



• **Board of Directors**
Engineering, Operations, and Technology Committee

10/10/2023 Board Meeting

7-3

Subject

Award a \$4,400,000 construction contract to Bosco Constructors Inc. for San Diego Canal Concrete Liner Rehabilitation; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The San Diego Canal conveys untreated Colorado River Aqueduct (CRA) and State Water Project supplies to Lake Skinner and the Robert A. Skinner Water Treatment Plant (Skinner plant). Recent inspections have identified three locations where the canal's concrete liner requires rehabilitation. The current condition of the concrete liner poses a potential risk to one or more canal sections, the failure of which could impact water deliveries to the Skinner plant and member agencies in Riverside and San Diego Counties. This action awards a construction contract for rehabilitation of the San Diego Canal concrete liner at three locations. The work will be conducted during an upcoming shutdown in early 2024.

Details

Background

The San Diego Canal is a concrete-lined open channel with a trapezoidal cross-section that provides for conveyance of Colorado River water from the Casa Loma Canal to Lake Skinner, and to the Skinner plant via raw water bypass lines around Lake Skinner. The San Diego Canal was constructed in the 1950s and is approximately 15 feet deep, 50 feet wide, and 16 miles long. The canal has a concrete lining made of individual panels that are approximately 12 feet by 11 feet and vary from four to eight inches in thickness. The San Diego Canal is routinely shut down and inspected for signs of deterioration and to perform needed repairs. Replacement of those panels typically occurs in the following shutdown season; if more work is identified than can be completed during the shutdown, the work is prioritized and completed in consecutive years.

Inspections in 2019 and 2021 identified degraded portions of the concrete liner, and staff prioritized locations for rehabilitation. Typical types of degradation of the concrete liner at these locations include spalled concrete, disbonding, bulging concrete panels, and holes in the concrete panels that extend all the way through the concrete liner. The rehabilitation work consists of demolition of the damaged liner panels, over-excavation of the subgrade as needed and backfill with aggregate base, installation of new concrete liner panels, and installation of weep holes on the invert panels at each location to relieve pore pressure that pushes up on the bottom of the concrete liner when the canal is dewatered due to saturated subgrade soils.

Final design to rehabilitate three locations of the San Diego Canal is complete. Staff recommends proceeding with construction of the liner rehabilitation at this time to improve the reliability of the San Diego Canal and protect against liner failures, which could cause a disruption in service to the Skinner plant and member agencies.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with the actions described below, pending board award of the construction contract. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for

Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an expenditure of approximately \$5,400,000 in capital funds. All costs will be incurred in the current biennium. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP Evaluation Team to be included in the Conveyance and Distribution System Reliability Program.

San Diego Canal Concrete Liner Rehabilitation– Construction

The scope of the contract includes removal and replacement of a total of 70 concrete panels, totaling 10,000 square feet over three locations on the San Diego Canal, and installation of 64 total weep holes at the three priority locations. The number and location of the concrete panels, as well as the over-excavation and aggregate backfill quantity, varies at each location. Steel reinforcing will be added to the new concrete panels. Metropolitan forces will perform shutdown work on the canal, including dewatering of the canal in preparation for the contractor's work. The work will be performed during the planned shutdown for the San Diego Canal, which is scheduled to start in late February 2024 and end in March 2024.

A total of \$5.4 million is required for this work. In addition to the amount of the construction contract described below, allocated funds for Metropolitan staff include \$164,000 for submittal review and preparation of record drawings; \$90,000 for Metropolitan force work, as described above; \$472,000 for construction management and inspection; \$170,000 for contract administration, environmental support, and project management; \$50,000 for professional/technical services including certified asbestos consultant support; and \$54,000 for remaining budget.

Attachment 1 provides the allocation of the required funds. The total cost to complete the canal concrete liner rehabilitation, including the amount appropriated to date, and funds allocated for the work described in this action, is approximately \$5.9 million.

Award of Construction Contract (Bosco Constructors Inc.)

Specifications No. 2084 for San Diego Canal Rehabilitation was advertised for bids on July 24, 2023. As shown in **Attachment 2**, two bids were received and opened on September 13, 2023. The low bid from Bosco Constructors Inc., in the amount of \$4,400,000, complies with the requirements of the specifications. The other bid was \$5.8 million, while the engineer's estimate for this project was \$3.3 million. Staff investigated the difference between the engineer's estimate and the low bid. The key differences are attributed to the greater-than-expected staffing levels required to complete construction simultaneously at three sites with three separate crews within the shutdown window, and the limited number of available contractors capable of performing this labor-intensive work. A Small Business Enterprise (SBE) participation level was established as 25 percent. Bosco Constructors Inc. is an SBE firm, and thus achieves 100 percent participation. The subcontractor for this contract is listed in **Attachment 3**.

Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for construction management and inspection of projects with construction greater than \$3 million is 9 to 12 percent. For this project, the performance metric goal for inspection is 10.5 percent of the total construction cost. The total cost of construction for this project is \$4,490,000, which includes the cost of the contract (\$4,400,000) and Metropolitan force work (\$90,000).

Alternatives Considered

An alternative to awarding this construction contract is to have Metropolitan forces complete the construction of the subject project. Although Metropolitan forces have completed this type of work before, this alternative is not recommended because the work will be conducted simultaneously with the annual CRA shutdown. During the CRA shutdown, Metropolitan forces are focused on maintenance work, which must be planned prior to the shutdown and executed during the shutdown. The selected option will utilize a contractor to perform the canal lining work to allow Metropolitan staff to focus on maintenance activities planned for the annual CRA shutdown.

Summary

This action awards a \$4,400,000 construction contract to Bosco Constructors Inc. to rehabilitate the San Diego Canal at three locations. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the list of subcontractors, and **Attachment 4** for the Location Map.

Project Milestone

March 2024 – Completion of rehabilitation of the San Diego Canal at three locations

Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/2023 and 2023/2024.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use and no possibility of significantly impacting the physical environment. In addition, the proposed action consists of the replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced. Furthermore, the proposed action consists of minor public or private alterations in the condition of land, water, and/or vegetation, which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. Accordingly, the proposed action qualifies under Class 1, 2, and 4 Categorical Exemptions (Sections 15301, 15302, and 15304 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required.

Board Options

Option #1

Award a \$4,400,000 contract to Bosco Constructors Inc. to rehabilitate the San Diego Canal at three locations.

Fiscal Impact: Expenditure of \$5.4 million in capital funds. \$5.4 million will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option will improve the operational reliability of the San Diego Canal and mitigate against the risk of unplanned outages.

Option #2

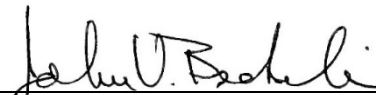

Do not proceed with the project at this time

Fiscal Impact: None

Business Analysis: This option would forego the opportunity to increase the operational reliability of the San Diego Canal.

Staff Recommendation

Option #1

 _____ John V. Bednarski Manager/Chief Engineer Engineering Services	9/21/2023 _____ Date
 _____ Adel Hagekhalil General Manager	9/25/2023 _____ Date

Attachment 1 – Allocation of Funds**Attachment 2 – Abstract of Bids****Attachment 3 – List of Subcontractors for the Low Bidder****Attachment 4 – Location Map**

Ref# es12693964

Allocation of Funds for San Diego Canal Concrete Liner Rehabilitation

	Current Board Action (Oct. 2023)
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	170,000
Submittals Review & Record Drwgs.	164,000
Construction Inspection & Support	472,000
Metropolitan Force Construction	90,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	50,000
Right-of-Way	-
Equipment Use	-
Contracts	
Bosco Constructors Inc.	4,400,000
Remaining Budget	54,000
Total	\$ 5,400,000

The total amount expended to date to rehabilitate the San Diego Canal concrete liner is approximately \$460,000. The total estimated cost to complete the project, including the amount appropriated to date and funds allocated for the work described in this action, is \$5.9 million. Future costs for subsequent work on the San Diego Canal are currently unknown.

The Metropolitan Water District of Southern California
Abstract of Bids Received on September 13, 2023, at 2:00 P.M.

Specifications No. 2084
San Diego Canal Concrete Liner Rehabilitation

The work includes removal and replacement of concrete liner panels at three locations of the San Diego Canal.

Engineer's estimate: \$3,300,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
Bosco Constructors, Inc. Chatsworth, CA	\$4,400,000	\$4,400,000	Yes	Yes
KEC Engineering Corona, CA	\$5,788,888	-	-	-

¹ Small Business Enterprise (SBE) participation level established at 25% for this contract.

The Metropolitan Water District of Southern California**Subcontractors for Low Bidder****Specifications No. 2084
San Diego Canal Concrete Liner Rehabilitation****Low bidder: Bosco Constructors Inc.**

Subcontractor	Service Category; Specialty
P.G. & J. Environmental Inc. La Habra, CA	Asbestos Removal

