

AGENDA
IRVINE RANCH WATER DISTRICT
ENGINEERING AND OPERATIONS COMMITTEE MEETING
TUESDAY, NOVEMBER 15, 2022

This meeting will be held in-person at the District's headquarters located at 15600 Sand Canyon Avenue, Irvine, California. The meeting will also be broadcasted via Webex for those wanting to observe the meeting virtually.

To observe this meeting virtually, please join online using the link and information below:

Via Web: <https://irwd.webex.com/irwd/j.php?MTID=mae108464a00e0a54d2ee9a6e2d3834a2>

Meeting Number (Access Code): 2489 272 8733

Meeting Password: pD7EpvemR43

PLEASE NOTE: Webex observers of the meeting will be placed into the Webex lobby when the Board enters closed session. Participants who remain in the "lobby" will automatically be returned to the open session of the Board once the closed session has concluded. Observers joining the meeting while the Board is in closed session will receive a notice that the meeting has been locked. They will be able to observe the meeting once the closed session has concluded.

CALL TO ORDER 1:30 p.m.

ATTENDANCE Committee Chair: Doug Reinhart _____
 Committee Member: Karen McLaughlin _____

<u>ALSO PRESENT</u>	Paul Cook	_____	Kevin Burton	_____	Wendy Chambers	_____
	Jose Zepeda	_____	Paul Weghorst	_____	Cheryl Clary	_____
	Steve Choi	_____	Jim Colston	_____	Fiona Sanchez	_____
	Rich Mori	_____	Eric Akiyoshi	_____	Joseph McGehee	_____
	Jacob Moeder	_____	Malcolm Cortez	_____	Ken Pfister	_____
	Harry Cho	_____	Alex Murphy	_____	_____	_____
	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____

PUBLIC COMMENT NOTICE

If you wish to address the Committee on any item, please submit a request to speak via the "chat" feature available when joining the meeting virtually. Remarks are limited to three minutes per speaker on each subject. Public comments are limited to three minutes per speaker on each subject. You may also submit a public comment in advance of the meeting by emailing comments@irwd.com before 9:00 a.m. on Tuesday, November 15, 2022.

COMMUNICATIONS

1. Notes: Burton
2. Public Comments
3. Determine the need to discuss and/or take action on item(s) introduced that came to the attention of the District subsequent to the agenda being posted, and determine which items may be approved without discussion.

INFORMATION

4. UPCOMING PROJECTS STATUS REPORT – AKIYOSHI / CORTEZ / MOEDER / MORI / BURTON

Recommendation: Receive and file.

5. PFAS REGULATORY AND MONITORING UPDATE – COLSTON / BURTON

Recommendation: Receive and file.

ACTION

6. PLANNING AREA 1 ORCHARD HILLS NEIGHBORHOOD 4 RECYCLED WATER IMPROVEMENTS – RIOS / AKIYOSHI / BURTON

Recommendation: That the Board authorize the General Manager to accept Irvine Community Development Company, LLC's construction contract with FYDAQ Company, Inc. in the amount of \$888,981, and authorize a budget increase for Project 01722 in the amount of \$713,500, from \$566,500 to \$1,280,000, for the Planning Area 1 Orchard Hills Neighborhood 4 Recycled Water Improvements.

OTHER BUSINESS

7. Directors' Comments
8. Adjournment

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 above-named Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee 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 Committee 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 Committee Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available electronically via the Webex meeting noted. Upon request, the District will provide for written agenda materials in appropriate alternative formats, and reasonable disability-related modification or accommodation to enable individuals with disabilities to participate in and provide comments at public meetings. Please submit a request, including your name, phone number and/or email address, and a description of the modification, accommodation, or alternative format requested at least two days before the meeting. Requests should be emailed to comments@irwd.com. Requests made by mail must be received at least two days before the meeting. Requests will be granted whenever possible and resolved in favor of accessibility.

November 15, 2022

Prepared by: E. Akiyoshi / M. Cortez /
J. Moeder / R. Mori

Submitted by: K. Burton

Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

UPCOMING PROJECTS STATUS REPORT

SUMMARY:

A status report of Irvine Ranch Water District's Upcoming Projects is presented to the Committee for information.

