



Board Report

File #: 2024-0496, File Type: Contract

Agenda Number: 25.

OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE SEPTEMBER 19, 2024

SUBJECT: A LINE TRAIN CONTROL NON-VITAL AND VITAL RELAY REPLACEMENT

ACTION: CONTRACT AWARD

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to:

- A. AWARD a 39-month firm fixed price Contract No. AE117510000 to B&C Transit, Inc. for the Metro A Line Train Control Non-Vital and Vital Relay Replacement Project in the amount of \$14,838,050 effective October 1, 2024, subject to resolution of any properly submitted protest(s), if any; and
- B. INCREASE the Life of Project (LOP) Budget for the A Line Train Control Non-Vital and Vital Relay Replacement by \$9,355,855 from \$11,100,000 to \$20,455,855.

ISSUE

The Metro railway train control system uses electronically operated non-vital and vital relay switches to manage the safe movement of trains. The current non-vital and vital train control relays on the A Line have continuously operated since revenue service began in 1990. These non-vital and vital relays are now reaching the end of their useful life and require replacement. They are no longer supported by the original equipment manufacturer (OEM), are not readily available in the industry, and potential replacement relays are not cost-effective due to the difficulty of installation. Approval of a contract award and an increase in the LOP budget are needed to proceed with the replacement and modernization work.

BACKGROUND

The obsolete non-vital train control relays are challenging the Maintenance of Way (MOW) maintenance workforce to keep them operational and in good repair. Additionally, new technology in the marketplace would make maintenance of the non-vital train control system easier.

In May 2022, the Board approved the Metro A Line Train Control Non-Vital Relay Replacement project with an LOP budget of \$11,100,000 as part of the adopted FY23 annual budget. This initial LOP budget was based on the engineering estimate for replacing only the non-vital train control

relays at Communication and Signal (C&S) buildings along the mainline. Subsequently, the project scope was expanded to include the replacement of vital train control relays because vital relays have also become more difficult to procure and are less readily available. The expanded project scope to add replacement of the vital relays, as well as inflation, contributed significantly to the increased LOP.

DISCUSSION

All train control equipment rooms consist of a large number of vital relays and non-vital relays. Vital relays are essential components of Metro's railway train control system, managing critical safety functions. They ensure the safe operation of trains by controlling signals and track switches at interlockings (track sections). They are designed to halt train movements when a train enters a section already occupied by another train. These relays are crucial in preventing collisions and are designed to fail without creating an unsafe condition. Non-vital relays manage other essential functions such as requesting routes, providing status indications, and sending alarms to the Rail Operations Control (ROC) Center.

The project work under Contract No. AE117510000 will replace the current vital and non-vital relays and associated wiring with microprocessor-based train control equipment. The microprocessor-based train control system will be installed at 14 C&S building locations along the mainline. To minimize the impact on rail service, the project work will be performed within one C&S building location at a time. A \$20,455,855 LOP budget need has been determined based on the necessary project scope and the negotiated amount for Contract No. AE117510000. See Attachment A for the expenditure plan of capital project 205673.

The replacement of the train control relays is part of the Capital Improvement Program (CIP), which aims to renew transit infrastructure assets. Metro is committed to maintaining transit infrastructure assets in good repair.

DETERMINATION OF SAFETY IMPACT

Non-vital and vital train control relays directly impact the safety of train movements and are critical infrastructure assets that work to prevent train collisions and other safety hazards. In accordance with Metro's Transit Asset Management Plan requirements, both non-vital and vital train control relays must be replaced in a timely manner when they begin reaching the end of their useful life to comply with safety and reliability standards, alongside meeting California Public Utilities Commission and Federal Transit Administration (FTA) regulations.

FINANCIAL IMPACT

This action will increase the LOP budget for capital project 205673-A-Line Train Control Non-Vital and Vital Relay Replacement, adjusting it from \$11,100,000 to \$20,455,855. The FY25 budget includes annual funding of \$2,900,276 for this project.

Since this is a multi-year project, the Project Manager will ensure that the balance of funds is budgeted in future fiscal years.

Impact to Budget

The current source of funds for this action is local funds. The majority of the funding sources are eligible for Capital and Operating Projects.

