio B) dated May 3, 2018 (“**Agreement**”), with respect to the following Premises (as defined in the Original Agreement): Michelson Water Recycling Plant (MWRP), Deep Aquifer Treatment System (DATS), Los Alisos Water Recycling Plant (LAWRP), Potable Treatment Plant (PTP), Desalter Wells 21/22, and Dyer Road Well #10. The Parties acknowledge that an error appears in the General Conditions of the Agreement and that this Amendment corrects that error.

B. The Parties desire to amend the Agreement as hereinafter provided.

AMENDMENT

NOW, THEREFORE, IN CONSIDERATION OF THE AFORESAID RECITALS, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties amend the Agreement as follows:

1. **Nature of First Amendment.** The Recitals are hereby incorporated into this First Amendment as though herein fully and completely rewritten. All capitalized terms not defined in this First Amendment shall be defined as such terms are defined in the Agreement. Except as specifically amended hereby, the Agreement shall remain in full force and effect.

2. **Amendments:** The parties hereby amend the Agreement only as specifically provided below.

(a) Section 8.2(c) of Schedule 5 - General Terms and Conditions of the Agreement is hereby deleted and replaced with the following language:

“Except for the DATS site located at 1704 W. Segerstrom Avenue, in the City of Santa Ana, California, which Host Customer leases from the City of Santa Ana, Host Customer is the owner of, and holds fee title to, the Premises, and subject to the matters disclosed under the Host Customer Disclosure section of **Schedule I**, attached to the Agreement, Host Customer has all rights, title, and

authority necessary or required to permit Provider to install, construct, operate, maintain, and remove the Energy Storage System on each of the Premises, and otherwise permit Provider to exercise its rights, pursuant to this Agreement. Host Customer is a public agency, and as such, there are no, and shall not be any, leases, mortgages, security interests, or other interest in or lien upon the portion of the Premises owned by Host Customer and occupied and/or used by Provider pursuant to this Agreement.”

(b) The following provision is added to Schedule 5 - General Terms and Conditions of the Agreement as Section 8.2(h):

“With respect to the Premises for the DATS site located at 1704 W. Segerstrom Avenue, Santa Ana, Host Customer is the holder of a leasehold estate in such Premises, the landlord is the City of Santa Ana, and pursuant to the letter dated September 20, 2016, the landlord City of Santa Ana consented to development and operation of the Energy Storage System on such Premises, Host Customer has all rights and authority necessary to permit Provider to install, construct, operate, maintain and remove the Energy Storage System on such Premises, and otherwise permit Provider to exercise its rights pursuant to this Agreement. The lease referred to herein expires on June 30, 2039, and Provider is required to remove the Energy Storage System from such Premises before such expiration date pursuant to Section 2.1 of Schedule 5, General Terms and Conditions of the Agreement.”

(c) The following words are added after “Energy Storage Systems” at the end of part (b) of Section 16.2:

“(including with respect to the DATS site located at 1704 W. Segerstrom Avenue, Santa Ana, any Liens granted or otherwise permitted by the City of Santa Ana)”.

(d) The word “full and encumbered rights” in part (c) of Section 16.2 are deleted and replaced with the following:

“full and unencumbered rights”.

(e) The words “or (e)” in Section 16.2 are deleted and replaced with the following:

“, (e) the eviction of Host Customer from the DATS site located at 1704 W. Segerstrom Avenue, Santa Ana or early termination of Host Customer’s lease of the DATS site located at 1704 W. Segerstrom Avenue, Santa Ana or (f)”.

3. Additional Terms. This First Amendment shall be binding on and shall inure to the benefit of the Parties and their respective successors and assigns. In the event of a conflict between the terms and provisions of the Agreement and the terms and provisions of this First Amendment, the latter shall be controlling for all intents and purposes. The

Agreement as amended by this First Amendment is hereby restated, reaffirmed and re-ratified by the Parties. This First Amendment together with the Agreement as amended hereby constitutes the entire agreement between the parties with regard to the subject matter hereof, and shall not be amended, modified or revised except by a writing signed by each of the Parties. This First Amendment shall be governed and construed in accordance with the laws of the State of California. In the event that any Party brings an action to interpret or enforce its rights hereunder, the prevailing Party in such action shall be entitled to recover its costs and reasonable attorney's fees as awarded by the court in such action. This First Amendment may be executed in any number of counterparts, each of which shall be considered an original for all purposes, and all of which together shall constitute one and the same instrument. If any provision of this First Amendment shall be invalid or unenforceable to any extent, then the other provisions of this First Amendment shall not be affected thereby and shall be enforced to the greatest extent permitted by law. Headings at the beginning of each section and subsection of this First Amendment are solely for the convenience of the Parties and are not a part of and shall not be used to interpret this First Amendment. In the interpretation of this First Amendment, and as the context may require, the singular shall include the plural, and the masculine, feminine and neuter shall each include the others. This First Amendment shall not be construed as if it had been prepared by one of the Parties, but rather as if both Parties have prepared it.

IN WITNESS WHEREOF, the Parties have executed and delivered this First Amendment on the date first above written.

Provider:
HYBRID-ELECTRIC BUILDING TECHNOLOGIES WEST LOS ANGELES 1, LLC,
A Delaware limited liability company

By: _____
Name:
Title:

By: _____
Name:
Title:

Host Customer:

IRVINE RANCH WATER DISTRICT,
A California water district

By: _____
Paul A. Cook, General Manager

July 22, 2019

Prepared by: K. Lew

Submitted by: K. Burton

Approved by: Paul A. Cook



ACTION CALENDAR

CONSTRUCTION INSPECTION SERVICES AGREEMENT

SUMMARY:

The current construction inspection workload for capital, development and operational improvement projects continues to exceed a level that can be supported by the District's inspection staff. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with NV5 in the amount of \$1,332,800 for two inspectors over a period of two years for construction inspection services.

BACKGROUND:

The District's current and upcoming inspection workload for capital, development and operational improvement projects continues to exceed the level that can be supported by IRWD staff. The District's construction inspection group consists of eight staff inspectors and five consultant inspectors that are currently responsible for the inspection, field coordination, documentation and record drawing preparation of over 530 projects spread across the District. Based on currently active and upcoming construction projects planned by the major developers including Irvine Company, FivePoint Communities, Lennar and the City of Tustin, staff anticipates the need for continued consultant field inspection support for a period of up to two years. Upon completion of the current high volume of construction projects, staff anticipates that these inspection services will no longer be required as the workload should return to a level that can be supported by IRWD's inspection staff.

In February 2015, the Board awarded a Professional Services Agreement to NV5, an engineering firm with a strong construction management and inspection services group. In December 2016, the Board authorized a variance to extend the services. NV5 is currently providing two experienced inspectors under its contract who have worked well within the District's inspection group and have demonstrated the ability to inspect and coordinate multiple projects simultaneously.

Funds for the current agreement with NV5 will be expended by August 2019. Due to the experience and quality work of the current consultant inspectors, staff requests a new Professional Services Agreement for continued inspection services. NV5's fully-burdened rate for its senior inspectors is \$140 per hour which includes office space and office equipment, truck and fuel, cell phone and laptop computer. It has been billing at these rates since 2018 and is not proposing any increases at this time. Staff recommends executing a new Professional Services Agreement with NV5 in the amount of \$1,332,800 for two inspectors for two additional years of construction inspection services. NV5's proposal is included as Exhibit "A".

FISCAL IMPACTS:

Funding for the construction inspection services will be provided from the various developer and capital projects being constructed as part of each project's budget.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 16, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH NV5 IN THE AMOUNT OF \$1,332,800 FOR CONSTRUCTION INSPECTION SERVICES FOR TWO INSPECTORS FOR A TWO-YEAR PERIOD.

LIST OF EXHIBITS:

Exhibit "A" – Proposal from NV5



July 9, 2019

Kelly Lew, P.E.
Principal Engineer of Development and Inspection Services
Irvine Ranch Water District
15600 Sand Canyon Ave
Irvine, CA 92618

Subject: On-Call Inspection Services

Dear Ms. Lew,

We are pleased to submit this proposal for On-Call Inspection Services. Our office has been providing inspection services to the Irvine Ranch Water District (District) since 2015. We are proposing Matt Greer and James Remus as inspectors for the District.

Our proposed fully loaded hourly rate for each inspector will be as follows:

- \$140/hr – Regular Work Hours
- \$175/hr – Overtime Hours

Services will be billed on an hourly basis with a total cost under this contract not to exceed \$1,332,800, detailed as follows:

- 8,320 hours at \$140/hr = \$1,164,800
- 960 hours at \$175/hr = \$ 168,000
\$1,332,800

We greatly appreciate the opportunity to continue working with the District. Should you have any questions or require additional information, please contact me at (949) 585-0477 or via email at peter.salgado@nv5.com.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Peter Salgado".

Peter Salgado, P.E.
Director of Construction Management

PN: P27019-0004303.00

CONTACT INFO

matt.greer@nv5.com
949.585.0477

EXPERIENCE

14 years

EDUCATION

B.S. Civil Engineering

LICENSES/CERTIFICATES

C2 Workzone Traffic
Control Certificate

OSHA 10-Hour
Construction Certificate

MATT GREER

Construction Inspector

Mr. Greer has 14 years of experience as a qualified Quality Control Inspection and Construction Engineer with experience in the management and inspection of public works projects. His projects have included sewer and water-related facilities, street rehabilitations, sidewalk improvements, slurry seal projects, landscaping and irrigation, storm drains and vertical construction. He has extensive experience dealing with the public, elected officials, contractors, architects, and engineers. He has been responsible for monitoring construction activities, preparing daily construction inspection reports, verifying compliance with plans and specifications, maintaining record drawings, final inspections, and assisting in field start-ups.

Project Experience

Staff Augmentation Inspection Services

IRVINE RANCH WATER DISTRICT | IRVINE, CA

Construction Inspector. Mr. Greer is providing inspection services for domestic water, recycled water and sanitary sewer projects for the Irvine Ranch Water District. His duties include: tracking project progress, inspection of grade and alignment of the water districts utilities, inspection of the testing and approving the installation of the water districts utilities, creating and maintaining the daily reports and project files, inspection of PCC structures such as manholes, thrust blocks and overflow, headwall, spillway, vehicle crossing and outflow PCC structures for NTS Basins. Projects include new home developments and NTS Basins.

Springdale Street Water Main Rehabilitation

CITY OF HUNTINGTON BEACH | HUNTINGTON BEACH, CA

Construction Inspector. Mr. Greer served as construction inspector on this \$5.8M street and waterline rehabilitation project. The scope of work included the replacement of existing 36-inch and 42-inch welded steel water mains Springdale Street from Warner Avenue to the northern city limits. The project also included trench reconstruction, roadway section repairs and resurfacing, traffic signal modifications, and traffic striping and signage.

Adams Hill Water Main Replacement Project

CITY OF GLENDALE | GLENDALE, CA

Construction Inspector. Mr. Greer provided inspection services for the Adams Hill Water Main Replacement project that was part of Glendale Water and Power's on-going \$2.7M water main replacement program. The project served to replace the substandard water mains with new, larger size, ductile-iron water mains to upgrade the water service. In addition, several streets in the project area have no water mains. As a result, homes on these streets had to connect to water mains in adjacent streets through service lines that ran across adjacent properties. This project will add new water mains to these streets to eliminate this situation, and to improve water circulation and provide redundancy for the water system.

Bette Davis Recycled Water Design-Build Project

CITY OF GLENDALE | GLENDALE, CA

Construction Inspector. Mr. Greer provided inspection services for this \$2.8M project completed through a single Design-Build Entity (DBE). The project generally consists



RESUME

of construction of new 8-in PVC Recycled Water transmission line to Bette Davis Park. Final portion of the pipeline will be constructed within the City of Los Angeles and will require permitting and coordination with the City of Los Angeles.

Water and Sewer Main Systems

CITY OF CATHEDRAL CITY | CATHEDRAL CITY, CA

Construction Inspector. Mr. Greer served as construction inspector for the construction of 30,000 lf of main line VCP sewer, 20,000 lf of VCP sewer laterals, 18,000 lf of 24"-72" RCP storm drains, 30,000 lf of DIP water main and 1,000,000 sf of street improvements.

Waterline and Street Improvements Phases 1A and 1B

CITY OF LOMITA | LOMITA, CA

Construction Inspector. Mr. Greer served as construction inspector for citywide street and waterline improvements. The scope of work included approximately 10,300 LF of water line rehabilitation, and approximately 12,300 LF of street rehabilitation. The street rehabilitation included removal and disposal of existing asphalt concrete; construction of finish course asphalt on base course asphalt on compacted subgrade; removal and replacement of portland cement concrete; restriping of the new pavement; and adjustment of manholes, utility covers and utility boxes to final grade.

Runkle Canyon Pipeline Installation Project

GOLDEN STATE WATER COMPANY

Construction Inspector. Mr. Greer's served as construction inspector for the construction of over 22,000 linear feet of 8-inch to 12-inch ductile iron water main.

Pelican Hill Golf Resort

THE IRVINE COMPANY, CA

Construction Inspector. Mr. Greer was responsible for the inspection of construction of the water and sewer systems for the Pelican Hill Golf Resort. The project included five large concrete cisterns with a capacity totaling 1.2 million gallons, a 360 ft concrete golf cart bridge, 6,000 lf of storm drains, 6,000 lf of sanitary sewer and water, 70,000 sf of retaining walls, and new road construction and existing street improvements.

Sewer Pump Station 45

CITY OF SAN DIEGO, CA

Project Engineer. Mr. Greer oversaw construction on this \$11M project which consisted of 15,840 LF of 10-inch and 18-inch sewer force main and 5,120 LF of 24-inch VCP micro-tunneled sewer main.

Redwood Trunk Sewer and Lift Station 29

CITY OF OXNARD | OXNARD, CA

Construction Inspector. Mr. Greer oversaw the construction of 15,850 lf of 36" and 42" gravity sewer main, 192 lf of 21.5" sewer force main, and 5,015 lf of storm drains. He was also responsible for the inspection of the new construction of Lift Station 29. \$21M

Orchard Hills Water Treatment System

CITY OF IRVINE | IRVINE, CA

Construction Inspector. Mr. Greer served as construction inspector. The \$3M project consisted of the precise grading of five basins averaging 150,000 sf, construction of maintenance roads and ramps, concrete overflow and spillway structures and an irrigation system.

RESUME

CONTACT INFO

James.Remus@nv5.com
949.585.0477

EXPERIENCE

28 years

EDUCATION

Office Management

LICENSES/CERTIFICATES

Cross Connection Control
and Backflow Prevention
and Program Specialist

C2 Workzone Traffic
Control Certificate

OSHA 10-Hour
Construction Certificate

JAMES REMUS

Construction Inspector

Mr. Remus has spent more than 28 years as a construction inspector for a variety of pipeline and construction projects. He has worked closely with engineering firms, public agencies and specialists in the fields of biology and archaeology as related to respective projects. Mr. Remus is knowledgeable in a variety of construction activities, including heavy documentation of design/build structures, testing and trench safety. He has spent more than 13 years as a cross-connection specialist with the Walnut Valley Water District.

Project Experience

Staff Augmentation Inspection Services

IRVINE RANCH WATER DISTRICT | IRVINE, CA

Inspector. Mr. Remus is currently providing inspection services for water, wastewater and sewer projects for the Irvine Ranch Water District. His duties include: confirming that the Contractors are adhering to the Contract Documents, as well as generating daily reports for several ongoing projects. The types of projects he has worked on include: housing tracts, commercial sites, as well as capital and non-capital projects.

Recycled Water System Assistance

IRVINE RANCH WATER DISTRICT | IRVINE, CA

Cross-Connection Specialist. Duties included reviewing irrigation and dual plumbed building retrofit designs, conducting on-site cross-connection tests for the use of recycled water for irrigation and dual plumbed building uses for Health Department approval.

South County Pipeline Project

SANTA MARGARITA WATER DISTRICT/METROPOLITAN WATER DISTRICT | SANTA MARGARITA, CA

Inspector. Mr. Remus provided construction inspection services for a 67-inch, high-pressure domestic water line, 10-inch and 16-inch force sewer line and 16-inch reclaimed water line. The project included six bores and the jacking of 72-inch casing. Project also involved the placement of center medians containing automatic irrigation.

Recharge Pipeline Project

MOJAVE WATER AGENCY | MOJAVE, CA

Construction Inspector. Mr. Remus was responsible for a 15-mile segment of the 48-inch CMI & C steel force main, which included both welded and o-ring gasket joints. He was accountable for trench safety and proper placement of two-sack sand slurry mix in the pipe zone at specified locations.

52-inch, 48-inch and 42-inch Domestic Water Line

WALNUT VALLEY WATER DISTRICT | WALNUT VALLEY, CA

Construction Inspector. Mr. Remus monitored chlorinating and hydrostatic testing of the pipeline and performed pressure test for leakage for all the mainline valves. Involved in a 16.7-million-gallon additional storage project. The project included three metering structures and six inline main valves, in which one was located at a flood control channel where a bridge was constructed to support the pipeline crossing. This entailed the construction of three subterranean reinforced concrete reservoirs, three inlet and three outlet valve vaults, one 42-inch venturi meter vault, and four interconnections to existing 33-inch pipelines.



RESUME

16-inch Potable and Non-Potable Pipeline

YUCAIPA VALLEY WATER DISTRICT | YUCAIPA, CA

Construction Inspector. The project included the installation of 16,000 LF of 16-inch potable and non-potable pipelines, including all appurtenances.

Sunnyslope Avenue Pipeline, Junkle Tank and Pump Station

ELSINORE VALLEY WATER DISTRICT | LAKE ELSINORE, CA

Construction Manager. The project included the installation of a new pump station, discharge 8-inch potable pipeline through a hilltop residential neighborhood that had limited access and a narrow road, and bolted steel potable water storage tank.

Recycle Water Retrofit Project

INLAND EMPIRE UTILITIES AGENCY

Construction Manager. Mr. Remus' duties included site evaluation, generating retrofit drawings, engineering reports, site construction inspections, cross-connection tests, reviewing pay requests from the contractor and coordination between contractor, site owner and water purveyor. The project involved converting several sites, including schools, parks and industrial users to utilize recycled water.

Aeration Basins 1 and 2 Air Project

ENCINA WASTEWATER AUTHORITY | ENCINA, CA

Construction Inspector. The project consisted of removing an aeration header, providing and installing a new stainless steel pipe connection riser, 30-inch isolation valve and an above-ground header.

Recycled Water System Assistance and Customer Retrofit

CITY OF SAN DIEGO | SAN DIEGO, CA

Cross-Connection Specialist. The project included coordination with customers, preparation of more than 50 on-site irrigation retrofit designs for Health Department approval, and preparation of industrial engineering reports also for Health Department approval.

Recycled Water System Assistance and Customer Retrofit

WEST BASIN MUNICIPAL WATER DISTRICT

Cross-Connection Specialist. The project included reviewing irrigation and dual plumbed building retrofit designs for Health Department approval, and preparation of industrial engineering reports that included site retrofit drawings, schematics, and detail figures.

Phase I Customer Connection Services

SACRAMENTO REGIONAL COUNTY SANITATION DISTRICT | SACRAMENTO, CA

Cross-Connection Specialist. Mr. Remus participated in a customer conversion and connection plan that provided strategy and scheduling for the recycled water connection process.

Reclaimed Water Distribution System

WALNUT VALLEY WATER DISTRICT | WALNUT VALLEY, CA

Recycled Water Operator. Mr. Remus maintained, operated and monitored the complete reclaimed water distribution system, which included programming computer pump station, inspecting on-site user facility code violations and coordinating water schedules for all users of reclaimed water.

Regional Wastewater System

COUNTY OF WESTERN RIVERSIDE | RIVERSIDE, CA

Construction Inspector. Mr. Remus worked with an associated engineering firm inspecting the construction of an 8-mgd wastewater treatment plant.

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July 22, 2019
Prepared by: K. Welch
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook



ACTION CALENDAR

2019 SHORT-TERM WATER EXCHANGE PROGRAM WITH CENTRAL COAST WATER AUTHORITY

SUMMARY:

Since 2008, IRWD has implemented three unbalanced exchange programs with Carpinteria Valley Water District (CVWD) through the Central Coast Water Authority (CCWA). Staff has received a request to implement another short-term program with CVWD. To accommodate this request, staff recommends that the Board authorize the General Manager to execute a Letter Agreement for a 2019 Short-Term Water Exchange Program with CCWA subject to substantive changes approved by the Supply Reliability Programs Committee and special legal counsel.

BACKGROUND:

In 2008, 2011 and 2017, the Board approved agreements for short-term unbalanced exchange programs with CVWD, which is a member agency of CCWA. Metropolitan Water District of Southern California (MWD) consented to these programs consistent with the Coordinated Operating, Water Storage, Exchange and Delivery Agreement between IRWD, MWD and Municipal Water District of Orange County. Subsequent to receiving MWD's consent, the California Department of Water Resources (DWR) prepared formal Exchange and Point of Delivery Agreements that facilitated the unbalanced exchange of State Water Project (SWP) water at IRWD's Water Bank. These DWR agreements were subsequently executed by the Santa Barbara County Flood Control and Conservation District on behalf of CCWA, MWD, Kern County Water Agency and DWR. The exchanges of water associated with the programs were completed and deemed to be successful by all the parties to the DWR agreements.

Request for 2019 Exchange:

In April 2019, staff received a request from CCWA to facilitate a new short-term unbalanced exchange program for up to 5,000 AF of water under terms similar to the 2017 program. The terms would allow CCWA to deliver SWP water for recharge at the IRWD Water Bank on a 2-for-1 basis. The deliveries of water would be completed by the end of 2019. IRWD would return one-half of the water, less a proportional share of losses to CCWA by the end of the 6th year. On July 2, 2019, CCWA reduced its exchange request to 700 AF of SWP water available from CVWD.

Short-Term Letter Agreement:

Staff has worked with IRWD special legal counsel at Kronick Moskowitz to prepare a letter agreement with CCWA that would facilitate a mutually beneficial short-term unbalanced exchange of 700 AF that is consistent with the agreement from the 2017 program. The agreement is also consistent with terms for a long-term program that were reviewed with the Supply Reliability Programs Committee in November 2018. The letter agreement and associated

terms for the short-term program are attached as Exhibit “A”. In order to expedite the implementation of the program before the end of 2019, staff recommends that the Board authorize the General Manager to execute this agreement subject to substantive changes approved by the Supply Reliability Programs Committee and special legal counsel.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed with the Supply Reliability Programs Committee on November 15, 2018.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE LETTER AGREEMENT FOR A 2019 SHORT-TERM WATER EXCHANGE PROGRAM WITH CENTRAL COAST WATER AUTHORITY SUBJECT TO SUBSTANTIVE CHANGES APPROVED BY THE SUPPLY RELIABILITY PROGRAMS COMMITTEE AND SPECIAL LEGAL COUNSEL.