BACKGROUND:

The information, which is provided as Exhibit "A", is a status report submitted quarterly to the Committee for review.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Upcoming Projects Status Report

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EXHIBIT "A"

UPCOMING PROJECTS STATUS REPORT

Project Name	Planning	Design	Construction	Construction
				Final Acceptance
IBC Sidewalk Relocations	Completed	Completed	In-Process	Jan-23
SR 133 - 36" Trunk Sewer Relocation	Completed	In-Process	Mar-23	-
Riparian View Paving	Completed	Completed	Jan-23	-
MWRP Compressed Natural Gas and Diesel/Gasoline Fueling Station	Completed	In-Process	Dec-22	-
MWRP Tertiary Filter Rehabilitation	Completed	In-Process	Apr-23	-
Operations Center Purchasing Warehouse	Completed	In-Process	Jun-23	-
MWRP Biosolids Misc. Improvements	Completed	In-Process	Jul-23	-
Coastal Z2 and Z4 Pump Stations Rehabilitation	Completed	In-Process	Jun-23	-
Silverado Bridge 174 DW Improvements	Completed	In-Process	Sep-23	-
Silverado Bridge 175 DW Improvements	Completed	In-Process	May-23	-
Woodbridge RW Replacement	Completed	Completed	In-Process	Oct-23
Sewer Siphon Improvements Phase II	Completed	In-Process	May-23	-
Main/Cartwright Manhole Rehabilitation	Completed	Completed	Jan-23	-
El Toro Road Manhole Raise to Grade	Completed	Completed	Feb-23	-
Serrano Creek Raw Water Pipeline Replacement	Completed	In-Process	Jun-23	-
Radio Tower Improvements	In-Process	Feb-23	-	-
Lake Forest Woods Sewer Improvements	Completed	In-Process	Apr-23	-
Santiago Canyon Pump Station Improvements	Completed	Completed	In-Process	May-23
Turtle Rock Chloramine Booster Station	Completed	Completed	Dec-22	-
Lake Forest Well No. 2 Treatment and Improvements	Completed	In-Process	Feb-23	-
Wells 10 and 12 Rehabilitation	Completed	Completed	In-Process	Apr-23
PDF Sodium Hypochlorite Storage and Feed System	Completed	Completed	In-Process	Feb-23
Santiago Creek Dam Outlet Tower and Spillway Improvements	Completed	In-Process	Aug-24	-
Rattlesnake Dam Risk Reduction Investigation	In-Process	-	-	-
Santiago Canyon Fleming Zone 8 Tank and Zone 8-9 BPS	Completed	Completed	In-Process	Jan-25
Generator Fuel Storage Upgrades	Completed	In-Process	Apr-23	-
Orange Heights Zone 6 Reservoir	Completed	In-Process	Aug-23	-
Well OPA-1 PFAS Treatment	Completed	Completed	In-Process	Jul-23
Well ET-1 and SGU PFAS Treatment	Completed	Completed	In-Process	Dec-23
Baker WTP Diesel Fuel Storage	Completed	In-Process	Dec-22	-
Orange Heights SAC/Baker Pipeline Relocation	Completed	Completed	Apr-23	-
San Joaquin Reservoir Filtration	Completed	Completed	In-Process	Aug-24
15 MG Zone 1 Reservoir Coating Replacement and Improvements	Completed	Completed	In-Process	Dec-22
Zone A to Rattlesnake Reservoir BPS	Completed	Completed	In-Process	Dec-23
Orange Heights Zn 5 to 6 and C+ to E Pump Stations	Completed	In-Process	Aug-23	-
Syphon Reservoir Improvements	Completed	In-Process	May-24	-
Syphon Reservoir Intersection Improvements and Access Road	Completed	In-Process	Jun-23	-
Lake Forest Zone B-C BPS	Completed	Completed	In-Process	Feb-23
Crystal Cove RW PRV	Completed	Completed	In-Process	Feb-23
Enterprise RW Pipeline Replacement	Completed	In-Process	May-23	-