EQUITY PLATFORM

Metro is committed to maintaining transit assets in marginalized communities, ensuring reliable and equitable transportation options for Metro riders. The equity benefits of this action modernize transit infrastructure assets on the A (formerly Blue) Line that directly provide service to many Equity Focus Communities (EFCs) as well as low-income riders, who are the primary users of the Metro transit system.

The A Line serves communities with a high concentration of EFCs, including Westlake, Exposition Park, Central-Alameda, Huntington Park, Vermont-Slauson, Vermont, Knolls, Vermont-Vista, Watts, Willowbrook, Compton, Long Beach, and Wilmington. It also serves as transfer connections to other Metro rail lines and multiple bus lines. Replacing and modernizing the vital and non-vital relays ensures the continuity of rail services through EFCs. The relays manage the safe movement of trains and provide for safe operations that benefit low-income riders.

Contract No. AE117510000 for the A Line Train Control Non-Vital and Vital Relays was solicited with a 3% Small Business Enterprise (SBE) and 3% Disabled Veteran Business Enterprise (DVBE) goal. The recommended firm, B&C Transit, met the project work requirements by committing to both the 3% SBE and 3% DVBE goals.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Approval of this recommendation supports the following Metro Strategic Plan Goals:

- Goal # 2 Deliver outstanding trip experiences for all users of the transportation system.
- Goal # 3 Enhance communities and lives through mobility and access to opportunity.

ALTERNATIVES CONSIDERED

The Board may choose not to award Contract No. AE117510000 and not increase the LOP budget for project 205673. Staff does not recommend this because the current non-vital and vital train control relays along the A (formerly Blue) Line are nearing the end of their useful life. They are safety-sensitive, and choosing not to perform or postpone replacement will impact service reliability if the relays become non-operational, halting train movements and disrupting railway service. Functioning non-vital and vital relays are required for train operations. Additionally, unscheduled maintenance repair costs per component will result in higher operating costs versus reduced costs when performing work as scheduled.

NEXT STEPS

Upon the Board's approval of the recommendations, staff will increase the authorized LOP budget and execute Contract No. AE117510000 with B&C Transit, Inc. for the Metro A Line Non-Vital and Vital Relay Replacement Project.

ATTACHMENTS

Attachment A - Project 205673 Expenditure Plan

Attachment B - Procurement Summary

Attachment C - DEOD Summary

Prepared by:


Geyner Paz, Chief Administrative Analyst, (213) 922-3744

Aderemi Omotayo, Deputy Executive Officer, Wayside Systems Engineering and Maintenance, (213) 922-3243

Errol Taylor, Deputy Chief Operations Officer, Infrastructure Maintenance and Engineering, (213) 922-3227

Carolina Coppolo, Deputy Chief Vendor/Contract Management Officer (Interim), (213) 922-4471

Reviewed by: Conan Cheung, Chief Operations Officer, (213) 418-3034



Stephanie N. Wiggins
Chief Executive Officer

**Capital Project 205673 Expenditure Plan
A Line Non-Vital and Vital Relay Replacement**

Use of Funds	ITD	FY25	FY26	FY27	FY28	Total
Contract No. AE117510000 Train Control Non-Vital and Vital Relays		\$ 3,000,000	\$ 5,000,000	\$ 5,000,000	\$ 1,838,050	\$ 14,838,050
Metro Workforces		\$ 225,000	\$ 250,000	\$ 275,000	\$ 300,000	\$ 1,050,000
Agency Costs (Design Support During Construction, Construction Management, Project Management, Procurement, Labor Compliance)	\$ 34,000	\$ 650,000	\$ 750,000	\$ 850,000	\$ 800,000	\$ 3,084,000
Contingency 10%						\$ 1,483,805

Yearly Cash Flow Forecast \$ 34,000 \$ 3,875,000 \$ 6,000,000 \$ 6,125,000 \$ 2,938,050 \$ 20,455,855

