

MEMORANDUM**TO:** Board of Trustees**THROUGH:** Mike Bandelin, Interim General Manager**FROM:** Kate Nelson, Interim Public Works Director, Hudson Klein, Principal Engineer**SUBJECT:** Review, discuss and possibly provide direction for Staff to pursue execution of a CMAR Construction contract in the amount of \$6,636,173.51 and a budget augmentation of \$800,000 for the WRRF Storage Tank Project - 2023/24 Capital Improvement Project; Fund: Sewer; Division: Utilities; Project #2599SS2010; Contractor: Granite Construction. (Requesting Staff Member: Interim Public Works Director Kate Nelson)**RELATED STRATEGIC
PLAN BUDGET
INITIATIVE(S):****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 venues, facilities, and services.

**RELATED DISTRICT
POLICIES, PRACTICES,
RESOLUTIONS OR
ORDINANCES**

Board Policy 12.1.0 Multi-year Capital Planning;
13.2.0 Capital Planning Capital Expenditures;
21.1.0 Purchasing Policy for Public Works
Contracts

DATE: February 28, 2024**I. RECOMMENDATION**

That the Board of Trustees Makes a Motion to:

1. Provide direction to Staff to pursue execution of a CMAR Construction Agreement with Granite Construction for the WRRF Storage Tank Project with a Guaranteed Maximum Price in the Amount of \$6,636,173.51 (inclusive of Owner controlled Project risk register in the Amount of \$407,270.00).
2. Prepare a budget augmentation in the amount of \$800,000 to support the award of the CMAR construction contract, a contract with Jacobs for engineering services during construction, Staff time for project management and operational assistance, and inspection and testing, as

required during construction.

II. BACKGROUND

At the Board of Trustees on January 28, 2021 (Item K1), Granite Construction (Granite) was selected as Construction Manager at Risk (CMAR) for both the effluent export line replacement project (CIP #2524SS1010) and the emergency pond lining project (CIP # 2599SS2010). Granite was selected by a panel comprised of Board of Trustees and Staff members; the selection of the CMAR was following Board instruction issued at the February 6, 2020 (Item G1 & G2), Board meeting to pursue external management support through design and construction of the projects.

The Wastewater Recovery Resource Facility (WRRF) Storage Tank Project (Tank Project) was formally started in mid-2021 with Jacobs Engineering Group (Jacobs) as lead design consultant and Granite Construction as pre-construction CMAR. The project is intended to satisfy existing Nevada Division of Environmental Protection (NDEP) discharge permit conditions for the WRRF requiring the impermeable lining of any emergency-use storage pond to prevent degradation of groundwater. The original scope of the Tank Project was to line Pond 2 (refer to Attachment A) in conjunction with replacement of the Effluent Export Pipeline in order to satisfy discharge permit conditions and provide additional storage to facilitate the effluent export line replacement within the existing pipeline alignment. However, regulatory requirements designated by the Nevada Division of Water Resources were confirmed in December 2021, resulting in the need to re-evaluate options as lining Pond #2 was not feasible due to the requirement that the dam, designed in 1962, meet present day design standards if modified to accommodate the proposed high density polyethylene line (HDPE) liner.

In March 2022, following investigation of feasible alternatives to the Pond 2 HDPE lining, Jacobs was authorized to develop 30% schematic designs for three options to provide emergency effluent storage at the WRRF: an HDPE liner installation in Pond 1 (refer Attachment A), a two million gallon (2MG) welded steel storage tank, and a 2MG pre-stressed concrete storage tank - each tank option sited within existing Pond 1. At the June 8, 2022 (Item H1), Board meeting, the Board approved the Staff recommendation for selection of a 2MG pre-stressed concrete tank as the best solution for the emergency storage needs at the WRRF. The 30% design level estimated total project cost was \$6.8M as prepared by Jacobs with cost inputs from both welded steel (\$2.8M) and pre-stressed concrete tank (\$1.9M) manufacturers; the construction cost was estimated at \$5.5M with other project soft costs totaling the \$6.8M estimate. At the June 29, 2022 (Item G3), Board meeting, Jacobs was approved to complete 100% design documents that were delivered in July 2023.