UPCOMING PROJECTS STATUS REPORT

Project Name	Planning	Design	Construction	Construction
				Final Acceptance
PA 1, Jeffrey Road Extension RW (RA w/CDC)	Completed	Completed	In-Process	Mar-23
PA 51, District 5, F and N St DW, RW	Completed	Completed	In-Process	Mar-23
PA 51, District 5, Astor DW, RW (RA w/Heritage Fields)	Completed	Completed	In-Process	Mar-23
PA 51, Marine Way from Alton Pkwy to Bake Pkwy DW, RW (RA w/Heritage Fields)	Completed	Completed	In-Process	Jan-23
PA 51, Marine Way at Bake Parkway DW (RA w/Heritage Fields)	Completed	Completed	Jan-23	-
PA 51, Serrano Creek Sewer Relocation	Completed	Completed	In-Process	Jun-23
PA 51, District 5 South Harrier DW, SS, RW (RA with Heritage Fields)	Completed	Completed	In-Process	Mar-23
PA 51, District 5 South Chinon DW, RW (RA with Heritage Fields)	Completed	Completed	In-Process	Mar-23
PA 51 GP-5 from Skyhawk to Treble DW, SS, RW (RA with Heritage Fields)	Completed	Completed	Completed	Dec-22
PA 51, Marine Way from Skyhawk to Treble DW, RW (RA with Heritage Fields)	Completed	In-Process	Jan-23	-
PA 51, Treble from GP5 to Marine Way DW, RW (RA with Heritage Fields)	Completed	In-Process	Jan-23	-
PA 51 Lynx from Harrier to Marine Way DW, SS (RA with Heritage Fileds)	Completed	In-Process	Jan-23	-
PA 1, Orchard Hills Neighborhood 4 RW (RA with TIC)	Completed	Completed	In-Process	Mar-23
East Orange, Orange Heights Tract 16199 SS, RW	In-Process	On-Hold	-	-
East Orange, Orange Heights Tract 17995 DW, RW	In-Process	On-Hold	-	-
East Orange, Orange Heights Jamboree and Chapman DW SS, RW	In-Process	On-Hold	-	-
The Meadows, SS (RA w/Toll Brothers)	Completed	Completed	In-Process	Mar-23
CIP Project Packaging for IRWD Production Wells	In-Process	-	-	-
Steel Tank Assessment	In-Process	-	-	-
Great Park Botanical Garden and Cultural Terrace Planning Analysis	In-Process	-	-	-
Innovation Park and PA 12/13 Commercial and Residential Planning Analysis	In-Process	-	-	-
OC San / IRWD IBC 5-Year CORF/Equity Flow Monitoring	In-Process	-	-	-
Pump Station and Lift Station Assessment	In-Process	-	-	-
CIP Asset Management Phase II - Linear Asset Prioritization	Jan-23	-	-	-
GIS Master Plan	In-Process	-	-	-

November 15, 2022

Prepared by: J. Colston

Submitted by: K. Burton

Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

PFAS REGULATORY AND MONITORING UPDATE

SUMMARY:

Per- and Poly-Fluoroalkyl substances (PFAS) compounds have been found in local groundwaters, and they are also found in wastewater due to residential, commercial, and industrial sources. The California State Water Resources Control Board has initiated a statewide investigation and phased sampling of potential industrial and municipal sources of PFAS threatening groundwater supplies. IRWD and other water and wastewater agencies around the state have been issued orders from the State Board to conduct monitoring of wells and wastewater treatment plants for PFAS. Staff will provide the Committee an update on current topics associated with PFAS.

BACKGROUND:

Staff will provide an update on PFAS that will include the following topics:

- The State Board's Division of Drinking Water (DDW) has added Notification and Response Levels for PFHxS (Perfluorohexanesulfonic Acid), at 3 parts per trillion (ppt) and 20 ppt, respectively. There are three other PFAS compounds with Notification Levels (NLs) and Response Levels (RLs): PFOA, PFOS, and PFBS. NLs and RLs are nonregulatory, health-based advisory levels established for contaminants in drinking water for which maximum contaminant levels (MCLs) have not been established. NLs and RLs are established as precautionary measures for contaminants that may be considered candidates for establishment of MCLs but have not yet undergone or completed the regulatory standard setting process prescribed for the development of MCLs and are not drinking water standards.
- DDW has repealed and replaced its statewide PFAS potable water monitoring order. The new order adds wells from the Dyer Road Wellfield for a total of 16 IRWD Wells required to conduct quarterly PFAS monitoring beginning in 2023. Wells were chosen by DDW based on proximity to other wells with PFAS detections.
- Important federal actions related to PFAS include:
 - In June, the EPA published interim lifetime drinking water health advisories for PFOA (.004 ppt), PFOS (.02 ppt), GenX (10 ppt), and PFBS (2,000 ppt).
 - In October, the EPA proposed to designate PFOA and PFOS as hazardous substances under the CERCLA (Superfund) statute.
 - The EPA has recently announced its intent to publish draft MCLs for PFOA and PFOS in December 2022.
 - The fifth unregulated contaminant monitoring (UCMR5) event will begin in 2023 and will include 29 PFAS compounds and Lithium.