LIST OF EXHIBITS:

Exhibit “A” – Letter Agreement and Terms for a 2019 Short-Term Water Exchange Program with Central Coast Water Authority

EXHIBIT "A"



July __, 2019

Honorable Board of Directors
Central Coast Water Authority
255 Industrial Way
Buellton, CA 93427-9565

Re: 2019 Short-Term Water Exchange Program

Dear Members of the Board:

Please be advised that that the Board of Directors of Irvine Ranch Water District (“IRWD”) has determined to proceed with the six-year exchange program (“2019 Short Term Exchange Program”) with Central Coast Water Authority (“CCWA”) (IRWD and CCWA collectively are referred to as the “Parties” and each individually may be referred to as a “Party”). The “2019 Short Term Exchange Program” means the program described in “Terms for a 2019 Short Term Exchange Program” (“Term Sheet”) which is attached hereto as Exhibit “A” and incorporated herein by this reference. When you have countersigned below to indicate your acceptance, this letter (the “Letter Agreement”) will be an agreement between IRWD and CCWA that will constitute the “2019 Short Term Exchange Program Agreement” referred to in the Term Sheet. Capitalized terms used herein and not otherwise defined shall have the definitions given such terms in the Term Sheet. The 2019 Short Term Exchange Program will be governed by the terms and conditions of the Term Sheet. In addition, the 2019 Short Term Exchange Program will be governed by the following terms and conditions of this Letter Agreement, each and all of which terms and conditions are intended to supplement said Term Sheet and, to the extent inconsistent therewith, are intended to amend and replace said Term Sheet:

1. Mediation: The Parties agree that any and all disputes, claims or controversies regarding the 2019 Short Term Exchange Program, the Term Sheet, or this Letter Agreement, shall be submitted to mediation in a mutually agreeable venue and if the matter is not resolved through mediation, then it may be submitted to any court of competent jurisdiction. Any affected Party may commence mediation by providing the other Party a written request for mediation, setting forth the subject of the dispute and the relief requested. The Parties shall cooperate with one another in selecting a mediator and in scheduling the mediation proceedings. The Parties covenant that they shall participate in the mediation in good faith, and that they shall share equally in costs charged by the mediator. All offers, promises, conduct and statements, whether oral or written, made in the course of the mediation by any of the Parties, their agents, employees, experts and attorneys, and by the mediator or any of the mediator’s employees, are confidential, privileged and inadmissible for any purpose, including impeachment, in any arbitration or other proceeding involving the Parties, provided that evidence that is otherwise admissible or discoverable shall not be rendered inadmissible or non-discoverable as a result of

its use in the mediation. The provisions of this Letter Agreement with respect to mediation may be enforced by any Court of competent jurisdiction, and the Party seeking such enforcement shall be entitled to an award of all costs, fees and expenses, including attorneys' fees, to be paid by the Party against whom such enforcement is ordered.

2. Release and Indemnification:

A. IRWD and its officers, agents, or employees shall not be liable for the control, carriage, handling, use, disposal, or distribution of Exchange Water upstream of the IRWD POD, or for the control, carriage, handling, use, disposal, or distribution of IRWD Return Water downstream of the CCWA POD, nor for any claim of damage of any nature whatsoever, including but not limited to property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal or distribution of such water, unless such damages or claims are a result of negligent, intentional or reckless misconduct on the part of IRWD.

B. CCWA and its officers, agents, and employees shall not be liable for the control, carriage, handling, use, disposal, or distribution of Exchange Water downstream of IRWD POD or for the control, carriage, handling, use, disposal, or distribution of Return Water upstream of the CCWA POD, nor for any claim of damage of any nature whatsoever, including, but not limited to, property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal, or distribution of such water, unless such damages or claims are a result of negligent, intentional or reckless misconduct on the part of CCWA.

C. Neither IRWD nor CCWA shall be liable to the other for any claims related to the impairment of the quality of water as a result of storage in the IRWD and/or Rosedale facilities or the aquifer from any cause.

D. Each Party will indemnify, defend, and hold the other harmless from any claims made by landowners in the respective Party's service area (in the case of IRWD, the service area will also include Rosedale's boundaries) as a result of activities of the indemnifying party or its diversion, control, carriage, handling, use, disposal or distribution of water into and out of storage in its performance under the Term Sheet or this Letter Agreement, and any claims relating to any third party claiming a prior right, or interference with their right, to water delivered from one Party to the other.

E. Each Party shall at all times indemnify, defend and save the other Party free and harmless from, and pay in full, any and all causes of action, claims, liabilities, obligations, demands, losses, judgments, damages or expenses, including reasonable attorney fees and costs ("claims") in any manner arising out of or connected with the indemnifying Party's activities in its performance under the Term Sheet or this Letter Agreement, except to the extent it is relieved of responsibility therefore under sections 2(A) or 2(B), or its diversion, control, carriage, handling, use, disposal or distribution of water into and out of storage, excepting any loss, damage or expense and claims for loss, damage or expense resulting in any manner from the negligent act or acts of the other Party, or its Board of Directors, officers, representatives, consultants, contractors, agents or employees.

In the event a Party entitled to indemnification is made a party to any action, lawsuit, or other adversarial proceeding alleging negligent or wrongful conduct on the part of an indemnifying Party, then (1) the indemnifying Party shall provide a defense to the other or, at the indemnitee's option, reimburse the indemnitee its costs of defense, including reasonable attorneys' fees, incurred in defense of such claims, and (2) the indemnifying Party shall promptly pay any final judgment or portion thereof rendered against the indemnitee(s).

3. Notices: All written notices required to be given pursuant to the terms of the Term Sheet or this Letter Agreement shall be either (i) personally delivered, (ii) deposited in the United States express mail or first class mail, registered or certified, return receipt requested, postage prepaid, (iii) delivered by overnight courier service, or (iv) delivered by facsimile transmission or e-mail, provided that the original of such notice is sent by certified United States mail, postage prepaid, or by overnight courier, no later than one (1) business day following such facsimile transmission or email. All such notices shall be deemed delivered upon actual receipt (or upon first attempt at delivery pursuant to the methods specified in clauses (i), (ii) or (iii) above if the intended recipient refuses to accept delivery). All such notices shall be delivered to the addresses shown in this Letter Agreement or to such other address as the receiving Party may from time to time specify by written notice to the other Party given in the manner provided herein.

4. Representations and Warranties:

(A) Each of the Parties represents and warrants to the other Party that each is a duly organized or constituted entity, with all requisite power to carry out its obligations under the Term Sheet and this Letter Agreement, and that the execution, delivery and performance of these documents have been duly authorized by all necessary action of the board of directors or other governing body of such Party, and shall not result in a violation of such Party's organizational documents.

(B) CCWA represents and agrees that CCWA has and, at all times during the term of this agreement shall have, insurance coverage for its facilities and operations, including those facilities owned or operated by CCWA and those operations by CCWA involved in the delivery of Exchange Water to the IRWD POD and receipt of Return Water from the CCWA POD.

(C) CCWA has legally enforceable rights to the Exchange Water and to deliver the Exchange Water to IRWD and to carry out its performance under the terms of this Letter Agreement.

(D) CCWA represents and warrants that entry into this Letter Agreement does not create or result in the breach of any other agreement to which CCWA is a party or to which CCWA is otherwise subject to or bound.

(E) CCWA represents and warrants that, to its knowledge at the time CCWA executed this Letter Agreement, there is no pending or threatened litigation involving CCWA that will affect this Letter Agreement.

(F) IRWD represents and agrees that IRWD has and, at all times during the term of this

Agreement shall have, insurance coverage for its facilities and operations, including those facilities owned or operated by IRWD and those operations by IRWD involved in the receipt of Exchange Water from the IRWD POD and delivery of Return Water to the CCWA POD.

- (G) IRWD represents and warrants that entry into this Letter Agreement does not create or result in the breach of any other agreement to which IRWD is a party or to which IRWD is otherwise subject to or bound.
- (H) IRWD has legally enforceable rights to carry out its performance under the terms of this Letter Agreement.
- (I) IRWD represents and warrants that, to its knowledge at the time IRWD executed this Letter Agreement, there is no pending or threatened litigation involving IRWD that will affect this Letter Agreement.
- (J) Prior to commencement of the delivery of Exchange Water pursuant hereto, there has been completed an environmental review under CEQA with respect to the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project and the use of water therein by IRWD, and the Environmental Impact Reports (EIRs) for the Projects were certified on May 27, 2008 and December 8, 2015, respectively. To IRWD's knowledge, no actions or proceedings have been initiated attacking the validity of such EIRs.
- (K) The Parties have relied on the forgoing representations, warranties, and covenants as a material inducement to execute this Letter Agreement, and should any material representation not be correct or true, it shall constitute a material breach of this Letter Agreement.

5. Increase in Maximum Account Balance; Expansion and Long-Term Agreement: IRWD, with the consent of the Metropolitan, may offer CCWA the ability to increase the delivery of Exchange Water and the Maximum Account Balance and/or extend the term of this Letter Agreement, including the period during which CCWA may deliver Exchange Water, as specified in the Term Sheet paragraph entitled "Quantity," by giving a written notice to CCWA, without the need for any amendment of this Letter Agreement.

The Parties may enter into a long-term exchange program agreement based on terms agreeable to both Parties that would provide for the storage and exchange of CCWA State Water Project water supplies using increased storage, recharge and recovery capacity that may be available to IRWD.

6. Termination For Breach. Either Party may terminate this Letter Agreement if the other Party breaches any material obligation under this Letter Agreement and such breach continues for a period of sixty (60) days, or such other period as may be reasonable under the circumstances, after the date on which written notice is issued by the non-breaching Party. The non-breaching Party shall be entitled to seek any and all legal or equitable damages and/or remedies as a result of the breaching Party's breach.

In the event that either IRWD or CCWA is in material default of this Agreement, the non-defaulting Party shall provide written notice to the defaulting Party, identifying with reasonable specificity the nature of the claimed default. If the defaulting Party has not cured the event(s) of material default which is (are) identified in the notice required by this section within twenty (20) business days after receipt of written notification, or such other period as is reasonable under the circumstances, the non-defaulting Party shall be entitled to any and all remedies which may be available to it at law or in equity. This provision is not intended to provide a separate termination right, which is set forth in the first paragraph of this Section.

7. Governing Law: The Term Sheet and this Letter Agreement shall be construed and enforced in accordance with the laws of the State of California.

8. Amendments: No amendment of the Term Sheet or this Letter Agreement shall be binding upon the Parties unless it is in writing and executed by both of the Parties.

9. Further Action: The Parties agree to and shall take such further action and execute and deliver such additional documents as may be reasonably required to effectuate the 2019 Short Term Exchange Program, consistent with each and all of the terms and conditions of the Term Sheet and this Letter Agreement.

10. Assignment: No Party shall assign or otherwise transfer its rights or obligations in, under or to the 2019 Short Term Exchange Program, the Term Sheet, or this Letter Agreement, in whole or in part, without the prior written consent of the other Party. All covenants and agreements contained in the Term Sheet and this Letter Agreement shall bind and inure to the benefit of the Parties' respective successors and permitted assigns.

11. Force Majeure; Change In Law. The respective obligations of each Party hereto shall be suspended while it is prevented from complying by acts of God; war; riots; civil insurrection; acts of civil or military authority; fires; floods; earthquakes; labor accidents or incidents; rules and regulations of any federal, state, or other governmental agency (other than the Parties themselves); changes in law, rules, or regulations of any federal, state or other governmental agency (other than the Parties themselves); or other cause of the same or other character any of which are beyond the reasonable control of such Party (collectively, "Force Majeure"). In the event of a suspension due to the foregoing, the Party whose obligations are suspended shall promptly notify the other Party in writing of such suspension and the cause and estimated duration of such suspension.

The Party providing such notice shall be excused from fulfilling its obligations under this Agreement until such time as the Force Majeure has ceased to prevent performance or other remedial action is taken, at which time the Party shall promptly notify the other Party of the resumption of its obligations under this Letter Agreement. Any Party rendered unable to fulfill any of its obligations by reason of a Force Majeure shall exercise due diligence to remove such inability with reasonable dispatch within a reasonable time period and mitigate the effects of the Force Majeure. The relief from performance shall be of no greater scope and of no longer duration than is required by the Force Majeure.

12. Joint Drafting and Negotiation: The Term Sheet and this Letter Agreement have been jointly negotiated and drafted. The language of each shall be construed as a whole according to

its fair meaning and without regard to or aid of Civil Code Section 1654 or similar judicial rules of construction. Each Party acknowledges that it has had the opportunity to seek the advice of experts and legal counsel prior to executing said documents and that it is fully aware of and understands all of their respective terms and the legal consequences thereof.

13. Headings. Headings used in this Letter Agreement are for reference only and shall not affect the construction of this Letter Agreement.

14. No Third Party Beneficiaries. No third party beneficiaries are intended by the Parties hereto, and no third party shall be entitled to claim or enforce any rights under this Letter Agreement.

15. Severability. In the event that any provision of this Letter Agreement is determined by a court to be invalid, the court shall reform the provision in a manner that is both consistent with the terms of this Letter Agreement taken as a whole and legally valid. The remainder of this Letter Agreement shall not be affected thereby.

16. Successors and Permitted Assigns. All covenants and agreements contained in this Letter Agreement by or on behalf of any of the Parties shall bind and inure to the benefit of their respective successors and permitted assigns under Section 10, whether so expressed or not.

17. No Effect on Short-Term Water Storage Partnership. The 2019 Short Term Exchange Program governed by this Letter Agreement and 1) the 2017 Short Term Water Exchange Project governed by the letter agreement and other documents dated January 13, 2017, between IRWD and CCWA, and 2) the Short-Term Water Storage Partnership governed by the letter agreement and other documents dated March 10, 2008, between IRWD and Carpinteria Valley Water District (CVWD), and 3) the Short-Term Water Storage Partnership – Pilot Exchange Program governed by the letter agreement and other documents dated October 12, 2011, between IRWD and CVWD are each intended to be entirely independent of one another, and this Letter Agreement shall have no effect upon, and shall not be affected by, the March 10, 2008, October 12, 2011, and January 13, 2017 agreements.

18. Approval by DWR. The effectiveness of this Letter Agreement shall be contingent upon consent to the herein-described transaction by The Metropolitan, as indicated by its signature below, and approval of the herein-described transaction by the Santa Barbara County Flood Control and Water Conservation District and the California Department of Water Resources ("DWR"). If the Metropolitan does not consent, or if the Santa Barbara County Flood Control and Water Conservation District, or the Kern County Water Agency or DWR disapproves the transaction described herein, this Letter Agreement shall not be effective; provided, the Parties may mutually agree to and make any modifications of this Letter Agreement that they determine are necessary to gain such consent or approval.

By its signature hereon, IRWD accepts the Term Sheet as amended and supplemented by the terms and provisions contained in this Letter Agreement. Please indicate the acceptance of CCWA of the Term Sheet, as amended and supplemented by the terms and provisions contained in this Letter Agreement, by signing and returning the enclosed copy. Thank you for your cooperation.

IRWD intends that this Letter Agreement and the Term Sheet are consistent with, and are entered into by IRWD pursuant to, that certain Water Banking and Exchange Program Agreement between Rosedale and IRWD dated as of February 4, 2016 and that certain Water Banking and Exchange Program Agreement between Rosedale and IRWD dated as of January 13, 2009.

This Letter Agreement may be signed in counterparts, each of which shall be deemed an original, and when taken together shall constitute one in the same instrument.

Sincerely,

IRVINE RANCH WATER DISTRICT

By: _____
General Manager

READ, APPROVED AND ACCEPTED:

CENTRAL COAST WATER AUTHORITY

By: _____
Title:

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CONSENT:

In accordance with Paragraph 3.2 of that agreement entitled “Coordinated Operating, Water Storage, Exchange and Delivery Agreement,” (the “COA”) dated as of April 21, 2011, by and among The Metropolitan Water District of Southern California (“Metropolitan”), the Municipal Water District of Orange County and the Irvine Ranch Water District, and in accordance with Section 15(d) of Metropolitan’s State Water Project Contract with the California Department of Water Resources, THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA hereby provides its written consent to IRWD’s acquisition of State Water Project Water on Metropolitan’s behalf as described in the 2019 Short Term Exchange Program defined herein, so long as that water meets the requirements of the COA.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

By: _____
Title:

DRAFT

Terms for a 2019 Short Term Exchange Program
Between Irvine Ranch Water District and Central Coast Water Authority
July 2, 2019

Parties	The Irvine Ranch Water District (IRWD) and the Central Coast Water Authority (CCWA)
Description	IRWD and CCWA would implement a Short Term Exchange Program (Exchange Program) that would allow CCWA to schedule and deliver unused State Water Project (SWP) water into storage at IRWD’s Strand and Stockdale Integrated Banking Projects (IRWD Water Bank) on a 2-to-1 exchange ratio basis. CCWA was transferred the rights and responsibilities of SWP water from the Santa Barbara County Flood Control and Water Conservation District (Santa Barbara) through Santa Barbara’s existing SWP Contract with the California Department of Water Resources (DWR). Recharge and recovery facilities at both the Strand Ranch and Stockdale Integrated Banking Projects could be used to deliver water in and out of storage at the IRWD Water Bank.
Term	Six years from the effective date of the Exchange Program Agreement. Delivery of the water into storage would be accomplished prior to the end of calendar year 2019. Upon mutual agreement the term may be extended as described under Return Water below.
IRWD’s Water Bank	IRWD Water Bank, located in Kern County, is owned by IRWD and operated by Rosedale-Rio Bravo Water Storage District (Rosedale). IRWD holds first priority rights to the use of the recharge and recovery facilities except for when the Kern River Watermaster offers water to all takers willing to sign a notice/order or the Kern River Watermaster offers Kern River water to the California Aqueduct/Kern River Intertie. Under such conditions, Rosedale has first priority right to the use of the recharge facilities.
Quantity	Up to 700 acre-feet (AF) of CCWA’s SWP water supplies may be delivered to the IRWD Water Bank for storage in 2019. One-half of the water delivered into storage would be deemed transferred to IRWD at the time the water has been recharged at the IRWD Water Bank.
Exchange Water	CCWA expects to supply up to 700 AF of its SWP water supplies to the IRWD Water Bank by the end of 2019 (Exchange Water). The Parties would cooperate in scheduling the Exchange Water deliveries with deliveries associated with other IRWD exchange programs. The recharge of Exchange Water would be subject to available recharge capacity, as well as provisions of IRWD’s Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan Water District of Southern California (Metropolitan) and the Municipal Water District of Orange County (Coordinated Agreement).

<p>Return Water</p>	<p>Water shall be returned, when requested by CCWA, at an annual rate of no more than one-third of the amount delivered into storage allocated to CCWA, after losses and not to exceed 117 AF per year. IRWD may allow CCWA to recover more water in a year, should IRWD determine that the use of additional recovery capacity by CCWA would not infringe on IRWD’s ability to recover water for itself and/or IRWD’s other partners. The actual Return Water delivered to CCWA shall be from Metropolitan’s future approved SWP Table A water.</p> <p>Return Water will occur by recovery of water from the IRWD Water Bank with subsequent delivery through the Cross Valley Canal (CVC) to the California Aqueduct. IRWD shall use its first priority recovery well capacity in the IRWD Water Bank to recover Return Water for CCWA after meeting IRWD’s own water supply needs. CCWA’s Return Water may not remain in storage beyond the end of the sixth calendar year after the delivery of water into storage in the IRWD Water Bank. Upon mutual agreement, the Term of this Exchange Program may be extended for an additional 5 years and as approved by the DWR.</p>
<p>Quality</p>	<p>The quality of Exchange Water and Return Water will be limited as follows: If and to the extent that either party delivers water to and into the California Aqueduct, the quality of water shall meet the water quality standards established by DWR for pump-in to the California Aqueduct.</p>
<p>Delivery Points</p>	<p>CCWA will deliver Exchange Water to the IRWD point of delivery (IRWD POD) which will be the Strand Ranch and/or Stockdale West Turnouts on the CVC, other Rosedale diversion locations as specified by Rosedale, or as directed by Metropolitan. IRWD will use IRWD Water Bank wells to extract Return Water for delivery to the pump-in location at Reach 12E of the California Aqueduct. CCWA shall coordinate with DWR for delivery of Return Water to the CCWA point of delivery (CCWA POD) which will be Check 28 of the California Aqueduct or to another delivery point as determined by CCWA.</p>
<p>Losses</p>	<p>Water banking losses shall be shared equally between IRWD and CCWA (estimated to be between 11% and 15%). CCWA and IRWD each may incur additional conveyance losses of 1% to 2% in the CVC for conveyance of each agency’s share of the water, as measured and assessed by Kern County Water Agency (KCWA).</p>
<p>Recharge Costs</p>	<p>IRWD shall pay all costs assessed to IRWD by Rosedale for recharging water at the IRWD Water Bank. CCWA would reimburse IRWD for 50 percent of these costs paid by IRWD upon delivery of Return Water to CCWA. These costs may include Rosedale’s administrative charge, charges assessed by the KCWA, CVC Standby, applicable CVC pumping and O&M costs, and applicable fixed and variable O&M water bank costs.</p>
<p>Recovery Costs</p>	<p>IRWD and CCWA would each be responsible for actual costs of recovery for each agency’s respective share of the water either through well pumping or by exchange. These costs may include Rosedale’s administrative charge, charges assessed by the KCWA, mitigation obligations, CVC Standby, O&M, and applicable CVC pumping costs, and applicable fixed and variable O&M water bank costs. CCWA would reimburse IRWD for its share of these costs upon delivery of Return Water to CCWA.</p> <p>IRWD and CCWA would each share any costs assessed by Rosedale under its Long Term Operations Plan for implementing provisions to prevent impacts from</p>

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	<p>operations. It is expected that banking projects, such as the IRWD Water Bank, may be required to contribute \$2.00 per AF for recovered water to a fund, which may be used to meet mitigation obligations.</p>
<p>SWP Variable OMP&R Costs</p>	<p>Metropolitan will pay the DWR Variable Operation, Maintenance, Power, and Replacement (OMP&R) charges associated with the delivery of the Exchange Water from the Delta to IRWD POD consistent with the Coordinated Agreement.</p> <p>For delivery of Return Water to CCWA POD, CCWA will pay the DWR Variable OMP&R charges from the Delta to CCWA's turnout at Check 28 of the California Aqueduct.</p>
<p>Agency Coordination</p>	<p>IRWD and CCWA would cooperate with DWR, KCWA and Metropolitan in preparing all necessary agreements to facilitate the Exchange Program. IRWD and CCWA shall each be responsible for their own costs associated with such coordination.</p>
<p>Environmental Compliance</p>	<p>Both parties shall comply with California Environmental Quality Act (CEQA) and cooperate with one another with respect to CEQA compliance that may be required by the DWR for the proposed Exchange Program. IRWD has already conducted environmental review under CEQA for the Strand and Stockdale Integrated Banking Projects that takes into consideration the delivery, storage and recovery of SWP water. Rosedale certified and IRWD approved the CEQA documents for the Strand and Stockdale Integrated Banking Projects. Corresponding Notices of Determination were filed by both Rosedale and IRWD. IRWD and CCWA will share equally any additional costs associated with environmental review or permitting deemed necessary for delivering CCWA water into storage (however, none are expected). Both IRWD and CCWA shall each be responsible for any other environmental review or permitting necessary to implement the Exchange Program within their own respective service areas.</p>
<p>Water Rights</p>	<p>It is expressly agreed, understood, and acknowledged by IRWD and CCWA that any existing or future delivery of Exchange Water to the IRWD Water Bank by CCWA will not result in or be considered a sale or transfer of CCWA's contractual rights to SWP water or a sale or transfer of IRWD's ownership in the IRWD Water Bank.</p>
<p>General Expenses</p>	<p>Each Party would be responsible for its own fees and expenses arising out of the negotiation and execution of the Exchange Program Agreement, obtaining necessary approvals, and the like.</p>

July 22, 2019

Prepared by: S. Toland / R. Mori

Submitted by: K. Burton

Approved by: Paul A. Cook



ACTION CALENDAR

SYPHON RESERVOIR IMPROVEMENTS PROJECT GEOTECHNICAL INVESTIGATION SERVICES CONSULTANT SELECTION

SUMMARY:

As part of the development of the Syphon Reservoir Improvements Project, geotechnical investigations are needed to characterize the geologic and geotechnical conditions at the reservoir site to inform the ongoing environmental documentation process and the future final design phase of the proposed Syphon Reservoir Improvements project. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with AECOM Technical Services in the amount of \$2,388,838 for geotechnical investigation services for the Syphon Reservoir Improvements project.

BACKGROUND:

In 2012, IRWD obtained baseline geotechnical information associated with Syphon Reservoir through a limited geotechnical investigation study. The study was limited in the location and number of borings conducted due to requirements to remain within existing onsite roadways and to avoid vegetation. In 2016, IRWD conducted another geotechnical investigation to obtain information on the extent and character of accumulated sediments in the reservoir, but the scope of that investigation was also limited due to challenges associated with reservoir access due to saturated conditions within the emptied reservoir. Due to these constraints, only limited geotechnical investigations have been completed to date.

