MEMORANDUM

TO: Board of Trustees

THROUGH: Indra Winquest
Interim General Manager

FROM: Joseph J. Pomroy, P.E.
Director of Public Works

SUBJECT: Review, Discuss, and Possibly Authorize Multiple Contracts for the Water Resource Recovery Facility Improvements Project; 2019/2020 Capital Improvement Project: Fund: Public Works; Division: Sewer; Project # 2599SS1707; Vendors: K.G. Walters Construction Co., Inc., in the amount of $1,508,500 and Jacobs Engineering in the amount of $60,000. **and** Acknowledge the additional use of $466,500 of Utility Fund cash to complete the project.

STRATEGIC PLAN: Long Range Principle #2 – Finance
Long Range Principle #4 - Service
Long Range Principle #5 – Assets and Infrastructure

DATE: November 26, 2019

I. RECOMMENDATION

That the Board of Trustees moves to:

1. Award a construction contract to K.G. Walters Construction Co., Inc. in the amount of $1,508,500 for the Water Resource Recovery Facility Improvements Project.

2. Authorize Chair and Secretary to execute the contract with K.G. Walters Construction Co., Inc., based on a review by General Counsel and Staff.

3. Authorize Staff to approve change orders to the construction contract for additional work not anticipated at this time of up to 10% of the project bid – $150,000.

4. Authorize Staff to enter into an Additional Task Order with Jacobs Engineering totaling $60,000 for services during construction of the project.

5. Acknowledge the additional use of $466,500 from the Utility Fund cash to complete the Project Budget for CIP 2599SS1707.

II. DISTRICT STRATEGIC PLAN

Long Range Principle #2 – Finance – Prepare Annual Budgets that demonstrate the balance of allocated resources, with service expectations, and the capability to deliver.

- Comply with Nevada Revised Statutes and Administrative Code requirement for the budget process, indebtedness reporting and the annual audit.

Long Range Principle #4 – Service – The District will provide superior quality service and value to its customers considering responsible use of District resources and assets.

- Provide well defined customer centric service levels consistent with community expectations.

Long Range Principle #5 – Assets and Infrastructure – The District will practice perpetual asset renewal, replacement, and improvement to provide safe and superior long term utility services and recreation activities.

- Maintain, renew, expand, and enhance District infrastructure to meet the capacity needs and desires of the community for future generations.

- Maintain, procure, and construct District assets to ensure safe and accessible operations for the public and the District's workforce.

- Comply with regulatory requirements and industry standards.

III. BACKGROUND

The District's Water Resource Recovery Facility (WRRF) processes the raw sewage collected from Incline Village and Crystal Bay into treated wastewater effluent for disposal at the District's Wetlands Facility in the Carson Valley. Constructed in 1962 and upgraded multiple times since, the WRRF utilizes multiple processes and mechanical systems to safely treat raw sewage to federal and state standards consistent with the requirements of the District's Nevada Department of Environmental Protection (NDEP) operating permit.

The aeration process at the WRRF supplies oxygen to facilitate the biological activity that converts the raw sewage into stabilized organic material. The WRRF has six 200,000 gallon aeration basins with two jet aeration clusters per basin. These clusters utilize low pressure air to mix and recirculate the wastewater and provide the necessary oxygen to the microorganisms that provide the treatment of the raw sewage. The low pressure air system consists of three multi-stage centrifugal blowers that feed into a common piping header that supply the aeration clusters in the six aeration basins.

The low pressure air system and associated three multistage centrifugal blowers, controls, and mechanical appurtenances was installed during the last major WRRF upgrade completed in 1992. The system is largely at the end of its useful operational life and the three blowers and controls are no longer supported by the manufacturer.

In late 2016, the District experienced an unexpected failure in one of the three multistage centrifugal blowers. The blower was removed and shipped to the manufacturer's authorized service facility for the region where it was determined the failure was catastrophic. Additionally, parts that may have allowed reconstruction and rebuilding of the blower are no longer available from the manufacturer. The WRRF now has two functional blowers. As the WRRF now requires one of the two blowers operating in order to supply enough air to meet system demands during the summer month. An additional blower failure would place the WRRF in a critical state.