- In addition to the identified wells, IRWD is monitoring the composite well water for PFAS. IRWD is not serving drinking water with PFHxS or other PFAS compounds.
- IRWD continues construction projects for PFAS treatment systems: OPA1, ET1, and SGU.

Staff will continue to monitor this topic and will provide updates to the IRWD Board on future substantive changes in regulation, legislation, and other information that could impact IRWD.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

None.

November 15, 2022

Prepared by: A. Kuan / B. Rios / E. Akiyoshi

Submitted by: K. Burton

Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

PLANNING AREA 1 ORCHARD HILLS NEIGHBORHOOD 4 RECYCLED WATER IMPROVEMENTS

SUMMARY:

Irvine Community Development Company, LLC (ICDC) is proceeding with development of Planning Area 1 (PA1) Orchard Hills Neighborhood 4 (NH4), which includes the construction of streets, storm drains, domestic water, sanitary sewer, and recycled water improvements. As part of the development, ICDC will construct IRWD capital facilities under an existing Supplemental Reimbursement Agreement. Staff recommends that the Board:

- Authorize the General Manager to accept ICDC's construction contract with FYDAQ Company, Inc. in the amount of \$888,981 for the PA1 Orchard Hills NH4 Recycled Water Improvements project; and
- Authorize a budget increase for Project 01722 in the amount of \$713,500, from \$566,500 to \$1,280,000, for the PA1 Orchard Hills NH4 Recycled Water Improvements.

BACKGROUND:

ICDC is moving forward with the first phase of residential and commercial development of PA1 Orchard Hills NH4. Orchard Hills NH4 is bound by Portola Parkway to the south, Rattlesnake Reservoir to the west, Jeffrey Road to the east, and National Community Conservation Plan conservation land to the north. The project location map is shown as Exhibit "A." As part of this development, ICDC will design and construct IRWD's capital recycled water improvements. The required IRWD capital facilities are documented in the February 2005 Planning Areas 1 and 2 Sub-Area Master Plan and all subsequent addenda and updates prepared by Stantec Consulting Services, Inc.

The design and construction of the IRWD capital facilities will be performed under the terms of the Master Reimbursement Agreement between IRWD and ICDC approved by the Board in May 1997 and as further refined in the Supplemental Reimbursement Agreement. The Supplemental Reimbursement Agreement for PA1 was approved in May 2005.

The PA1 Orchard Hills NH4 Recycled Water Improvements project consists of approximately 9,000 feet of 8-inch recycled water pipeline, all within future streets for the development. ICDC retained Hunsaker & Associates, Inc. to prepare the plans and received bids from four contractors. The bids ranged from \$888,981 to \$1,351,350. ICDC recommends awarding the construction contract to the low bidder FYDAQ Company, Inc. for a bid amount of \$888,981 as shown in Exhibit "B". In addition, ICDC has received consultant proposals for surveying, geotechnical observation and testing, and construction support services. Proposals for field archeological and paleontological monitoring were not necessary because those costs were included as a part of the previously approved improvements. Staff has reviewed the consultant

proposals and the construction bids and found the amounts to be acceptable. A summary of the PA1 Orchard Hills NH4 Recycled Water Improvement costs is shown below.

Construction (FYDAQ)	\$888,981.00
Construction Support (Hunsaker & Associates)	\$17,200.00
Geotechnical Services (NMG)	\$18,822.00
Survey Services (Hunsaker & Associates)	\$29,160.00
ICDC Administration Fee (1%)	<u>\$8,889.81</u>
	\$963,052.81

FISCAL IMPACTS:

Project 01722 is included in the FY 2022-23 Capital Budget and requires a budget increase as follows:

Project No.	Current Budget	Addition <Reduction>	Total Budget
01722	\$566,500	\$713,500	\$1,280,000

ENVIRONMENTAL COMPLIANCE:

Construction of capital recycled water facilities for Orchard Hills, Neighborhood 4 is subject to CEQA. In conformance with the California Code of Regulations Title 14, Chapter 3, Article 7 an Environmental Impact Report was certified by the City of Irvine, the lead agency on June 14, 2005 (SCH# 2004041080).

