

**Board Report**

File #: 2020-0170, **File Type:** Informational Report

Agenda Number: 23.

**CONSTRUCTION COMMITTEE
MAY 21, 2020**

SUBJECT: SYSTEMS ENGINEERING AND SUPPORT SERVICES

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to:

- A. An increase in total authorized funding for Contract No. AE47810E0128 with SECOTrans (Joint Venture of LTK Engineering Services, NBA Engineering Inc., Pacific Railway Enterprises Inc., and Ramos Consulting Services, Inc), for pending and future Task Orders to provide systems engineering and support services in the amount of \$22,500,000 for 1 year, increasing the total contract value from \$43,932,000 to \$66,432,000 through Fiscal Year 2021; and
- B. The Chief Executive Officer (CEO) or designee to execute individual Task Orders and Contract Modifications within the Board approved contract funding amount.

ISSUE

In April 2018, the Board approved awarding a seven-year cost reimbursable fixed fee, Task Order (TO) based Contract No. AE47810E0128, plus three one-year options, to SECOTrans, a Joint Venture for Systems Engineering and Support Services (SESS) consultant. The Board action provided an initial two-year funding authorization in the amount of \$28,932,000 through Fiscal Year 2020. In February 2020, a separate Board action approved an additional not-to-exceed (NTE) authorization in amount of \$15,000,000 to support the Rail Operations Center and Bus Operations Center (ROC/BOC) Project increasing the total Board approved contract authority to a new NTE amount of \$43,932,000. The recommended board action above will increase the contract value by \$22,500,000 to a new NTE of \$66,432,000 through Fiscal Year 2021-2022 (FY21). Staff will continue to return to the board on an annual basis to request additional contract authorization as conditions and project requirements warrant

BACKGROUND

To date, staff has awarded TO's and Contract Modifications (MODS) totaling \$25,081,605 with approximately \$18,850,395 in authorized funding remaining. The SESS Consultant has been exceeding their DBE commitment by over ten (10) percent based on the TOs executed to date.

Examples of projects supported by this contract include Metro Operational Analyses, Crenshaw\LAX, Metro A (Blue) Line Upgrades, East San Fernando Valley Light Rail Transit and West Santa Ana Branch Transit. Attachment C includes a complete listing of the TO's and MODS executed over the initial two-years of the SESS contract. As indicated during initial approval, staff is now seeking an additional one year funding authorization to support Systems Engineering and Measure M projects.

DISCUSSION

With the approval of Measure M, the ongoing implementation of the Measure R program, required State of Good Repair initiatives, and the Board's desire to accelerate eligible projects prior to the 2028 Olympics, staff has engaged a SESS to provide a broad range of systems engineering design and related support services to supplement current Systems Engineering Department resources. Metro's capital program is over \$18 billion and requires extensive resources with the ability to react quickly to a wide range of complex technical issues. With a strong core staff located in Los Angeles, the SESS is capable of applying and withdrawing resources as the workload of projects fluctuates over time. The SESS has the extensive experience and capability to support the complete project lifecycle; from the conceptual phase to final design and construction.

Due to the intensive system integration requirements and length of time needed to deliver major capital improvement projects, this contract has allowed Metro to efficiently and effectively augment Program Management staff where appropriate to ensure the proper project resources are available to Metro in terms of additional staff and technical expertise.

The SESS provides a single systems engineering team, and associated sub-specialties, with the necessary resources to assist in the planning, development, and delivery of Metro's aggressive schedule of projects for the next decade. Examples of systems engineering disciplines include traction electrification, overhead contact systems (OCS), train control, communications, supervisory control and data acquisition (SCADA), rail simulations, corrosion control, systemwide electrical and other specialized disciplines.

Other Considerations

The challenge presented by the simultaneous implementation of numerous projects is to ensure the integration and standardization of the systems elements within and across the current Metro system. Consistent development and design is necessary to ensure that the required integration is achieved with respect to civil and electrical infrastructure, vehicles, control systems, communications, operations, maintenance, security, training, etc.