PROCUREMENT SUMMARY

METRO A LINE TRAIN CONTROL NON-VITAL AND VITAL RELAY
REPLACEMENT/AE117510000

1.	Contract Number: AE117510000	
2.	Recommended Vendor: B&C Transit, Inc.	
3.	Type of Procurement (check one): <input type="checkbox"/> IFB <input type="checkbox"/> RFP <input checked="" type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	Procurement Dates:	
	A. Issued: February 27, 2024	
	B. Advertised/Publicized: February 29; March 1 and 2, 2024	
	C. Pre-Proposal Conference: March 12, 2024	
	D. Proposals Due: April 4, 2024	
	E. Pre-Qualification Completed: July 11, 2024	
	F. Conflict of Interest Form Submitted to Ethics: April 8, 2024	
	G. Protest Period End Date: September 24, 2024	
5.	Solicitations Picked up/Downloaded: 12	Proposals Received: 1
6.	Contract Administrator: Ernesto N. De Guzman	Telephone Number: (213) 922-7267
7.	Project Manager: Aderemi Omotayo	Telephone Number: (213) 922-3243

A. Procurement Background

This Board Action is to award Contract No. AE117510000 issued in support of the Metro A Line Train Control Non-Vital and Vital Relay Replacement project. Board approval of contract awards is subject to resolution of any properly submitted protest(s), if any.

On February 27, 2024, Request for Proposal (RFP) No. AE117510 was released as a competitive procurement, in accordance with Metro's Acquisition Policy and the contract type is firm fixed price. The Diversity and Economic Opportunity Department recommended a Small Business Enterprise (SBE) goal of 3% and a Disabled Veteran Business Enterprise (DVBE) goal of 3%.

Three amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on March 8, 2024, revised Section LOI-01 Notice and Invitation, to include the 3% SBE goal and 3% DVBE goal.
- Amendment No. 2 and 3, issued on March 18, 2024, clarified the insurance requirements for professional services and added Section LOI – 16 SBE/DVBE PROGRAM to the solicitation.

A total of twelve firms downloaded the RFP and were included in the planholder's list. A virtual pre-proposal conference was held on March 12, 2024, and was attended by two participants representing a single firm. There were no questions received for this RFP.

One proposal was received by the due date of April 4, 2024, from B&C Transit, Inc.

Since only one proposal was received, staff conducted a market survey of the planholders to determine why no other proposals were submitted. Responses were received from four firms and they included the following reasons:

- the scope of services not being within their area of expertise
- not having control over manufacturers' supply of material delivery

The market survey revealed that the decisions not to propose were based on individual business considerations. Therefore, the solicitation can be awarded as a competitive award.

B. Evaluation of Proposal

A Proposal Evaluation Team (PET) consisting of staff from the Transit Vehicle Engineering, Wayside Systems Engineering and Maintenance, and Rail MOW Signal Systems departments was convened and conducted a comprehensive technical evaluation of the proposal received.

The proposal was evaluated based on the following criteria:

Minimum Qualification Requirements: This is a pass/fail criteria. To be responsive to the RFP minimum qualification requirements, the proposer must meet the following:

1. Proposer shall be a train control equipment manufacturer or train control systems integrator with at least five years of experience in the design, installation, assembling, manufacturing, testing, and integrating a train control system on an active transit system.
2. The Proposer must have an active California State Contractor License in Classification C-10 Electrical Contractor.

The proposer met the minimum qualification requirements and was further evaluated based on the following weighted evaluation criteria

- | | |
|---|-----|
| • Experience and Qualifications of the Team | 35% |
| • Experience and Qualifications of the Proposed Key Personnel | 20% |
| • Effectiveness of Management Plan | 10% |
| • Work Plan/Project Approach | 35% |

The evaluation criteria are appropriate and consistent with criteria developed for other, similar Architecture and Engineering (A&E) procurements. Several factors were considered when developing these weights, giving the greatest importance to the experience and qualifications of the team and the work plan/project approach.

This is an A&E, qualifications-based procurement; therefore, price cannot be used as an evaluation factor pursuant to state and federal law.

During the period of April 29 to May 23, 2024, the PET independently evaluated and scored the technical proposal and determined that the proposal met the requirements of the scope of services. A summary of the PET scores is provided below:

1	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
2	B&C Transit, Inc.				
3	Experience and Qualifications of the Team	85.25	35%	29.84	
4	Experience and Qualifications of the Proposed Key Personnel	92.35	20%	18.47	
5	Effectiveness of Management Plan	90.09	10%	9.01	
6	Work Plan/Project Approach	84.94	35%	29.73	
7	Total		100.00%	87.05	1

C. Cost Analysis

The recommended price has been determined to be fair and reasonable based upon an Independent Cost Estimate (ICE), technical analysis, cost analysis, fact finding, and negotiations. Staff successfully negotiated savings of \$1,611,950.