A 100% Opinion of Probable Construction Cost (OPCC) was prepared by Granite in January 2024 and the construction cost estimate increased to \$6.1M, inclusive of approximately \$450,000 allocated in the (owner controlled) project risk register and plug-number estimates (formal subcontractor bid-process required for actual values) for the subcontractor portions of the Tank Project.

Following completion of the subcontractor bid process as required by NRS (Section 338.1696) and additional negotiations, Granite delivered a guaranteed maximum price (GMP) proposal for the project of \$6.64M, inclusive of \$407,270 in Owner-controlled risk register.

A summary table of progressive Tank Project Estimates is as follows:

Date	Total Constr. Cost	Tank Cost	Mech/Elec Portion	Constr. Admin/Inspection	Risk Reserve	Forecast Project Total Construction-Phase Cost
July 2022 30% design est.	\$5.5M	\$1.9M	\$100k	\$1.3M	\$530k	\$6.8M
January 2024 100% OPCC	\$6.1M	\$1.9M	\$100k	\$1.0M	\$446k	\$7.1M
February 2024 GMP	\$6.6M	\$2.7M	\$325k	\$0.6M	\$407k	\$7.2M

The total construction cost has increased by approximately \$0.8M. As shown above, there were \$800,000 and \$225,000 movements in the tank price and the mechanical/electrical prices, respectively.

The tank price increased significantly (~40%). Note that the original cost estimate prepared by Jacobs at 30% schematic design level was provided in collaboration with DN Tanks - the subcontractor selected and included in the proposed CMAR GMP. Staff requested DN Tanks provide some context for the increased cost and the following brief summary was provided:

- A) \$50,000 sales tax not included at 30% schematic design
- B) \$50,000 due to increased design specification requirements
- C) \$50,000 due to schedule requirements to accommodate a single construction season (vs. a two-season schedule)
- D) \$500,000-\$600,000 due to seismic and structural loads not adequately identified at 30% schematic design

DN Tanks have stated these costs were always going to be realized during bid/construction; however, they further acknowledged that IVGID and the CMAR have

been disadvantaged by these omissions at the time of 30% design cost preparation and are revising their budgeting tools as a result of the IVGID Tank Project miscalculation.

Granite has proposed a CMAR contract structure similar to the Effluent Pipeline Project and has reduced the CMAR fee to 10% with an 80/20 owner/CMar share of the unused risk at the completion of the project.

III. **BID RESULTS**

Granite Construction, PW Staff, and Board Trustee liaison completed negotiations as required by NRS 338.1969.1.a-c. However, the GMP presented is inclusive of a competitive bidding process per NRS 338.1685 - 338.16995, completed by Granite Construction for the subcontracted portions of the Tank Project scope. PW Staff were involved in the review of the publicly bid portions and agreed with selections included in the current GMP proposal.

The subcontracted portions of the project include:

- A) Pre-stressed concrete tank construction (~\$2.7M)
- B) Civil Electrical Works (~\$325k)
- C) Permanent Erosion Controls (~\$150k)

IV. **FINANCIAL IMPACT AND BUDGET**

The remaining Tank Project cost totals hinge on final determination of the timing and model for construction delivery; these final costs/contracts will be formally presented at subsequent Board meetings (March 2024) when related consultant contracts and Staff allocations are finalized. Under the current CMAR delivery method, the total project budget is estimated at \$7.2M; This includes the GMP cost, contract contingency, Staff time for construction and closeout periods, special inspection and materials testing, as well as design and Staff time to date. A summary of forecast costs is as follows:

Description	Cost Estimate
Direct Construction Costs	\$ 5,663,000
CMAR Fee	\$ 566,300
Risk Reserve	\$ 410,000
IVGID Operations Staff	\$ 38,000
IVGID Proj. Mgmt.	\$ 90,000

