



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

9/14/2010 Board Meeting

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**7-4**

**Subject**

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Appropriate \$1.2 million; and award \$550,108 contract to Braughton Construction, Inc. for construction of the Mills Electrical Buildings Nos. 1 and 2 Seismic Upgrades (Approp. 15452)

**Description**

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This action awards a contract for seismic upgrades to Electrical Buildings Nos. 1 and 2 at the Henry J. Mills Water Treatment Plant. This project will enhance the capability of these buildings to withstand a major seismic event, and will provide a consistent level of seismic strength for critical Mills plant facilities. The seismic upgrades will reduce the risk of unplanned outages due to damage of essential electrical equipment during a major earthquake.

**Timing and Urgency**

Seismic upgrades for Electrical Buildings Nos. 1 and 2 are needed because these buildings cannot withstand the forces associated with a major earthquake based on up-to-date seismic criteria and current building codes. These buildings house essential electrical equipment that supplies power to the Administration Building; the Chlorine Containment Facility; and the pumps, flocculators, filters and gates in Modules Nos. 1 and 2. The San Jacinto fault is located 8 miles from the plant, and is capable of generating a magnitude 7.2 earthquake. Damage to the Mills electrical equipment due to a major earthquake could lead to an unplanned outage and interrupt treated water deliveries.

This project has been reviewed with Metropolitan's updated Capital Investment Plan (CIP) prioritization criteria, and staff recommends moving forward with construction at this time to enhance plant reliability. This project is categorized as an Infrastructure Upgrade project and is budgeted within Metropolitan's CIP for fiscal year 2010/11.

**Background**

The Mills plant was placed into service in 1978 with an initial capacity of 75 mgd. The plant was expanded twice and is currently rated to treat 220 mgd, which is the design capacity of the two treatment modules currently in operation. The Mills plant exclusively treats water from the East Branch of the State Water Project.

Metropolitan's practice has always been to design its facilities in accordance with the most current applicable codes and regulations at the time of construction. Over time, design standards and building codes have become more stringent based on new knowledge and research into events such as earthquakes.

Metropolitan staff is systematically assessing the seismic integrity of structures at the Mills plant. This assessment considers the earthquake faults that could affect Mills, and applies up-to-date seismic criteria to all of the existing structures. This approach produces a consistent level of seismic strength and risk across the plant. Of the eight Mills structures that were evaluated, six structures have been found to be adequate, and two facilities require upgrades. This project addresses these two structures, Electrical Buildings Nos. 1 and 2, which require upgrades to enable continued reliable operation in the event of a major earthquake. Both buildings were constructed in 1976 and were placed into operation in 1978.

Electrical Buildings Nos. 1 and 2 are prefabricated steel buildings that house electrical equipment (motor control centers and switchgear) essential for plant operations. This electrical equipment supplies power to the Administration Building; the Chlorine Containment Facility; finished water reservoir inlet and bypass gates; chemical feed systems; the pumps, flocculators, filters and gates in Modules Nos. 1 and 2; and other plant process equipment and facilities.

Staff recommends seismically upgrading both steel buildings by constructing new concrete block walls around the outside of each building, along with a new roof. This new structural system will provide sufficient lateral support to withstand a seismic event. Staff determined that it is not cost-effective to modify the existing structures to provide the same level of stability. By constructing a new exterior shell for each building, the existing electrical equipment within each building can remain in place.

In June 2009, Metropolitan's Board authorized final design phase activities for this project. Final design has been completed, and staff recommends award of a contract at this time to complete this project.

### **Mills Electrical Buildings Nos. 1 and 2 Seismic Upgrades – Construction Phase (\$1.2 million)**

Specifications No. 1671 for the Mills Electrical Buildings Nos. 1 and 2 Seismic Upgrades were advertised for bids on June 23, 2010. The work consists of construction of new concrete footings and concrete masonry unit enclosures around the existing prefabricated steel buildings, along with new roofs and appurtenances. As shown in [Attachment 2](#), 14 bids were received on August 4, 2010. The apparent low bidder, Dalke & Sons Construction, Inc., requested to be relieved from its bid in accordance with the California Public Contract Code due to an inadvertent clerical error made during the bid process, which materially changed its bid. Upon review of the request, Metropolitan released Dalke & Sons from its bid.