The District has planned a multi-year aeration system improvements project within the Capital Improvement Program to address the aging infrastructure and operational challenges associated with the system. Earlier phases of the project

were completed in 2016-17 that installed a dedicated blower for solids storage and aerated grit tank mixing. The WRRF Aeration pre-design completed in 2018, conducted a comprehensive evaluation of the aeration system's mechanical equipment, piping, controls, and structures; current process performance and energy usage; as well as current industry best practices and technologies; and made recommendations for system improvements.

In December 2018, the Board authorized a design contract for $80,000 to Jacobs engineering to completed design drawings, construction estimate and construction documents. The Basis of Design report provided a construction cost estimate of $1,178,524. The WRRF Aeration Improvement Project CIP data sheet was updated with $1,200,000 for construction to reflect this cost estimate. The design drawings and construction specifications were fully complete in August 2019.

IV. BID RESULTS

The District publicly advertised this project for bidding on September 19, 2019 with a bid submittal due date on October 24, 2019, a 5 week bid period. The District conducted a pre-bid conference and provided a project site tour on October 1, 2019. The District posts all construction documents on PlanetBids. PlanetBids is a web-based eProcurement company that provides a modular suite of innovative and best-in-class solutions to help government, private, non-profit and educational procurement teams better serve their organization and has been in business since 2000. Vendors and contractors on PlanetBids can access all of the District's documents at no cost. The on-line portal also tracks questions, addenda to the documents, plan holders and interested vendors.

A total of 160 vendors and contractors were notified of the project on September 19, 2019. A total of 25 vendors responded on-line as prospective bidders. This included contractors, suppliers, equipment representatives and Plan rooms including Sierra Contractors Source, the Builders Exchange. Three General Contractors submitted bids that were publically opened and read on October 24, 2019. The bid results are as follows.

Contractor	Bid Amount
TNT Industrial	$1,650,324
Resource Development	$1,990,000
K.G. Walters Construction Co., Inc.	$1,508,500

The lowest responsive bidder is K.G. Walters Construction Co., Inc. Staff checked their reference projects listed in the bid submittal and they have successfully performed multiple projects for water and wastewater utilities. K.G. Walters also has over 30 years of successfully completing projects for the District including the $5 million upgrade to the Burnt Cedar Water Disinfection Plant in 2012 and the Sewer Pumping Station 8 Improvements Project in 2018. If awarded, the project is scheduled to be substantially complete by September 2020.

V. FINANCIAL IMPACT AND BUDGET

This multi-year Capital Project has a current 2019-20 budget of $1,300,000. There is a capital carry forward of $100,000 and there is $1,200,000 in the 2019-20 CIP WRRF Aeration Systems Improvements Project data sheet included with this agenda item. The predesign, design, and bidding phase costs expended as of November 15, 2019 are $140,291 with an additional engineering costs of $38,000 still encumbered bringing the total design phase costs to $178,291. The remaining Capital Budget for this project is $1,262,000 after the final engineering costs are paid from the $1,300,000 remaining budget.

The proposed construction project budget is presented in the following table.

Total Construction Phase Project Budget

Construction Phase	Cost
Construction Contract	$1,508,500
10% Construction Contingency Reserve Fund	$150,000
Design Consultant Services During Construction	$60,000
District Construction Management and Inspection	$10,000
Subtotal	**$1,728,500**

The total construction phase budget of $1,728,500 exceeds the current available project budget of $1,262,000 by $466,500. The submitted construction bid by K.G. Walters was $330,000 above the Engineer's estimate. In speaking with Jacobs Engineering, they stated they had not properly kept up with equipment prices from the design phase into the construction phase and that this is the reason for the low estimate.

