



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

7/12/2016 Board Meeting

---

**8-1**

**Subject**

---

Appropriate \$2.7 million; and award \$1,422,082 contract to PCL Construction, Inc. to replace valves on the Palos Verdes Feeder (Approp. 15441)

**Executive Summary**

---

This action awards a contract to replace deteriorated valves at the Collis Avenue Valve Structure on the Palos Verdes Feeder. These valves regulate the flow of treated water through that pipeline into the Central Pool portion of Metropolitan's distribution system. The valve structure is an underground vault located below Collis Avenue within the city of Los Angeles.

**Timing and Urgency**

The main hydraulic control valve at the Collis Avenue Valve Structure is a 42-inch-diameter spherical valve that regulates flow in the Palos Verdes Feeder and maintains the upstream water level at Eagle Rock Control Tower. This valve was designed for isolation purposes only, but has been used for several decades as a control valve. As a result of this long-term use in a severe-duty application, the valve has deteriorated and no longer functions reliably. This project will replace the spherical valve and several other aging control and isolation valves within the structure.

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 2016/17.

**Details**

---

**Background**

The Palos Verdes Feeder is a 54-inch-diameter welded steel pipeline that was constructed in 1941. This feeder is one of Metropolitan's primary supply lines serving the Central Pool portion of the distribution system. The Palos Verdes Feeder commences at Eagle Rock Tower, passes through the Collis Avenue, Washington Street, and 108<sup>th</sup> Street Valve Structures, and terminates at Palos Verdes Reservoir. The feeder delivers treated water to eight member agencies through 34 service connections.

The Collis Avenue Valve Structure was constructed in 1962 and is located in the community of El Sereno. This underground vault houses a 42-inch-diameter spherical valve and two 12-inch-diameter bypass lines with butterfly and plug valves. In order to access the vault's removable hatch, a portion of Collis Avenue must be closed to traffic.

The Collis Avenue Valve Structure was originally used to isolate the Palos Verdes Feeder for shutdowns. The spherical valve is designed for isolation duty instead of throttling and flow control. Operation of the Palos Verdes Feeder has evolved over time, leading to use of the spherical valve to control flows in the feeder and maintain upstream hydraulic grade elevation. Due to decades of service in this severe application, the valve has become increasingly difficult to open and close, and often freezes in position. Failure of the spherical valve could result in uncontrolled upstream releases at Eagle Rock Control Tower and cascading downstream flows, leading to air

entrainment and reduced flow capacity within the Palos Verdes Feeder. The existing 12-inch-diameter bypass valves have manual actuators and are not capable of automatic flow control. Staff performed a detailed inspection of the Collis Avenue Valve Structure and determined that the spherical valve, adjacent bypass valves, and the interconnecting piping have deteriorated significantly and need to be replaced.

The existing spherical valve will be replaced with a new 42-inch diameter multi-orifice valve that is designed for flow control service. In addition, the two existing 12-inch butterfly valves will be replaced with new plunger valves, while the four existing plug valves used for isolation will be replaced in kind.

In November 2014, Metropolitan's Board authorized procurement of new valves for the Collis Avenue Valve Structure, and final design for their installation. The valves have been manufactured and final design has now been completed. Staff recommends moving forward with construction at this time.

### **Collis Avenue Valve Replacement – Construction (\$2,700,000)**

The contractor's work will include excavation; installation of Metropolitan-furnished valves; installation of piping and concrete valve pedestals; replacement of existing grating, handrails, and vault roof cover; street closure and traffic control; abatement of hazardous materials; electrical upgrades; and street surface restoration. Much of the work will be performed continuously on a round-the-clock basis during a nine-day shutdown of the Palos Verdes Feeder scheduled for January 2017. Metropolitan force activities will include procurement, installation, and programming of Supervisory Control and Data Acquisition (SCADA) equipment; shutdown of a portion of the pipeline; final disinfection and water quality testing; and return of the pipeline to service.