Engineering services	\$ 150,000
Special Inspections	\$ 50,000
Contract Contingency	\$ 190,000
Temporary SCADA	\$ 26,500
Subtotal	\$ 7,183,800
Spent to date	\$ 880,000
TOTAL	\$ 8,063,800

The US Army Corps of Engineers (USACE) Section 595 Program Project Partnering Agreement (PPA) was signed in 2023 including reimbursement of up to 75% of the project costs calculated as \$7.6M at the time of signing. This provides up to \$5.7M of reimbursement. Since the start of the project in July 2021, approximately \$880,000 has been spent in consultant fees, CMAR preconstruction, permitting, US Army Corps of Engineers (USACE) funding administration, and Staff management and operations time. Roughly \$745,000 of this is eligible under Section 595 Funds with \$559,000 currently submitted and in the process of reimbursement.

IVGID currently has approximately \$6.4M currently in the project budget inclusive of FY24 spend to date and the carry-forward approved in October 2023; this does not include the \$559,000 USACE reimbursement referenced above. Should the Board direct the Staff to finalize a CMAR construction contract with Granite Construction, Staff will request a budget augmentation of \$800,000 to account for the difference between the \$6.4M available and the \$7.2M forecast in order to award the construction contract and secure appropriate budget for all project costs.

V. ALTERNATIVES

The alternatives include abandoning the CMAR delivery method and pursuing either:

- A) Publicly bid project, as is.
- B) Re-design project to include bid-options for either welded steel tank or pre-stressed concrete tank.

Note that re-bid or re-design will preclude construction completion and operational use of the new storage tank in 2024. The operational risk IVGID faces is in the event of an emergency (i.e. export pipeline break) when the WRRF has limited storage capacity available, especially at peak visitor times. If

discharge to the existing ponds is required, this will be a clear violation of the NDEP Discharge Permit for the WRRF. This has been the case since 2016 when NDEP first attached the Special Condition to the permit that the existing ponds cannot be used in their unlined condition. Staff have been actively engaged with NDEP via regular updates on project progress since that time; most recently in 2023, the discharge permit was issued/approved with specific reference to the construction of the new tank and a reiteration of the prohibition on use of the existing emergency Storage Ponds.

If the Board opts to abandon the CMAR delivery and bid the project publicly, a separate bid package will need to be prepared for advertisement. This will require additional Staff time and a new contract amendment with Jacobs for bid-support services to adequately facilitate a public bid process. Similarly, if a re-design to incorporate the option for a welded steel tank for competitive pricing purposes is desired, this too will require additional consultant services and/or Staff time to complete. In either scenario, there is no certainty that the total project costs will be reduced. With the added engineering and administration costs and the one-year delay to the start of construction, there is the possibility project costs will increase from the CMAR delivery discussed herein.

VI. COMMENTS

The Tank Project and District have been disadvantaged by the inaccurate cost estimation in the schematic design and budget phase in mid-2022. However, the cost increases reflect what the Tank Project will require for completion and should have been more accurately represented in 2022. The largest movement in the project cost came from subcontracted portions of the project and these costs were competitively bid. Therefore, if the project is publicly re-bid, there is a low likelihood that the costs for these large items will decrease and a reasonable likelihood the cost will further increase due to inflation impacts if construction is delayed until 2025.

Although the performance of the CMAR and tank subcontractor does not reflect favorably with regard to accurate cost estimation for the tank and mechanical costs in early design stages, their value to the project has been a net positive by a wide margin.

VII. BUSINESS IMPACT/BENEFIT

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

VIII. ATTACHMENTS

1. ATTACHMENT A - SITE_PLANS

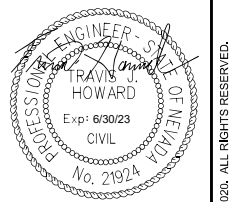
IX. DECISION POINTS NEEDED FROM THE BOARD OF TRUSTEES

1. Provide direction to Staff to pursue or abort execution of a CMAR Construction Agreement with Granite Construction for the WRRF Storage

