



- Board of Directors
Engineering and Operations Committee

5/8/2012 Board Meeting

8-6

Subject

Appropriate \$21.2 million; award \$16,300,127 contract to Stronghold Engineering, Inc., for the La Verne Machine and Fabrication Shops Upgrades; and authorize amendment to existing agreement with Tetra-IBI Group (Approp. 15395)

Description

This action awards a construction contract to upgrade and expand the machine and fabrication shop buildings located at the F. E. Weymouth Water Treatment Plant. This project initiates the final stage of a four-stage program to upgrade the La Verne Shops, which are essential to support reliable operation of Metropolitan's treatment plants and distribution system. The shops also support emergency response activities, and enable Metropolitan to provide assistance on a reimbursable basis to member agencies and the California Department of Water Resources (DWR). This action also authorizes an amendment to an existing agreement for technical support during construction by the project's architectural consultant.

Timing and Urgency

Metropolitan's machine and fabrication shop buildings at La Verne have extremely tight working conditions, are over 50 years old, and need to be upgraded to comply with modern building codes. The equipment itself ranges up to 50 years in age and is at the end of its service life. Staff recommends moving forward with this project to upgrade and expand the La Verne Shops in order to improve emergency response capability, product quality, efficiency, and safety of the shops.

This project has been reviewed with Metropolitan's updated Capital Investment Plan (CIP) prioritization criteria and is categorized as an Infrastructure Upgrade Project. Funds for this action are available within Metropolitan's CIP for fiscal year 2011/12.

Background

Specialized shops have been a feature of the Weymouth plant, which is located in the city of La Verne, since the plant was originally placed into service in 1941. The shops were expanded in the 1960s when larger facilities were constructed, and were expanded again in the 1980s to support a major rehabilitation of the Colorado River Aqueduct pumps. The La Verne Shops are housed in four buildings: the fabrication shop, machine shop, and two coatings shops.

The La Verne Shops provide full-time support for Metropolitan's rehabilitation work, maintenance activities, and capital projects; provide equipment rehabilitation services for DWR; and provide routine and emergency fabrication support to Metropolitan and its member agencies. Metropolitan has maintained an agreement with DWR since the 1980s to provide shop services which support maintenance activities along the State Water Project. Recent examples of this support include repairing and coating components for the Gianelli Power Plant, and fabricating and coating large drop gates and lifting beams for the Hyatt Power Plant. This work is performed on a fee-for-service basis which recovers machine rates, raw material costs, and fully burdened labor rates, including additives and overhead. Support to member agencies typically includes agency-requested service

connections, which involves fabrication, coating, and lining of pipe. On an annual basis, the shops provide almost \$10 million in manufacturing services for over 120 projects.

Retention of the in-house capability to perform the functions provided by the La Verne Shops is essential for Metropolitan to maintain reliable water deliveries. The La Verne Shops have the capability to perform critical rehabilitation of pumps, valves and pipelines within the expedited time frame needed to respond to emergencies and shutdowns.

In March 2008, Metropolitan's Board authorized final design of the La Verne Shops Upgrade Program. The scope of the program includes:

- Refurbishing and replacing inefficient and outdated fabrication, machining, and coating equipment.
- Expanding the machine shop building to permit larger and safer work areas around each piece of equipment and providing adequate areas for staging parts near each machine, while maintaining clear walkways throughout the building.
- Expanding the fabrication shop to permit a more efficient layout of existing and proposed new equipment, material handling and staging, and to provide safer equipment work areas.
- Consolidating the two coating shop buildings into one more efficient shop with adequate work area for new coating shop equipment, material staging areas, workbenches, and post-painting handling operations.

The work has been prioritized and is being executed in four stages, such that later stages will augment the improvements completed in earlier stages. Stage 1 included the refurbishment and replacement of 19 pieces of equipment in the existing machine and fabrication shops, and was completed in 2006. Under Stage 2, which was completed in 2011, the existing machine shop roof was replaced, the existing fabrication shop building was retrofitted to meet current seismic codes, and the bridge cranes in the fabrication and machine shops were upgraded to improve safety and handling of materials and equipment. Under Stage 3, which is currently underway, one of the existing coating shop buildings is being expanded. Stage 3 construction is approximately 60 percent complete.

The Stage 4 work will integrate the fabrication and machine shop functions into a single building and will procure new equipment. Stage 4 has been planned so that during construction, the existing shops will continue to maintain full-service support to perform manufacturing and to respond to emergencies and shutdown events. Award of a construction contract under the present action represents the initiation of Stage 4 work. A future board action is planned for procurement of new equipment which will be installed following completion of Stage 4 construction.