Proposal Amount	Metro ICE	Recommended Amount
\$16,450,000	\$10,000,000	\$14,838,050

The variance between the ICE and the recommended amount is due to the following:

- The ICE assumed the design work would be done using a software ratio of 75% and hardware 25%. However, the contractor proposed a software of 60% and hardware of 40% ratio. This approach is more of a designer's choice. In addition, hardware prices have increased by 15% since the ICE was developed.
- The risk that the contractor associated with the project. For this work, the A Line system will not be shut down and the contractor will have to perform field testing work while the system is operating. Therefore, the work will require a higher level of effort for project management, installation, and testing.

D. Background on Recommended Contractor

B&C Transit, Inc. is a transit engineering firm headquartered in Oakland, California, and has been in business since 1999. Its focus is on automated train control design, technical engineering, system installations, field testing, networked and stand-alone control, office monitoring systems, station communications, and design-build engineering. B&C Transit, Inc. has satisfactorily performed work for Metro as a prime contractor and subcontractor.

DEOD SUMMARY

**METRO A LINE TRAIN CONTROL NON-VITAL AND VITAL RELAY
REPLACEMENT/AE117510000**

A. Small Business Participation

The Diversity and Economic Opportunity Department (DEOD) established a 3% Small Business Enterprise (SBE) and 3% Disabled Veteran Business Enterprise (DVBE) goal for this solicitation. B&C Transit, Inc. met the goals by making a 3% SBE and 3% DVBE commitment.

Small Business Goal	3% SBE 3% DVBE	Small Business Commitment	3% SBE 3% DVBE
----------------------------	---------------------------	----------------------------------	---------------------------

	SBE Subcontractor	% Committed
1.	KPA Constructors	3.00%
	Total SBE Commitment	3.00%

	DVBE Subcontractor	% Committed
1.	PTS Telecommunications	3.00%
	Total DVBE Commitment	3.00%

B. Local Small Business Preference Program (LSBE)

The LSBE Preference Program does not apply to Architecture and Engineering procurements. Pursuant to state and federal law, price cannot be used as an evaluation factor.

C. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy (LW/SCWRP) is not applicable to this contract.