The proposed geotechnical investigation will provide for a comprehensive site characterization program to adequately document and characterize the geologic and geotechnical conditions at the site. The proposed investigation will evaluate the dam foundation and abutments to determine the appropriate excavation depths and requirements for dam seepage control measures, evaluate the characteristics of potential dam construction materials that could be extracted from borrow areas on the project site, and verify the location and historical activity of the previously documented inactive Center Valley Fault that is believed to be located at or near the reservoir site.

To accomplish these goals, the work will involve a combination of exploratory test pits, soil borings, and geophysical surveys to characterize the subsurface conditions of the soil at each exploratory location. Prior to the start of these activities, the reservoir will be drained to allow the reservoir bottom to dry out so that the borings, test pits, and trenches can be implemented more easily. The exploration locations were selected based on the location of the proposed reservoir improvements, access considerations, and the desire to avoid environmentally sensitive areas. The results of the investigation will inform the ongoing environmental documentation process and the future final design phase of the proposed Syphon Reservoir Improvement project.

Consultant Selection Process:

Staff received proposals from AECOM Technical Services, GEI Consultants, the team of GeoPentech/NMG Geotechnical, and the team of Kleinfelder/Stantec. Each firm presented unique project approaches and creative engineering solutions for achieving the project objectives, but AECOM's approach to completing the project exceeded that presented by the other firms. AECOM outlined a focused and detailed work plan for completing the geotechnical investigation and presented an innovative approach to sequencing the investigation to ensure completion within the project schedule constraints. AECOM also established a superior depth and knowledge of managing and implementing complex geotechnical investigations for reservoir projects. After reviewing the proposals, staff met with AECOM to discuss and negotiate the final scope of work, project schedule, and overall fee. The consultant selection matrix is attached as Exhibit "A", and AECOM's scope of work and fee proposal are attached as Exhibit "B".

Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with AECOM in the amount of \$2,388,838 since its approach, schedule, and level of effort are consistent with the project goals.

Schedule:

Staff anticipates that the geotechnical work will begin in September 2019. The field geotechnical activities are scheduled to be complete by January 2020, and the final geotechnical report is scheduled for completion in March 2020.

FISCAL IMPACTS:

The Syphon Reservoir Improvements, Project 03808, is included in the FY 2019-20 Capital Budget as a flagged project. Staff is requesting an additional Expenditure Authorization (EA) to fund the geotechnical investigation services as summarized in the table below.

Project No.	Current Budget	Addition <Reduction>	Total Budget	Existing EA	This EA Request	Total EA Request
03808	\$75,000,000	\$0	\$75,000,000	\$3,850,000	\$2,500,000	\$6,350,000

ENVIRONMENTAL COMPLIANCE:

This project is subject to CEQA and in conformance with California Code of Regulations Title 14, Chapter 3, Article 6. A Notice of Intent to adopt a Mitigated Negative Declaration (MND) was filed with the County of Orange and the State Clearinghouse on February 8, 2019. Pursuant to State Guideline §15073, the IS/MND was made available for public review for a period of 30 days from February 8, 2019 through March 11, 2019. IRWD's Board of Directors adopted the Final Initial Study/MND at its June 24, 2019 meeting. A Notice of Determination was filed with the Orange County Clerk/Recorder and the CA State Clearinghouse on June 25, 2019.

Action Calendar: Syphon Reservoir Improvements Geotechnical Investigation Services
Consultant Selection
July 22, 2019
Page 3

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on July 16, 2019.

RECOMMENDATION:

THAT THE BOARD APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$2,500,000 AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH AECOM TECHNICAL SERVICES, INC. IN THE AMOUNT OF \$2,388,838 FOR GEOTECHNICAL INVESTIGATION SERVICES FOR THE SYPHON RESERVOIR IMPROVEMENTS, PROJECT 03808.

LIST OF EXHIBITS:

Exhibit "A" – Consultant Selection Matrix
Exhibit "B" – AECOM Scope of Work and Fee Proposal

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EXHIBIT "A"

CONSULTANT SELECTION MATRIX

Syphon Reservoir Geotechnical Investigation Services Project									
Item	Description	Weights	AECOM	GeoPentech/NMG	Kleinfelder/Stantec	GEI Consultants			
A	<u>TECHNICAL APPROACH</u>								
1	Project Understanding	30%	1	4	3	2			
2	Project Approach	40%	1	4	3	2			
3	Project Team	30%	1	3	4	2			
	<u>Weighted Score</u>		1.0	3.7	3.3	2.0			
	Ranking of Consultants		1	4	3	2			
B	<u>SCOPE OF WORK</u>								
TASK		Task Hours	FEE	Task Hours	FEE	Task Hours	FEE	Task Hours	FEE
1	Project Management	1,142	\$208,278	440	\$89,740	496	\$93,040	546	\$170,689
2	Geotech Data Collection	3,559	\$1,684,706	6,997	\$2,221,170	4,280	\$2,278,672	4,152	\$3,230,676
3	Lab Testing	121	\$183,252	403	\$204,451	340	\$160,986	126	\$181,464
4	Geotech Data Report	647	\$121,319	590	\$85,120	886	\$127,895	1,386	\$276,943
5	Seismic Hazard Analysis/Reports	419	\$191,283	888	\$199,720	690	\$231,681	1,124	\$304,585
	Total Engineering Services Fee	5,888	\$2,388,838	9,318	\$2,800,201	6,692	\$2,892,274	7,334	\$4,164,357
C	<u>OTHER</u>								
	Exceptions taken to IRWD Std. Contract	No	No	Yes (requesting limited liability clause)	Yes (requesting limited liability clause)				
	DIR Numbers Provided	Yes	Yes	Yes	Yes				
	Insurance (Professional & General Liability)	Yes	Yes	Yes	Yes				

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1.0 Scope

1.0 Project Understanding

1.0.1 Project Need and Description

Based on projected future recycled water supply and demand scenarios, IRWD estimates that it will need an additional 4,500 acre-feet (AF) of recycled water seasonal storage by the year 2030. IRWD plans to enlarge the Syphon Reservoir to increase its storage capacity to approximately 5,000 AF to meet the projected seasonal storage needs. This will be accomplished by removing the existing 59-foot-high dam and replacing it with a 136-foot- high zoned earth dam constructed to the most current design standards. The project will also include significant grading of the reservoir, construction of a new spillway, and inlet/outlet (I/O) works.

AECOM has reviewed the MND and has a thorough understanding of the mitigation measures and biological constraints associated with the investigation program. We regularly perform geotechnical field explorations on sites with similar environmental constraints. Prior to initiation of work, AECOM will coordinate with the Project Biologist to discuss the biological constraints, vegetation removal, and general work schedule. It is assumed that ESA will perform any required biological tasks (nesting bird surveys, flushing of wildlife, etc.) and communicate any findings to AECOM should those findings have the potential to impact the geotechnical investigation. It is understood that Project- related activities are scheduled to occur outside of the nesting season, February 15 to August 31 (January 15 to June 30 for raptors); however, should work occur during the nesting season, AECOM will coordinate with ESA to ensure impacts to nesting birds will be avoided. Additionally, AECOM understands that impacts to sensitive habitats will be avoided by remaining within the Project's designated access routes and work areas.

The primary goal of the investigation program is to adequately document and characterize the geologic/geotechnical and seismic conditions at the site. This will support the ongoing CEQA documentation process and the future design phases for the overall Syphon Reservoir Improvement Project (Project). The investigation will build upon existing limited geotechnical data obtained during the feasibility phase and will concentrate additional exploration at the proposed embankment dam, spillway, I/O works, borrow areas and reservoir grading, and will locate and characterize the Center Valley fault. The Project also includes sampling and characterization of existing reservoir sediments to evaluate potential use and/or disposal requirements. AECOM has reviewed in detail the previous studies performed for IRWD by GEI and the Geotechnical Investigation Work Plan (GIWP) prepared by HDR, and understand that the GIWP forms the basis for the scope of work of this geotechnical investigation. Based on our discussions with IRWD on 6-17-2019, some modifications to the proposed investigations have been made as presented in this Scope of Work.



Syphon Reservoir

1.0.2 Anticipated Subsurface Conditions

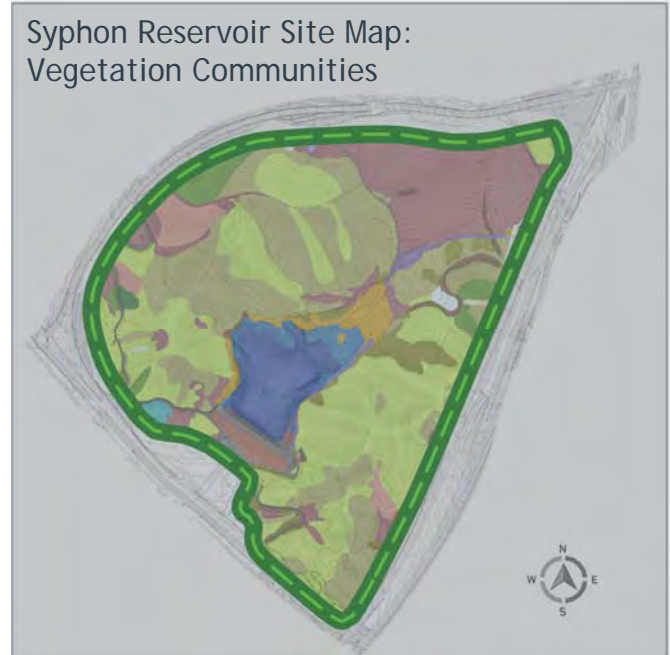
The reservoir site and surrounding area consists of a hilly, southwest draining terrain that is underlain by Tertiary sedimentary bedrock with alluvium overlying the bedrock in intervening valleys. The reservoir site is formed by two northeast trending bedrock ridges, referred to hereafter as the "southeast ridge" and the "northwest ridge." Regional geologic mapping suggests that the southeast ridge is underlain by the Paleocene age Silverado Formation and that the northwest ridge is underlain by Late Eocene to early Miocene age Vaqueros and Sespe Formations. This interpretation of the bedrock underlying the reservoir ridges necessitates the existence of an up-to-the-east fault in the reservoir valley to explain the juxtaposition of the much older Silverado Formation against the younger Vaqueros and Sespe Formations.

The Silverado Formation typically consists of non-marine sandstone with a distinctive basal conglomerate. The Vaqueros and Sespe Formations typically consist of sandstone with less common siltstone/claystone and conglomerates. The marine Vaqueros Formation and the non-marine Sespe Formation consist of sediments deposited in adjacent environments at the same time. At the northwest ridge, where exposures are few, these two formations have been mapped as undifferentiated Vaqueros/Sespe Formation.

Overburden soils in the reservoir area include colluvium, slope wash materials and alluvium. Colluvium and slope wash materials mantle most of the bedrock slopes and a southwest thickening alluvial valley deposit fills the valley bottom to a maximum depth of about 30 feet.

2.0 Scope of Work

AECOM's scope and approach to implementing the GIWP and meeting the requirements of the MND are described herein. We have also taken the liberty to summarize various options that we believe would provide added value and enhance the geotechnical investigation.



Task 1. Project Management

AECOM will conduct effective project management that adheres to the scope, schedule, and budget; provide efficient and frequent communication with IRWD and other project stakeholders; and, implement AECOM's Quality Management System (QMS) to provide effective quality assurance/quality control. Project management encompasses:

- Project Status Reports.** AECOM will prepare weekly and monthly project status reports for IRWD's management team. The weekly status reports will consist of a brief (one to two paragraphs) email summarizing work activities completed the previous week, along with activities planned for the upcoming week. Monthly status reports will provide more detail and summarize work for the previous and upcoming month. The monthly reports will include an updated project schedule (Microsoft Project Gantt Chart), a summary of budget expenditures to date per task, and budget remaining. In addition to the status reports, AECOM's Project Manager will maintain strong lines of communication with IRWD via email and telephone.
- Meetings and Workshops.** AECOM will organize and conduct meetings and workshops to keep the project team informed on work in progress, coordinate field activities, and present deliverables. We will prepare and submit meeting agendas for IRWD review and concurrence at least three days prior to the meeting. Draft and final minutes for all meetings and workshops will be prepared and submitted to IRWD within one week of each meeting. **Table 1-1** presents a summary of the meetings anticipated.
- Quality Assurance/Quality Control.** AECOM will implement its QMS throughout the project to ensure consistent quality control for all project phases. The QMS system is based on the ISO 9001 standard and is required on all AECOM projects. Each project deliverable will undergo detail checking and an independent technical review. The detail checking review focuses on a review of grammar, spelling, drafting, boring and test pit logs, consistency of laboratory data with field exploration, and consistency in nomenclature for features and geologic descriptions. The independent technical review will be performed by experts in the related field who have not been involved in preparation of the deliverable.
- Project Schedule.** AECOM will develop and maintain a Microsoft Project Schedule that establishes the sequential logic of all tasks and milestones. Our Project Manager will monitor compliance with the schedule, update it monthly as necessary, and distribute it at monthly progress meetings. The schedule will include all primary work elements defined in the GIWP and scope of work, key milestones defined herein, deliverables, and IRWD review periods. If any issues arise that may cause delays, our Project Manager will develop proactive actions to recover and maintain the schedule.

Table 1-1. Meetings/Workshops

Meeting/Workshop	Description
Kick-off and initial project implementation/phasing meeting	One (1) two-hour meeting
Monthly progress meetings	Six (6) one-hour meetings
Site walk to verify proposed access roads with IRWD	One (1) four-hour meeting
Site visits (miscellaneous)	Four (4) two-hour meetings
Present Draft Geotechnical Data Report	One (1) two-hour meeting
Present Draft Seismic Hazard Assessments	One (1) two-hour meeting
Present Final Geotechnical Data Report, discuss IRWD's comments, and discuss how the outstanding items were addressed	One (1) two-hour meeting
Present Final Seismic Hazard Assessments, discuss IRWD's comments and how outstanding items were addressed	One (1) two-hour meeting

Task 2. Geotechnical Data Collection and Investigations

Purpose and Objectives

The purpose of the geotechnical investigation for the Project is to establish a comprehensive set of geotechnical, seismologic and geologic data to support final design. The data will also help to inform the EIR with respect to on-site and import volumes, truck trips, and other impacts. Key objectives of the investigation are to:

- Collect data for evaluation of the foundations and abutments of the embankment dam, spillway and inlet/outlet.
- Obtain data to evaluate excavation depths and need for seepage control measures.
- Obtain data to determine dam foundation objectives.
- Conduct borrow site evaluation of future embankment materials for strength, permeability, compressibility, index properties, and bulking/shrinkage potential.
- Locate and determine potential activity of the Center Valley fault.
- Sample and characterize existing reservoir sediment for potential reuse in the new dam's core or spreading within mitigation area.

The GIWP is a detailed scope that defines planned location, guidance and protocols for the exploration and data collection/analysis.

Task 2A Geologic Mapping

Existing sources of information regarding the geology of the site area will be compiled onto a topographic/air photo base map prior to any field geologic mapping. Additional field mapping will be performed at the reservoir site to build upon the work previously completed (see **Figure 1-1** Geologic/Site Exploration Map).

Field mapping will include acquisition of data specific to rock types, degree of weathering, orientation, and character of bedding and other rock mass discontinuities (fractures) on a 1:5000-scale map. Mapping will also establish and refine the contact between the bedrock ridges and the valley alluvium. Geologic mapping will also include identification of existing landslides (if present). Because rock outcrops are not prevalent at the reservoir site, the mapping will be done in conjunction with select exploratory test pits. The map will depict the location of all existing natural and man-made (i.e., roadcuts, test pit exposures) outcroppings and include our interpretation of the sedimentary formations and the locations of the contacts between the formations. In this manner it will be clear what portions of the map portray factual information and what portions of the map are largely interpretive.

As discussed further in Section 2.E.1, a prime objective of the mapping is to verify the previous regional mapping that indicates the existence of the Center Valley fault at the reservoir. In particular, mapping will be focused on confirming that the southeast ridge is Silverado Formation and the northwest ridge is, in fact, Vaqueros/Sespe Formation. We believe it is important to test this paradigm and the geologic mapping will be a key part of that test.

The RFP specifically requested that any possible geomorphic evidence of faulting be shown on the geologic map. Geomorphic evidence of faulting can be subdivided into two fundamentally different types. One type of geomorphic evidence is formed by preferential erosion along fault damaged rock (i.e., linear drainages, saddle in ridge lines), whereas the other type of geomorphic evidence is formed by the displacement of the earth surface (i.e., fault scarps, offset drainages). The presence of the latter type of geomorphic evidence is suggestive of recent fault activity, whereas the former is not. Based on a preliminary review of the site from aerial imagery and preliminary understanding of the fault, we believe it's unlikely that geomorphic evidence suggestive of fault activity exists at the site. However, it will be important to identify alternative interpretations for the trace of the postulated fault by identifying geomorphic evidence suggestive of preferential erosion (i.e., saddles in the

northwest ridge). AECOM's preliminary geologic map that will be submitted for the Seismic Trenching Plan will include alternative interpretations of the trace of the fault through the northwest ridge, based in part on geomorphic evidence. The final geologic map that will be presented in the Seismic Hazard Assessment Report will show our final interpretation of the postulated fault location based on consideration of the geologic mapping and the subsurface information from trenching and borings.

Task 2B Geotechnical Investigations

2.B.1 Access Roads and Helicopter Mobilizations

AECOM believes that the dozer access roads shown on the HDR site exploration plans can be done by mostly "drive and crush" methods by utilizing a large excavator and a track-mounted drill rig. AECOM utilized this method at the Trampas Canyon Dam – Recycled Water Reservoir (see inset photographs) to drill a core hole at the top of a ridge that was accessible by only a crude fire break (old/overgrown dozer path). We believe that most of the bulldozer access roads shown on the HDR exploration plan can be done in a similar manner. By avoiding the significant dozer excavation that would be required to establish a drivable access road, both the environmental impact and the cost of restoring such roads to original grade would be substantially reduced. The use of tracked equipment will allow for the minimization of impacts to native vegetation and associated sensitive species through a reduction in the overall footprint. Due to the reduced width of access routes, and through the use of "drive and crush," the cost of restoration to IRWD likely will be reduced in those areas in which these techniques are implemented. Furthermore, by using an excavator rather than a bulldozer to establish the path, the test pit excavations can be done at the same time, creating both schedule and cost efficiency. Straw wattles will be installed at cleared areas where erosion into adjacent CSS or sensitive habitat is possible.

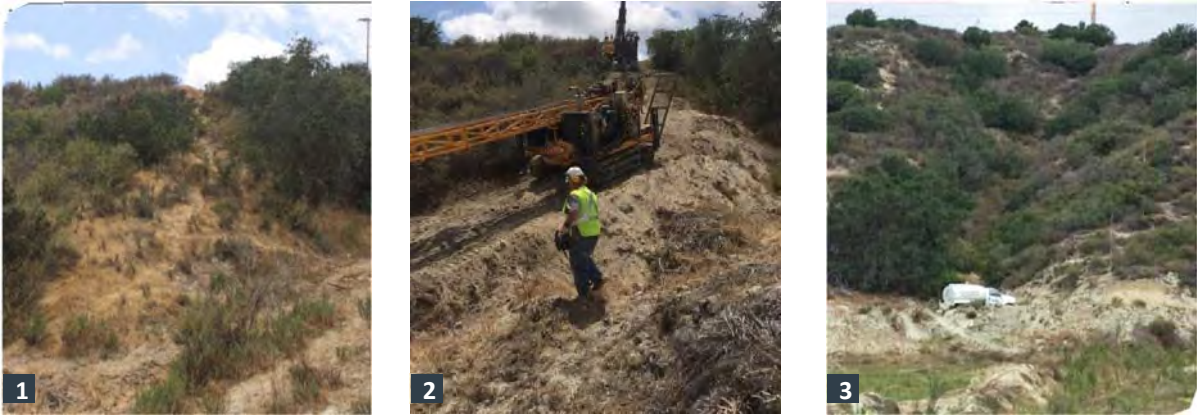
AECOM also proposes that some of the core borings be performed with a Helicopter mobilization. AECOM has frequently conducted helicopter mobilizations of core drilling rigs in environmentally sensitive settings. We believe that it could also be done for the Syphon Reservoir Improvement Project. Mobilization to difficult-access borings with a helicopter provides several advantages over accessing sites with a track-mounted drill rig and pioneered roads/ paths. The helicopter mobilizations will take substantially less time than the drive and crush access that will be required for a track-mounted rig. The helicopter mobilizations will also leave a smaller footprint of disturbance (just the drill pad will be cleared of brush and leveled with hand tools), and therefore be less of an environmental impact. At the Syphon Reservoir Improvement Project, we propose that core borings B-15, B-16, B-21, B-22, B-23, B-39, B-41, B-44, and B-45 be done with helicopter mobilizations (see **Figure 1-1** Geologic/Site Exploration Map). This would reduce the amount of excavator access road by approximately 2,720 feet.

2.B.2 Borings

The comprehensive drilling investigation described in the GIWP is the principal component of the field investigation. Successful, on time completion of this important part of the investigation will require careful planning and execution. The drilling investigation includes:

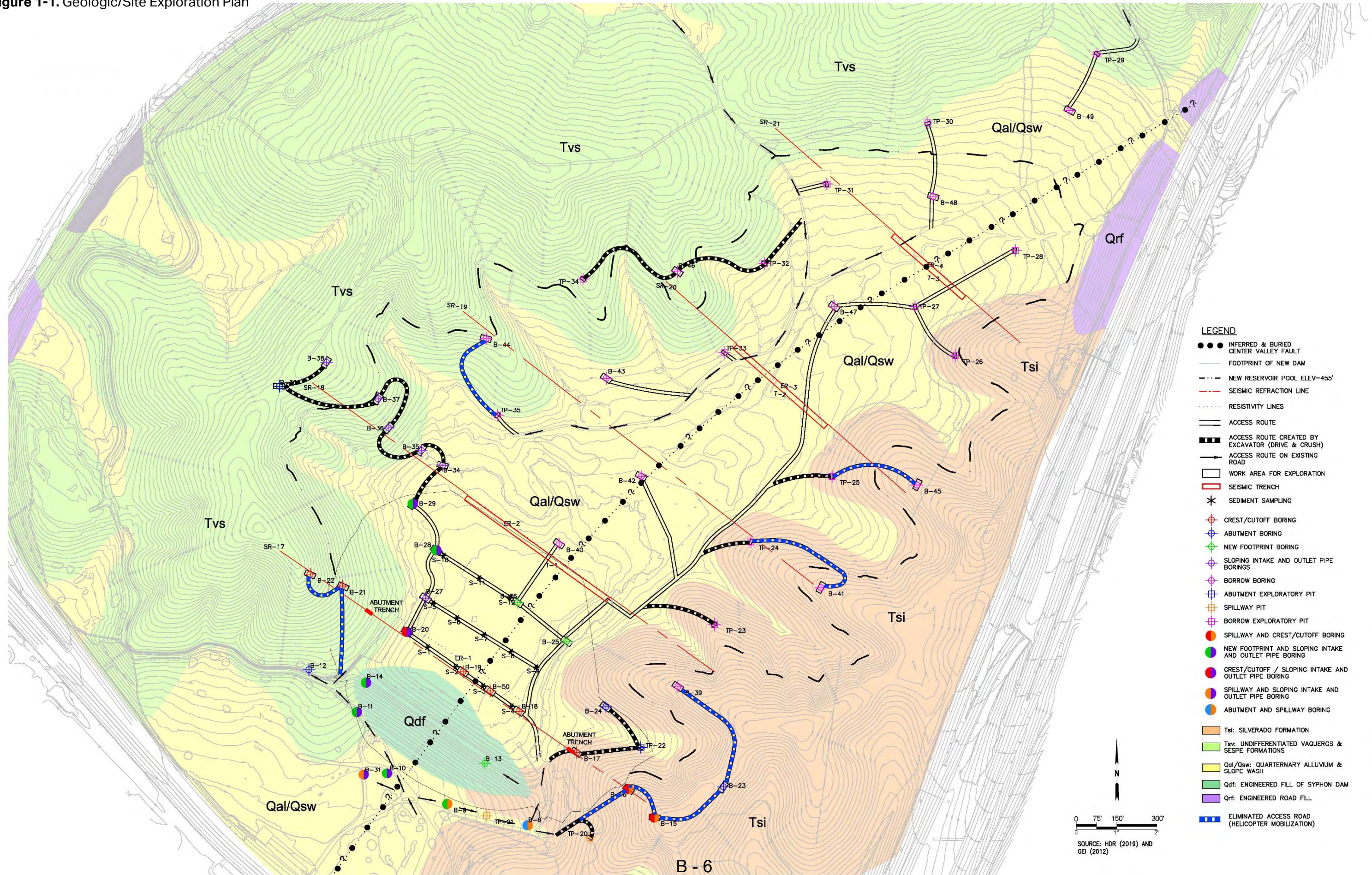
- Twenty-seven (27) borings with stem auger to bedrock and HQ core drilling in bedrock (from 40 to 270 feet in depth)
- Fourteen (14) hollow stem auger borings (from 25 to 80 feet deep)
- Twelve (12) hand auger borings (from 5 to 15 feet deep) to obtain sediment samples of lake deposits.