La Verne Shops Upgrades, Stage 4 - Construction (\$21,200,000)

The planned Stage 4 construction will expand the footprint of the existing machine and fabrication shop buildings by attaching an adjacent 22,000-square foot structure. The existing shops will be updated with a new fire protection system; the existing restroom will become Americans with Disabilities Act (ADA) compliant; and equipment within the existing buildings will be relocated for increased efficiency, improved productivity, and enhanced safety.

Specifications No. 1641 for the La Verne Shops Upgrades – Stage 4 was advertised for bids on January 12, 2012. As shown in [Attachment 2](#), seven bids were received and opened on March 28, 2012. The low bid from Stronghold Engineering, Inc., in the amount of \$16,300,127, complies with the requirements of the specifications. The six higher bids ranged from approximately \$18.7 million to \$22 million. The engineer's estimate was \$16.3 million. For this contract, Metropolitan has established a Small Business Enterprise (SBE) participation level of at least 24 percent of the bid amount.

In conjunction with the construction work, staff will develop operation and maintenance manuals to document and detail the following: procedures for operating new and existing shop equipment; control of the workflow of products through the shops; document control; nonconformance management; audit and record-keeping processes; and integration of these components into a shop management software tool to monitor the processes

and operation of equipment on an ongoing production basis. This effort will enable the La Verne Shops to seek certification for compliance with the ISO 9001-2008 standard.

This action appropriates \$21.2 million and awards a \$16,300,127 contract to Stronghold Engineering, Inc. In addition to the amount of the contract, the requested funds include \$435,000 for construction by Metropolitan forces for the relocation of existing shop equipment, procurement and installation of security system equipment, and new shop equipment start-up and testing. The appropriated funds also include \$1,755,000 for construction inspection; \$378,000 for review of specialized equipment submittals and preparation of record drawings by Metropolitan staff; \$500,000 for technical support during construction by the design consultant, Tetra-IBI Group, as discussed below; \$176,000 for environmental monitoring and project management; \$155,000 for contract administration; and \$1,500,873 for remaining budget.

Construction inspection will be performed by Metropolitan staff. For this project, the anticipated cost of inspection is approximately 10.3 percent of the total construction cost. Engineering Services' goal for inspection of construction contracts greater than \$3 million is 9 to 12 percent. For this project, the total cost of construction is \$16,735,127.

Technical Support During Construction (Tetra-IBI Group) – Amendment to Existing Agreement

Tetra-IBI Group performed the final design of the La Verne Shops Upgrades. As the Architect of Record, Tetra-IBI Group is recommended to provide technical support during construction. These activities will include review of building-related submittals, responding to requests for information, advising staff on technical issues as they may arise, and preparation of record drawings. Tetra-IBI Group was selected through a competitive process via Request for Proposals No. 831, and the design was performed under a board-authorized agreement. Amendment of the existing Tetra-IBI Group agreement is consistent with the agreement's scope of work and with the planned approach for project implementation. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 20 percent.

This action authorizes an increase of \$500,000 to the existing agreement with Tetra-IBI Group, for a new not-to-exceed total of \$2.35 million, to provide technical support during construction of the machine and fabrication shop upgrades.

Summary

This action appropriates \$21.2 million, awards a construction contract to expand and upgrade the existing machine and fabrication shop buildings at La Verne, and authorizes an amendment to an existing agreement with Tetra-IBI Group. This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2011/12 capital expenditure plan. See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, and [Attachment 3](#) for the Location Map.

This project is included within capital Appropriation No. 15395, the La Verne Shop Facilities Upgrade Program, which was initiated in fiscal year 2002/03. Appropriation No. 15395 also includes the coating shop building expansion, machine shop roof replacement, and machine/fabrication shop crane upgrades. With the present action to award the Stage 4 construction contract, the total funding for Appropriation No. 15395 will increase from \$17,320,000 to \$38,520,000.

Project Milestone

May 2014 – 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 environmental effects from the La Verne Machine and Fabrication Shops Upgrades, Stage 4, were evaluated in the F.E. Weymouth Filtration Plant Ozonation Facilities and Site Improvements Program Final Environmental Impact Report (Final EIR), which was certified by the Board on April 12, 2005. The Board also approved the Findings of Fact (Findings), the Statement of Overriding Considerations, the Mitigation Monitoring and Reporting Program (MMRP), and the project itself. Addendum No. 1 to the Final EIR was certified by the Board on January 9, 2007. The current board action is solely based on authorizing award of a construction contract for the La Verne Machine and Fabrication Shops Upgrades, Stage 4, and not on any changes to the approved program itself. Hence, the previous environmental documentation acted on by the Board in conjunction with the proposed action fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act on the proposed action.

