



Board Report

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REVISED
CONSTRUCTION COMMITTEE
APRIL 12, 2018

**SUBJECT: PERMEABLE PAVEMENT AND BIORETENTION
PILOT PROJECT, DIVISION 4 MAINTENANCE
FACILITY**

ACTION: AUTHORIZATION FOR LIFE OF PROJECT BUDGET

RECOMMENDATION

APPROVE an increase in the Life of Project Budget (LOP) for Permeable Pavement and Bioretention Pilot Project (Project) in the amount of \$1.16 million increasing the LOP from \$940,000 to \$2.1 million to complete construction of the Project.

ISSUE

In 2014, Metro applied for a Proposition 84 Grant Opportunity to implement a permeable pavement project at Division 4. In May 2014, the State Water Resource's Control Board (SWRCB) awarded Metro with a grant of \$752,000 to implement its proposed permeable pavement and bioretention project with a local commitment from Metro of \$188,000 for a total LOP of \$940,000. This report recommends adopting a LOP budget with the necessary additional funding of \$1.16 million to complete the Project.

The competitive low-bid prices for the construction component of the Project have been received and the winning bid would result in this higher forecast for the LOP. Staff believes the bids are representative of current market conditions and that a rebid would not result in lower pricing. Furthermore, without additional funds, Metro will have to relinquish grant funding back to the SWRCB and terminate current efforts related to a much needed pilot.

DISCUSSION

Project Description

The Permeable Pavement and Bioretention Pilot Project, Division 4 Maintenance Facility will replace approximately 40,000 square feet of hardscape with low-impact development (LID) stormwater infiltration features. Located in the City of Downey, Division 4 is directly adjacent to the Rio Hondo River. All stormwater from Division 4 currently drains directly into the Rio Hondo River. To address

this runoff, Metro will install 39,140 square feet of permeable concrete pavement and 1,680 square feet of plant material in a bioretention area at Division 4. Permeable concrete pavement is designed to be porous for rainwater to infiltrate and recharge groundwater. Permeable pavement is also strong enough for vehicles to drive over it. The adjacent bioretention area will capture additional rainwater and any overflows from the permeable concrete pavement area. This project will ensure that Metro complies with the Los Angeles River Trash Total Maximum Daily Load (TMDL). Infiltration technology is required to be considered in all Metro projects throughout the City and County of Los Angeles.

This Project would serve as a pilot demonstration model to implement at other sites in accordance with Proposition 84 goals and intentions, which are in part to reduce "... contamination by dangerous bacteria, polluted runoff, toxic chemicals, damage from catastrophic floods and the demands of a growing population..." (§75002.5), while also providing "... careful planning and thorough improvements in land use and water management ... better integration of water supply, water quality, flood control and ecosystem protection..." (§75003.5). Furthermore, as a pilot project, this Project serves as a template for similar uses and applications at other Metro facilities.

Background

In 2014, Metro applied for and was awarded by the SWRCB a Proposition 84 technology grant for this Project. In July 2014, the Board approved the grant award and provided a local match of \$188,000. The anticipated total project costs in the year of award was \$940,000. The initial LOP was developed based on a conceptual design of the permeable pavement project and a feasibility study completed using available technology and information at the time of grant application. The LOP was internally developed and was an order of magnitude cost before any final design was done.

The Project was proposed to be implemented at Division 4 but because of land use constraints that surfaced at the time including the potential to reuse Division 4 for other purposes, staff looked for another location to implement the pilot project. In consultation with the Metro Operations Department, the Central Maintenance Facility (CMF) adjacent to Division 13 was selected as the next best location for this project; and geotechnical as well as environmental investigations were initiated to determine site project conditions that may inhibit effectiveness of the approved conceptual design. During the geotechnical and environmental investigation, unknown contamination at the potential CMF location was discovered. There was an attempt to determine whether the original conceptual design can still be implemented. The chemical data showed that the project would be infeasible at the CMF.

Greater certainty on the future of Division 4 prompted staff to reconsider doing the pilot at the location. Staff was also able to use many of the information already developed during the application process. However, newer regulations on low impact development as well as the reconfiguration of some of the elements of the original conceptual design to accommodate optimum use of Division 4 for Metro Operations prompted the redesign of a number of project pilot elements.

Costs have been incurred considering all of the above circumstances. To date, Metro has spent

approximately \$250,000 on project management, administration and design. Considering the time of this pilot's grant award to the time the design of the project was completed and the bids were received, the award value for Contract C1160, combined with other project costs such as engineering, contract administration, and construction management costs, is \$2.1 million.

Construction costs alone have increased from \$580,780 to \$1.234 million, an increase of more than 110% since the Project was originally budgeted. With the change in statutory and regulatory requirements, the Project also now requires more extensive monitoring and public outreach components. The cost of these components has increased from \$120,000 to \$180,000, an increase of 50%.

DETERMINATION OF SAFETY IMPACT

This Board action will not have an impact on established safety standards.

FINANCIAL IMPACT

Upon approval of the recommendation, the project LOP will be increased from \$940,000 to a new cumulative LOP of \$2,100,000 under Project 202809: Division 4 Concrete Pavement. Funds from the Metro Green Fund (Fund 2113, Account 40799) will be used to fund the project and absorb the LOP increase. The funds will be allocated to various accounts in Cost Center 8510 (Construction Contract Procurements). Since this is a multi-year capital project, the Chief, Program Management and Executive Officer, Environmental Compliance and Sustainability will be responsible for budgeting in future years.

Impact to Budget

The sources of funds for this project is the Metro Green Fund. This fund is eligible for sustainable capital efforts such as this project.

ALTERNATIVES CONSIDERED

With the low bid price significantly higher than the independent cost estimate, staff evaluated the two options of rebidding and significantly de-scoping the project. With a continually recovering economy and rising construction cost indices, there would be no assurance of receiving a better price given the competitiveness of the bids received. The independent cost estimate prepared internally by Metro Staff provides an indication that any bid received would require an increase in LOP. Significant de-scoping of the project would necessitate negotiating the project with the SWRCB and potentially reducing their financial contribution. Rebidding or postponing an award will introduce additional cost and schedule risks to this project. Given these factors, it is recommended that the Board proceed with the increase of the LOP.

NEXT STEPS

Upon approval, Metro will award the Contract to the lowest bidder and issue a notice to proceed once bonds and insurance requirements are submitted and administrative paperwork, including a job plan, have been received from the contractor. Meetings will be held with the contractor to ensure early submittals such as quality assurance and safety plans are submitted on time. Progress of the project will be monitored per the project monitoring plan already developed by Metro staff for the State Water Resources Water Quality Control Board.

ATTACHMENTS

Attachment A - Procurement Summary

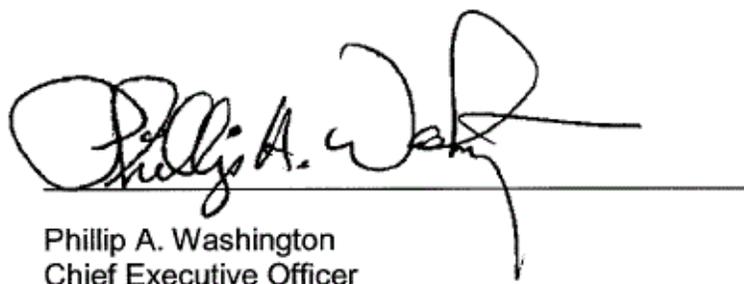
Attachment B - DEOD Summary

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