In addition, 9 piezometers will be installed (B-9, B-16, B-17, B-21, B-34, B-42, B-47, B-48, and B-49); 26 downhole geophysical surveys (including natural gamma ray, electrical resistivity, sonic logging, acoustic or optical televiewer) will be performed; and approximately 100 packer permeability tests will be completed. AECOM will adhere to the detailed description of the drilling and in-situ testing methodologies described in the GIWP.



1. AECOM's subcontractor, American Integrated Services (AIS), enhanced the road on the Trampas Canyon Dam – Recycled Water Reservoir project using drive-and-crush methods with an excavator. AIS removed vegetation from the road, but did not significantly cut or alter the native ground surface. **2.** The excavator assisted with mobilization and demobilization of the drill rig and all necessary equipment (i.e., drill rod, drilling materials, water tanks, tubs, etc.). **3.** Pumping from water truck parked at base of hill through a temporary water line to the drill site provided drill fluids.

Figure 1-1. Geologic/Site Exploration Plan



This section of our proposal presents our general plan for expeditious implementation of this complex component of the field investigation. The principal objective is to get all geotechnical drilling completed by mid-December 2019 so that geotechnical laboratory testing can be completed by mid-January 2020, and all geotechnical testing data will be available for submittal of the Geotechnical Data Report in early February 2020. Well and boring drilling permits will be obtained by AECOM prior to commencement of field investigations. We assume that field investigations will commence on September 3 (first access to the project site). The first field activity will be to stake the boring sites and access roads with IRWD/ESA environmental biologists and then immediately notify Underground Service Alert (dig alert) for utility clearance.

Ruen Drilling Inc. will serve as our subconsultant for core drilling and BC2 Inc. will be our subconsultant for hollow stem auger (HSA) borings. Shallow borings and sampling will be performed to characterize existing reservoir sediment for potential reuse within the dam core or spreading within a mitigation area. Because these sediments are likely to be saturated and have a very low bearing capacity, AECOM is proposing that the sampling be done by either an all-terrain hollow stem auger rig or a hand auger, depending on the condition of the reservoir bottom during the field program. If the reservoir bottom is sufficiently dry to support BC2's all-terrain (track-mounted) drill rig, then the sediment samples will be quickly obtained by HSA methods. Sheets of plywood can sometimes be used with the track rig to access particularly soft areas. Alternatively, the reservoir bottom might be too saturated to support a drill rig. If so, sediment samples can be obtained by hand auger. AECOM can deploy a two-man crew comprising an environmental geologist and an engineering geologist to obtain samples for both geotechnical and environmental sampling.

2.B.3 Test Pits

Test pits will be excavated at depths ranging from 10 to 20 feet to acquire the necessary information (i.e., depth to bedrock, bedrock and overburden characteristics for borrow characterization, slope stability). Bulk samples in five-gallon buckets will be collected of the various stratigraphic layers to provide for the various classification and engineering property testing that will be performed. We are anticipating that most or all the test pits will be backfilled the same day they are excavated and logged. However, our field crews will be prepared to cover the test pit should there be a reason to leave it open overnight. In the test pits where the objective is to determine depth to bedrock, and to collect soil samples for borrow characterization (TP-20, TP-21, TP-22, TP-27 and TP-28), the geologist will not enter the test pit, rather the test pit will be logged from the surface. In the test pits where the objective is to evaluate cut stability (TP-23 to TP-27 and TP-29 to TP-35), the test pit will be shore and/or benched as necessary to allow downhole logging.

American Integrated Services (AIS) will be our excavation contractor for the test pits, as well as for fault trenching and clearing access roads. As noted above, we intend to use an excavator rather than a bulldozer to establish the access paths to the test pit and some of the boring sites. Therefore, we can use the excavator to also do the test pits in conjunction with this activity. Because the access paths and test pit excavation will be conducted early during the field investigations, they will provide timely subsurface information that can be utilized for the geologic mapping task.

2.B.4 Miscellaneous Tests (Geophysics)

A comprehensive geophysical investigation program was proposed in the GIWP, including Seismic Refraction and Electrical Resistivity Surveys and downhole geophysical testing for selected borings, including natural gamma ray, electrical resistivity, acoustic velocity, and optical or acoustic televiwer. For the geophysical investigations, we selected GEOVision Inc., a full-service geophysical service company that offers high-quality geophysical data acquisition, analysis, and imaging services. GEOVision has on staff five registered geophysicists to rapidly respond when called. This will be particularly important when doing the downhole geophysics, as the completion of the borings will be reliant on the expeditious mobilization of the geophysicist to complete the geophysical survey.

Up to 26 downhole geophysical surveys will be performed. The downhole geophysical survey program outlined in the GIWP is very robust and there may be some opportunity to reduce the number of surveys without compromising the site characterization. Currently, there are 18 borings with optical/acoustic televiwer logs proposed, and 13 borings with natural gamma ray and electrical resistivity logs proposed. Depending on the complexity of the subsurface conditions, the core recovery, and the effectiveness of the downhole geophysical surveys, some of the optical/acoustic televiwer, natural gamma ray and electrical resistivity, surveys could be eliminated to reduce costs and improve schedule.

2.B. 5 Sample Logging, Collection and Storage

Soil sampling will be performed in accordance with the GIWP and applicable ASTM standards. Rock coring will be collected using diamond core techniques, photographed on site, and placed in core boxes. Soil samples and core boxes will be first taken to our geotechnical laboratory in Anaheim for cataloging and review. An engineering geologist will review the rock core with the field log, photograph the core boxes for the data report, and assign lab tests. A geotechnical engineer will review boring logs and soil samples and assign lab testing. We have a sample inventory and test tracking sheet for all samples, which is maintained on our server. Upon completion of the tests, all samples remaining will be taken to the site and stored in AECOM provided Conex shipping containers. AECOM will maintain a log of the samples collected at the site, so they can be readily retrieved and inspected, or tested further.

Task 2C Laboratory Testing Program

For this project, we propose to perform the laboratory testing described in the GIWP in our geotechnical laboratory in Anaheim, located about 20 minutes from Syphon Reservoir. Additional capacity will be provided by GMU's in-house geotechnical and materials laboratory in Rancho Santa Margarita, about 20 minutes from Syphon Reservoir.

The GIWP defines a substantial geotechnical test program; however, there are a few types of tests that are not included that we recommend doing to provide the Design Engineer with additional useful information. These tests are for corrosion potential and dispersive characteristics. The Design Engineer will eventually need to specify the type of cement to use in reinforced concrete for the spillway, inlet structure and other structures. To permit evaluation of corrosion potential we recommend tests be performed on representative samples of soil and rock that could be located adjacent to such structures. As a minimum, we recommend pH and resistivity of soil (Caltrans test method [CTM] 643), sulfate content (CTM 417), and chloride content (CTM 422); alternative test procedures could also be used.

The GIWP includes pinhole tests (ASTM D4647) to provide information for evaluating the dispersive characteristics of clay soils. Dispersive clays have caused failure of a number of earth dams, especially homogeneous dams. The pinhole test models the action of water flowing along a crack in an earth embankment and should be thought of as indicator of behavior rather than an absolute determiner. Other indirect tests are also used as indicator tests of clay dispersibility, such as the double hydrometer test (ASTM D4221), the crumb test (ASTM D6572), which relates the turbidity of a cloud of suspended clay colloids as an indicator of the clay dispersity, and chemical tests that relate the percentage of sodium to total soluble salt content of the soil. Thus, we recommend that the double hydrometer test and crumb test be performed on each sample on which a pinhole test is run to provide deeper insight to dispersive characteristics. The chemical tests for soluble salts are less frequently performed and are not recommended unless questions remain concerning the dispersive characteristics after performing the pinhole, double hydrometer and crumb tests.

Also, the feasibility exploration had limited data for characterizing the borrow materials strength when recompacted and used in the dam embankment. Typical borrow investigations are phased, with first delineating the subsurface materials and their key index properties when broken down as would occur during excavation, hauling, spreading and compaction. The key parameters are typically gradation and plasticity index. As a second step, we recommend creating composite samples that are blends of materials collected from the borrow and targeted to provide materials that represent the range of materials expected from the borrow on a volume basis. These are then compacted to the level expected during construction (typically 95 percent of ASTM D1557 or 98 percent of DWR S-10 for this height of dam) and tested for strength, permeability, compressibility, gradation, plasticity index and dispersive characteristics. Three composite samples will be prepared and tested. This will provide the Design Engineer with an accounting of the materials available in each borrow area and the parameters to use for design of the embankment zonation.

We also propose to collect two block samples and to perform specialized testing to the investigation program that can support the engineering design of the reservoir and borrow area grading. The stability of the reservoir slopes is critically important as it impacts the borrow available for construction, as well as reservoir storage and water quality. We used block sample collection and testing very successfully at Trampas Canyon Dam – Recycled Water Reservoir (see inset photos). We selected areas of soft bedrock to carve block samples that were then trimmed in the lab to perform triaxial compression and direct shear testing. These data were particularly helpful in discussions with DSOD. We also propose to run selected ring shear testing of claystone beds as they provide input to stability analyses.

These data will resolve the stability issue as soon as possible so reservoir grading can be designed. The borrow and reservoir side slopes are critical to the volume of materials, water quality, and reservoir storage. The current feasibility slopes are very conservative (flat) and steepened slopes will be a significant benefit to the project.



1-2. At Trampas Canyon Dam – Recycled Water Reservoir, AECOM gathered a carving block sample of bedrock for lab testing. 3. Preparing specimens in lab for engineering property testing.

AECOM also proposes to perform two exploratory trenches at the dam abutments. The trenches will be approximately 30 feet long and penetrate to potential dam foundation depths. The trenches will be mapped and sampled, including two carved block samples for strength and permeability testing. We will also invite our technical reviewers to visit the trenches to provide their opinion of the rock with a focus on providing input that can be used by the Design Engineer to create foundation objectives. DSOD will also be invited to observe the trenches. Our Lead Geologist will make a field presentation to DSOD.

Another important issue the Design Engineer will face is the delineation of the foundation excavation for the dam. We propose to perform Cone Penetrometer Tests (CPTs) to better map the dam foundation materials. The CPT is a relatively economical method of exploration compared with borings, so the number of exploration points can be increased, and the uncertainty of the foundation excavation decreased. This will improve Design Engineer's ability to address key design issues such as dam foundation preparation and determining the depth and foundation conditions.

Another important issue is the erosion and piping potential of the dam and spillway foundations. These are considered critical aspects of the dam and foundation of appurtenant structure design. After the spillway failure at Oroville the DSOD has focused on this issue. AECOM has recently incorporated the DSOD concerns in the design of the Trampas Canyon Dam – Recycled Water Reservoir project and condition assessments in spillways at Lake Mathews, Lake Skinner, and Vail Dam. Our investigation and testing will include collection of the types of data important to the evaluation of erosion and piping. These evaluations can be used in a Potential Failure Modes Analysis (PFMA). A PFMA during design is a tool for focusing the design on key elements and driving down risk of failure. For bedrock, we will obtain geologic structure and strength data that can be used in an erodibility study. For the embankment materials we will collect data on the gradation and dispersion potential that can be used for design of the dam's filter and drain zones. Our geotechnical laboratory in Anaheim has the ability to perform pinhole, double hydrometer, and crumb testing for dispersion potential. These tests will provide data to address a critical design issue for the dam. If erosion or piping is an issue, it can be addressed proactively by the Design Engineer.

Computation of shrinkage and bulking factors for potential borrow materials is another important design and construction cost issue. Calculation of these factors requires knowledge of the in-situ dry density and the design maximum dry density. The GIWP includes some tests to measure the maximum dry density but does not include any in-situ dry density tests. We speculate that the reason no dry density tests are included in the GIWP is because modified California samples are generally fairly disturbed and do not yield reliable values of density, and SPT samples should not be used at all for density testing. In-situ density tests would yield density values with high reliability and could be used to compute reliable shrinkage/bulking factors for potential borrow materials, which will help demonstrate that borrow materials are sufficient and improve the construction cost estimate. We propose to perform in-situ density tests in the test pits to obtain this data in the various material tests (e.g., alluvium, bedrock formations, and residual soil/slope wash). Provides Design Engineer with data necessary to compute shrinkage/bulking factors, enabling a better evaluation of these factors and determination of the material distribution and construction cost.

Task 2D Geotechnical Data Report (GDR)

The GDR will be a comprehensive, well-organized compilation of all the geotechnical data acquired during the upcoming Geotechnical Investigation and previous site investigations, with a succinct but comprehensive summary of the equipment and methodology used. We intend to provide all the information possible that could be useful to the Design Engineer. We will endeavor to provide critical information, such as the energy efficiency ratio of the hammer used to drive the soil samplers, which is needed to correct the field-measured blow counts used to estimate soil strength, and for other purposes. AECOM will implement our QMS throughout the project to ensure consistent quality control for all project phases.

The QMS is certified to the ISO 9001:2008 standard and is required on all our projects. Each project calculation will undergo a detail checking review. Each project report and technical memorandum will undergo an independent technical review and detail checking review. The independent technical reviews will be performed by experts in the subject matter who have not been involved in preparation of the deliverable. The detail checking review will focus on consistency of content, clarity, grammar, spelling and notes. The detail checker will verify that the bookmarked, searchable PDF file has been properly assembled. AECOM will provide IRWD with review comment disposition forms, redlines, redline back-checks, and QMS forms upon request.

Task 2E Seismic Hazard Assessment

2.E.1 Center Valley Fault Activity and Rupture Potential

AECOM understands that the informally named "Center Valley fault" is an inferred fault buried by Quaternary alluvium in the reservoir valley. It is the western part of a curved fault trace shown on regional geologic maps (see geologic map below) that is estimated to have displacement of a few thousand feet. The unnamed curved fault is generally accepted to be an inactive fault that is not capable of renewed rupture. However, its inferred presence beneath the proposed

new dam requires that the site characterization include a thorough investigation to unequivocally demonstrate inactivity.

AECOM believes that the first step of the fault investigation should be to verify the regional geologic mapping that necessitates the existence of the fault in the valley. The geologic mapping that shows the fault originated in the 1950s (Schoellhamer et al. 1954) and it has been carried forward on more recent regional maps that are mostly a compilation of the previous mapping with minor modifications (Tan et al. 1978, Morton and Miller, 1981, Morton and Miller, 2006). The regional mapping shows Paleocene age Silverado Formation on the east rim of the reservoir against upper Eocene to Miocene Vaqueros/Sespe Formation on the west side of the reservoir. Juxtaposition of the Paleocene age rocks against the upper Eocene to Miocene age rocks necessitates the existence of an up to the east fault somewhere beneath the reservoir valley alluvium.

AECOM recognizes that Silverado Formation and the undifferentiated Vaqueros/Sespe formations are grossly similar in that they are both weakly lithified, predominantly sandstone units with subordinate siltstone, claystone, and conglomerate beds.

We also recognize that the bedrock hills comprising the reservoir area are poorly exposed (bedrock outcrops are not prevalent). Therefore, there is some possibility that inaccuracies on the regional mapping could have led to the erroneous placement of the western limits of the unnamed curved fault (the Center Valley fault) in the reservoir valley. Detailed, project-specific geologic mapping should be performed to confirm that the fault exists as previously shown on published regional maps.

If the fault exists in the reservoir valley as inferred, then the ultimate objective of the investigation will be to evaluate its activity with trenching, in accordance with DSOD fault activity criterion. If it appears that the fault does not exist in the valley, trenching will still be necessary to confirm its absence. AECOM's fault investigation will be subdivided into three sequential tasks, which we refer to as the pre-trenching, fault trenching, and angled boring tasks.

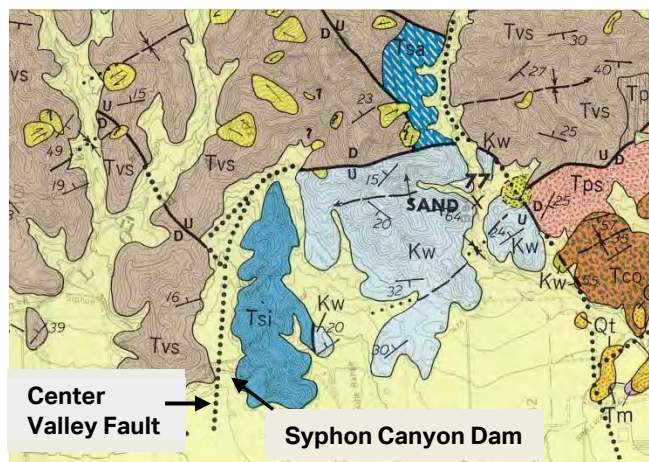
Pre-Trenching

The pre-trenching task of the fault investigation will involve a literature review, aerial photograph analysis, geologic mapping, two exploration test pits at the trench site and preliminary review of the findings from selected geotechnical borings and test pits. AECOM believes there is little to no geomorphic expression of the fault and, therefore, the geologic mapping activities will primarily be focused on finding or ruling out alternative locations for the fault. It is plausible that the curved fault "escapes" the reservoir valley to the west through a saddle in the west rim and that the bedrock comprising the northwest ridge is actually Silverado Formation, rather than undifferentiated Vaqueros/Sespe as shown on published geologic maps. Detailed mapping of the reservoir ridges, along with logging of geotechnical test pits and borings will help answer these questions (to facilitate understanding of the geologic formations and locations of geologic contacts at the reservoir site). It would be the intent of this task to either verify or modify the geologic contact on the regional mapping that shows the contact between the Silverado Formation and the undifferentiated Vaqueros/Sespe going through the center of the valley. AECOM will investigate the possibility that the western extent of the curved fault actually does not go through the reservoir valley, rather it cuts beneath the adjacent valley to the west of the northwest ridge.

The seismic refraction and electrical resistivity survey lines will also be completed prior to any fault trenching. The seismic refraction lines will investigate the possibility that the Center Valley fault is manifested in the subsurface by either buried bedrock scarps, or deep incision along the fault line from preferential erosion. Electrical resistivity surveys will also be done to test the possibility that the Silverado and the Vaqueros/Sespe Formations have varying resistivity signatures. If so, the electrical resistivity surveys could be useful for mapping the location of the fault contact between the Silverado and Vaqueros/Sespe formations beneath the valley alluvium.

Five northwest to southeast trending seismic refraction (SR) lines (SR-17 through SR-21), ranging from 1000 feet to 1800 feet long, will be done at various locations across the reservoir valley to evaluate the depth of bedrock, bedrock rippability and weathering, and to help locate the Center Valley fault. The SR lines will be completed in accordance with all specifications noted in the GIWP (e.g., a resolution depth of at least 50 feet below the top of rock). The seismic refraction models (profiles) will be analyzed for evidence that is suggestive of subsurface faulting.

Four electrical resistivity (ER) surveys (ER-1 through ER-4, ranging from 500 to 1,000 feet in length) will also be done at



Detailed, project-specific geologic mapping will be performed to confirm that the fault exists as previously shown on published regional maps.

various locations across the reservoir valley to assess the possibility that there are changes in soil or bedrock resistivity across the Center Valley fault. The ER lines will be completed in accordance with all specifications noted in the GIWP (e.g., a resolution depth of at least 50 feet below the top of rock).

The SR and ER geophysical lines will be completed early in the investigation program so that this information can be utilized to plan the fault trenching investigation. The project geologist will collaborate with the geophysicist to carefully analyze the geophysical data and present the findings in the "Seismic Trenching Plan," which will be prepared to justify the proposed locations, orientations, and methods (i.e., benching and/or shoring plan) of the trench excavation.

Two test pits will be excavated at the trench site to evaluate the soil characteristics and the depth to bedrock and groundwater. This pre-trenching activity will provide important information for planning the trenching investigation. For example, based on the soil characteristics, AECOM will determine if a benched trench, a single-slot shored trench, or a combination benched/shored trench will be the most efficient means of exposing the alluvium and bedrock across the presumed fault. It will also allow for a determination of the need for dewatering to afford a dry fault trench.

The pre-trenching investigations will also include a review of selected test pits and borings performed as part of tasks 2.B.2 and 2.B.3, which will provide valuable insight on the distribution of the bedrock formations and, therefore, the location of the fault. The information gathered from these activities will be summarized in a "Seismic Trenching Plan," which will be prepared to justify the proposed locations, orientations, and methods of the trench excavation (i.e., benching and/or shoring plan).

Trenching Investigation

In accordance with the methodology outlined in the "Seismic Trenching Plan," the trenching activities will be performed to attain the unequivocal evidence regarding the existence, location and activity of the fault. Depending on the characteristics of the soils and depth to bedrock at the trench site (Trench Site 2), the fault trench will be benched and/or shored in accordance with OSHA standards to allow safe entry of geologic personnel to log the trench. Based on existing data, significant groundwater in Trench T-2 is not anticipated. Therefore only incidental dewatering using sump pumps is included in the scope. Trenching will be performed by a team of geologists led by our Lead Engineering Geologist, Chris Goetz. The team will assist with placement of shoring, cleaning of trench walls, photographing and logging the trench at a scale of 1" = 5' in accordance with all provisions outlined in the GIWP. Upon exposure of subsurface soils that are either cut or overlain by the fault, AECOM's subconsultant, Professor Tom Rockwell (San Diego State University), will visit the trench site to observe and collect data regarding pedogenic soil development. Dr. Rockwell, who is a recognized expert on pedogenic age dating, will provide estimates of the age of the alluvial soils. He will also assist with the collection of samples for Optically Stimulated Luminescence (OSL) and radiocarbon age dating. Professor Lewis Owen (University of Cincinnati) will perform the OSL dating. If samples suitable for radiocarbon dating are encountered (charcoal or organic sediments suitable for Accelerator Mass Spectrometry dating), they will be collected and submitted to Beta Analytical, a commercial laboratory that specializes in radiocarbon age dating. Dr. Rockwell will prepare a letter report that will provide estimates of the age of the soils based on pedogenic development and the acquired OSL and radiocarbon dates.

The GIWP suggests that the T-2 fault trench might only be 100 feet long. Depending on the findings of the 100-foot long fault trench, it may be necessary to lengthen the trench to unequivocally demonstrate activity and location of the fault. AECOM anticipates that up to 500 feet of fault trench might be necessary at the T-2 trench site. Therefore, Option 6 provides for additional fault trenching at the T-2 trench site. As we have done for all fault trenching investigations involving dam projects, AECOM will extend an invitation to DSOD to visit the trench during the logging. During this site visit, we will endeavor to reach a mutual understanding with DSOD regarding the findings of the investigation. If DSOD has any concerns or further requests regarding the trench investigation, we will continue the subsurface investigation as necessary prior to backfilling the trench. AECOM believes that this approach of reaching a consensus in the field prior to preparation of the fault report will ensure acceptance by DSOD of the fault report findings and conclusions.