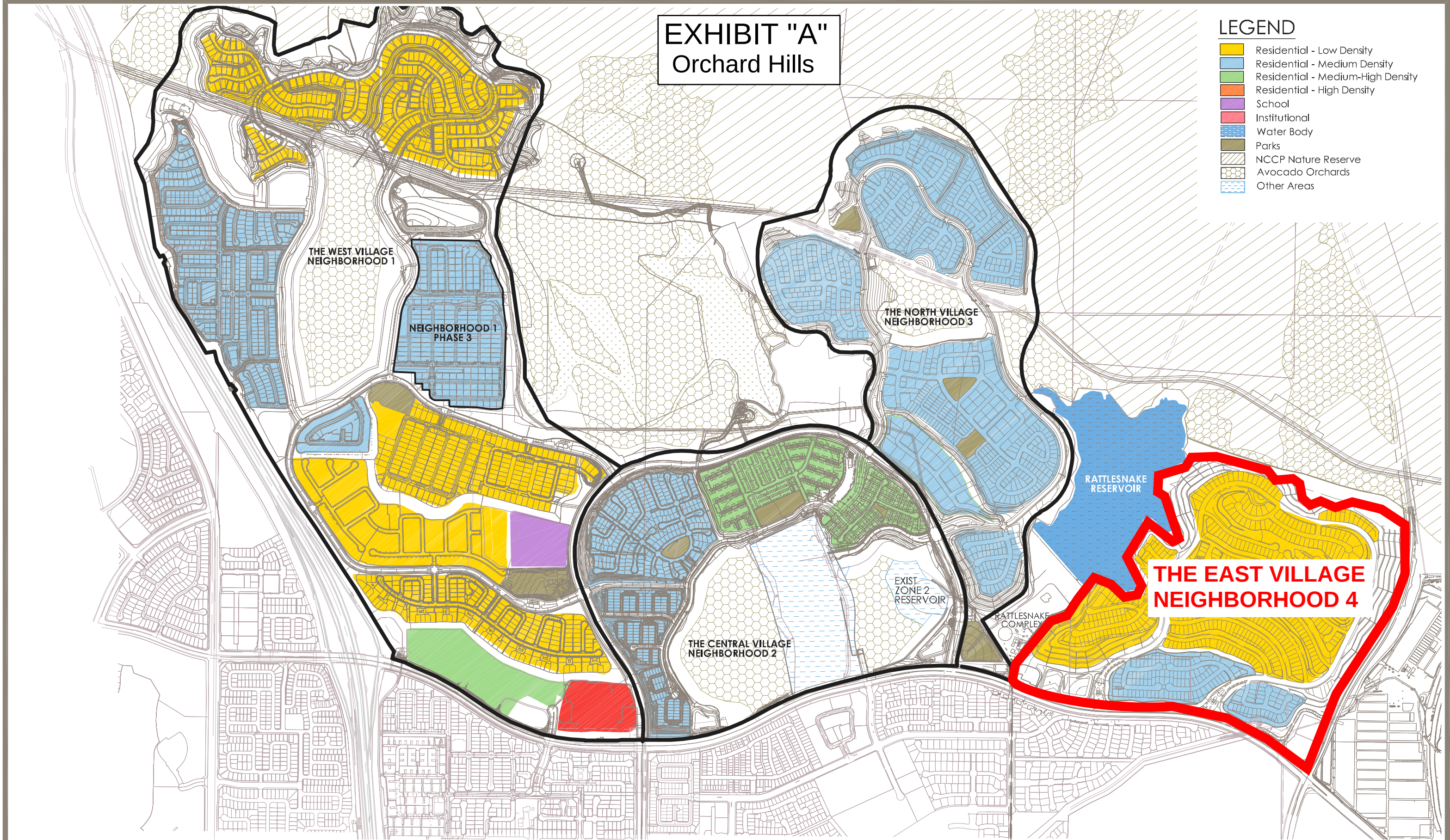
RECOMMENDATION:

That the Board authorize the General Manager to accept Irvine Community Development Company, LLC's construction contract with FYDAQ Company, Inc. in the amount of \$888,981, and authorize a budget increase for Project 01722 in the amount of \$713,500, from \$566,500 to \$1,280,000, for the Planning Area 1 Orchard Hills Neighborhood 4 Recycled Water Improvements.