Prior to the procurement of the SESS, each project would use a different consultant for this work, resulting in inconsistent applications. This approach was no longer feasible or advisable with the large volume of projects now underway. With a single SESS design team on staff, the standardization of design, construction and functionality of systems elements will keep Metro's long-term interest of system interoperability and safety at the forefront. A fully-integrated network requires a consistency of systems design and not a collection of potentially incompatible independent designs arising from separate projects. This approach has been implemented successfully in other transit agencies nationwide and the benefits of full systems standardization include:

- Interoperability and efficient maintainability
- Improved commercial viability
- Reduced spares requirements
- Reduced training requirements
- Flexibility to adapt to changing circumstances

In addition to the projects listed above and on Attachment C, staff expects the SESS to provide systems engineering services for current and future rail and bus transit projects, and other capital improvement projects, including, but not limited to, the following:

- East San Fernando Valley Transit Corridor
- L (Gold) Line Eastside Phase 2 Extension
- C (Green) Line South Bay Rail Extension
- West Santa Ana Transit Corridor
- Sepulveda Pass Transit Corridor
- Vermont Transit Corridor
- G (Orange) Line BRT Improvements
- Westside D (Purple) Line Extension Section 3

DETERMINATION OF SAFETY IMPACT

The use of a consistent systems design process has a positive safety benefit during the construction and subsequent operations of Metro's Bus and Rail transit network.

FINANCIAL IMPACT

The requested not-to-exceed award value is based on the anticipated level of services that will be required through FY21. Funding for the individual TOs are funded through and included in the Board approved life-of-project (LOP) or departmental budgets; Therefore, this work is within the various project budgets.

Since this is a multi-year contract, project managers, cost managers, and Chief Program Management Officer will be responsible for budgeting the costs in future years.

Impact to Budget

Funding for TOs issued under this contract is provided by the specific project(s) requiring those services, as well as project studies, other general system engineering issues, and small-scale analyses. The current Funds allocated to this effort consist of federal, state, and local sources, including Measure R and Measure M. Using these funding sources maximizes the project funding parameters allowed by approved provisions and guidelines. Alternative funding sources will be applied as additional revenue funding opportunities become available.

ALTERNATIVES CONSIDERED

The board may choose to reject the recommendation and request staff to re-procure these services through an RFP, choose to authorize an alternative amount, or approve an alternative term of financial authorization. Staff does not recommend these alternatives. The use of a qualified SESS consultant has allowed the agency to secure highly technical expertise without the necessary increase in Metro's long-term labor costs. Further, by providing for an extended term contract, the board has afforded staff the resources that seek to provide an integrated and consistent network design that serves Metro's interests. Finally, by limiting the funding authorization to one year, greater accuracy of project scope and cost requirements are provided to the Board on an annual basis.

NEXT STEPS

Upon Board approval, staff will complete the process to amend the contract. Specific task orders will be subsequently issued on an as needed basis.

ATTACHMENTS

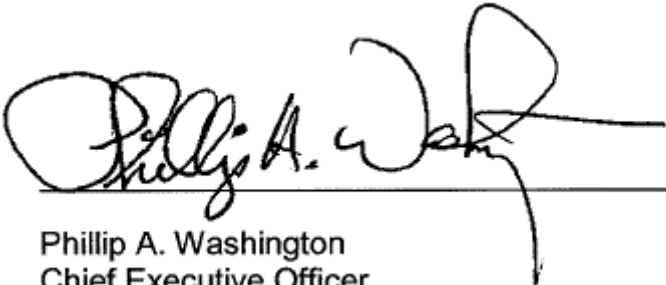
Attachment A: Procurement Summary
Attachment B: DEOD Summary
Attachment C: Proposed Task Order Work List

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Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

SYSTEMS ENGINEERING SUPPORT SERVICES / CONTRACT NO. AE47810E0128

1.	Contract Number: AE47810E0128		
2.	Contractor: SECOTrans (Joint Venture of LTK Engineering Services, NBA Engineering Inc., Pacific Railway Enterprises Inc., and Ramos Consulting Services, Inc.).		
3.	Mod. Work Description: Increase the Contract Funding not-to-exceed amount		
4.	Work Description: Systems Engineering Support Services		
5.	The following data is current as of: March 3, 2020		
6.	Contract Completion Status:		Financial Status:
	Award Date:	April 26 2018	Board Approved NTE Amount: \$43,932,000
	Notice to Proceed (NTP):	June 14, 2018	Total Contract Modification Authority (CMA): N/A
	Original Completion Date:	June 14, 2025	Value of Task Orders and Mods. Issued to Date: \$25,081,605
	Current Est. Complete Date:	June 14, 2025	Remaining Board Approved Amount: \$18,850,395
7.	Contract Administrator: Diana Sogomonyan		Telephone Number: (213) 922-7243
8.	Project Manager: Ron Tien		Telephone Number: (213) 418-3445