Angled Boring

In the event that the Center Valley fault is found to be active or conditionally active, it will be important to locate the fault in the footprint of the proposed dam. Locating the fault in the dam footprint by trenching will be impractical due to the presence of thick and saturated alluvial soils immediately upstream of the existing dam and the presence of underground utilities immediately downstream of the dam. Therefore, drilling an angled core boring designed to intercept the fault in the subsurface below the proposed new dam axis is considered the best approach to locating the fault. At this time, the angled boring (B-50) is proposed to be drilled at a 30-degree angle from vertical towards the left abutment. Final location and angle of the core boring will be decided upon completion of the fault trenching. The angled boring will include downhole geophysical testing, including optical or acoustic televiewer, natural gamma ray and electrical resistivity survey in the cored portion of the borehole. The borehole will also be equipped with a vibrating wire piezometer in the fault zone, assuming that the fault is encountered.

2.E.2 and 2.E.3 Deterministic and Probabilistic Seismic Hazard Analyses

Review of Previous Seismic Hazard Studies

AECOM will review the available geologic and seismic hazard studies performed for the project site. In addition, pertinent published and unpublished fault studies will be reviewed for incorporation into the seismic hazard analysis.

Evaluation of Historical and Contemporary Seismicity

The historical and contemporary regional seismicity will be evaluated based on an updated seismicity catalog. Historical ground shaking at the project site from past events will be evaluated. Recurrence rates of the historical seismicity for defined regional seismic source zones will be determined for input into the probabilistic seismic hazard analysis (PSHA). A background seismicity source will be defined for use in the PSHA.

Evaluation of Site Velocity

One of the several input parameters is the time-averaged shear-wave velocity in the upper 30 m (V_{s30}) of the foundation material. The appropriate value will be determined from available geophysical and geologic data, and especially the P-S suspension data acquired by GEOVision for the Feasibility Study and the P-S suspension data that we propose GEOVision acquire for the current geotechnical investigation. Note that the value of V_{s30} is not unique for a site; i.e., a reference level for the top of the 30-meter interval needs to be selected to suit the application and the analysis methodology. Our experience as dam designers will enable us to select an appropriate reference level. We may also use a range of values to ensure that the structure response analysis is robust.

Deterministic Seismic Hazard Analysis

A deterministic seismic hazard analysis (DSHA) will be performed for the most significant seismic sources to the project site using the 2014 NGA-West2 GMPEs.

Sources to be considered include, but are not limited to, the San Joaquin Hills, Elsinore, Chino, Newport- Inglewood-Rose Canyon, Puente Hills, San Jacinto, Peralta Hills and San Andreas faults. Maximum magnitudes will be determined by utilizing the magnitude-rupture area relationships of Field et al. (2013). The ground motions from the controlling deterministic earthquakes will be compared with the uniform hazard spectra from the PSHA.

Probabilistic Seismic Hazard Analysis

Based on the AECOM seismic source model for the southern California region, which includes all significant sources within 100 km of the project site, the 2014 NGA-West2 GMPEs, and the V_{s30} for the foundation material, we will calculate site-specific probabilistic ground motions and develop uniform hazard spectra for return periods of 1,000, 2,000, 5,000, 10,000, 20,000, and 50,000 years. The AECOM Southern California seismic source model consists of the source parameters from the 2008 and 2012 California Geological Survey (CGS)/U.S. Geological Survey (USGS) seismic source models for California. The model has been checked against the Uniform California Earthquake Rupture Forecast version 3 (UCERF3) model parameters (Field et al., 2013) to verify that the model is consistent with the parameters that will impact the hazard at the site. We have explicitly incorporated the uncertainties in each parameter through the use of logic trees. Seismic hazard curves at peak ground acceleration (PGA) and spectral accelerations (SA) at periods of 0.0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.75, 1.0, 1.5, 2.0, 3.0, 4.0, and 5.0 seconds will be presented, as will the contribution from the various seismic sources.

Magnitude-distance-epsilon deaggregation of the seismic hazard at PGA (period 0.0 seconds) and SA at periods of 0.2, 0.5, 0.75, 1.0, 1.5 and 2.0 seconds for each ground motion prediction model and each return period will be presented. The results of the PSHA could be used by the Design Engineer in a risk analysis during the design of the dam to demonstrate the conservatism and safety of the design.

Time Histories Development

Seven horizontal two-component time histories will be spectrally matched to: 1) the UHS at the design earthquake hazard level (to be determined based on DSHA); and, 2) conventional DSOD design deterministic spectrum. Seed time histories will be selected from the NGA database and screened for magnitude, style of faulting, distance to site, Arias intensity, and duration.

Seismic Hazard Assessment Report

AECOM will prepare a technical memorandum (TM) summarizing the results and findings of the Center Valley fault investigation, the DSHA, and the PSHA. With regard to the surface fault rupture hazard, the TM will provide conclusions regarding the location, activity and rupture potential of the Center Valley fault. It will provide our conclusion as to whether or not the inferred fault is located in the valley. If it is located in the valley, the TM will provide our conclusion regarding its activity in accordance with DSOD activity criteria. If the fault is located in the valley, it will also provide our conclusions regarding where it crosses the footprint of the dam. If the fault is found to be active and cutting through the dam footprint, an estimate of the horizontal and vertical slip per event will be provided so that the dam Design Engineer can develop mitigation concepts to address the surface fault rupture potential. If active, we propose to perform a Probabilistic Fault Displacement Hazard Analysis (PFDHA). This can be used during design in a risk analysis

for rupture potential and magnitude of rupture.

The TM will include all the supporting geologic data, including surface geophysics, the fault trench log and photographs, the log of angled boring B-50, and the logs of select borings and test pits (if used in reaching conclusions concerning the fault), as well as any other information that was used to reach the conclusions concerning the Center Valley fault.

With regard to the deterministic ground shaking hazard, the TM will provide a discussion of the DSHA methodology; the basis for the selected value of Vs30 used in the GMPEs; the faults in the site region that are considered active or conditionally active under DSOD criteria; the choice of the uncertainty level assumed (i.e., median values, median plus one-half standard error term or median plus one standard error term [84th percentile]) in the GMPEs for each fault, and the DSHA results that update the 2012 DSHA.

With regard to the probabilistic ground shaking hazard, the TM will provide a discussion of the DSHA methodology; all significant Quaternary seismic sources in the site region (100 km radius minimum); historical seismicity; documentation of the relevant characteristics of the active and potentially active seismic sources, including the background seismic source; discussion of any judgments that need to be made due to conflicting studies or unclear or incomplete information; and, all the pseudo acceleration response spectral values and curves, deaggregation information, and acceleration-time histories specified in the RFP. As noted above, we proposed to provide seven acceleration-time histories.

Discussion of the selected value of Vs30 used in the GMPEs will refer to the DSHA discussion. For each of the draft and final TM, we will provide five printed copies and one electronic copy in Adobe Systems Incorporated® Portable Document Format™ (PDF).

Task 2F Street Sweeping

Primary access to the project site will be through a shared road with the Crean Lutheran High School. Throughout the duration of the field work, AECOM will ensure that the access road remains free of dirt and debris tracked beyond the limits of the reservoir site. Should any track out occur at any time, as identified by either IRWD or the Crean Lutheran High School, AECOM will immediately provide street sweeping services to remove the tracked-out dirt and debris. At a minimum, the access road will be swept once per week for each week that exploration is ongoing. We also recommend adding rumble strips at all entrances to the site, which will help to remove dirt from vehicle tires.

3.0 Alternative Approaches and Optional Scope of Services

AECOM has developed the following alternative approaches for IRWD’s consideration. These are summarized in **Table 1-2**, including the unique benefit of each option.

Table 1-2. Summary of Alternative Approaches and Optional Scope of Services

Option	Optional Approach	Reduces Environmental Disturbance	Schedule	Reduces Cost	Reduces Risk (cost and schedule for final project)	Increases Dam Safety	Improves Data Quality for Design
1	Not Used						
2	Identify Sufficient Borrow Material				●	●	●
3	Modify Seismic Refraction Program					●	●
4	Perform Probabilistic Fault Displacement Hazard Analysis				●	●	●
5	Prepare Geotechnical Interpretive Report				●	●	●
6	Additional Fault Trenching at T-2				●	●	●
7	Dewatering for the T-2 Trenching				●	●	●
8	Fault Trench at T-3				●	●	●

9	Data Loggers	:	:	:	•	•	•
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Option 1 – Not used

Not used

Option 2– Identify sufficient borrow material

The 2012 Feasibility Study identified less borrow material than was needed to construct the proposed dam. Normally, exploration at the feasibility level should identify at least twice the required quantity of each material. This apparent surplus is needed to protect against the risk of some material that is thought to be useful proving to be, in fact, not usable or usable only at great cost. Failure to identify sufficient borrow material could be a significant issue for the Design Engineer, requiring the need to conduct an additional geotechnical investigation to prove out additional material. At the geotechnical investigation stage, we suggest that at least 50 percent more borrow than is thought to be needed should be available at a reasonable cost.

In this optional task, AECOM proposes to evaluate the borrow exploration data, delineate three-dimensional zones of credible borrow material, and compute the available material using Civil 3D for comparison with the quantity required according to the Feasibility Study or an alternative model.

Note that the 2012 Feasibility Study proposed a reservoir grading that resulted in a reservoir that is relatively narrow at lower reservoir stages, with a large flat area at elevation 330 feet, and with deep (almost 60 feet) excavations in the upper part of the reservoir, conditions which may not be conducive to good water quality or controlling evaporation losses. We have some different ideas about the manner in which the reservoir might be graded to enhance water quality. In part, this stems from our belief that the 4:1 (horizontal to vertical) slopes assumed for reservoir grading are too conservative (a point that is proven at the dam abutments by natural slope inclinations that approach 3:1 and even 2.5:1 in areas).

BENEFIT Reduces schedule extension and supports DSOD reviews. The Design Engineer will have a greater understanding of where borrow material can be obtained and reduce the likelihood that additional geotechnical exploration to identify additional borrow will be needed.

Option 3 – Modify seismic refraction program

There will be some challenges to the seismic refraction program presented by the site geologic conditions. The RFP specifies refraction but does not specify P-wave or S-wave. Unless specifically stated, the typical assumption is P-wave refraction, as it is the most common and less expensive. Furthermore, the RFP references ASTM D5777, which is essentially a P-wave refraction guideline. The anticipated challenge associated with P-wave measurements is that it will likely measure the refractor at the water table (water velocity, which is 5,000 fps or more). The team will not be able to see another refractor until rock velocities at least 20% higher than water velocity are reached, and even then the depth will be distorted. There could be difficulties with accessing some of the lines with a strong seismic source. Depending on access constraints due to soft ground in saturated reservoir sediment, it may be problematic for the geophysicists to mobilize their Accelerated Weight Drop (AWD) to some of the seismic lines. This would require that they use sledge hammers and "Betsey" percussion rods that will not be able to image as deep. Collectively, the likelihood of a shallow groundwater table and access limitation could result in a P-wave refraction profile that only would reflect the groundwater table. The plan is to do P-wave refraction as specified on all the lines, using sledge hammers as best we can. It will work well on lines SR-20 and SR-21, and maybe even SR-19, and definitely give the rippability information for the abutments of the new dam (i.e., the steep hills).

For the sedimented basin (lines SR-17, SR-18, and SR-19), we are proposing a couple of options to penetrate below the ground water table:

1. S-wave refraction
2. P-wave reflection with hammers and plates

To decide which option will work best, AECOM suggests one day of testing. P-wave reflection requires good reflectors in the sedimentary rock. Hammer reflection may only penetrate 100 feet due to absorption in the soft layer, so it would be anticipated that some good reflectors would be in that range. S-wave refraction would see either a velocity contrast across the fault (probably not the case) or, possibly a step on the bedrock surface fault (fault scarp).

There is also some concern that the electrical resistivity lines may be too short to adequately image 50 feet below the top of rock for the entire length

of the proposed lines. Resistivity lines require that their lengths be five times the depth. The 2-dimensional profile will be a trapezoid (full depth in the middle of the profile and tapering towards its ends). Because full depth may not be attained at the ends of the line, it is important that the lines be sufficiently long to address the possibility that the Center Valley fault might

not be in the center of the valley. We recommend that the resistivity lines be lengthened to the same lengths as the seismic refraction lines to provide adequate depth for the full width of the valley. This would add one extra day to the field

BENEFIT Improves feasibility of obtaining desired data.

investigation and no added cost for analyses.

Option 4 – Perform a Probabilistic Fault Displacement Hazard Analysis (PFDHA)

If the investigation of the Center Valley fault determines that the fault is active or could be subject to sympathetic fault rupture potential (an inactive fault displaces due to the rupture on a nearby active fault), we would propose to perform a PFDHA. The methodology is well developed, and our seismologists are practical leaders in this type of analysis. This type of analysis produces a probability of a magnitude of fault rupture potential. This can be expressed as a displacement versus return period, so it can be coordinated with the results of the PSHA. It can also provide the Design Engineer with values of displacement to consider in design and provide input to a risk analysis during design.

BENEFIT Improves understanding of potential risk and provides the Design Engineer with value of displacement to consider during design. Supports DSOD review.

Option 5 – Prepare a Geotechnical Interpretative Report

Raw geotechnical data can be difficult to build into a model of site conditions. The GDR may not transfer some information residing in the minds of the geologists and geotechnical engineers to the eventual Design Engineer. As an optional task, AECOM could provide a geotechnical interpretative report that provides cross sections and a description of site conditions as perceived by the Geotechnical Consultant. (Note that this is not intended to be a Geotechnical Baseline Report, which can only be prepared by the Design Engineer, though it could function as a point of departure for a GBR.)

BENEFIT Ensure IRWD and the Design Engineer have an enhanced understanding of site conditions. Reduces the time for the Design Engineer to understand site conditions, which may improve the design schedule. In addition, the fees proposed for the design phase may be reduced due to proposing firms having an improved understanding of site conditions.

Option 6 – Additional Fault Trenching at T-2

The GIWP suggests that the T-2 fault trench might only be 100 feet long. Depending on the findings of the 100-foot long fault trench it may be necessary to lengthen the trench to unequivocally demonstrate activity and location of the fault. AECOM anticipates that up to 500 feet of fault trench might be necessary at the T-2 trench site. Therefore, Option 6 provides for additional fault trenching at the T-2 trench site ranging from 100 to 400 additional footage in 100-foot increments. The option assumes that the need for additional trenching will be determined upon excavation of the initial 100-foot long trench (prior to backfilling) and will not require additional mobilizations.

BENEFIT Trenching across most, or all the valley alluvium will provide information regarding the structural complexity of the Center Valley fault. Also if the fault is not encountered in the 100 foot long trench there is some possibility that the fault does not exist in the reservoir valley. Only a 500-foot long trench will be able to demonstrate that possibility.

Option 7 – Dewatering for the T-2 Trenching

Should shallow groundwater be present at the T-2 trench site it may be necessary to do some dewatering to facilitate logging of the trench in the dry. Groundwater is unlikely in the higher sides of the drainage channel, but the central 200 feet of trench might have seepage near the bedrock contact or from isolated perched layers. From the preliminary investigations we anticipate that the alluvium is predominantly clayey sand and that groundwater is clean and can be discharged via overland flow or into an existing stream channel while the trench is open, and no permits are needed for the temporary discharge. Based on existing data, it is possible no groundwater will be encountered in a trench excavated several feet below bedrock, particularly if the reservoir is dewatered. However, if groundwater is present it may range from local perched water (limited inflow that quickly drains) or only a small thickness of groundwater in the deepest part of the

trench – both conditions that could easily be controlled inside the trench with sump pumps – or more significant groundwater flow may be present that requires dewatering (e.g. upstream well points) to prevent groundwater entering and destabilizing the trench. We propose excavating test pits prior to excavating the full fault trench to confirm actual conditions. However, for budgeting purposes we have costed a dewatering option to address the occurrence of a high groundwater table or persistent perched groundwater. The optional dewatering task includes the following;

- Up to five (5) well points drilled to 25 feet below ground, spaced up to 50 foot intervals.
- Dewatering points to be 12-inch dia. holes with 6-inch slotted PVC installed in bottom 10 feet and a gravel pack filling the annulus.

- Install a sump pump in each sump capable of pumping up to 10 gpm, with 100 ft long flexible discharge hoses.

BENEFIT Improves the feasibility of completing the T-2 trench under dry conditions should groundwater be present near the base of the alluvium.

- Provide suitable portable generator to run sump pumps.

Option 8 – Additional Fault Trenching for Trench T-3

Depending on the findings of the T-2 trenching it may be advantageous to do the T-3 trenching to further constrain the location and activity of the fault. Option 8 provides for fault trenching at the T-3 trench site ranging from 100 to 500 feet long, in 100-foot increments. For the T-3 trenching we have assumed that a separate mobilization would be necessary. This would allow for some review of the T-2 trench findings by the project team and the regulatory agency (DSOD) to determine the necessity of additional trenching. We have provided costs for the T-3 trench to be as long as 500 feet.

BENEFIT Strengthens the findings and conclusions reached from the T-2 trenching. The T-3 trenching might be necessary if the exposures in the T-2 trench provide ambiguous information. Also, if the T-2 trench findings suggest that the Center Valley fault is active, it might be advantageous to complete the T-3 trench to provide additional information to develop fault slip per event parameters for dam design.

Option 9 – Data Loggers (line of sight wireless) in 9 Piezometers

This option includes a data logger installed at the ground surface of every vibrating wire piezometer. The data logger would be covered using a fiberglass tube enclosure that would protect the logger from the weather. A small radio antenna would be placed on top of the data logger. With this option, the data can be collected from a distance, such as at a vehicle parked within line of sight of the data logger.

BENEFIT Provides for efficient retrieval of data without the need to hike to remote piezometer sites.

Estimated Cost Breakdown of Total Fee

Irvine Ranch Water District

Syphon Reservoir Improvement Project

July 5, 2019

Task No.	Task Description	Labor Category with Billing Rate											Total Hours	Total Labor, \$	Subcontract Amount,\$ (see next sheet for breakdown)	Direct Costs / Materials, \$ ¹	TOTAL, \$	
		Senior Technical Reviewer	Project Manager	Principal Engineer/ Geologist	Senior Project Engineer/ Geologist	Project Engineer/ Geologist	Assistant Project Engineer/ Geologist	Senior Staff Engineer/ Geologist	Staff Engineer/ Geologist	CAD Designer	Project Controls Specialist	Admin / Clerical						
		\$290	\$250	\$235	\$190	\$155	\$130	\$118	\$87	\$87	\$110	\$95						
TASK 1: Project Management																		
A.	Preparation of Project Status Reports																	
	Team Management and Coordination		120										120	30,000				30,000
	Monitoring budget and schedule		35									70	105	16,450				16,450
	Review Invoices and Write Progress Reports		32										96	14,080				14,080
	Develop subcontracts		20									40	100	13,200				13,200
B.	Meetings and Workshops																	
	Kickoff Meeting (one 2-hour meeting)		10		20								30	6,300	1,500		14	7,814
	Progress Meetings (six 1-hour meetings)		30		30								60	13,200			84	13,284
	Site walk to review access with IRWD (one 4-hour meeting)				8								8	1,520			65	1,585
	Site Visits (four 2-hour meetings)				24								24	4,560			156	4,716
	Present Draft GDR (one 2-hour meeting)		3		42			8					53	9,674			14	9,688
	Present Draft SHA TM (one 2-hour meeting)		3		21	2							26	5,050			14	5,064
	Present Final GDR (one 2-hour meeting)		3		18			16					37	6,058			14	6,072
	Present Final SHA TM (one 2-hour meeting)		3		13	2							18	3,530			14	3,544
C.	Quality Assurance/Quality Control	46	16	16	57			178	4				317	53,282	4,400			57,682
D.	Project Schedule--Create and update		43		35								148	25,100				25,100
SUBTOTAL TASK 1		46	318	16	268	4		202	4				1,142	202,004	5,900		374	208,278
TASK 2: Geotechnical Data Collection																		
A.	Geologic Mapping				64								152	19,816			425	20,241
B.	Geotechnical Explorations	3	6	16	133	16	60	1099	320	12		12	1677	201,386	995,591	60,760		1,257,737
C.	Laboratory Testing				16		4	100	1				121	15,447	54,303	113,502		183,252
D.	Geotechnical Data Report (GDR)				96	86		260	148	49		8	647	80,149	37,280	3,890		121,319
E.	Seismic Hazard Assessment (SHA)																	
	1. Center Valley Fault Investigation				113	8			132	18			271	35,760	124,049			159,809
	2. and 3. Deterministic and probabilistic seismic hazard analyses (DSHA/P				6	114		8					128	19,754				19,754
	4. Seismic Hazard Assessment Technical Memorandum				8	4						8	20	2,900		1,320		4,220
F.	Street Sweeping During Exploration Phase															7,500		7,500
SUBTOTAL TASK 2		3	6	16	436	228	64	1467	689	79		28	3,016	375,212	1,211,223		187,397	1,773,832
TOTAL (TASKS 1 AND 2)		49	324	32	704	232	64	1,669	693	79		180	4,158	577,216	1,217,123		187,771	1,982,110
OPTIONAL TASKS: Additional Geotechnical Data Collection																		
1.	Not Used																	
2.	Prove out sufficient borrow material				16			80					96	12,480				12,480
3.	Modifications to the seismic refraction lines														37,650			37,650
4.	Probabilistic Fault Displacement Hazard Analysis – Center Valley fault	4			8	40							52	8,880		255		9,135
5.	Prepare a Geotechnical Interpretative Report	8	8	8	100	40	32		80	40			316	46,000		400		46,400
6.	Additional Fault Trenching at T-2 (additional 400 feet)				244				192	32			468	65,848	36,800			102,648
7.	Dewatering for the T-2 Trenching				4	8			20			4	36	4,180	32,100			36,280
8.	Fault Trenching at T-3				313	8			264	50			635	88,028	52,156			140,184
9.	Data Loggers (line of sight wireless) in 9 piezometers							60	65			2	127	12,925		9,025		21,950
SUBTOTAL OPTIONAL TASKS		12	8	8	685	96	32	140	621	122		4	1730	\$238,341	\$158,706		\$9,680	\$406,727
TOTAL (TASKS 1, 2 and Optional Tasks)		61	332	40	1,389	328	96	1,809	1,314	201		184	5,888	815,557	1,375,829		197,451	2,388,838

Notes & Assumptions:

1. Direct Costs / Materials include costs such as mileage to meetings/site, AECOM-leased or -rented vehicles when used on the job site, equipment rentals, courier fees, document reproduction, permit fee allowances, and geotechnical laboratory costs.
2. Amounts are displayed as whole numbers but are carried to nearest one cent to the bottom line.
3. Depending on field results, the angle boring may not be needed. In this event, as jointly determined by IRWD and ACEOM, a credit of \$49,143 will be applied.

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July 22, 2019

Prepared by: F. Sanchez

Submitted by: P. Weghorst

Approved by: Paul A. Cook



ACTION CALENDAR

JOINT POWERS AUTHORITY AGREEMENT FOR THE KERN FAN GROUNDWATER STORAGE PROJECT

SUMMARY:

To facilitate the design, construction and operation of the Kern Fan Groundwater Storage Project (Kern Fan Project), IRWD and Rosedale-Rio Bravo Water Storage District intend to form the Kern Fan Joint Powers Authority (Authority). Staff and IRWD's special legal counsel have worked to finalize an agreement that would form the Authority. The agreement was developed with input from the Supply Reliability Programs Committee as well as Rosedale and its legal counsel. At the Board meeting, staff will present an overview of the key terms of the Joint Powers Agreement. Staff recommends that the Board authorize the General Manager to execute the Joint Powers Agreement Between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District Creating the Kern Fan Joint Powers Authority to Develop and Administer a Kern Fan Groundwater Storage Project, subject to non-substantive changes and the General Manager's determination that reasonable assurances are in place that necessary agreements with the State of California related to the Kern Fan Project are feasible.

BACKGROUND:

Proposition 1, also known as the Water Quality, Supply and Infrastructure Improvement Act of 2014, dedicated \$2.7 billion for investments in new water storage projects through the Water Storage Investment Program (WSIP). In August 2017, IRWD and Rosedale jointly submitted an application to the California Water Commission (CWC) for the proposed Kern Fan Project with a request for \$86 million in WSIP grant funding. In July 2018, the CWC conditionally awarded \$67.5 million in grant funding to the project. To facilitate land acquisition, environmental review, permitting, design, construction and operations associated with the Kern Fan Project, IRWD and Rosedale intend to form the Kern Fan Joint Powers Authority through the execution of the Joint Powers Agreement described below.

