

**Metro**Los Angeles County
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metro.net**CONSTRUCTION COMMITTEE
November 6, 2014****SUBJECT: I-5 NORTH CAPACITY ENHANCEMENTS FROM SR-134 TO SR-118
(AMENDMENT TO FUNDING AGREEMENT NO. MOU.P0008355/8501
A/A5)****ACTION: APPROVE CONTRACT MODIFICATION NO. 46****RECOMMENDATION**

Authorize a programmatic Contract Modification No. 46 (Contract Change Order, CCO No. 46 with State of California, Department of Transportation (Caltrans)) for Funding Agreement No. MOU.P0008355/8501 A/A5 in a not to exceed amount of \$5,000,000, for a change in the original construction staging schedule, changes in the construction of retaining wall #25(RW #25) and retaining wall #26(RW #26), and the completion of work on the foundation of the Buena Vista and Burbank Bridges without an increase in the project budget and to continue construction and minimize project delays.

ISSUE

In June 12, 2014, LACMTA issued Amendment Number 5 under Funding Agreement MOU.P0008355/8501 A/A5 with Caltrans. Metro provides programming and partial funding for the I-5 North Capacity Enhancements from SR-134 to SR-118.

The I-5 North Capacity Enhancements Project was designed by Caltrans, and construction is administered by Caltrans, as well. Contract modifications exceeding \$500,000 require Board authorization per the Staff Delegations of Contract Action Approval and Award Authority Memo, dated February 23, 2010.

Many challenges have arisen during construction and utility relocation of Segments 3 due to design inconsistencies, unknown utilities, as-built plans unavailability/accuracy, gas, water, electrical, telecommunication, and sewer utility conflicts, in addition to differing site conditions. These issues have been categorized and managed under the risk management plan. These issues have also triggered several change orders including this CCO No. 46.

BACKGROUND/DISCUSSION

The I-5 North Capacity Enhancements project is divided into five segments:

Segment 1A :	Widen I-5 for HOV lane from SR-118-SR-170. Reconstruct I-5/SR-170 mixed flow connector. Construct soundwall.
Segment 1B :	Install Changeable Message Sign (CMS) along I-5 at Los Feliz Blvd.
Segment 2 :	Widen I-5 for HOV lane from SR-170 to Buena Vista Street
Segment 3 :	Widen I-5 for HOV lane from Buena Vista to Magnolia. Reconstruct Burbank and Empire Blvd. interchanges
Segment 4 :	Widen I-5 for HOV lane from Magnolia-SR134

This board report involves Segment 3 only.

In the January 2014 Board report, staff committed to report back to the Board the status of Segment 3 Contract Change Order No. 15 (CCO No.15) and the final negotiated amount. Caltrans negotiated the CCO No. 15 with Contractor and reported back to the Board in May 2014.

In the March 2014 Board report, staff informed the Board that Caltrans was performing an update to the Risk Management Plan.

In the May 2104 Board report, staff informed the Board that under the updated risk management plan, Caltrans had quantified \$53.85 Million in risk exposure for Segment 3. The top risks identified were due to 1) survey and design, 2) utility relocations and unknown utilities, 3) impacts due to delays.

Caltrans continued to evaluate various risks on an on-going basis. Brighton Siding issue, existing storm drainage system, and pile driving issues described in this Board report were identified in the risk management plan. According to Caltrans, these risks can't be avoided or mitigated. The estimated cost exposure for these risks is \$5.0 Million.

Construction Delays

Caltrans awarded this contract on November 29, 2012 and fieldwork was anticipated to begin on February 13th, 2013. Caltrans and the contractor agreed to modify the start date to April 22, 2013 due to late Storm Water Pollution Prevention and Protection (SWPPP) & Critical Path Method (CPM) Schedule submittals. However, Caltrans suspended construction commencement as of April 22, 2013 due to unresolved utility conflicts with entities including AT&T, City of Burbank, Southern California Gas Company, etc. within the project limits. On May 26, 2014, Caltrans commenced the

construction activities per the approval of contract modification no. 15 which includes the exposed Right-of-Way Utility relocation work in the project.

Right-of-Way Utility Relocation

In a conventional Caltrans design-bid-build project, work performed for utility relocation is performed prior to the start of construction. Due to various utility design issues and conflicts, this work has not been completed. This has a direct impact on the contractor's ability to perform the contracted work as planned and budgeted. The City of Burbank and Caltrans will amend their current utility agreement and reduce the billable expenditures for the work Caltrans will perform on Burbank's behalf.

Impact of Delays

Per the construction contract, the prime contractor will be paid \$7,100 per workday for Time Related Overhead (TRO) resulted from this contract suspension.

CCO No. 46

- A. **The construction stage change on Segment 3** is initiated due to the recently communicated requirement from Southern California Regional Rail Authority (SCRRA) that the Brighton Siding remains operational until the main track is diverted to a fully constructed and operational Shoofly (temporary track detour). The SCRRA requirement is not identified in the Contract documents designed by SCRRA and was not previously contemplated by SCRRA. Per the baseline schedule, the contractor planned to construct the Shoofly and remove the Brighton Siding in the same stage which is consistent with the contract document. The new requirement from SCRRA will change contractor's staging sequence, reduce the contractor's operation hours due to the siding traffic, and limit the access to work on constructing the new track (Grade Separation Retaining Wall). Then the time for constructing the main track and the siding will be increased due to this requirement. This CCO is to compensate the contractor for the increased cost due to the time delay, staging changes and inefficiency of the related work.