D. Prevailing Wage Applicability

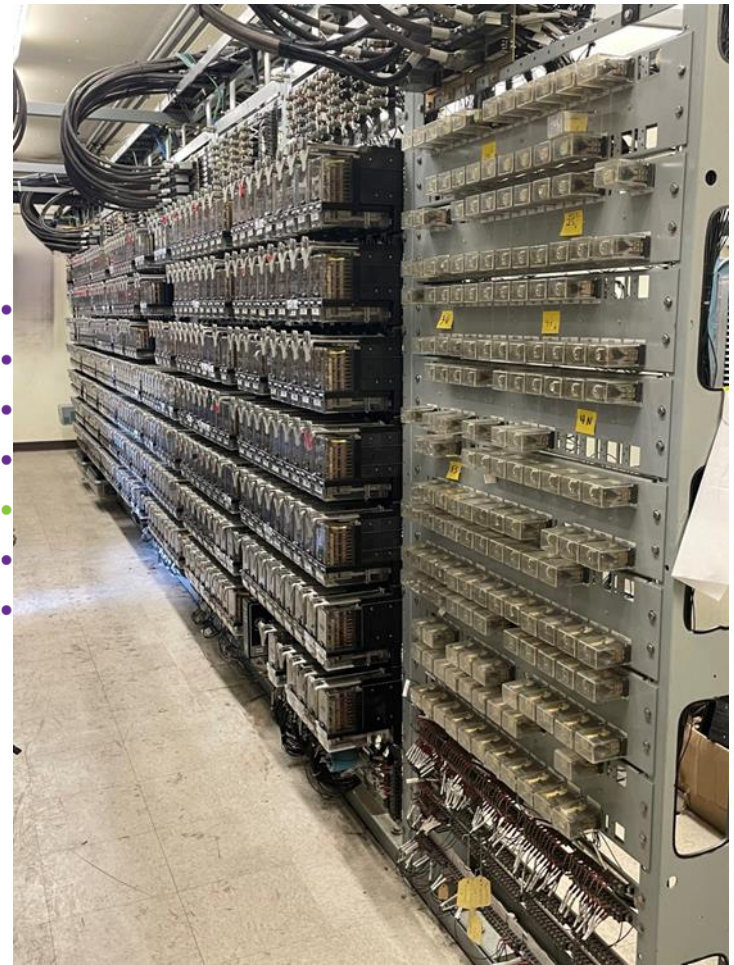
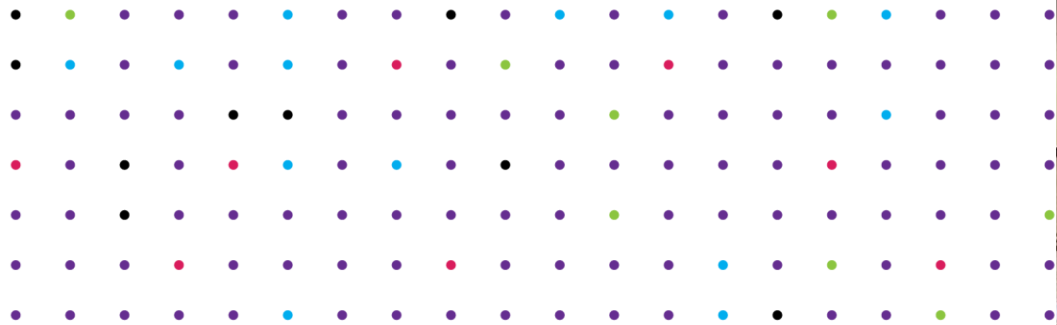
Prevailing Wage requirements are applicable to this project. DEOD will continue to monitor contractors' compliance with the State of California Department of Industrial Relations (DIR), California Labor Code, and, if federally funded, the U.S. Department of Labor (DOL) Davis Bacon and Related Acts (DBRA). Trades that may be covered include: Electrician.

E. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract. PLA/CCP is applicable only to construction contracts that have a construction related value in excess of \$2.5 million.

A Line Train Control Non-Vital and Vital Relay Replacement LOS ANGELES METRO

Date SEPTEMBER 19, 2024



RECOMMENDATION



AUTHORIZE the Chief Executive Officer to:

- A. AWARD a 39-month firm fixed price Contract No. AE117510000 to B&C Transit, Inc. for the Metro A Line Train Control Non-Vital and Vital Relay Replacement Project in the amount of \$14,838,050 effective October 1, 2024, subject to resolution of any properly submitted protest(s), if any; and
- B. INCREASE the Life of Project (LOP) Budget for the A Line Train Control Non-Vital and Vital Relay Replacement by \$9,355,855 from \$11,100,000 to \$20,455,855.

ISSUE & DISCUSSION



ISSUE

The train control System uses electromechanically operated non-vital and vital relay switches to manage the safe movement of trains on our tracks and over our switches.

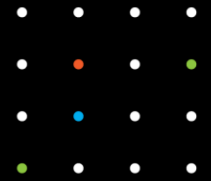
The original equipment manufacturer (OEM) no longer supports the relays, and their scarce availability is creating a challenge for the Maintenance of Way (MOW) maintenance workforce to keep them operational and in the state of good repair.

DISCUSSION

The project work under Contract No. AE117510000 will involve the replacement of the current vital and non-vital relays and associated wiring with microprocessor-based train control equipment. The microprocessor-based train control system will be installed at fourteen (14) C&S building locations along the mainline. A \$20,455,855 LOP budget need has been determined based on the necessary project scope and the negotiated amount for Contract No. AE117510000.



ISSUE & DISCUSSION



AWARDEE

B & C Transit INC

NUMBER OF PROPOSALS

One

DEOD COMMITMENT

SBE 3% / DVBE 3% commitment percentages met.

DISCUSSION

The replacement of the train control relays is part of the Capital Improvement Program (CIP), which aims to renew transit infrastructure assets. Metro is committed to maintaining transit infrastructure assets in a state of good repair.