Joint Powers Agreement:

In August 2018, IRWD's special legal counsel and staff reviewed a draft Joint Powers Agreement with the Supply Reliability Programs Committee. Based on feedback from the Committee, staff worked with Rosedale and respective legal counsel to prepare an updated draft agreement that was reviewed with the Committee in April 2019. Staff worked with Rosedale to continue refining the agreement and outstanding issues were reviewed with the Committee in June. Since then, staff has worked with Rosedale and respective legal counsel to address the outstanding issues, incorporate input from the Committee and to prepare the Joint Powers Agreement that is provided as Exhibit "A". On July 18, staff reviewed the following changes that were made to the agreement to resolve the outstanding issues:

- 1) *Disposition of Property*: Rosedale determined that IRWD would not need to detach its share of project property from Rosedale's service area in the event that the parties decide to terminate the agreement, nor would IRWD be required to separate water from the property should IRWD decide to farm the property. IRWD would be treated in the same manner as any other property owner within Rosedale's service area. This change is reflected in Section 1B.
- 2) *Indemnification*: Indemnification is provided on a pro-rata basis based on well pumping by IRWD and Rosedale. Costs would be allocated pursuant to the *Project Recovery Operations Plan Regarding Pioneer Project, Rosedale-Rio Bravo Water Storage District, and Kern Water Bank Authority Projects*. This change is reflected in Section 16 D.

At the Board meeting, staff will present an comprehensive overview of the key terms of the Joint Powers Agreement. Staff's presentation is attached as Exhibit "B".

FISCAL IMPACTS:

The CWC will provide \$67.5 million in WSIP funding through a grant agreement. IRWD and Rosedale will fund the remaining cost of the Kern Fan Project.

ENVIRONMENTAL COMPLIANCE:

A Final Environmental Impact Report (EIR) for the Stockdale Integrated Banking Project was prepared, certified and approved in compliance with California Environmental Quality Act (CEQA) of 1970 as amended, codified at California Public Resources Code Sections 21000 et seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. Rosedale, as lead agency, filed a Notice of Determination for the Stockdale Integrated Banking Project with the County of Kern. IRWD, as a responsible agency, filed Notices of Determination with the County of Orange and with the County of Kern. The EIR includes a program-level analysis of impacts of a third project site. This third project site is contemplated to be incorporated into phase one of the Kern Fan Project. When the third project site is identified, subsequent project-level environmental review will be necessary prior to implementation of phase one of the Kern Fan Project. It is expected that a new EIR will be required for the construction and operation of the second phase facilities contemplated in the proposed Kern Fan Project.

COMMITTEE STATUS:

This item was reviewed with the Supply Reliability Programs Committee at multiple meetings, most recently on July 18, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE JOINT POWERS AGREEMENT BETWEEN ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT AND IRVINE RANCH WATER DISTRICT CREATING THE KERN FAN JOINT POWERS AUTHORITY TO DEVELOP AND ADMINISTER A KERN FAN GROUNDWATER STORAGE PROJECT SUBJECT TO NON-SUBSTANTIVE CHANGES AND THE GENERAL MANAGER'S DETERMINATION THAT REASONABLE ASSURANCES ARE IN PLACE THAT NECESSARY AGREEMENTS WITH THE STATE OF CALIFORNIA RELATED TO THE KERN FAN PROJECT ARE FEASIBLE.

LIST OF EXHIBITS:

- Exhibit "A" – Draft Joint Powers Agreement Between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District Creating the Kern Fan Joint Powers Authority to Develop and Administer a Kern Fan Groundwater Storage Project
- Exhibit "B" – Draft PowerPoint Presentation on the Joint Powers Agreement for the Kern Fan Groundwater Storage Project

Exhibit "A"

DRAFT
JOINT POWERS AGREEMENT
BETWEEN
ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT
AND
IRVINE RANCH WATER DISTRICT
CREATING THE KERN FAN JOINT POWERS AUTHORITY
TO DEVELOP AND ADMINISTER
A KERN FAN GROUNDWATER STORAGE PROJECT

DRAFT
JOINT POWERS AGREEMENT
BETWEEN
ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT
AND
IRVINE RANCH WATER DISTRICT
CREATING THE KERN FAN JOINT POWERS AUTHORITY
TO DEVELOP AND ADMINISTER
A KERN FAN GROUNDWATER STORAGE PROJECT

THIS JOINT POWERS AGREEMENT ("Agreement") is made and entered into as of the Effective Date by and between the ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT ("RRB") and the IRVINE RANCH WATER DISTRICT ("IRWD") to form the KERN FAN JOINT POWERS AUTHORITY ("Authority") pursuant to the Joint Exercise of Powers Act of 1980 (Division 7, commencing with § 6500 of the California Government Code). RRB and IRWD are sometimes referred to individually as a "Party" and collectively as the "Parties."

RECITALS

A. RRB is a public agency organized in accordance with the California Water Storage District Law (Division 14, commencing with § 39000 of the California Water Code) for the purpose of acquiring, storing, distributing, and replenishing water supplies within its boundaries in Kern County, California.

B. IRWD is a public agency organized in accordance with the California Water District Law (Division 13, commencing with § 34000 of the California Water Code) to provide water services and certain other services. IRWD's powers and purposes include the acquisition within or outside the district in the State of all necessary property, water, and water rights for the production, storage, transmission, and distribution of water for irrigation, domestic, industrial, and municipal purposes and to provide and sell such water at wholesale and retail to customers within its boundaries in Orange County, California.

C. In 1959, RRB was formed to develop a groundwater recharge program to offset overdraft. The construction of the initial phases of the recharge program was completed in early 1962, and the facilities placed in operation shortly thereafter. Additional improvements to program recharge facilities have since been made, and RRB has acquired fee title to the properties on which the program facilities are located. The physical features of the recharge program include facilities to divert waters from the Kern River and the Cross Valley Canal facilities ("CVC") and RRB properties into the Goose Lake Slough and adjacent recharge basins.

D. To improve its water supplies, generate increased recharge capability and to provide operational flexibility, RRB has developed a program for the banking, storage, exchange, and direct delivery of water pursuant to the exercise of its powers ("RRB Conjunctive Use

Program"). The RRB Conjunctive Use Program involves the banking of imported water by customers ("RRB Program Participants") in the Kern County Sub-Basin of the San Joaquin Valley Groundwater Basin ("Groundwater Basin") for later delivery to said customers. RRB has developed and approved the RRB Conjunctive Use Program through various agreements and documents including, without limitation, an environmental impact report ("EIR") certified by RRB on July 17, 2001, and subsequent addenda thereto, pursuant to the California Environmental Quality Act ("CEQA"), Public Resource Code section 21000 et seq.

E. In 2004, IRWD acquired 611 acres of real property in Kern County, California, sometimes referred to as the "Strand Ranch property," lying adjacent to the southerly boundary of RRB. On January 13, 2009, RRB and IRWD entered into an "Agreement For A Water Banking and Exchange Program," as amended by Amendment No. 1, entered into on or about February 27, 2015 (collectively, "Strand Ranch Agreement") providing for the development and operation of a groundwater banking program on IRWD's Strand Ranch property, and the operation and integration of such program within the RRB Conjunctive Use Program ("Strand Ranch Integrated Banking Project").

F. Since 2004, RRB acquired an additional 230 acres of real property lying adjacent to the easterly boundary of the Strand Ranch property ("Stockdale East property"), and IRWD acquired an additional 323 acres of real property lying adjacent to the westerly boundary of the Strand Ranch property ("Stockdale West property"). On or about February 4, 2016, RRB and IRWD entered into an "Agreement for A Water Banking, Recovery and Exchange Program," as amended by Amendment No. 1, entered into on or about January 16, 2018 (collectively, "Stockdale Integrated Banking Project").

G. CEQA compliance for the Stockdale Integrated Banking Project has been completed. On December 8, 2015, RRB certified an EIR for the Stockdale Integrated Banking Project ("Stockdale Integrated Banking Project EIR"), and on December 14, 2015, IRWD approved the Stockdale Integrated Banking Project EIR as a responsible agency. The Stockdale Integrated Banking Project EIR provides a project-level effects analysis for the Stockdale Integrated Banking Project and provides a program-level analysis for a third project site of up to 640 acres within a 12,300-acre site radius analyzed in the Stockdale Integrated Banking Project EIR.

H. The up to 640-acre third project site analyzed in the Stockdale Integrated Banking Project EIR would constitute Phase 1 of a proposed Kern Fan Groundwater Storage Project ("Kern Fan Project") for which RRB and IRWD have jointly applied for grant funding through the California Water Commission's ("Commission") Water Storage Investment Program ("WSIP") authorized by California voters' approval of Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act of 2014. A second up to 640-acre project site would constitute Phase 2 of the Kern Fan Project.

I. Through the Kern Fan Project, the Parties seek to develop a regional water bank in the Kern County Groundwater Sub-basin of the San Joaquin Valley Groundwater Basin in Kern County. The Kern Fan Project would recharge and store up to 100,000 acre-feet of water during periods when surface water is abundant. Water stored by the Kern Fan Project pursuant to participation in the WSIP would be recovered when needed to provide ecosystem public benefits,

water supply public benefits during extended droughts or a Delta levee failure, and other non-public water supply benefits for RRB and IRWD water service customers. The Kern Fan Project proposes to use 25 percent (25%), up to 25,000 acre-feet, of the unallocated State Water Project ("SWP") Article 21 water stored pursuant to participation in the WSIP to provide public ecosystem benefits, with the remainder for use by IRWD and RRB. IRWD and RRB would have access to Kern Fan Project facilities and capacities to store water pursuant to other programs to generate additional water supply benefits as described in article 3(C) of this agreement. Unallocated SWP Article 21 water is an interruptible water supply that the California Department of Water Resources ("DWR") periodically makes available to its long-term water service contractors under Article 21 of their contracts.

J. In July 2018, the Commission conditionally approved \$67,537,315 in conditional WSIP grant funding for the Kern Fan Project, which may be increased by the Commission in the future. The Parties may seek additional state or federal grant funding in the future.

K. The Parties are forming the Authority to achieve the above-described objectives of the Kern Fan Project, and this Agreement helps to define a stable and finite project description that will facilitate completion of CEQA review pursuant to Cal. Pub. Res. Code section 21000 et seq.

NOW, THEREFORE, the Parties agree as follows:

AGREEMENT

1. Effective Date, Term and CEQA Compliance

A. ***Effective Date and Term.*** This Agreement shall be effective August 1, 2019 or upon the execution by the Parties ("Effective Date"), whichever is later, but shall be subject to article 1(B). This Agreement shall remain effective for thirty (30) years from the Effective Date or until expiration of any requirements to operate the Kern Fan Project as part of the WSIP or other grant funding requirements, whichever is longer, or until it is terminated early by either Party providing eighteen (18) months' advance written notice of intent to terminate. Prior to the expiration of the term of the JPA Agreement, the Parties shall work together to mutually extend this Agreement. If this Agreement is not extended, or if it is terminated early, the Parties shall agree to negotiate in good faith to integrate the Kern Fan Project facilities into one or more other existing water storage and recovery programs or projects; provided further that if the Parties fail to reach agreement on such integration, then RRB shall have a first right to acquire IRWD's interest in all Kern Fan Project facilities, capacities and real or personal property held by the Authority. If this Agreement is terminated early, the Parties agree that the legal effectiveness of such termination shall be conditioned upon all then-existing grant obligations being met for the duration of such obligations.

B. ***Disposition of Kern Fan Project Property, Facilities and Other Assets Upon Termination.*** If this Agreement is terminated for any reason, then RRB's first right to acquire IRWD's interest in the Kern Fan Project facilities, land and easements shall be based upon the then-existing fair market value of the land and easements and upon the then-existing undepreciated fair market value of all such facilities. For

this purpose, IRWD's interest in Kern Fan Project facilities, land and easements shall be 50%, unless a Special Activities Agreement provides otherwise, and depreciation shall be calculated on a straight line basis and, (i) pumps and electrical improvements shall be deemed to have a useful life of twenty (20) years and all other improvements shall be deemed to have a useful life of fifty (50) years, (ii) each improvement's useful life shall be measured from its initial installation or most recent replacement or refurbishment, whichever is later, and (iii) cost shall be based on the amount of the documented cost of installation of the improvement being valued, prorated as necessary if the improvement was constructed with other improvements that are not part of the Kern Fan Project. Land and easements shall be valued at the fair market value at the time of termination. Land and easement valuation shall be "like for like" and shall be based upon comparable properties with consideration given to location, zoning, and land use. If RRB elects not to exercise its first right to acquire IRWD's interest in Kern Fan Project facilities, land and easements, IRWD may hold its interest or sell its interest to a mutually acceptable third party. Upon termination, and consistent with articles 3(C) and 3(F), RRB and IRWD each respectively shall retain their ownership of water stored in their respective shares of the Kern Fan Project's storage capacity, and each shall retain discretion to hold, recover or otherwise dispose of their water, including transferring stored water into another existing water banking project.

- (1) The Authority shall continue to exercise the powers described herein until the Parties terminate this Agreement.
- (2) Upon termination, the Authority shall continue to exercise only such powers as to enable it to pay and discharge all costs, expenses, and charges legally incurred hereunder, and to dispose of, divide, and distribute any property acquired as a result of the Authority's operations.
- (3) Upon termination, the Authority shall continue to be responsible for the payment of any expenses, liabilities, or obligations between the Parties to this Agreement incurred prior to withdrawal. (Solely by way of example, this provision would require payment for rights and obligations incurred pursuant to Government Code section 6504.) This requirement shall survive any withdrawal or termination of this Agreement.
- (4) Upon termination of this Agreement, all costs, expenses, and charges legally incurred by the Authority shall be paid and discharged by the Authority. After the disposition of Kern Fan Project facilities, capacities and real or personal property under this article 1, the Authority shall sell any remaining property as may be necessary and shall distribute to the federal or state government such property and funds as are lawfully required; the balance of such property and any surplus money on hand shall be distributed or returned in proportion to contributions made by the

affected Parties except to the extent otherwise agreed upon by the affected Parties.

- (5) In the event this Agreement is terminated prior to termination of the requirements of the WSIP grant or any other grant used to pay for the Kern Fan Project, the Parties shall be responsible for meeting all of the obligations of the WSIP and any other grants in proportion to their respective ownership of facilities post termination.

- C. **CEQA Compliance.** Formation of this Agreement helps to define a stable and finite project description, which will facilitate completion of CEQA review for the proposed Kern Fan Project. The Authority shall complete CEQA review for the proposed Kern Fan Project prior to approving, constructing or operating the proposed project. Any real property acquired for the proposed project prior to completion of CEQA review shall be conditioned on completing CEQA review before changing the existing use of the real property. If the performance of CEQA review identifies any significant adverse environmental effects, the Parties each retain their full discretion to terminate this Agreement or to jointly revise this Agreement as necessary to implement any feasible mitigation measures or alternatives that would avoid or reduce such significant effects as provided by CEQA; provided that each Party's discretion to terminate or to jointly revise this Agreement under this article 1(B) shall be limited to responding to any significant adverse environmental effects.

2. **Authority for Joint Powers Agreement**

This Agreement is made pursuant to Chapter 5 of Division 7 of Title 1 of the Government Code of the State of California (commencing with Section 6500) relating to the joint exercise of power common to the counties and public agencies. The Parties are each empowered by the laws of the State of California to exercise, in their respective jurisdictions, the powers which will be jointly exercised as set forth herein.

3. **Purposes**

- A. **Creation of Separate Entity.** The purpose of this Agreement is to create a joint powers authority called the "Kern Fan Project Authority" to plan, design, construct, operate and otherwise implement the Kern Fan Project. The Authority shall be a separate legal entity from its member agencies. The purpose of the Authority is to implement the Kern Fan Project, as described in the Recitals, above, which are incorporated herein by this reference.
- B. **Project Benefits.** The benefits of the Kern Fan Project include, but are not limited to, benefits to the water levels in the Kern County Groundwater Subbasin, enhanced water supply reliability for RRB's and IRWD's service areas, reduced dependence of RRB's and IRWD's service areas on existing imported water supplies from northern California, endangered species preservation through reduced demands on

such imported water, and the establishment of temporary wetlands through recharge activity.

- C. ***Allocation of Capacities Provided by Kern Fan Project.*** The primary objective of the Kern Fan Project is to provide 100,000 acre-feet per year (“AFY”) of groundwater recharge capacity, 100,000 acre-feet (“AF”) of storage capacity for the Parties to capture and recover unallocated SWP Article 21 water, with up to 50,000 AF per year of recovery capacity and up to 500 cubic feet per second of additional conveyance capacity.

The water storage capacity developed under the Kern Fan Project when fully implemented is planned to be 100,000 AF and shall be allocated as follows:

- 25% of storage capacity up to 25,000 AF to the WSIP Public Ecosystem Account
- 50% of remaining storage capacity to RRB
- 50% of remaining storage capacity to IRWD

The water recharge, recovery, and additional conveyance capacity developed under the Kern Fan Project shall be allocated equally between RRB and IRWD, subject to any Special Activities Agreements governing the Parties' independent choices whether to participate in or to add a component of the Kern Fan Project.

RRB and IRWD shall each have first priority access to their own respective shares of capacities in the Kern Fan Project to recharge, store and recover other water supplies, including SWP water, for the independent benefit of each Party. The Parties shall have second-priority access to use each other's unused recharge and recovery capacities. RRB and IRWD may use their respective capacities to implement other independent operating programs or projects with third parties, so long as such use does not impair the ability to provide the WSIP public ecosystem benefits.

Each Party shall submit to the other Party, prior to use of any unused second priority capacity, a preliminary schedule showing rates and quantities of water for recharge and/or recovery to be delivered in the second priority capacity. The Parties shall coordinate schedules and cooperate to avoid impacts to their respective first priority capacities. To the extent that the use of second priority capacity is deemed by the Parties to have resulted in a reduction of recharge or recovery capacity necessary to fully implement a water management program, the Parties shall meet and confer on the appropriate mitigation, which may include use of other recharge and/or recovery facilities not part of the Kern Fan Project.

Each Party may enter into a Special Activities Agreement with the Authority pursuant to article 3(D) describing and approving an independent operating program or project.

- D. ***Special Activities Agreements.*** A Party may enter into one or more written Special Activities Agreements with the Authority providing for its independent choice

whether to participate in or to add a component of the Kern Fan Project or to allow use of a its capacity in the Kern Fan Project to implement an independent operating program or project with a third party. For example, IRWD may enter into a Special Activities Agreement providing for installation of additional Kern Fan Project wells to increase recovery capacity for the benefit of IRWD, or RRB may enter into a Special Activities Agreement providing for RRB to reduce its recovery capacity by foregoing the installation of Kern Fan Project wells. The Authority's Board of Directors shall adopt bylaws providing for Special Activities Agreements.

- E. ***WSIP Water.*** For purposes of participating in the WSIP to provide ecosystem public benefits and water supply public benefits during extended droughts or a Delta levee failure, the Kern Fan Project will be operated by recharging and storing unallocated SWP Article 21 water obtained by the Parties ("WSIP Water"). Unallocated SWP Article 21 water deliveries would be made on behalf of IRWD as a landowner in Dudley Ridge Water District ("DRWD") and on behalf of RRB as a sub-unit of the Kern County Water Agency ("KCWA") or any other SWP contractor acting on behalf of either or both Parties. Consistent with article 3(N) of this Agreement, WSIP Water delivered to the Kern Fan Project by each Party will be proportionately applied to each Party's respective storage account consistent with this Agreement's defined "Allocation of Capacities Provided by Kern Fan Project."
- F. ***Ownership.*** The Authority plans to acquire, own, and use up to approximately 1,280 acres of land within the Kern Fan Project designated project area. The Authority will own all property, facilities and capacities of the Kern Fan Project, subject to each Party's rights to use such capacities according to this Agreement, unless otherwise provided for through a Special Activities Agreement. The Authority may acquire or use property outside of the Kern Fan Project area and designated existing and/or new project areas/recharge to meet the Kern Fan Project objectives. The Authority shall own the water stored in the Kern Fan Project's ecosystem public benefit account for the benefit of the State's WSIP, while RRB and IRWD each shall own the water stored in their respective shares of the Kern Fan Project's remaining storage capacity.
- G. ***Hydrogeologic Evaluations.*** RRB and IRWD will equally fund or reimburse through the Authority hydrogeologic studies needed to determine the recharge, storage and recovery capacities and limitations of the Kern Fan Project designated properties.
- H. ***CEQA Compliance Cost and Roles.*** RRB and IRWD will equally fund or reimburse through the Authority the preparation of an Environmental Impact Report ("EIR") for the construction and operation of the Kern Fan Project, including all technical studies necessary to support the EIR. The Authority shall play the role of lead agency, while RRB and IRWD will each play the role of a

responsible agency with respect to any discretionary decisions each Party makes in connection with implementing the Kern Fan Project.

- I. ***Other Regulatory Permitting Costs.*** RRB and IRWD will equally fund or reimburse through the Authority all regulatory and permitting fees and costs associated with construction of the Kern Fan Project.
- J. ***Project Costs.*** Any and all WSIP or other grant funds awarded for the Kern Fan Project shall be applied to all eligible capital costs, including, but not limited to, the planning, design and construction costs of the Kern Fan Project, and the Authority will fund all remaining associated costs. RRB and IRWD shall each pay through the Authority half of Kern Fan Project planning, design and construction costs that are not paid by awarded WSIP or other grant funds except as otherwise provided by any Special Activities Agreements governing the Parties' mutually agreeable independent choices whether to participate in or to add a component of the Kern Fan Project.
- K. ***Project Construction.*** Board of Directors shall adopt bylaws describing the procedures, team and requirements for any planning, design, construction and construction management associated with the Kern Fan Project.
- L. ***Project Operation.*** RRB shall operate, maintain and repair the Kern Fan Project facilities, subject to approval by the Board of Directors. RRB shall maintain WSIP records accounting for each Party's water recharge, storage and recovery activities pursuant to all applicable WSIP regulations and as further described in bylaws adopted by Board of Directors. The Authority shall be responsible for any and all regulatory and permitting fees applicable to Kern Fan Project operations, including compliance with an anticipated Memorandum of Understanding regarding operation and monitoring of the Kern Fan Project and related Project Recovery Operations Plan, which governs groundwater banking within RRB.
- M. ***Operation Costs.*** RRB and IRWD shall pay operations, maintenance, energy and replacement ("OME&R") costs consistent with their respective proportional use of the Kern Fan Project and any Special Activities Agreements governing the Parties' independent choices whether to participate in or to add a component of the Kern Fan Project as described in bylaws adopted by the Board of Directors.
- N. ***Mutual Obligation to Recharge Ecosystem Public Benefit Account.*** At such times when unallocated SWP Article 21 water is available, the Parties shall equally fund the acquisition and recharge of such water for ecosystem public benefits until up to 25% of Kern Fan Project storage capacity, up to 25,000 acre-feet, is full (when the WSIP ecosystem public benefit account is full). Until the WSIP ecosystem public benefit account is full, all recharge of unallocated SWP Article 21 water shall be apportioned 25% to the WSIP ecosystem public benefit account, 37.5% to RRB's share of the Kern Fan Project's remaining storage capacity, and 37.5% to IRWD's share of the Kern Fan Project's remaining storage capacity. After the WSIP ecosystem public benefit account is full, RRB and IRWD may use their respective

capacities to recharge and store other available water, including Kern River Flood Water, to fill their respective water supply public benefits accounts, so long as such water may be used to provide water supply public benefits within the Parties' respective service areas.