A. Contract Action Summary

On April 26, 2018, the Board of Directors approved award of Contract No. AE47810E0128 to SECO Trans for Systems Engineering and Support Services, in the amount not-to-exceed \$28,932,000, to supplement Metro's Engineering Department resources in providing engineering services for projects in varying stages of conceptual design, preliminary engineering, final design, support during bidding for construction, and design support during construction (DSDC), including the following: program management, quality, and computer aided design and drafting (CADD); design services concerning train control, communications systems, traction power, and overhead catenary systems (OCS); operational runtime simulation and modeling, corrosion control, system integration, facilities and system-wide electrical, facilities mechanical, facilities plumbing, and facilities fire protection. The base Period of Performance for the Contract is seven (7) years from NTP plus three (3) one-year options to be exercised at Metro's sole discretion.

Seventeen (17) Task Orders have been issued to SECOTrans to date. Four (4) Contract Modifications have been issued for zero dollars.

On February 27, 2020, the Board of Directors authorized the Chief Executive Officer to award a Task Order (TO No. E0128-TO-016) under the subject contract to SECOTrans (Joint Venture) for the preliminary engineering design of the Rail Operations Center (ROC) / Bus Operations Center (BOC) Architectural and Engineering Systems Design Services in the not-to-exceed amount of

\$15,000,000, increasing the previous Board approved NTE amount from \$28,932,000 to a NTE amount of \$43,932,000 for Contract No. AE47810E0128. Task Order No. E0128-TO-016 Scope of Work consists of developing the space and systems design for the ROC and BOC into the Emergency Security Operations Center (ESOC) and is currently pending execution, as cost analysis and negotiations are in progress for completion.

Since this is a multi-year contract, the Chief Program Management Officer and the Project Manager are responsible for budgeting costs in future years, including the exercise of any options. Consequently, funding for the award of the Supplemental Engineering and Support Services Contract was initially requested for the first two years and funding must be requested every two years subsequent to that for future work, contingent upon an updated annual work program and schedule for the period in a form of an Independent Cost Estimate (ICE). The amount of \$43,932,000 is the current NTE amount for the FY '18 –FY '20 period. The total contract amount will be the aggregate value of all task orders negotiated with the Consultant through the term of the contract.

Contract No. AE47810E0128 is a cost plus fixed fee (CPFF) Contract.

B. Cost/Price Analysis

The recommended price for the Task Orders resulting from the recommended increase in funding will be determined to be fair and reasonable based upon fact finding, technical evaluation, cost analysis, and negotiations, before issuing Task Orders to the Consultant. Task Orders will be processed in accordance with Metro’s Acquisition Policy and Procedures. A cost analysis will be performed for each Task Order, taking into consideration the completed Independent Cost Estimate and technical audit, utilizing labor and indirect cost rates already establish in the contract.

The Systems Engineering Services Independent Cost Estimate for the additional NTE amount of \$22,500,000 was developed using the current master schedule, construction estimates, and completed work to date from the Program Management Project Controls department. An estimated cost was determined for each project using past project costs, systems to civil project percentages along with historical rates. Depending on the type of transit project and the complexity, the percentages were derived from the overall construction costs to determine the systems construction and engineering costs. Once the systems engineering costs were estimated, they were distributed across each fiscal year according to the master schedule. Other costs for Maintenance of Way (MOW) support, State of Good Repair and Transit Asset Management, were independently developed with each department.

Cost Schedule Proposals	Independent Cost Estimate	Recommended NTE Amount
Not Required ⁽¹⁾	\$22,500,000 ⁽²⁾	\$22,500,000 ⁽³⁾

(1) A Cost Schedule Proposal amount was not required. This is a Cost Plus Fixed Fee (CPFF) Task Order Contract with no definable level of effort for the Scope of Work. Hourly labor rates, overhead and fee were negotiated for the contract and

determined to be fair and reasonable. Individual future Scopes of Work will be issued on a Task Order basis and executed separately as the work is defined.