Specifications No. 1855 for the Collis Avenue Valve Replacement was advertised for bids on May 10, 2016. As shown in [Attachment 2](#), three bids were received and opened on June 7, 2016. The low bid from PCL Construction, Inc. in the amount of \$1,422,082 complies with the requirements of the specifications. The two higher bids were \$1,755,000 and \$2,158,000, while the engineer's estimate was \$1.3 million. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 10 percent of the bid amount. PCL Construction, Inc. has committed to meet this level of participation.

This action appropriates \$2.7 million and awards a \$1,422,082 contract to PCL Construction, Inc. to replace valves at the Collis Avenue Valve Structure. In addition to the amount of the contract, the appropriated funds include \$412,000 for the Metropolitan force activities described above; \$300,000 for construction inspection; \$50,000 for temporary construction easement; \$204,000 for submittals review, responding to requests for information, and preparation of record drawings by Metropolitan staff; \$143,000 for acquisition of traffic permits and a construction noise variance, public outreach activities, and project management; and \$168,918 for remaining budget.

Construction inspection will be performed by Metropolitan staff. For this project, the anticipated cost of inspection is approximately 11.7 percent of the total construction cost. Engineering Services' goal for inspection of projects with construction cost less than \$3 million is 9 to 15 percent. The total cost of construction for this project is \$2.56 million, which includes the contract (\$1.42 million), Metropolitan force activities (\$412,000), and the previously procured valves (\$725,000).

The total estimated cost to complete the valve replacement at the Collis Avenue Valve Structure, including the amount appropriated to date and current funds requested, is \$4,075,000.

This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2016/17 capital expenditure plan. See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, [Attachment 3](#) for the listing of Subcontractors for Low Bidder, and [Attachment 4](#) for the Location Map.

This work is included within capital Appropriation No. 15441, the Conveyance and Distribution System Rehabilitation Appropriation – FY 2006/07 Through FY 2011/12, which was initiated in fiscal year 2006/07. With the present action, the total funding for Appropriation No. 15441 will increase from \$89,839,000 to \$92,539,000.

***Project Milestone***

May 2017 – Completion of construction

**Policy**

---

Metropolitan Water District Administrative Code Section 5108: Appropriations

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

**California Environmental Quality Act (CEQA)**

---

**CEQA determination for Option #1:**

The project was previously determined by the Board to be categorically exempt under Classes 1, 2, 3, and 4 (Sections 15301, 15302, 15303, and 15304 of the State CEQA Guidelines) on November 18, 2014. Since that time, the statute of limitations has ended. With the current action, there is no substantial change proposed since the original project was first approved in 2014. Hence, the previous environmental documentation in conjunction with the project fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act on with regard to the proposed action.

The CEQA determination is: Determine that pursuant to CEQA, the proposed action was addressed previously in the 2014 categorical exemptions (Classes 1, 2, 3, and 4; Sections 15301, 15302, 15303, and 15304 of the State CEQA Guidelines) and that no further environmental analysis or documentation is required.

**CEQA determination for Option #2:**

None required

**Board Options**

---

**Option #1**

Adopt the CEQA determination that the proposed action was previously determined to be categorically exempt, and

- a. Appropriate \$2.7 million; and
- b. Award \$1,422,082 contract to PCL Construction, Inc. to replace valves on the Palos Verdes Feeder.

**Fiscal Impact:** \$2.7 million of capital funds under Appropriation No. 15441

**Business Analysis:** This option will enhance delivery reliability to member agencies, protect Metropolitan's assets, and reduce the risk of costly emergency repairs.

**Option #2**

Do not proceed with the project at this time.

**Fiscal Impact:** None

**Business Analysis:** This option would forgo an opportunity to enhance delivery reliability to Metropolitan's member agencies, and could lead to higher costs, more extensive repairs, and unplanned shutdowns.