- O. ***Kern River Flood Water.*** During times that Kern River Flood Water is available (i.e., when the Kern River Watermaster offers water to all takers willing to sign a "Notice/Order", or the Kern River Watermaster offers water to the California Aqueduct/Kern River Intertie, such water is expected to flood farmed acreage in Buena Vista Lake or is expected to be delivered into the Kern River Flood Channel for delivery out-of-county), this water would follow delivery of WSIP Water, if simultaneously available. Following any such delivery of WSIP Water, RRB shall have first priority to use all Kern Fan Project facilities for recharge of Kern River Flood Water. The first 25% of Kern River Flood Water recharged into the Kern Fan Project shall be deemed owned by IRWD at no cost and the remainder of such stored water shall be deemed owned by RRB; provided that RRB may exercise its discretion to allow IRWD to acquire an additional 25% of such recharged Kern River Flood Water by paying RRB the average price for Kern River water over the preceding two (2) months or \$25 per AF, whichever is greater.. Beginning on January 1, 2020 and on January 1 of each year thereafter, the \$25 shall be increased in an amount equal to the percentage change, if any (but not less than zero) in the Consumer Price Index (All Urban Consumers, All Items) for Western Cities, Populations Less than 1.5 Million, published by the United States Department of Labor, Bureau of Labor Statistics. water into storage.
- P. ***Water Quality.*** The quality of water to be recharged, stored and recovered at the Kern Fan Project shall be consistent, including through blending with other water, with applicable pump-in requirements specified by DWR for the California Aqueduct, as such requirements may be amended from time to time.

4. **Powers**

The Authority is hereby authorized to perform all powers and functions set out in this Agreement, including all powers granted to California water storage districts pursuant to the California Water Storage District Law (Division 14, commencing with § 39000 of the California Water Code) and California water districts pursuant to the California Water District Law (Division 13, commencing with § 34000 of the California Water Code), as amended, and any applicable regulations.

The Authority shall administer this Agreement. Pursuant to Government Code section 6509 and shall undertake all further actions necessary to carry out the purposes of the Authority, the Authority shall exercise its powers in administering this Agreement subject to the restrictions applicable to IRWD. The Authority is hereby further authorized to:

- A. Negotiate with, apply for, contract for, and receive monies from federal, state, county, city, and special district governments, and other public and private entities and agencies to carry out the purposes of this Agreement, and shall disburse and account for funds so received.

- B. Allocate all funds, including discretionary and special purpose funds, received by the Authority as equitably as practicable, based upon the applicable terms of the funding application, fund source requirements, Agency policy, or vote of the Board of Directors, as described in Section 6 of this Agreement.
- C. Monitor, evaluate, and take corrective action concerning performance specified in any agreement, and contracts or agreements the Authority has entered into.
- D. Establish performance objectives for subcontractors.
- E. Evaluate the effectiveness of programs undertaken by the Authority.
- F. Maintain financial and statistical records to satisfy federal, state, and other laws and regulations, and provide necessary information for effective program management.
- G. Adopt, promulgate, and enforce such bylaws, rules, and regulations as the Board of Directors deems necessary for operation and management of the Authority and implementation of the purposes of this Agreement.
- H. Negotiate and enter into agreements and contracts.
- I. Employ agents and employees.
- J. Acquire, lease, rent, construct, manage, maintain, hold, and dispose of real and personal property with title to such property being held by the Authority.
- K. Acquire property by eminent domain.
- L. Commission the design, permitting, construction, operation, and maintenance of any facilities required for the Kern Fan Project.
- M. Incur debts, liabilities, and other obligations.
- N. Bring suit and be sued in its own name.

Undertake all further actions necessary to carry out the purposes of the Authority.

5. **Governance**

- A. ***Board of Directors.*** The Board of Directors of the Authority shall consist of four (4) members constituting two (2) members appointed by each Party. Of the two members appointed by each Party, one must be a member of that Party's legislative body and neither appointee may serve as an officer of the Authority (*e.g.*, as general manager or treasurer) while also serving on the Authority's Board of Directors. Each Party's legislative body shall designate an alternate to serve on the Authority's Board of Directors to provide continuity in the event one of a Party's representatives cannot participate in one or more meetings of the Authority's Board of Directors. Such alternates shall be members of either RRB's or IRWD's legislative body or

designees and shall not serve as an officer of the Authority while also serving as an alternate on the Authority's Board of Directors.

- B. **Meetings.** All meetings of the Board of Directors shall be subject to the provisions of the Ralph M. Brown Act (Chapter 3.5 of Division 7, commencing with § 6250 of the California Government Code) and shall be held at a regularly scheduled time. At its first meeting, the Board of Directors shall, by resolution, determine the schedule for its regular meetings.
- C. **Quorum.** A quorum of any meeting of the Board of Directors shall require the attendance of at least one member of the Board of Directors from each of the Parties. In the absence of a quorum, any meeting of the Board of Directors shall be adjourned by the member of the Board of Directors present. In the absence of any members of the Board of Directors, the Clerk of the Board shall adjourn any meeting of the Board of Directors. Vacant positions on the Board of Directors shall not be considered for purposes of determining quorum.
- D. **Voting and Affirmative Decisions.** Voting by the Board of Directors shall be conducted on a one-vote-per-Party basis, meaning that the two RRB directors together may cast one vote and the two IRWD directors may together cast one vote. The vote representing each Party may be cast by either of that Party's two members of the Authority's Board of Directors or their alternates. All decisions of the Board of Directors shall require an affirmative and unanimous vote, meaning that the Board of Directors may not make a decision unless both the RRB directors' vote and IRWD directors' vote are in favor of making a decision; provided that voting on actions related to administration of a previously approved Special Activities Agreement shall be weighted as determined by each Special Activities Agreement. In the event the Authority Board of Directors is deadlocked on a proposed action, then RRB and IRWD shall conduct a joint meeting of their legislative bodies to resolve the deadlock. In the event that such a joint meeting does not resolve the deadlock, then the Parties shall participate in mediation to resolve the deadlock. Finally, in the event mediation fails to resolve the deadlock, either Party may initiate litigation to resolve the deadlock subject to any defenses raised in response to such litigation. This process of resolving deadlocks of proposed actions can be further defined in bylaws adopted by Board of Directors; provided, however, that nothing in this Agreement or the bylaws shall limit either Party's discretion to exercise its own independent judgment upon issues before the Authority in any manner.
- E. **Bylaws.** The Board of Directors shall adopt bylaws detailing how the Board of Directors' business is to be conducted. Those bylaws shall not conflict with the provisions of this Agreement or any law.

6. **General Manager**

The Authority Board of Directors shall appoint a representative of RRB to serve as General Manager of the Authority, unless the Board of Directors elects to appoint another

individual to serve as the General Manager of the Authority. The General Manager shall not be an employee or independent contractor of the same Party as the Treasurer. An assignment to serve as the General Manager of the Authority shall not be construed to be permanent. The General Manager shall serve at the pleasure of the Board of Directors and may be appointed or removed at a time of choosing of the Board of Directors.

7. **Treasurer**

The Authority Board of Directors shall appoint a representative of IRWD to serve as Treasurer of the Authority, unless the Board of Directors elects to appoint another individual to serve as the Treasurer of the Authority. The Treasurer shall not be an employee or independent contractor of the same Party that employs the General Manager. The Treasurer shall serve at the pleasure of the Board of Directors and may be appointed or removed at a time of choosing of the Board of Directors. IRWD shall be the depository and manage custody of all monies of the Authority and maintain all monies under the oversight and direction of the Treasurer. Furthermore, the Treasurer shall:

- A. Receive and receipt all funds of the Authority and place them in the separate accounts established and maintained for the Authority.
- B. Receive and invest funds and be responsible for the safekeeping of all funds of the Authority.
- C. Pay, when due, out of the Authority's funds, all properly approved disbursements due by the Authority including amounts due on outstanding bonds and coupons.
- D. Verify and report to the Authority and the Parties, in writing, on a monthly basis, the amount of money held for the Authority, the amount of receipts since the last report, and disbursements since the last report.

Treasurer may designate other individuals, as approved by the Board of Directors, necessary to carry out the Treasury function.

8. **Accounting and Financial Reporting**

The Treasurer shall have overall responsibility to maintain the accounting books and records of the Authority. This includes maintenance of the accounting records, monthly report preparation of all receipts and disbursement activities and grant administration and compliance. Such reporting activity shall be provided to each of the Authority parties.

9. **Legal Counsel**

Legal Counsel for the Authority shall be selected by the Board of Directors. Legal Counsel shall also serve as the Secretary of the Authority. The Legal Counsel and Secretary shall serve at the pleasure of the Board of Directors.

10. **Staff**

The staff of the Parties shall serve as the staff of the Authority. The primary responsibility for providing adequate staff support for the operation of the Kern Fan Project shall belong to RRB, unless the Board of Directors appoints a IRWD representative as General Manager pursuant to article 6. The primary responsibility for the treasury function and financial accounting of the Authority shall belong to IRWD, unless the Board of Directors appoints a RRB representative as Treasurer pursuant to article 7. The Authority Board shall negotiate rates of reimbursement and payment schedules with the Parties for staff time and incorporate such requirements into the bylaws of the Authority.

11. **Official Bonds**

The General Manager and the Treasurer are designated as public officers or persons who have charge of, handle, or have access to any property of the Authority, and each such officer or person shall obtain, maintain, and file an official bond. Alternatively, a government crime insurance policy or employee dishonesty insurance policy, including faithful performance, shall be obtained and maintained, with the Authority so long as such insurance policy is in conformance with Government Code section 1463.

12. **Funds and Accounts; Fiscal Year; Annual Budgets**

- A. ***Funds and Accounts.*** The Authority shall establish and maintain such funds and accounts as may be required by the California Government Code, other applicable laws, the Governmental Accounting Standards Board, good accounting practice, this Agreement, and any ordinance, resolution, or policy of the Board of Directors.
- B. ***Funding.*** The Authority's accounts shall be funded with the WSIP grant funding awarded by the Commission or any other grant funding that may be awarded for the Kern Fan Project and with such additional funding that each Party contributes to enable the Authority to successfully implement the Kern Fan Project pursuant to this Agreement; subject to the Parties' respective financial obligations under article 3 of this Agreement.
- C. ***Fiscal Year.*** For the purposes of this Agreement, the Authority shall have such fiscal year from July 1 to and including the following June 30.
- D. ***Annual Budget.*** An annual capital and operating budget shall be prepared or caused to be prepared by the General Manager and presented to the Board of Directors for its adoption or amendment, pursuant to the Authority's article 4 powers, above, not later than May 1 of each fiscal year. The budget shall establish any necessary rates, capital expenditures, and charges to be paid for operation and maintenance activities and such other matters as shall be determined by the Board of Directors.

13. **Records and Reports; Audit**

The Board of Directors shall establish reporting requirements and direct staff to maintain such reports. All books and records of the Authority shall be open to inspection at all reasonable times by any party to this Agreement or its representatives. Annual audits of the Authority's accounts and records shall be made by an independent certified public

accountant or firm of independent certified public accountants selected by the Board of Directors, and reports of such audits shall be filed in the manner provided in Section 6505 of the Government Code.

14. **Debts, Liabilities, and Obligations**

The debts, liabilities, and obligations of the Authority shall not constitute debts, liabilities or obligations incurred by any Party under this Agreement.

15. **Privileges and Immunities**

All of the privileges and immunities from liability, exemptions from law, ordinances, and rules, all pension, relief, disability, worker's compensation, and other benefits which apply to the activity of officers, agents or employees of any Party when performing their respective functions within their territorial limits, shall apply to them to the same degree and extent while engaged in the performance of any of their functions and duties extraterritorially.

16. **Indemnification**

- A. ***Authority.*** The Authority Board of Directors, officers, representatives, consultants, contractors and agents shall be entitled to defense and indemnification by the Authority as provided under Government Code sections 825 et seq. and section 995 et seq. The Authority shall at all times indemnify, defend and save the Parties from, and pay in full, any and all claims, demands, losses, damages or expenses, including reasonable attorneys' fees and costs, that the Parties, their Boards of Directors, officers, representatives, consultants, contractors, agents, and/or employees may sustain or incur in any manner relating to the Authority's performance under this Agreement for any action.
- B. ***RRB.*** RRB shall at all times indemnify, defend and save IRWD and the Authority, its Board of Directors, officers, representatives, consultants, contractors, agents, and employees free and harmless from, and pay in full, any and all claims, demands, losses, damages or expenses, including reasonable attorneys' fees and costs, that IRWD, its Board of Directors, officers, representatives, consultants, contractors, agents, and/or employees may sustain or incur in any manner arising out of RRB's sole active negligence or willful misconduct in the performance of its responsibilities under this Agreement, excepting any loss, damage or expense and claims for loss, damage or expense resulting in any manner from the negligent or willful act or acts of IRWD, its Board of Directors, officers, representatives, consultants, contractors, agents and employees.
- C. ***IRWD.*** IRWD shall at all times indemnify, defend and save RRB and the Authority, its Board of Directors, officers, representatives, consultants, contractors, agents, and employees free and harmless from, and pay in full, any and all claims, demands, losses, damages or expenses, including reasonable attorneys' fees and costs, that RRB, its Board of Directors, officers, representatives, consultants, contractors, agents, and/or employees may sustain or incur in any manner arising out of IRWD's sole active negligence or willful misconduct in the performance of

its responsibilities under this Agreement for any action, excepting any loss, damage or expense and claims for loss, damage or expense resulting in any manner from the negligent or willful act or acts of RRB, its Board of Directors, officers, representatives, consultants, contractors agents and employees.

- D. ***Mutual Indemnification.*** Except as set forth above, each Party shall indemnify, defend and save the other Party, its Board of Directors, officers, representatives, consultants, contractors, agents, and employees free and harmless from, and pay in full, any and all claims, demands, losses, damages or expenses, including reasonable attorneys' fees and costs, that said other Party, its Board of Directors, officers, representatives, consultants, contractors, agents, and/or employees may sustain or incur in any manner arising out of specific Kern Fan Project operations undertaken on behalf of the indemnifying Party under this Agreement for any action. Without limiting the generality of the foregoing, and by way of example, IRWD shall indemnify, defend and save Rosedale free and harmless from claims of damages and expenses to neighboring water wells that result from recovery operations made on the behalf of IRWD, except to the extent caused by the sole active negligence or willful misconduct of Rosedale. Costs for any claim relating to Kern Fan Project operations that is made and administered pursuant to the *Project Recovery Operations Plan Regarding Pioneer Project, Rosedale-Rio Bravo Water Storage District, And Kern Water Bank Authority Projects* shall be allocated between the Parties in the same manner as claims paid by the parties to said *Project Recovery Operations Plan, a copy of which is attached as Exhibit A to this Agreement.*
- E. ***No Right of Contribution; Indemnification Agreement.*** The indemnification and hold-harmless provisions of article 16 shall apply in lieu of the right of contribution provisions at Government Code sections 895-895.8; the provisions of this article 16 are entered into pursuant to Government Code sections 895.4 and 895.6.

17. **Insurance**

- A. ***Authority.*** During the term of this Agreement, the Authority shall maintain general liability insurance coverage in a sum not less than five million dollars (\$5,000,000) per occurrence. The insurance shall also contain a written endorsement to such policy or policies which names each of the Parties as an

additional insured. RRB and IRWD will equally fund through the Authority the general liability insurance coverage premium and any deductible.

- B. **RRB.** RRB shall name the Authority as an additional insured covered by RRB's general liability insurance policy, premises liability insurance policy, and automobile insurance policy.
- C. **IRWD.** IRWD shall name the Authority as an additional insured covered by IRWD's general liability insurance policy, premises liability insurance policy, and automobile insurance policy.
- D. If a claim is made against one or the other Party's insurance policy as a result of Kern Fan Project operations, the Parties agree to each pay half of the deductible on each such claim.

18. **Modification**

This Agreement may only be amended by the written agreement signed by authorized representatives of the Parties.

19. **Notice**

Notice under this Agreement shall be made by: (1) overnight courier or (2) certified mail, return receipt requested. Additionally, notice under this Agreement shall be made by electronic mail. All such notices shall be deemed delivered upon actual receipt from (1) overnight courier or (2) certified mail, return receipt requested (or upon first attempt at delivery pursuant to either of the two methods specified herein if the intended recipient refuses to accept delivery).

Notice to IRWD shall be made to:

Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, California 92618
Attn: General Manager
Telephone: (949) 453-5300
Facsimile: (949) 453-1228
Electronic Mail: cook@irwd.com

Notice to RRB shall be made to:

Rosedale-Rio Bravo Water Storage District
P.O. Box 867
Bakersfield, California 93302-0867
Attn: General Manager
Telephone: (661) 589-6045
Facsimile: (661) 589-1867
Electronic Mail: _____

20. **Severability**

Should any part, term, or provision of this Agreement be adjudged by a court of competent jurisdiction to be illegal or in conflict with any law of the State of California, or otherwise be rendered unenforceable or ineffectual, the remaining portions of this Agreement shall remain in full force and effect.

21. **Representations**

Each Party represents and warrants to the other Party that it is a duly organized or constituted entity, with all requisite power to carry out its obligations under this Agreement, and that the execution, delivery, and performance of this Agreement have been duly authorized by all necessary action of the board of directors or other governing body of such Party, and shall not result in a violation of such Party's organizational documents or any agreement to which it is a party or to which it is otherwise subject or bound. Each Party further represents and warrants to the other Party that, to its knowledge at the time it executed this Agreement, there is no pending or threatened litigation involving such representing Party that will affect this Agreement. The Parties have relied on the forgoing representations as a material inducement to execute this Agreement, and should any representation not be correct or true in any material respect, it shall constitute a material breach of this Agreement.

22. **Choice of Law; Venue**

This Agreement shall be construed and enforced in accordance with the laws of the State of California. Venue over any and all disputes arising from this Agreement shall be proper in Los Angeles County, California or in the United States District Court for the Central District of California.

23. **Dispute Resolution**

For matters involving a dispute under this Agreement, the following provisions shall apply:

A. **Mediation**

The Parties agree that any and all disputes, claims or controversies arising under this Agreement, whether for breach, enforcement, or interpretation thereof, shall be submitted to mediation in a mutually agreeable venue. Either Party may commence mediation by providing to the other Party a written request for mediation, setting forth the subject of the dispute and the relief requested. The Parties shall cooperate with one another in selecting a mediator and in scheduling the mediation proceedings. The Parties covenant that they shall participate in the mediation in good faith, and that they shall share equally in costs charged by the mediator. All offers, promises, conduct and statements, whether oral or written, made in the course of the mediation by any Party, its agents, employees, experts or attorneys, or by the mediator or any of the mediator's employees, are confidential, privileged and inadmissible for any purpose, including impeachment, in any arbitration or other proceeding involving the Parties, provided that evidence that is otherwise admissible or discoverable shall not be

rendered inadmissible or non-discoverable as a result of its use in the mediation. A Party may request arbitration with respect to the matters submitted to mediation by filing a written request for arbitration at any time following the initial mediation session or 45 days after the date of filing the written request for mediation, whichever occurs first; provided, however, the other Party is not required to accept a request for arbitration. The mediation may continue after the commencement of arbitration if the Parties so desire. Unless otherwise agreed by the Parties, the mediator shall be disqualified from serving as arbitrator in the case. The provisions of this article 23 may be enforced by any Court of competent jurisdiction, and the Party seeking such enforcement shall be entitled to an award of all costs, fees and expenses, including attorneys' fees, to be paid by the Party against whom such enforcement is ordered.

B. Selection of Mediator

The Parties shall first attempt to mutually agree to a mediator. If the Parties fail to agree on the mediator, the Parties shall each nominate and exchange with each other the names of three persons to resolve the dispute. From this group of nominated mediators, the Parties shall select the Mediator. If each of the Parties selects the same Mediator, that person shall be the Mediator. In the event two or more same persons are selected by the Parties, the person whose name precedes the other alphabetically shall be the Mediator. If the Parties do not select the same person, then each Party shall eliminate two of the other's selection and the remaining names shall be randomly drawn in order by either Party. The first drawn shall be the Mediator unless there is a conflict of interest or the mediator cannot serve because of scheduling conflicts. In that case, the second name drawn shall be the Mediator. No Mediator shall be nominated or selected if they have any actual or perceived conflict of interest. If necessary, this process can be repeated to nominate or select a mediator if the final two selected Mediators have any actual or perceived conflict of interest.

24. Force Majeure

All obligations of the Parties, other than payment of accrued monetary obligations, shall be suspended for so long as and to the extent the performance thereof is prevented, directly or indirectly, by earthquakes, fires, tornadoes, facility failures, floods, strikes, other casualties, acts of God, orders of court or governmental agencies having competent jurisdiction, compliance with applicable statutes, regulations, ordinances, laws or other events, conditions or causes beyond the control of the nonperforming Party. In no event shall any liability accrue against a non-performing Party, its officers, agents or employees, for any claim of damage arising out of or connected with a suspension of performance pursuant hereto.

25. Assignment; Delegation

A. *Prior Written Consent.* Except as otherwise provided in this Agreement, the Authority and the Parties shall not assign any rights or delegate any duties or

obligations arising from this Agreement without the written consent of the Parties. Any attempt at such an assignment or delegation shall be null and void. Any assignment or delegation shall be in writing and shall expressly provide that the assignee or delegatee accepts all rights and duties or obligations of the assignor or delegator, including but not limited to any obligations imposed as a condition of outside funding of the Kern Fan Project.

- B. ***Temporary Use of Kern Fan Project Capacity.*** Each Party's use of its respective Kern Fan Project capacity to implement another independent operating program or project with a third party shall not be deemed an assignment requiring prior written consent pursuant to article 25(A). The Parties agree that any agreement each might enter with a third party to provide recharge, storage or recovery operations for the third party shall be characterized as providing a recharge, storage or recovery service and not as an assignment, unless an assignment proposed by one Party is approved in writing by the other Party under article 25(a).

26. **Hierarchy of Documents**

This Agreement, as may be amended from time to time, shall govern over all other Authority documents and agreements, including the Bylaws of the Board of Directors.

27. **Entire Agreement**

This Agreement contains the entire agreement between the Parties and supersedes all prior understanding between them with respect to the subject matter of this Agreement. There are no promises, terms, conditions or obligations, oral or written, between or among the Parties relating to the subject matter of this Agreement that are not fully expressed in this Agreement. Modifications, changes or supplements shall not be effective unless in conformance with section XVIII of this Agreement. Termination of this Agreement shall not be effective unless in conformance with section XIX of this Agreement.

28. **Joint Drafting and Negotiation**

This Agreement has been jointly negotiated and drafted. The language of this Agreement shall be construed as a whole according to its fair meaning and without regard to or aid of Civil Code section 1654 or similar judicial rules of construction. Each Party acknowledges that it has had the opportunity to seek the advice of experts and legal counsel prior to executing this Agreement and that it is fully aware of and understands all of its terms and the legal consequences thereof.

29. **Counterparts and Effective Date**

This Agreement may be executed in counterparts and be as valid and binding as if each Party signed the same copy. A faxed copy of the executed signature page shall be sufficient to cause the terms of this Agreement to become fully operative.

30. **Headings**

Article and section headings contained herein are for convenience only. Such headings shall not control or affect the meaning or construction of this Agreement.

IN WITNESS WHEREOF, each Party has executed this Agreement on the date set forth below its signature.

Irvine Ranch Water District

Rosedale-Rio Bravo Water Storage District

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title _____

Date: _____

Date: _____

Approved as to Form:

Approved as to Form:

EXHIBIT A

PROJECT RECOVERY OPERATIONS PLAN REGARDING PIONEER PROJECT, ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT, AND KERN WATER BANK AUTHORITY PROJECTS

Purpose:

The Kern County Water Agency, on behalf of itself and the Pioneer Project Recovery Participants, Rosedale- Rio Bravo Water Storage District, and the Kern Water Bank Authority (the Parties) have developed this Operating Plan to designate measures, consistent with the MOUs¹ governing their respective projects, to “... *prevent, eliminate or mitigate significant adverse impacts*” resulting from project recovery operations. This plan applies to all recovery programs undertaken by any of the Parties’ projects that are governed by MOUs. Pioneer mitigation includes the Pioneer Project, Berrenda Mesa Banking Project and Improvement District No. 4’s Allen Road well field. This plan applies to landowners using groundwater for overlying agricultural or domestic uses as of the date this plan is executed. It does not apply to wells installed after the date of this plan that are installed to unsuitable depths based on historic water level fluctuations.