The second low bid from Braughton Construction, Inc. of Rancho Cucamonga, CA, in the amount of \$550,108, complies with the requirements of the specifications. The 12 higher bids ranged from \$596,000 to \$1,187,684. The engineer's estimate was \$900,000. Staff believes the difference between the engineer's estimate and the group of low bids reflects the current highly competitive bidding environment, and that this project was successful in attracting a large number of smaller contractors. The overhead and profit for these contractors were lower than those in the engineer's estimate and in the bids at the higher end of the range. In addition, the group of low bids included a smaller allowance for the perceived difficulty in working in the vicinity of electrical equipment than did the engineer's estimate and group of higher bidders. For this contract, Metropolitan has established a Small Business Enterprise (SBE) participation level of at least 25 percent of the total bid amount. Braughton Construction, Inc. is a registered SBE firm, and thus achieves 100 percent participation.

This action appropriates \$1.2 million and awards a \$550,108 contract to Braughton Construction, Inc. to construct this project. In addition to the amount of the contract, the appropriated funds include \$259,892 for Metropolitan force construction to procure and install security and communication equipment, and to relocate electrical conduits. The total cost of construction is \$810,000. The appropriated funds also include \$120,000 for construction inspection; \$50,000 for submittals review by Metropolitan staff; \$70,000 for project management and record-drawing preparation; and \$150,000 for remaining budget.

Metropolitan staff will perform inspection of the construction contract. The anticipated cost of inspection is approximately 14.8 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.

### ***Project Milestone***

August 2011 – Completion of construction of the Electrical Buildings Nos. 1 and 2 Seismic Upgrades project

See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, and [Attachment 3](#) for the Location Map.

This project is consistent with Metropolitan's goals for sustainability by enhancing the reliability of the Mills plant, in order to maintain reliable water deliveries in the future.

## Policy

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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)

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CEQA determination for Option #1:

The project was previously determined to be categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The Mills Electrical Buildings Nos. 1 and 2 Seismic Upgrades project was found to be exempt under Class 1, Section 15301 of the State CEQA Guidelines on March 11, 2008. A Notice of Exemption (NOE) was filed on the project at that time and the statute of limitations has ended. With the current board action, there is no substantial change proposed to the project since the original NOE was filed. 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 with regards to the proposed action.

The CEQA determination is: Determine that the proposed action has been previously addressed in the 2008 NOE (Class 1, Section 15301 of the State CEQA Guidelines) and that no further environmental analysis or documentation is required.

CEQA determination for Option #2:

None required

## Board Options

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### Option #1

Adopt the CEQA determination and

- a. Appropriate \$1.2 million; and
- b. Award \$550,108 contract to Braughton Construction, Inc. for seismic upgrades to Mills Electrical Buildings Nos. 1 and 2.

**Fiscal Impact:** \$1.2 million in budgeted funds under Approp. 15452

**Business Analysis:** The seismic upgrades will reduce the risk of catastrophic structural failure of critical electrical buildings due to a major earthquake, and will thus enhance plant reliability and the safety of plant staff.

### Option #2

Do not award the contract and re-advertise in an attempt to receive more favorable bids.

**Fiscal Impact:** None

**Business Analysis:** This option may or may not result in lower bids, would forego an opportunity to provide a consistent level of seismic strength and risk across the Mills plant. Damage to the electrical buildings could result from a significant earthquake, along with potential loss of power to critical chemical feed systems and other plant systems, potentially affecting the ability to deliver water.

**Staff Recommendation**

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Option #1

  
Roy L. Wolfe  
Manager, Corporate Resources

8/24/2010  
Date

  
Jeffrey Lightlinger  
General Manager

8/31/2010  
Date

**Attachment 1 – Financial Statement**

**Attachment 2 – Abstract of Bids**

**Attachment 3 – Location Map**

Ref# cr12606591

**Financial Statement for Mills Improvements Program – Phase II**

A breakdown of Board Action No. 10 for Appropriation No. 15452 for the Mills Electrical Buildings Nos. 1 and 2 Seismic Upgrades\* is as follows:

	<b>Previous Total Appropriated Amount (Sept. 2010)</b>	<b>Current Board Action No. 10 (Sept. 2010)</b>	<b>New Total Appropriated Amount</b>
Labor			
Studies and Investigation	\$ 1,113,100	\$ -	\$ 1,113,100
Final Design	926,000	-	926,000
Owner Costs (Program mgmt., record drwgs.)	985,200	70,000	1,055,200
Submittals Review		50,000	50,000
Construction Inspection and Support	67,000	120,000	187,000
Metropolitan Force Construction	1,120,000	132,000	1,252,000
Materials and Supplies	899,000	95,892	994,892
Incidental Expenses	95,700	32,000	127,700
Professional/Technical Services	97,000	-	97,000
Equipment Use	50,000	-	50,000
Contracts	-	550,108	550,108
Remaining Budget	485,000	150,000	635,000
<b>Total</b>	<b>\$ 5,838,000</b>	<b>\$ 1,200,000</b>	<b>\$ 7,038,000</b>

**Funding Request**

<b>Program Name:</b>	Mills Improvements Program – Phase II		
<b>Source of Funds:</b>	Revenue Bonds, Replacement and Refurbishment or General Funds		
<b>Appropriation No.:</b>	15452	<b>Board Action No.:</b>	10
<b>Requested Amount:</b>	\$ 1,200,000	<b>Capital Program No.:</b>	15452-I
<b>Total Appropriated Amount:</b>	\$ 7,038,000	<b>Capital Program Page No.:</b>	E-43
<b>Total Program Estimate:</b>	\$ 15,923,300	<b>Program Goal:</b>	I- Infrastructure Upgrade

\* The total amount expended to date on the Mills Electrical Buildings Nos. 1 and 2 Seismic Upgrades project is approximately \$320,000.

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received on August 4, 2010 at 2:00 P.M.**

**Specifications No. 1671**

**Henry J. Mills Water Treatment Plant  
Electrical Buildings Nos. 1 and 2 Seismic Upgrades**

The project consists of construction of new concrete footings and colored concrete masonry unit enclosures around the existing prefabricated steel buildings; attaching the concrete block enclosure to the steel buildings by steel anchors; construction of new roofs with steel framing over the existing roofs; furnishing and installing new HVAC systems; constructing new sumps and installing new sump pumps in the basements; asbestos removal; and Building No. 2 door relocation and existing parapet trimming.

**Engineer's Estimate: \$900,000**

<b>Bidder and Location</b>	<b>Total</b>	<b>SBE \$</b>	<b>SBE %</b>	<b>Met SBE**</b>
*Dalke & Sons Construction, Inc., Riverside, CA	\$ 487,480	N/A	N/A	N/A
<b>Broughton Construction, Inc., Rancho Cucamonga, CA</b>	<b>\$ 550,108</b>	<b>\$550,108</b>	<b>100%</b>	<b>Yes</b>
Harik Construction, Inc., Glendora, CA	\$ 596,000	N/A	N/A	N/A
Alton Builders, Inc., Laguna Hills, CA	\$ 626,718	N/A	N/A	N/A
Western Group, Inc., Woodland Hills, CA	\$ 640,000	N/A	N/A	N/A
SCW Contracting Corporation, Fallbrook, CA	\$ 651,840	N/A	N/A	N/A
H.A. Nichols Co., Inc., Los Angeles, CA	\$ 656,800	N/A	N/A	N/A
IPI Construction, Panorama City, CA	\$ 666,374	N/A	N/A	N/A
H.C. Olsen Construction Co., Inc., Monrovia, CA	\$ 674,999	N/A	N/A	N/A
Doty Bros. Equipment Company, Norwalk, CA	\$ 739,000	N/A	N/A	N/A
3 D Construction Inc., Escondido, CA	\$ 783,600	N/A	N/A	N/A
Metro Builders & Engineers Group, Ltd., Newport Beach, CA	\$ 973,963	N/A	N/A	N/A
Riverside Construction Company, Inc., Riverside, CA	\$ 1,000,837	N/A	N/A	N/A
Dahl Taylor & Associates - Constructors, Inc., Santa Ana, CA	\$ 1,187,684	N/A	N/A	N/A

\* Dalke & Sons Construction, Inc., requested to be relieved from its bid in accordance with the California Public Contract Code due to an inadvertent clerical error made during the bid process, which materially changed its bid. Upon review of the request and documentation submitted, Metropolitan released Dalke & Sons from its bid.

\*\*SBE (Small Business Enterprise) participation set at 25 percent

# Location Map