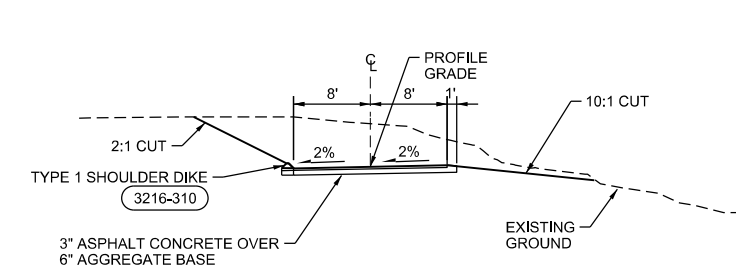
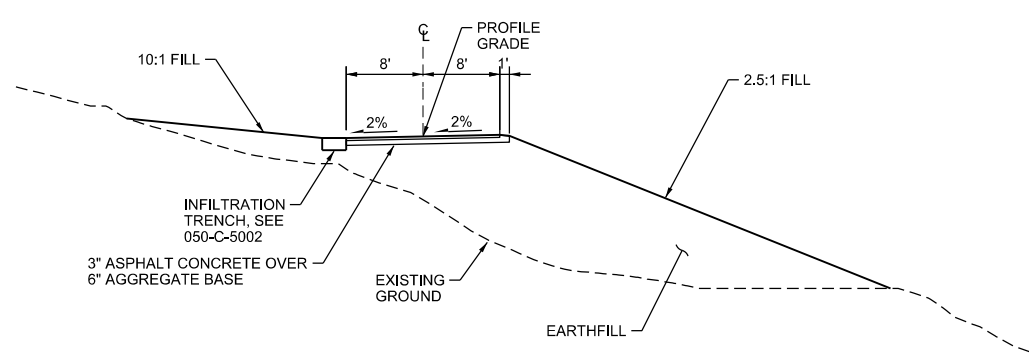
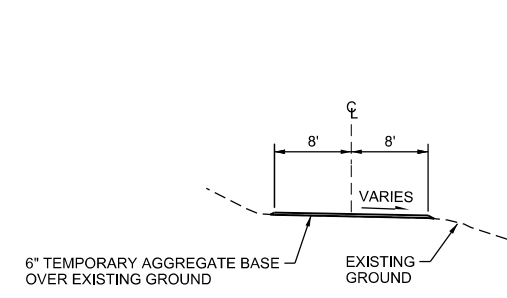
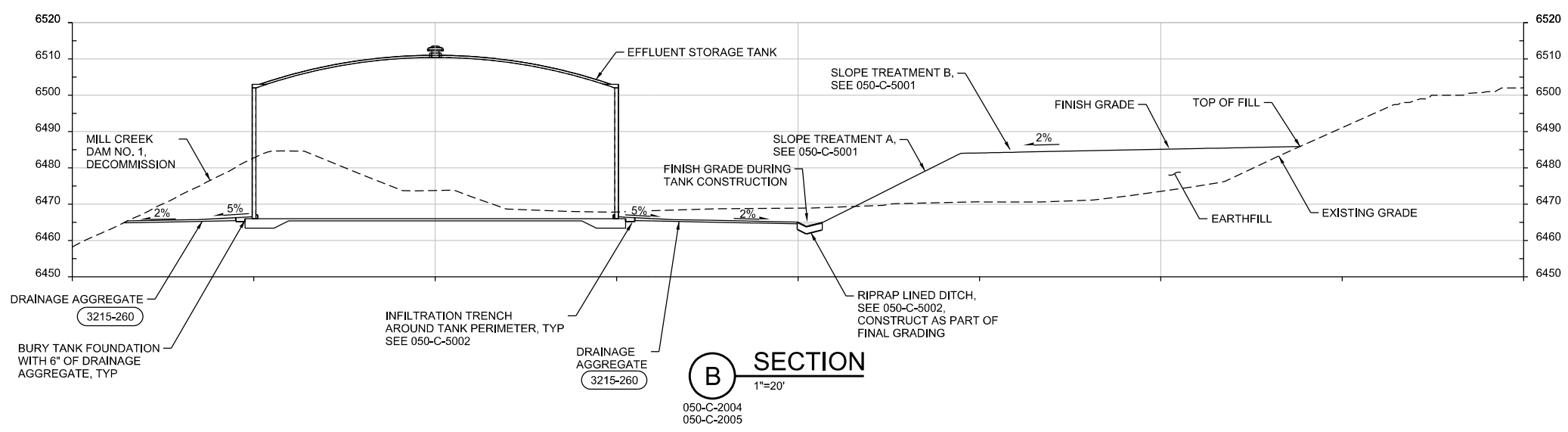
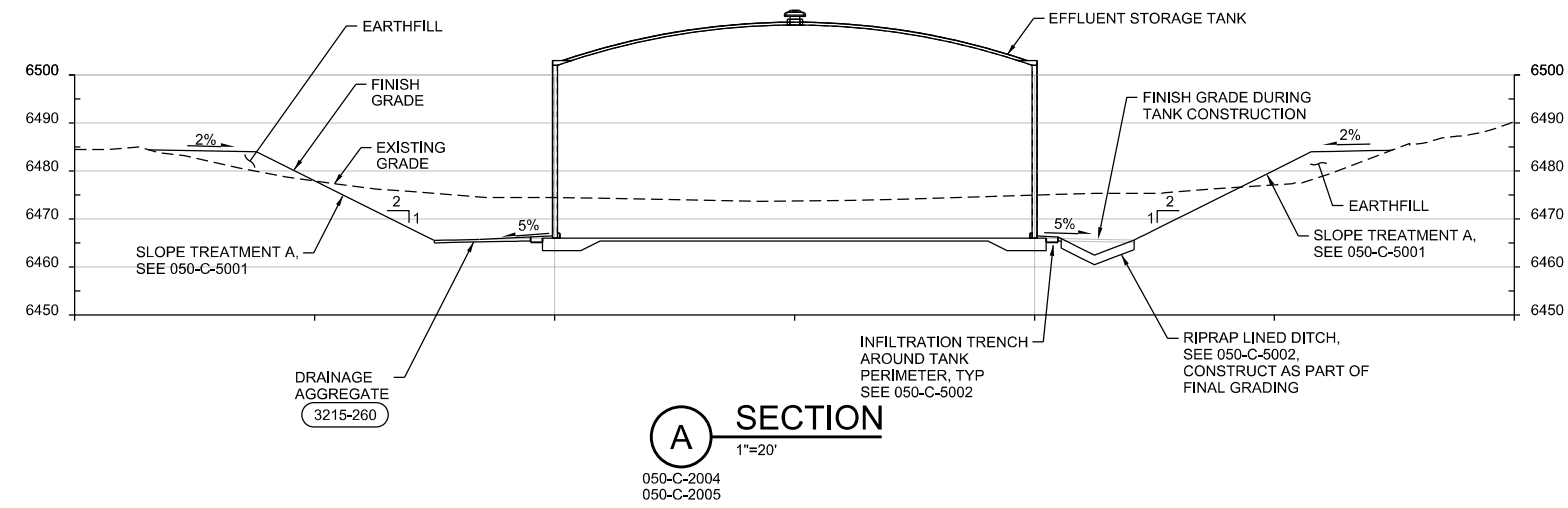
Tank Project with a Guaranteed Maximum Price in the Amount of \$6,636,173.51 (inclusive of Owner controlled Project risk register in the Amount of \$407,270.00).

2. Prepare a budget augmentation in the amount of \$800,000 to support the award of the CMAR construction contract, a contract with Jacobs for engineering services during construction, staff time for project management and operational assistance, and inspection and testing, as required during construction.





4/12/2023



Jacobs
CIVIL
EFFLUENT STORAGE TANK GRADING SECTIONS

VERIFY SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING.
DATE	APRIL 2023
PROJ	W8Y12900
DWG	050-C-3001
SHEET	18 of 45

FINAL DESIGN - ISSUED FOR PERMITTING