Plan Components:

1. Establish a Joint Operations Committee (JOC):

- a. Representatives from each of the Parties will participate in the JOC. Each Party will have equal representation on the JOC and an equal voice in its determinations, except that with respect to claims made to the JOC, only those parties contributing to mitigation will have a vote in determinations made on such claims.
- b. The JOC will meet as needed during years in which recovery operations are occurring (or expected to occur) to evaluate groundwater conditions, model results, landowner claims, and any other topics of concern. It is expected that the JOC will meet at least monthly during years when recovery operations are occurring.
- c. The JOC may establish a technical subcommittee to assist with compiling information to use in evaluating claims.
- d. The JOC will evaluate all claims with respect to model results and other appropriate information and the triggers established in Section 3, and approve or reject such claims. If claims are approved, appropriate mitigation will be determined as further described in Section 3. If mitigation is provided, the JOC will fund and/or contribute to the actions as described in Section 4.

¹ MOU refers to all of those MOUs executed by the parties that contain terms substantially similar to the *Memorandum of Understanding Regarding Operation and Monitoring of the Kern Water Bank Groundwater Banking Program* (dated October 26, 1995).

2. Evaluate Groundwater Conditions

- a. The Parties have developed groundwater models (AMEC and Harder) as a tool to evaluate With Project versus Without Project groundwater levels and predict potential groundwater impacts. The Parties shall mutually agree on the assumptions used for Without Project conditions, and for purposes of making determinations hereunder an average of the output for the two models shall be utilized. The Pioneer Without Project condition shall assume farming is continued on its footprint.
- b. The models will be updated regularly (at least annually) and compared to actual conditions during years in which recovery occurs. The Parties shall mutually cooperate to attain all data necessary for such updates. The Parties will utilize the water quality and water level monitoring data collected by the Kern Fan Monitoring Committee, and may conduct additional monitoring as needed. The Parties will report the results of the modeling to their respective Boards of Directors and shall publish on their respective websites maps and data showing current and projected water level information in the general area of the projects. As a matter of practice, the Parties will use the best and latest science and information available in all modeling and technical matters.
- c. Absent unanimous approval of the JOC, recovery in any calendar year beyond March 15 of that year shall not commence (or continue) until the Models have been run for the projected operations and the Committee has met to review the results.²
- d. The Models will be used to:
 - i. Forecast With Project and Without Project groundwater levels at the outset of recovery programs.
 - ii. Forecast any localized areas for special attention and/or monitoring.
 - iii. Attempt to identify domestic wells at risk of impacts.
 - iv. Determine if mitigation triggers have been met (See Section 3b).
- e. The Parties may, based on experience gained, select a mutually agreeable groundwater model capable of accurately predicting groundwater impacts resulting from project operations.
- f. In case of a dispute concerning a technical issue with a model, such as data inputs or the results based thereon, the Parties shall consult with a third party to resolve the matter.

3. Triggers and Actions

- a. These actions will not occur in years when average water levels (measured at the following wells: 29S/25E-25M1&2, 29S/26E-31H1&2, 29S/26E-34M1, and 29S/26E-35H) are less than 140 feet from the surface as measured on March 31 of a given year

² Model data for a preceding year becomes available at different times in the following year. Modeling at the beginning of any given year will necessitate estimating certain model input data for the preceding year (e.g. Kern River losses). These estimates will be replaced with actual data at regular intervals when the model is updated.

because it is expected that water levels will not decline during such year to an extent resulting in a mitigatable impact.

- b. The trigger for whether mitigation is considered shall be based upon an analysis and comparison of Model generated Without Project conditions to Model generated With Project conditions. When the With Project conditions are fifteen (15) or forty-five (45) feet deeper than the Without Project conditions at any operative domestic or agricultural well, respectively, and mechanical failure or other operational problems have occurred or are reasonably likely to occur due to declining water levels, mitigation will be provided as described below.
- c. To be eligible for mitigation as provided below, the affected landowner shall allow the JOC (or representatives thereof) to perform a field inspection as described in 3.d. below, and provide claim information concerning the condition of the well and casing and pumping equipment, as determined appropriate by the JOC. The JOC shall evaluate all submitted claims within forty-five (45) days of receipt, provided that the landowner cooperates with the collection of necessary information. All mitigation actions are contingent upon the claimant executing an appropriate release, the terms of which will depend upon the nature of the mitigation provided.
- d. For all claims, a field inspection will be conducted with the consent and coordination of the landowner to determine static depth to groundwater levels within the well and verify well construction information and pump setting information, if possible.
- e. Well construction information and pump setting information will be compared to Model projected pumping water levels to determine pump submergence levels and evaluate the necessity and feasibility of mitigation measures. Mitigation measures, if warranted, will include one or more of the following:
 - i. Providing a short-term emergency water supply to domestic well owners. Short-term emergency supplies shall be provided as soon as reasonably possible, but in all cases within 14 days of notification to the JOC of such needs;
 - ii. Providing funds to lower a well pump;
 - iii. Providing funds to complete a connection to an M&I water provider;
 - iv. Supplying an equivalent water supply from an alternate source;
 - v. Providing funds to replace the affected well with a deeper well that meets Kern County well ordinance standards;
 - vi. Reducing or adjusting recovery pumping as necessary to avoid the impact; or
 - vii. With the consent of the affected landowner, providing other acceptable mitigation.
- f. Mitigation will not be provided where it can be demonstrated that the affected well requires remediation for reasons other than temporary groundwater level declines resulting from Project operations (i.e., general overdraft conditions, lack of well maintenance, normal wear and tear, failure of well equipment, etc.).

4. Mitigation Funding

- a. It is the intent of the Parties to mitigate and/or compensate for legitimate Project impacts; it is not the intent of the Parties or the Plan to generate a windfall for landowners. Accordingly, adjustments will be made for depreciation of existing equipment and landowner contributions based on betterment for all mitigation measures. See Exhibit A for an example of such adjustments.
- b. All costs paid, water supplies provided, and/or pumping reductions used by the Parties to prevent, eliminate or mitigate claimed impacts at a well site shall be initially allocated among the parties according to their respective projects' proportionate contributions to the With Project water level as compared to Without Project water level, as determined by using an average of the most recent versions of the models. After years end, the models shall be updated with the actual operations data for that year and recalibrated, and the average of the results of such modeling shall be used for a final allocation of the projects' proportionate contributions levels. If appropriate, the parties shall exchange funds and/or water supplies among them in accordance with the final allocation. For administrative ease, only an initial and final allocation for a given year shall be required. This procedure shall apply to mitigation for both domestic and agricultural wells.
- c. All costs expended by any Party for equipment, water supplies or labor that is/are purchased or provided to address emergency health and safety concerns at domestic wells (exclusive of the costs described in 4.b. above) shall initially be allocated equally between the Parties. These costs shall be reallocated among the parties after years end per the procedure described in 4.b. above, provided that only those domestic wells for which emergency health and safety costs were incurred by a party shall be included in such reallocation, and further provided that the projects' proportionate contribution levels shall be based on the melded average of the results of the reallocation at all of the wells included in the reallocation.
- d. All costs expended by any JOC participant in the administration of the JOC on behalf of all participants (e.g., processing claim response letters, calls from claimants, postage, notary public services, etc.) shall initially be allocated equally between the Parties. These costs shall be reallocated after years end per the procedure described in 4.b. above.

5. Additional Actions and Miscellaneous.

- a. The term of this Operations Plan shall commence on February 1, 2017, and shall terminate on January 31, 2019. The Parties may agree to extend this Operations Plan and will meet starting October 1, 2018 to discuss any extension.
- b. Modification language - This Operations Plan may not be altered, amended, or modified in any respect, except by unanimous consent of the Parties. Any modification to this Operations Plan must be made in writing and executed by all the Parties.

- c. Except as set forth below, in the event the Joint Operations Committee cannot agree on (1) the implementation of this agreement, or (2) the proper action in response to a landowner claim, such dispute shall be submitted to binding arbitration before a single neutral arbitrator appointed by the Parties, and in absence of such consent, appointed by the presiding judge of the Kern County Superior Court. Any arbitrator selected by the parties shall have experience arbitrating groundwater disputes. The arbitration shall be called and conducted in accordance with such rules as the Parties shall agree upon, and in the absence of such agreement, in accordance with the procedures set forth in California Code of Civil Procedure section 1282, et seq. Notwithstanding the foregoing, in any arbitration the Parties agree that discovery will be allowed pursuant to Code of Civil Procedure section 1283.05. The Parties shall attempt to jointly appoint the neutral arbitrator within ten (10) days after a dispute arises, and in the event the Parties cannot agree to a neutral arbitrator within said ten-day period, either Party may make a request to the presiding judge of the Kern County Superior Court immediately thereafter. In the event a landowner submits a claim and the Joint Operations Committee cannot agree on the proper action in response, the arbitration requirement shall be contingent upon the landowner's express written consent to proceed and be bound by arbitration and to pay his/her/its proportionate share of arbitrator fees and related costs. Absent such landowner consent, there shall be no obligation on the part of either Party to arbitrate any such dispute.
- d. With respect to the interpretation and enforcement of this Plan, and with respect to the resolution of any matter left for future determination or implementation, the Parties agree to carry out such duties and responsibilities in good faith and in cooperation with one another, to the end that the objectives and purposes of this agreement will be achieved and/or carried out to the greatest extent practicable.

APPROVED this ___ day of _____, 2017

“PARTIES”

KERN COUNTY WATER AGENCY, on behalf of itself and the Pioneer Project Recovery Participants

By: 

KERN WATER BANK AUTHORITY

By: 

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

By: _____

Joint Operations Committee
Well Cost Alternatives Worksheet

Date: October 13, 2015
Case No. 15-017
Name: Ross Johnson

A. Notes:

1. Pump was lowered in 2015.
2. Pump was pulled in October 2015 and found to be sanded up. (ME Beggs Invoice)
3. Bottom of well was tagged in October 2015 at 288 ft or 6 ft shallower than a year ago. (ME Beggs Invoice)
4. Casing is flaking off (ME Beggs Invoice)

B. Exhibit A Analysis:

<u>i. Pump Capacity Analysis:</u>				
Required Pump Flow Rate (Estimated)				10 GPM
Measured Pump Flow Rate (Estimated)				0 GPM
Difference				10 GPM
Adequate Capacity	Yes	No	X	
<u>ii. Pump Setting Analysis:</u>				
Depth of Casing				288 Ft
Depth to Water (Static)				222 Ft
Depth to Pumping Water Level (Estimated)				231.5 Ft
Drawdown				9.5 Ft
Pump Setting				284 Ft
Pump Submergence				52.5 Ft
Adequate Submergence	Yes	X	No	
Projected static depth to water level (From Study)				250 Ft
Drawdown				9.5
Required Submergence				50
Projected 10 Year Casing Setting				175
Modified Pump Setting				485 Ft
Existing Casing Depth				288 Ft
Modified Pump Setting				485 Ft
15 feet minimum pump clearance.				15 Ft
Required casing depth in ten years.				500 Ft
Existing Casing Depth below Required Casing Depth				(212) Ft
Adequate Clearance	Yes	No	X	

C. Well Replacement Analysis

<u>Well Replacement Depreciation Analysis:</u>				
Existing well casing - Expected Life				50 Years
Existing well casing - Age				38
Existing well casing - Expected Remaining Life (Casing has failed)				0
Existing pump -- Expected Life				15 Years
Existing pump - (Pump replaced in July 2015)				0
Existing pump - Expected Remaining Life				15
<i>Note: In some cases, existing column, tube, shaft and motor should also be evaluated, or included with Existing pump.</i>				
<u>Facility Remaining Replacement Cost Analysis:</u>				
		Cost	Cont. Amount	Total
Drilling and casing cost for new well.		90,000	9,000	\$99,000
Purchase and installation of new pumping equipment.		5,000	500	\$5,500
Salvage Value				\$0
	Total:			\$104,500
Unit Well Replacement Cost	\$99,000 /	500 FT =		\$198 /FT
Existing Well - Replace Cost	\$198 /FT x	288 FT =		57,024
Existing Well - Depreciated Value				57,024
Existing Well - Remaining Value				0
New Well - Incremental Cost	\$198 /FT x	212 FT =		41,976
Action Fund Mitigation Cost				\$41,976
Unit Pump Replacement Cost	\$5,500 /	485 FT =		\$11 /FT
Existing Pump - Replace Cost	\$11 /FT x	284 FT =		3,224
Existing Pump - Depreciated Value				0
Existing Pump - Remaining Value				3,224
New Pump - Incremental Cost	\$11 /FT x	201 FT =		2,276
Action Fund Mitigation Cost				\$5,500
<u>Facility Replacement Cost Summary:</u>				
Owner Cost for Facility Replacement				\$57,024
Action Fund Cost for Facility Replacement				\$47,476
Total Replacement Cost				\$104,500

D. Cost Alternative Summary:

1) Cost to drill new well to a depth of 495 ft.	\$99,000
2) Incremental cost to drill new well from 288 ft down to 495 ft.	\$41,976
3) Drill New Well & Provide Pump (Full Cost)	\$104,500

E. Action Fund Cost

Exhibit A - Incremental cost to drill new well from 288 ft down to 495 ft and lower pump from 284 ft to 485 ft.	\$47,476
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**AMENDMENT NO. 1
TO THE
PROJECT RECOVERY OPERATIONS PLAN REGARDING
PIONEER PROJECT, ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT,
AND KERN WATER BANK AUTHORITY PROJECTS**

This *Amendment No. 1 to the Project Recovery Operations Plan Regarding Pioneer Project, Rosedale-Rio Bravo Water Storage District, and Kern Water Bank Authority Projects* ("Amendment No. 1"), is made, entered into and effective as of January 31, 2019, by and between the Kern County Water Agency, on behalf of itself and the Pioneer Project Recovery Participants, Rosedale- Rio Bravo Water Storage District, and the Kern Water Bank Authority (the "Parties").

RECITALS

WHEREAS, the Parties have entered into an agreement titled *Project Recovery Operations Plan Regarding Pioneer Project, Rosedale-Rio Bravo Water Storage District, and Kern Water Bank Authority Projects* ("Operations Plan");

WHEREAS, the term of the Operations plan will terminate on January 31, 2019; and

WHEREAS, the Parties desire to extend the term of the Operations Plan for two years.

AGREEMENT

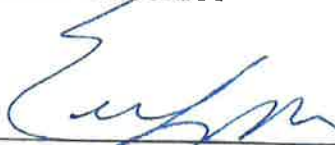
1. The term of the Operations Plan shall be extended from January 31, 2019 to January 31, 2021, and shall terminate on January 31, 2021, unless extended by mutual agreement of the Parties. The Parties may agree to extend the Operations Plan and will meet starting October 1, 2020 to discuss any extension.

2. Except as amended herein, all other terms and conditions of the Operations Plan shall remain unchanged and in full force and effect during the term of the Operation Plan as extended by this Amendment No. 1.

KERN COUNTY WATER AGENCY, on
behalf of itself and the Pioneer Project
Recovery Participants

By: 
Curtis Creel, General Manager

ROSEDALE-RIO BRAVO WATER
STORAGE DISTRICT

By: 
Eric Averett, General Manager

KERN WATER BANK AUTHORITY

By: 
Jon Parker, General Manager

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Joint Powers Authority Agreement for the Kern Fan Groundwater Storage Project

IRWD Board of Directors Meeting
July 22, 2019



Overview

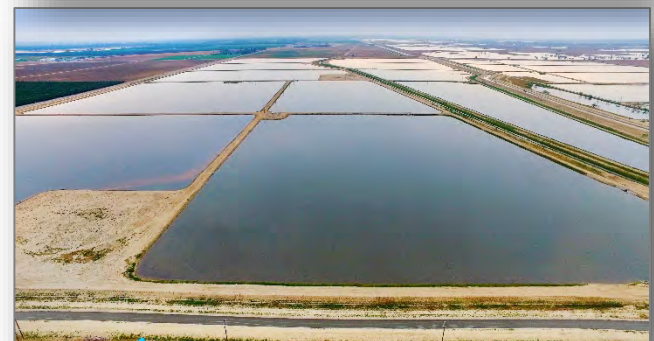
- Background
 - Water Storage Investment Program (WSIP)
 - Kern Fan Project Highlights
 - Project Funding
- Joint Powers Authority (JPA) Agreement
- Project Schedule
- Recommendation

Water Storage Investment Program (WSIP)

- California Water Commission administers Prop 1 WSIP grant funding
- \$2.6 billion in funding available for eligible water storage projects providing public benefits
- WSIP funds a maximum of 50% capital costs
- Quantified ecosystem benefits make up at least 50% of the WSIP funding request

Kern Fan Groundwater Storage Project Highlights

- New Conveyance from California Aqueduct
 - New turnout
 - 10 mile canal
 - 500 cfs capacity
- 1,050 Acres of Recharge Basins
 - Annual recharge capacity of 100,000 AF
 - 100,000 AF storage capacity
- 12 Recovery Wells
 - Combined capacity up to 70 cfs
- Stores water otherwise lost to the ocean
- Improves flexibility in operation of State's water system



Prop 1 WSIP Grant Funding

Funding Entity	Percent Funding	Funding Cost Share (millions)
WSIP	40%	\$67.5
IRWD	30%	\$51.9
Rosedale	30%	\$51.9

Joint Powers Authority (JPA) Agreement

The Kern Fan Groundwater Storage Project Joint Powers Authority (JPA), consisting of IRWD and Rosedale, is being formed to facilitate:

- Land acquisition
- Environmental review
- Permitting
- Design
- Construction
- Operations

JPA Agreement Key Provisions (continued)

- **Effective Date and Term**
 - August 1, 2019 or upon execution, whichever is later
 - 30-year term or as required by grant conditions
- **Project Operation**
 - Rosedale to operate, maintain and repair Kern Fan Project facilities
 - Costs for OM&E paid proportional to use
- **Project Costs**
 - Grant funding applied to eligible capital costs
 - Other costs equally funded by IRWD and Rosedale, unless otherwise agreed to

JPA Agreement Key Provisions

- **Allocation of Capacities**

- 100,000 AFY of recharge capacity, 50,000 AF of recovery capacity and up to 500 cfs of conveyance
 - Capacity shared equally unless modified by an approved Special Activities Agreement
- 100,000 AF of water storage capacity allocated as follows:

WSIP Ecosystem Account	25%, up to 25,000 AF
IRWD	50% of remaining capacity
Rosedale	50% of remaining capacity

- **Priority Access**

- First priority access to own respective capacity
- Second priority access to each other's unused capacity

JPA Agreement Key Provisions (continued)

- Ecosystem Public Benefit Account and WSIP Water
 - IRWD and Rosedale to equally fund acquisition and recharge of unallocated State Water Project Article 21 water (WSIP Water) when available until ecosystem account is full (25,000 AF)
 - Once ecosystem account is full, IRWD and Rosedale may fill their accounts with other available water
 - Must comply with any public water supply grant requirements

JPA Agreement Key Provisions (continued)

- Kern River Flood Water
 - Deliveries would follow WSIP Water
 - Rosedale first priority to all Kern Fan Project facilities to recharge flood water
 - First 25% recharged deemed owned by IRWD at no cost
 - IRWD may acquire additional 25% from Rosedale
 - Pay average price for Kern River water over preceding two months or \$25/AF, whichever is greater
 - \$25/AF adjusted for inflation beginning in 2020

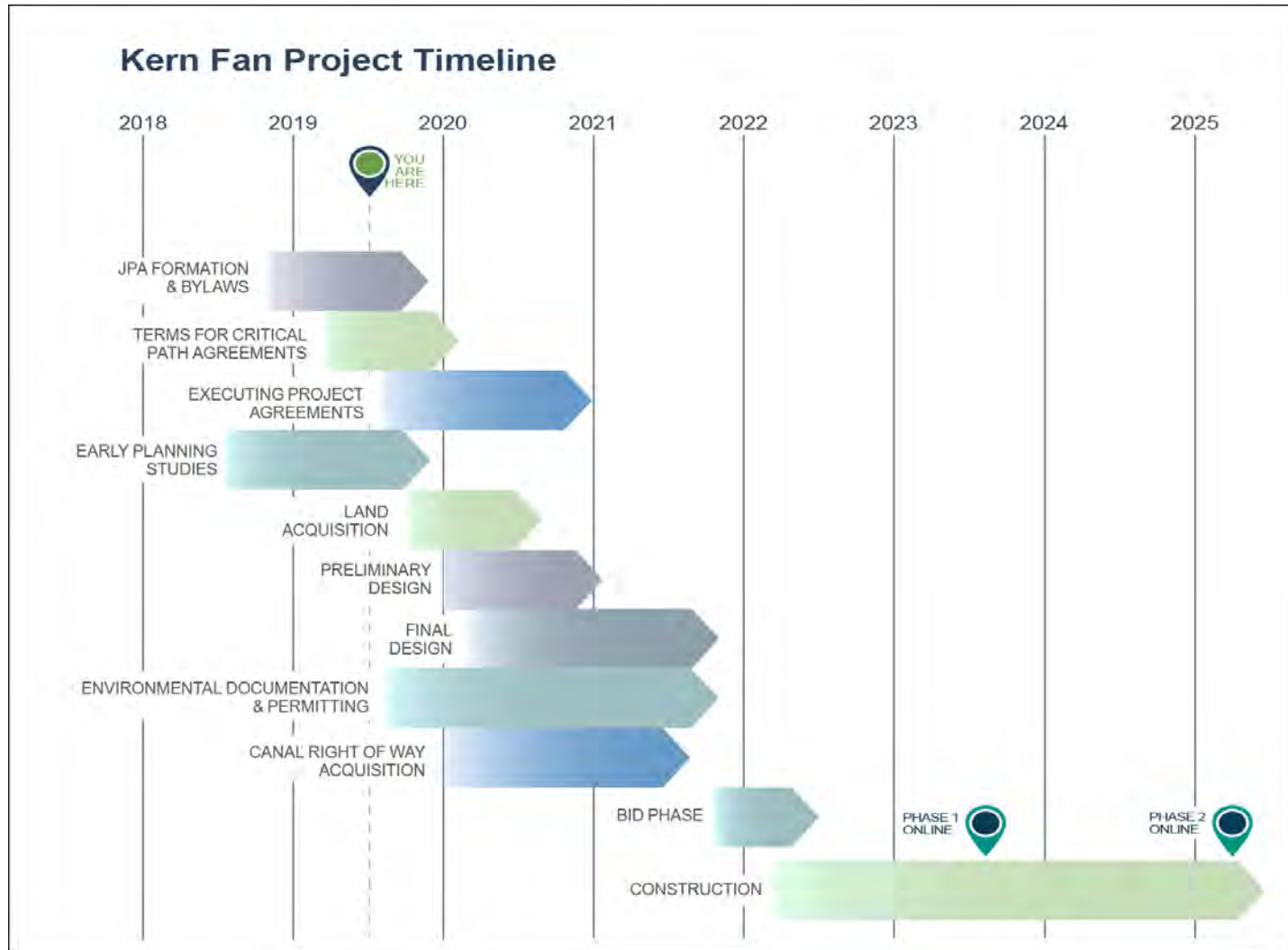
JPA Agreement Key Provisions (continued)

- **Governance**
 - Four member Board of Directors of the Authority
 - Two from each party
 - At least one must be a member of the legislative body
 - One-vote-per-party basis
 - JPA Board to appoint a General Manager from Rosedale
 - JPA Board to appoint a Treasurer from IRWD

JPA Agreement Key Provisions (continued)

- **Disposition of Property**
 - IRWD / Rosedale ownership is equal
 - Each agency retains ownership of its share of the water
 - IRWD may hold its property to operate for water banking or farming or sell its interest to a third party
 - Rosedale has first right to acquire IRWD's interest based on fair market value at the time of disposition
- **Indemnification**
 - Mutual indemnification
 - Claims related to well pumping allocated on a pro-rata basis

Project Schedule



Recommendation

- Authorize the General Manager to execute the Joint Powers Authority Agreement for the Kern Fan Groundwater Storage Project, subject to non-substantive changes and the General Manager's determination that reasonable assurances are in place that necessary agreements with the State of California related to the Kern Fan Project are feasible.