LIST OF EXHIBITS:

Exhibit "A" – Location Map

Exhibit "B" – Bid Summary, PA1 Orchard Hills NH4 Recycled Water Improvements



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EXHIBIT "B"

BID SUMMARY
ORCHARD HILLS, NEIGHBORHOOD 4
BACKBONE DOMESTIC WATER & PRV'S AND RECYCLED WATER
ALL PREVAILING WAGE
CONTRACT "B1A"
TASK/PC ID NO. LD-0001.ST.40.cn02
BID PACKAGE NO. B00513A

c: Mike Morse
Terri Moss
File with Bid Key Map
Erica Marioneaux - Cost Matrix

PRE-BID MEETING DATE: August 24, 2022
BID OPENING DATE: September 19, 2022
WITNESSED BY: M. Morse
E. Marioneaux

DECLINED PRIOR TO PRE-BID: N/A
NO SHOW AT PREBID: N/A
DID NOT SUBMIT: Shoffeitt Pipeline

ENGINEER'S ESTIMATE	LOW BIDDER	2ND BIDDER	3RD BIDDER	4TH BIDDER
Hunsaker & Associates, Inc.	Fydaq	L&S Construction Inc.	Paulus Engineering	Clearwater Pipeline, Inc.

CHECK LIST
Required items to be included in bid package:

1. Signed Addendum 1	X		Did not check, as bidder was not low.		Did not check, as bidder was not low.		Did not check, as bidder was not low.
2. Corporate Seal (if applicable)	X						
3. Correct Signatures (Page V-3)	X						
4. Bid Totals Correctly	X						
5. List of SubContractors	X						
6. Equipment/Material Source Information	X						
7. Contractors Rates/Reviewed	X						
8. 10% Bid Bond	X						
9. Construction Schedule		Per Construction Schedule					
10. Non-Collusion Certificate	X						
11. Contractor Prequalified	X						
12. Fuel Letter		N/A					

