



● **Board of Directors**
Engineering and Operations Committee

4/12/2016 Board Meeting

7-2

Subject

Appropriate \$330,000; and authorize design to replace valves at Service Connections CB-12 and CB-16 on the Rialto Pipeline (Approp. 15480)

Executive Summary

This action authorizes design and preparation of procurement documents to replace two 48-inch-diameter isolation valves at Service Connections CB-12 and CB-16 on the Rialto Pipeline. This work is needed to allow isolation between Metropolitan's system and the member agency facilities, in order to perform inspection and repairs of pipelines and equipment.

Timing and Urgency

The existing isolation valves at two service connections serving Inland Empire Utilities Agency need to be replaced. These valves no longer operate reliably and leak continuously. The valves were installed in the mid-1980s during the original construction of the two service connections. Following 30 years of continuous operation, the valves have deteriorated and need to be replaced. Metropolitan is responsible for maintenance of the service connections pursuant to Administrative Code Section 4700(b). Due to the long delivery time for large diameter valves, procurement should move forward at this time in order to meet a planned shutdown of the Rialto Pipeline in 2018.

This project has been reviewed with Metropolitan's Capital Investment Plan (CIP) prioritization criteria and is included in the Distribution System Reliability Program. Funds for this action are available within Metropolitan's capital expenditure plan for fiscal year 2015/16.

Details

Background

The Rialto Pipeline is a 96-inch-diameter prestressed concrete cylinder pipeline (PCCP) that was constructed in 1972. It conveys untreated water from Lake Silverwood via the Devil Canyon Power Plant to Live Oak Reservoir in La Verne. The Rialto Pipeline supplies water from the East Branch of the State Water Project to the F. E. Weymouth Water Treatment Plant, and directly serves three member agencies through 11 service connections.

Service connections CB-12 and CB-16 supply untreated water to the Inland Empire Utilities Agency. CB-12 delivers up to 120 cubic feet per second (cfs) to the Water Facilities Authority's Agua de Lejos Treatment Plant, while CB-16 delivers up to 150 cfs to Cucamonga Valley Water District's Lloyd Michael Treatment Plant. These service connections are the primary source of supply to several cities in western San Bernardino County.

At both service connections, the 48-inch-diameter butterfly valves are used for isolation when maintenance or repairs are needed on either Metropolitan's pipeline or the member agency's facilities. The inability to isolate at these locations could require the shutdown of significant portions of the Rialto Pipeline in order to make repairs, and could impact other service connections. Both valves no longer operate reliably and contain rubber seats that leak and cannot be repaired. In addition, the electrical vaults that supply power to the valves have been

vandalized at both locations, and copper cables have been stolen twice in the last two years. Currently, CB-16 does not have electrical service, requiring a temporary generator to be mobilized in order to operate the valve. This project will replace the isolation valves and upgrade the existing electrical systems at both service connections so the valves operate reliably via their motorized actuators.

Service Connections CB-12 and CB-16 Valve Replacement—Preliminary Design Phase (\$330,000)

Planned preliminary design phase activities include preparation of bid documents to purchase two new 48-inch-diameter butterfly valves with actuators, and receipt of bids. Other activities will include field investigations; preliminary design for the electrical improvements, valve installation and security enhancements; and development of a construction cost estimate. All work will be performed by Metropolitan staff.

This action appropriates \$330,000 and authorizes preliminary design to replace butterfly valves at Service Connections CB-12 and CB-16 on the Rialto Pipeline. The requested funds include \$72,000 for preparation of procurement documents; \$155,000 for preliminary design activities; and \$103,000 for bidding and project management.

This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2015/16 capital expenditure plan. See [Attachment 1](#) for the Financial Statement and [Attachment 2](#) for the Location Map.

This project is included within capital Appropriation No. 15480, the Conveyance and Distribution System Rehabilitation Appropriation—FY 2012/13 Through 2017/18. With the present action, the total funding for this appropriation will increase from \$35.66 million to \$35.99 million. The total estimated cost to replace the valves and upgrade the electrical systems is anticipated to range from \$2 million to \$2.2 million.

Staff will return to the Board for award of the valve procurement contract and for authorization of design for the installation and electrical work.

Project Milestone

August 2016—Award of valve procurement contract

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

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 overall activities involve the funding, design, minor alterations and replacement of existing facilities with negligible or no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed action qualifies under Class 1 and Class 2 Categorical Exemptions (Sections 15301 and 15302 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed action qualifies under two Categorical Exemptions (Class 1, Section 15301 and Class 2, Section 15302 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination that the proposed action is categorically exempt, and

- a. Appropriate \$330,000; and
- b. Authorize design to replace valves at Service Connections CB-12 and CB-16 on the Rialto Pipeline.

Fiscal Impact: \$330,000 of capital funds under Approp. 15480

Business Analysis: This option will help maintain the reliability of water deliveries to the two service connections.

Option #2

Do not proceed with design and valve procurement at this time.

Fiscal Impact: None

Business Analysis: This option would forgo an opportunity to maintain delivery reliability by restoring the ability to isolate two service connections. The inability to isolate could require shutdown of significant portions of the Rialto Pipeline to make needed repairs, which could impact deliveries to other service connections.

Staff Recommendation

Option #1



Gordon Johnson
Manager/Chief Engineer
Engineering Services

3/21/2016

Date



Jeffrey Kightlinger
General Manager

3/22/2016

Date

[Attachment 1 – Financial Statement](#)

[Attachment 2 – Location Map](#)

Financial Statement for Conveyance and Distribution System Rehabilitation Appropriation – FY 2012/13 Through FY 2017/18

A breakdown of Board Action No. 18 for Appropriation No. 15480 for Service Connections CB-12 and CB-16¹ is as follows:

	Previous Total Appropriated Amount (Feb. 2016)	Current Board Action No. 18 (Apr. 2016)	New Total Appropriated Amount
Labor			
Studies & Investigations	\$ 1,431,000	\$ 155,000	\$ 1,586,000
Final Design	6,116,000	72,000	6,188,000
Owner Costs (Program mgmt., bidding)	2,643,779	103,000	2,746,779
Submittals Review & Record Drwgs	634,000	-	634,000
Construction Inspection & Support	2,186,000	-	2,186,000
Metropolitan Force Construction	3,015,000	-	3,015,000
Materials & Supplies	1,513,000	-	1,513,000
Incidental Expenses	107,000	-	107,000
Professional/Technical Services	2,143,000	-	2,143,000
Right-of-Way	257,000	-	257,000
Equipment Use	5,000	-	5,000
Contracts	12,612,155	-	12,612,155
Remaining Budget	2,997,066 ²	-	2,997,066
Total	\$ 35,660,000	\$ 330,000	\$ 35,990,000

Funding Request

Appropriation Name:	Conveyance and Distribution System Rehabilitation Appropriation – FY 2012/13 Through FY 2017/18		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15480	Board Action No.:	18
Requested Amount:	\$ 330,000	Budget Page No.:	274
Total Appropriated Amount:	\$ 35,990,000	Total Appropriation Estimate:	\$ 255,000,000

¹ This is the initial action to replace isolation valves at CB-12 and CB-16 on the Rialto Pipeline. The total estimated cost to replace the valves and upgrade the electrical systems is anticipated to range from \$2 million to \$2.2 million.

² Includes reallocation of \$275,000 for permitting and design of the Orange County Conveyance & Distribution Service Center.

Distribution System