**Staff Recommendation**

---

Option #1

  
\_\_\_\_\_  
Gordon Johnson  
Manager/Chief Engineer  
Engineering Services

6/21/2016  
Date

  
\_\_\_\_\_  
Jeffrey Kightlinger  
General Manager

6/27/2016  
Date

- Attachment 1 – Financial Statement**
- Attachment 2 – Abstract of Bids**
- Attachment 3 – Subcontractors for Low Bidder**
- Attachment 4 – Location Map**

Ref# es12643300

**Financial Statement for Conveyance and Distribution System Rehabilitation Appropriation – FY 2006/07 Through FY 2011/12**

A breakdown of Board Action No. 74 for Appropriation No. 15441 to replace valves at the Collis Avenue Valve Structure<sup>1</sup> is as follows:

	<b>Previous Total Appropriated Amount (June 2016)</b>	<b>Current Board Action No. 74 (July 2016)</b>	<b>New Total Appropriated Amount</b>
Labor			
Studies & Investigations	\$ 4,574,914	\$ -	\$ 4,574,914
Final Design	6,186,293	-	6,186,293
Owner Costs (Permitting, outreach, program mgmt.)	7,844,123	118,000	7,962,123
Submittals Review & Record Drawgs.	1,110,670	204,000	1,314,670
Construction Inspection & Support	5,817,550	300,000	6,117,550
Metropolitan Force Construction	11,603,710	402,000	12,005,710
Materials & Supplies	3,373,040	10,000	3,383,040
Incidental Expenses	1,200,900	25,000	1,225,900
Professional/Technical Services	3,444,000	-	3,444,000
Right of Way	1,100,000	50,000	1,150,000
Equipment Use	330,200	-	330,200
Contracts	39,886,404	-	39,886,404
PCL Construction, Inc.	-	1,422,082	1,422,082
Remaining Budget	3,367,196	168,918	3,536,114
<b>Total</b>	<b>\$ 89,839,000</b>	<b>\$ 2,700,000</b>	<b>\$ 92,539,000</b>

**Funding Request**

<b>Appropriation Name:</b>	Conveyance and Distribution System Rehabilitation Appropriation – FY 2006/07 Through FY 2011/12		
<b>Source of Funds:</b>	Revenue Bonds, Replacement and Refurbishment or General Funds		
<b>Appropriation No.:</b>	15441	<b>Board Action No.:</b>	74
<b>Requested Amount:</b>	\$ 2,700,000	<b>Budget Page No.:</b>	213
<b>Total Appropriated Amount:</b>	\$ 92,539,000	<b>Total Appropriation Estimate:</b>	\$ 182,700,000

<sup>1</sup>The total amount expended to date to replace valves at the Collis Avenue Valve Structure is approximately \$1,375,000. The total estimated cost to complete this project, including the amount appropriated to date and current funds requested, is approximately \$4,075,000.

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received on June 7, 2016 at 2:00 P.M.**

**Specifications No. 1855  
Palos Verdes Feeder Collis Avenue Valve Replacement**

The work consists of installation of Metropolitan-furnished valves; construction of concrete pedestals; replacement of existing grating, handrails, and vault roof; abatement of hazardous materials; and electrical upgrades.

Engineer's Estimate: \$1,300,000

<b>Bidder and Location</b>	<b>Total</b>	<b>SBE \$</b>	<b>SBE %</b>	<b>Met SBE<sup>1</sup></b>
<b>PCL Construction, Inc. Riverside, CA</b>	<b>\$1,422,082</b>	<b>\$142,208</b>	<b>10%</b>	<b>Yes</b>
Steve P. Rados, Inc. Santa Ana, CA	\$1,755,000	-	-	-
Mlanden Buntich Construction Co., Inc. Upland, CA	\$2,158,000	-	-	-

<sup>1</sup> Small Business Enterprise (SBE) participation level was established at 10 percent for this contract.

**The Metropolitan Water District of Southern California**

**Subcontractors for Low Bidder**

**Specifications No. 1855**

**Palos Verdes Feeder Collis Avenue Valve Replacement**

Low Bidder: PCL Construction, Inc.

<b>Subcontractor and Location</b>
McBratney Company, Murrieta, CA
Alameda Construction Services, Inc., Compton, CA
Performance Abatement Svc., Inc., Anaheim, CA
CSI Elect. Contractors, Inc., Santa Fe Springs, CA