- (2) FY '21 NTE amount identified by the ICE for the period starting from July 1, 2020 thru June 30, 2021.
- (3) The recommended NTE amount \$22,500,000 (amounts are rounded) is V/CM's extraction from the Independent Cost Estimate (ICE) for FY '21 period (year three of the contract base period), respectively. Future work will be funded according to an Annual Work Program, on a one-year basis. The total contract amount will be the aggregate value of all task orders negotiated with the Consultant through the term of the contract.

DEOD SUMMARY

SYSTEMS ENGINEERING SUPPORT SERVICES / CONTRACT NO. AE47810E0128

A. Small Business Participation

The Diversity & Economic Opportunity Department (DEOD) established a 15% Disadvantaged Business Enterprise (DBE) goal for this Task Order contract for the participation of DBE certified firms. SECOTrans, a Joint Venture of LTK Engineering Services and three (3) DBE Joint Venture (JV) partners, NBA Engineering, Inc., Pacific Railway Enterprises, Inc., and Ramos Consulting Services, Inc. made a 15% DBE overall commitment for this contract. The overall DBE participation is based on the cumulative value of all task orders issued.

To date, seventeen (17) task orders have been awarded. Based on payments reported, the contract is 23% complete and the cumulative DBE participation of all task orders awarded is 28.76%. SECOTrans is exceeding their DBE commitment by 13.76%.

SECOTrans acknowledges that four (4) DBE firms listed on the team have not been utilized and contends that task orders issued to-date have not contained the scope of work to be provided by those DBE firms. SECOTrans remains committed to utilize all the DBE firms listed on the team, as Metro issues new task orders that include their scopes of work.

Notwithstanding, Metro Project Managers and Contract Administrators will work in conjunction with DEOD to ensure that SECOTrans (JV) remains on schedule to meet or exceed its DBE commitment.

Small Business Commitment	15% DBE	Small Business Participation	28.76% DBE
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	DBE Contractors	Scope of Work	Current Participation
1.	NBA Engineering, Inc. (JV Partner / DBE Prime)	MEP Engineering	5.45%
2.	Pacific Consulting Service, Inc. (JV Partner / DBE Prime)	Railroad Signal and Communications System Design and Engineering	.05%
3.	Ramos Consulting Services (JV Partner / DBE Prime)	Systems Engineering and Support Services	8.76%
4.	Arakelyan Drafting Services, Inc.	Computer Aided Drafting and Design	0.00%
5.	Destination Enterprises, Inc.	Systems Construction Management, Project Management, Inspection Estimating and Scheduling	8.50%
6.	Enabled Enterprises LLC	IT Infrastructure Systems and Network Architecture, Design, Engineering, and Project	0.00%

		Management, Application Development	
7.	Fariba Nation Consulting	Systems Engineering Design	2.15%
8.	Intueor Consulting, Inc.	Systems Engineering CM/DSDC	0.62%
9.	PK Electrical Inc.	Electrical Engineering	0.00%
10.	ROMAR7 LLC	Computer Aided Drafting and Design	0.00%
11.	Triunity Engineering and Management, Inc.	Communications Design, System Integration and Analysis	3.23%
Total Participation			28.76%

¹Current Participation = Total Actual amount Paid-to-Date to DBE firms ÷ Total Actual Amount Paid-to-date to Prime.

B. Living Wage and Service Contract Worker Retention Policy Applicability

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

C. Prevailing Wage Applicability

Prevailing wage is not applicable to this Contract.