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL
II.	IRWD CAPITAL RECYCLED WATER DELETABLE IMPROVEMENTS (Developer may or may not award the Deletable Section with the Assessment District Improvements)												
C.	GENERAL												
41.	MOBILIZATION (NOT TO EXCEED 2% OF CONTRACT PRICE SECTIONS C-D)	1	LS	\$20,000.00	\$20,000.00	\$2,500.00	\$2,500.00	\$9,200.00	\$9,200.00	\$5,800.00	\$5,800.00	\$25,000.00	\$25,000.00
42.	PAYMENT AND PERFORMANCE BONDS (SECTIONS C-D)	1	LS	\$10,000.00	\$10,000.00	\$7,444.00	\$7,444.00	\$6,100.00	\$6,100.00	\$12,750.00	\$12,750.00	\$65,540.00	\$65,540.00
43.	DEVELOP CONSTRUCTION WATER (SECTIONS C-D)	1	LS	\$5,000.00	\$5,000.00	\$1,000.00	\$1,000.00	\$3,500.00	\$3,500.00	\$1,160.00	\$1,160.00	\$25,000.00	\$25,000.00
44.	TRAFFIC CONTROL (SECTIONS C-D)	1	LS	\$5,000.00	\$5,000.00	\$9,368.00	\$9,368.00	\$850.00	\$850.00	\$580.00	\$580.00	\$15,000.00	\$15,000.00
45.	INTERIM EROSION AND SEDIMENT CONTROL (SECTIONS C-D)	1	LS	\$12,000.00	\$12,000.00	\$1,000.00	\$1,000.00	\$2,500.00	\$2,500.00	\$2,552.00	\$2,552.00	\$25,000.00	\$25,000.00
46.	REMOVE AND DISPOSE BEES, BEE HIVES, SNAKES, AND OTHER NOXIOUS INSECTS AND ANIMALS	1	LS	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1.00	\$1.00	\$5,801.00	\$5,801.00	\$7,500.00	\$7,500.00
47.	ALL ELSE REQUIRED AS SHOWN ON THE PLANS AND SPECIFICATIONS, BUT NOT LISTED ON THE SCHEDULE OF VALUES (SECTIONS C-D)	1	LS	\$500.00	\$500.00	\$1,500.00	\$1,500.00	\$1.00	\$1.00	\$1.00	\$1.00	\$5,000.00	\$5,000.00
D.	RECYCLED WATER IMPROVEMENTS												
	NOTE: All tees, bends, crosses, adapters, flanges, reducers, thrust blocks, tracer wire, and other fittings are to be included in the pipe unit price												
48.	INSTALL 8" PURPLE PVC C-900, DR-14, RECYCLED WATER LINE PER IRWD STD W-17	8,972	LF	\$100.00	\$897,200.00	\$67.25	\$603,367.00	\$84.00	\$753,648.00	\$110.00	\$986,920.00	\$105.00	\$942,060.00
49.	INSTALL 8" GATE VALVE, FLG'D, W/ VALVE BOX PER IRWD STD W-22	9	EA	\$1,450.00	\$13,050.00	\$2,585.00	\$23,265.00	\$3,350.00	\$30,150.00	\$4,406.00	\$39,654.00	\$2,750.00	\$24,750.00
50.	INSTALL 8" BUTTERFLY VALVE, CLASS 250, FLG'D, W/ VALVE BOX PER IRWD STD W-22	4	EA	\$2,300.00	\$9,200.00	\$3,350.00	\$13,400.00	\$4,200.00	\$16,800.00	\$10,900.00	\$43,600.00	\$5,500.00	\$22,000.00
51.	INSTALL 8" BUTTERFLY VALVE, CLASS 150, FLG'D, W/ VALVE BOX PER IRWD STD W-22	5	EA	\$1,800.00	\$9,000.00	\$3,350.00	\$16,750.00	\$3,450.00	\$17,250.00	\$5,228.00	\$26,140.00	\$4,500.00	\$22,500.00
52.	INSTALL 8" DI, CLASS 53, WATER LINE PER IRWD STD W-17	47	LF	\$200.00	\$9,400.00	\$233.00	\$10,951.00	\$180.00	\$8,460.00	\$188.00	\$8,836.00	\$500.00	\$23,500.00
53.	INSTALL 2" AIR RELEASE AND VACUUM RELIEF PER IRWD STD W-11	5	EA	\$5,500.00	\$27,500.00	\$7,180.00	\$35,900.00	\$4,950.00	\$24,750.00	\$7,400.00	\$37,000.00	\$7,500.00	\$37,500.00
54.	INSTALL BLOW OFF/BOTTOM DRAIN ASSEMBLY PER IRWD STD W-14	5	EA	\$6,500.00	\$32,500.00	\$16,180.00	\$80,900.00	\$9,800.00	\$49,000.00	\$13,000.00	\$65,000.00	\$15,500.00	\$77,500.00
55.	REMOVE TEMPORAY FLUSH-OUT ASSEMBLY & JOIN EXISTING PER DETAIL 93	1	EA	\$3,000.00	\$3,000.00	\$7,783.00	\$7,783.00	\$3,250.00	\$3,250.00	\$9,290.00	\$9,290.00	\$7,500.00	\$7,500.00
56.	REMOVE TEMPORAY FLUSH-OUT ASSEMBLY & JOIN EXISTING PER DETAIL 94	1	EA	\$3,000.00	\$3,000.00	\$7,783.00	\$7,783.00	\$3,250.00	\$3,250.00	\$9,290.00	\$9,290.00	\$7,500.00	\$7,500.00
57.	INSTALL 8" CML&C STEEL PIPE, RECYCLED WATER LINE PER IRWD STD W-17	12	LF	\$1,000.00	\$12,000.00	\$3,700.00	\$44,400.00	\$300.00	\$3,600.00	\$189.00	\$2,268.00	\$500.00	\$6,000.00
58.	INSTALL 8" 45 DEGREE STEEL BEND, W/ TRUST BLOCK PER IRWD STD W-16	2	EA	\$1,500.00	\$3,000.00	\$360.00	\$720.00	\$650.00	\$1,300.00	\$988.00	\$1,976.00	\$1,500.00	\$3,000.00
59.	ADJUST VALVE CAP TO BASE PAVE GRADE	19	EA	\$300.00	\$5,700.00	\$525.00	\$9,975.00	\$700.00	\$13,300.00	\$597.00	\$11,343.00	\$250.00	\$4,750.00
60.	ADJUST VALVE CAP TO FINAL GRADE	19	EA	\$600.00	\$11,400.00	\$525.00	\$9,975.00	\$700.00	\$13,300.00	\$597.00	\$11,343.00	\$250.00	\$4,750.00
	TOTAL IRWD CAPITAL RECYCLED WATER DELETABLE IMPROVEMENTS (SECTIONS C-D)				\$1,089,450.00		\$888,981.00		\$960,210.00		\$1,281,304.00		\$1,351,350.00

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