The District budget for the Utility Fund reports capital expenditure on Schedule F-2 of Form 4404LGF; this is the Statement of Cash Flows. Therefore, Staff recommends the acknowledgement of the additional use of $466,500 in cash to complete the project in excess of the approved budget. Ending cash and cash equivalents on Schedule F-2 were estimated at $4,717,867 at June 30, 2019, while the Audit report has $4,366,202. Ending cash and cash equivalents at June 30, 2020 are budgeted to be $2,709,985. Whether or not that balance is realized depends largely on the rate of spend for capital projects. Even the WRRF Project won't be completed before June 30, 2020. Since this is not an operating expense the use of augmentation or other budget amendment does not apply. Obviously how other projects are executed will need to be monitored. There is currently one Utility Fund 2019-20 CIP that is already coming under budget. The Board of Trustees awarded a construction contract for the Water Pump Station 2-1 Improvements Project on August 28, 2019. The total District allocated budget for that project was $700,000 and the approved construction phase project budget was $350,000. The remaining $350,000 would not be spent from Utility Fund cash for the Fiscal Year 2019-20. Additionally, the Sewer Pump Station-1 Project, budgeted at $470,000, was postponed for Fiscal Year 2019-20 after the Board approved rejecting all bids at the October 30, 2019 Board Meeting and will be re-budgeted in the CIP for Fiscal Year 2020-21.

VI. ALTERNATIVES

The District must move forward with the improvements to the WRRF low pressure air system in order to ensure continuous and reliable wastewater treatment operations; avoid violating the District's NDEP operating permit and the resulting fines; as well as negatively impacting the environment. The District received three competitive bids for the project with the low bid being very well qualified for the work and the named suppliers for equipment are very reliable and widely used in the industry.

The alternative to awarding the contract is rejecting all bids. District staff would then follow the procedure to increase the project budget in the CIP process and carry forward the project balance to the 2020-21 fiscal year. The project would then be rebid in summer of 2020. Although we can't predict what the bidding climate will be in 12 months, expectations are that at a minimum, costs would increase with inflation pressures. The low bidder stated he did not see any value engineering opportunities to increase efficiencies and save costs. Any reduction in project cost would come from reducing project scope and project functionality.

VII. BUSINESS IMPACT

This item is not a "rule" within the meaning of Nevada Revised Statutes, Chapter 237, and does not require a Business Impact Statement.

INCLINE VILLAGE
GENERAL IMPROVEMENT DISTRICT

Project Summary

Project Number:	2599SS1707
Title:	WRRF Aeration System Improvements
Project Type:	D - Capital Improvement - Existing Facilities
Division:	99 - General Administration - Sewer
Budget Year:	2020
Finance Option:	
Asset Type:	SS - Sewer System
Active:	Yes

Project Description

The Wastewater Resource Recovery Facility (WRRF) was constructed by Incline Village General Improvement District (IVGID) in 1962. Since that time, there have been several upgrades and process replacements/improvements to modernize the WRRF and replace aging infrastructure. The aeration process of wastewater treatment supplies oxygen to facilitate the biological activity that converts raw sewage into treated wastewater effluent. The plant has six 200,000 gallon aeration basins with two jet aeration clusters per basin. These clusters utilize pressurized air to mix and recirculate the wastewater and provide the necessary oxygen to the microorganisms. The pressurized air is delivered by multistage centrifugal blowers that are metered by electronically operated valves in order to keep the correct balance of oxygen in the aeration basins at all times.

Project Internal Staff

Staff involvement is the coordination and contracting of the removal, procurement, and replacement of equipment with new equipment.

Project Justification

This project funds the design and replacement of the aeration system equipment at the WRRF. The age of the equipment, the number of hours of operation, and condition assessment indicates the existing centrifugal blowers are at the end of their serviceable life. Additionally, the blowers are no longer supported by the manufacturer and replacement parts are difficult to acquire. The pre-design phase of this project will evaluate current blower and aeration technologies and will select the technology best suited to the conditions at the District's WRRF. The design phase of this project will assemble the plans and specifications to facilitate equipment acquisition and installation. The pre-design report completed in 2018/19 includes the installation of three new turbo blowers, new blower control system, improvements to the motor control center, new aeration piping, new control valves and instrumentation. There is also the necessary demolition of existing aeration blowers and modifications necessary to the building to complete construction.

Forecast

Budget Year		Total Expense	Total Revenue	Difference
2020				
Construction		1,200,000	0	1,200,000
	Year Total	1,200,000	0	1,200,000
		1,200,000	**0**	**1,200,000**

Year Identified	Start Date	Est. Completion Date	Manager	Project Partner
2017	Jul 1, 2018	Jun 30, 2020	Engineering Manager	