D. Project Labor Agreement/Construction Careers Policy

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

ATTACHMENT C

PROPOSED TASK ORDER WORK

SYSTEMS ENGINEERING SUPPORT SERVICES / CONTRACT NO. AE47810E0128

Mod./Task Order (TO) No.	Description	Status (approved or pending)	Date	Task Order Issued including Mods	Pending TO Mods	Pending TO
N/A	Initial Authorized NTE Funding (\$28,932,000)	Approved	4/26/18	---	---	---
E0128-TO-001	Systems Engineering Support for Crenshaw Project	Approved	7/9/18	\$4,963,761	(\$31,227)	---
E0128-TO-002	Program-wide System Engineering Support Services for Systems Engineering Group	Approved	7/27/18	\$3,089,670	(\$391,092)	---
E0128-TO-003	Overhead Contact Systems (OCS) Support for Maintenance of Wayside Engineering	Approved	9/11/18	\$309,751	(\$69,847)	---
E0128-TO-004	System-wide Electrical Support for Rail and Bus Projects	Approved	9/11/18	\$145,244	(\$11,261)	---
E0128-TO-005	Crenshaw Project Design Services During Construction	Approved	9/12/18	\$161,992	(\$95,532)	---
E0128-TO-006	Rail Systems Engineering Support for New Blue	Approved	10/3/18	\$3,817,827	(\$368,522)	\$471,259

E0128-TO-007	West Santa Ana Branch Systems Support	Approved	10/1/18	\$120,667	(\$41,121)	---
E0128-TO-008	System-wide Operations and Maintenance Plan	Approved	10/10/18	\$798,543	(\$77,672)	---
E0128-TO-009	Division 20 Portal Widening Turnback Project Systems Engineering Support	Approved	10/30/18	\$882,609	(\$40,017)	---
E0128-TO-010	West Santa Ana Branch (WSAB) Project Conceptual Engineering	Approved	11/16/18	\$5,100,555	(\$227,492)	---
E0128-TO-011	East San Fernando Valley (ESFV) Conceptual Engineering	Approved	12/3/18	\$3,862,840	(\$58,686)	---
E0128-TO-012	Metro Blue Line Track and OCS Refurbishment	Approved	3/21/19	\$1,545,042	---	---
E0128-TO-013	Metro Systems Support for Green Line/Crenshaw Operations	Approved	4/10/19	\$262,675	---	---
E0128-TO-014	Metro Red/Purple Line and Regional Connector Operational Simulation Support	Approved	4/25/19	\$677,959	---	\$92,143
E0128-TO-015	Airport Metro Connector Engineering Support	Approved	9/12/19	\$360,138	---	---
E0128-TO-017	Centinela Grade Separation Conceptual Engineering	Approved	11/4/19	\$75,574	---	---
E0128-TO-021	Systems Engineering DSDC Support	Approved	1/29/20	\$319,227	---	---

	for Purple Line Extension Sec. 1					
EO128-00-MOD-00001	Update to Advanced Cost Agreement (LTK, DE, GF and IC)	Approved	9/6/18	\$0.00	---	---
EO128-00-MOD-00002	Updates to Advanced Cost Agreement (Home Office Rates 2019: Atkins, FN, GF, IEI, ICI, RCS)	Approved	12/14/18	\$0.00	---	---
EO128-00-MOD-00003	Revise Spec. Section CP-04 Payment & Invoicing Part C.1 - Invoicing	Approved	1/11/19	\$0.00	---	---
EO128-00-MOD-00004	Direct Hourly Labor Rates Adjusted for 2019	Approved	2/6/19	\$0.00	---	---
	Subtotal Approved TOs			\$26,494,074		
EO128-TO-018	Metro Gold Line Foothills 2B Extension Systems Engineering Support	Pending	TBD	---	---	\$145,500
EO128-TO-019	Metro Gold Line Eastside Phase 2 Conceptual Engineering	Pending	TBD	---	---	\$427,963
EO128-TO-016	Rail Operations Center (ROC) / Bus Operations Center (BOC) Architectural and Engineering Systems Design Services	Pending	TBD	---	---	\$15,000,000
EO128-00-MOD-00005	Administrative Modification to Contract to Update the Advance Cost Agreement	Pending	TBD	---	---	\$0.00

TBD	Future Anticipated Task Orders	Pending	TBD	---	---	\$2,713,530
	Subtotal Pending TOs					\$18,850,395
	Task Orders Approved	---	---	\$26,494,074	---	---
	Task Order Pending Mods	---	---	---	(\$1,412,469)	
	Current Total Contract Value, Including Approved TO, Pending Mods, and Pending TO	---	---	\$43,932,000	---	---
	Increase in Total Authorized Funding for Contract – This Board Action	---	---	---	---	\$22,500,000

SUMMARY	
Board Approved Funding	\$43,932,000
This Board Action	\$22,500,000
New Contract Value	\$66,432,000