The CEQA determination is: Determine that the proposed action has been previously addressed in the certified 2005 Final EIR, Findings, SOC, and MMRP, and 2007 Addendum, 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 and

- a. Appropriate \$21.2 million;
- b. Award \$16,300,127 contract to Stronghold Engineering, Inc., for the La Verne Machine and Fabrication Shops Upgrades; and
- c. Authorize increase of \$500,000 to the existing agreement with Tetra-IBI Group, for a new not-to-exceed total of \$2.35 million.

Fiscal Impact: \$21.2 million of capital funds under Approp. No. 15395

Business Analysis: This option will enhance reliability and continued operation of the La Verne machine and fabrications shops. Upgrade of the existing shop buildings will enhance Metropolitan's operational flexibility in the event of emergencies, and will comply with up-to-date building codes.

Option #2


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

Fiscal Impact: None

Business Analysis: This option would delay completion of the building upgrades, and may or may not result in more favorable bids.

Staff Recommendation


Option #1



Gordon Johnson
Manager/Chief Engineer,
Engineering Services

4/16/2012

Date



Jeffrey Kightlinger
General Manager

4/23/2012

Date

Attachment 1 – Financial Statement

Attachment 2 – Abstract of Bids

Attachment 3 – Location Map

Ref# es12617299

Financial Statement for La Verne Shop Facilities Upgrade Program

A breakdown of Board Action No. 6 for Appropriation No. 15395 for the La Verne Machine and Fabrication Shops Upgrades¹ is as follows:

	Previous Total Appropriated Amount (March 2011)	Current Board Action No. 6 (May 2012)	New Total Appropriated Amount
Labor			
Studies & Investigations	\$ 197,000	\$ -	\$ 197,000
Final Design	1,532,508	-	1,532,508
Owner Costs (Program mgmt, envir. monitoring, contract admin.)	1,048,000	331,000	1,379,000
Submittals Review & Record Drwgs	224,000	378,000	602,000
Construction Inspection & Support	955,000	1,728,000	2,683,000
Metropolitan Force Construction	199,000	365,000	564,000
Materials & Supplies	1,236,673	70,000	1,306,673
Incidental Expenses	56,300	27,000	83,300
Professional/Technical Services	2,529,900	-	2,529,900
Tetra-IBI Group	300,000	500,000	800,000
Equipment Use	15,000	-	15,000
Contracts	8,388,427	16,300,127	24,688,554
Remaining Budget	638,192	1,500,873	2,139,065
Total	\$ 17,320,000	\$ 21,200,000	\$ 38,520,000

Funding Request

Program Name:	La Verne Shop Facilities Upgrade Program		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15395	Board Action No.:	6
Requested Amount:	\$ 21,200,000	Capital Program No.:	15395
Total Appropriated Amount:	\$ 38,520,000	Capital Program Page No.:	304
Total Program Estimate:	\$ 41,659,900	Program Goal:	Infrastructure Reliability

¹ The total amount expended to date on the La Verne Machine and Fabrication Shops Upgrades project is approximately \$10,992,595.

The Metropolitan Water District of Southern California

Abstract of Bids Received on March 28, 2012 at 2:00 P.M.

Specifications No. 1641

La Verne Maintenance Shops Upgrades – Stage 4

The work consists of upgrading and expanding the existing machine and fabrication shop buildings at the Weymouth plant.

Engineer's Estimate: \$16,300,000

Bidder and Location	Total Bid	SBE \$	SBE %	Met SBE*
Stronghold Engineering, Inc., Riverside, CA	\$16,300,127.00	\$3,994,180	24.5	YES
Minako America Corporation dba Minco Construction, Gardena, CA	\$18,700,000.00	-	-	-
Pinner Construction Company, Inc., Anaheim, CA	\$19,450,000.00	-	-	-
Perera Construction & Design, Inc., Ontario, CA	\$19,946,187.00	-	-	-
Morillo Construction, Inc., Pasadena, CA	\$19,957,000.00	-	-	-
USS Cal Builders, Inc., Stanton, CA	\$20,539,859.22	-	-	-
Royal Construction Corp., Arcadia, CA	\$21,969,000.00	-	-	-

*SBE (Small Business Enterprise) participation set at 24 percent

F.E. Weymouth Water Treatment Plant