As a condition of on-going utility relocation, Contractor had requested to take out the Brighton Siding in May 2014 for the construction staging work and this request was submitted again and denied lately in Sep 2014. With this CCO No. 46, Caltrans could ask the contractor to alter contract schedule and operation right away and present them to Caltrans in the middle of November 2014. Caltrans will evaluate the potential time impact and changes per the approved baseline schedule and order the Contractor to continue the construction work under the change conditions within the time permitted. The detailed estimate is being formulated by the contractor and negotiations are still on-going.

Alternatives Considered to Minimize Cost Impacts

The two principle alternatives considered for resolution are:

Alternative 1 – Proceed per Contract Plans – removing the Brighton Siding in the stage 1. This alternative would involve the interruption of Union Pacific and Metrolink operations in this stage per the contract document. Then the siding will be out of service for six months more than SCRRA anticipates. The goods movement in the area will be hampered more due to this extended time period. The potential of business loss/claim from SCRRA and Union Pacific for this six month period without the Brighton Siding is immense, SCRRA disapproved this alternative.

Alternative 2 – Removal of the Brighton Siding until Shoofly operational. This alternative involves requiring the contractor to work around the Brighton Siding, and to remove the Brighton Siding during next stage. This alternative will result in about an 8 month delay and increase the construction cost due to multiple work mobilizations, longer operational detour, additional storage area, changing work processes, and modifications to working shifts. This alternative 2 is considered to be acceptable by SCRRA and Caltrans.

Alternative 2 will allow Caltrans to continue the work in the area with the limited work windows, the revised construction stages and the constrained ingress/egress access.

- B. **Constructing RW #25 and RW #26 by using Secant Piles instead of a spread footing on Segment 3.** This segment started on May 26, 2014. An existing ~ 42" diameter drainage pipe at Empire Avenue and Victory Place owned by the City of Burbank passes "diagonally" through RW #25 and RW #26. This drainage pipe was anticipated to be abandoned and could be removed at the stage 1 construction. During the Right of Way Utility Relocation negotiation process, this storm drains was identified to be operational. This existing storm drains at Empire Avenue and Victory Place must remain in service per the City's requirement until RW #25, RW #26, and drainage systems (DS) #67 and DS #69 are built and in service.

Per the contract documents and constructability practice, the existing drainage pipe should be removed first, and the RW #25 and RW #26 would be built. DS #67 and DS #69 would be the last order of work. In order to maintain the existing drainage in place until the DS #67 and DS #69 are in service means that RW #25 and RW #26 must be redesigned and changed from the traditional spread footing to a secant pile retaining wall. This modification will minimize the construction delay and will require constructing the two retaining walls from the top to bottom to avoid the interference of the existing 42" drainage pipe. Then Contractor could make the DS #67 & #69 ready to replace this existing 42" drainage system.

Although the bid items related to the original retaining walls are credited to the contract, additional work is needed to accommodate the changes to these walls.

This contract modification will allow Caltrans to complete the work on RW #25 and RW #26 in time.

- C. **Using Tube-Ex pile and/or EDEX piles in lieu of the steel and concrete pile driving for the foundation of the Buena Vista Bridge and the Burbank Bridge on Segment 3.** Pile driving at Buena Vista and Burbank bridges has raised concerns from the locals related to the noise / vibration. This is also the case for the concrete driven piles throughout the railroad portion of the project. Caltrans is working with the contractor and has evaluated possibility of using an alternate deep foundation system, such as Tube-Ex and EDEX Pile systems, that could achieve the same structural capacity and integrity as the proposed pipe and concrete piles currently planned. The difference is that they are driven in with torsion rather than pounding (driving). This proposed system will minimize the noise and vibration concerns, while allowing the work to take place at night instead of the restricted 9 AM to 3 PM work window - meaning more hours to work each day and faster completion of the project.

This contract modification will allow Caltrans to complete the work on the foundations of Buena Vista and Burbank Bridges.

Due to complexity of changes in construction staging, construction methods, working schedule, working efficiency and material & labor costs, Caltrans is continuing to evaluate/negotiate the costs with the Contractor for the above contract modification. The total estimated cost of the CCO No. 46 is \$5,000,000.

Authorizing the CCO No. 46 in time will minimize the project delay and additional costs. This CCO No. 46 does not require an increase in the overall project budget at this stage, as there are sufficient programmed funds available at the beginning of construction stage of the Segment 3.

DETERMINATION OF SAFETY IMPACT

There is no impact to safety by approving this action.

FINANCIAL IMPACT

The funding of \$15,000,000 of Proposition C 25% for FY15 for this project is included in Account 54001 - Subsidies to Others, in cost center 0442, under project number 410001 Freeway, Task 008355. The changes identified will not increase the project budget for the current fiscal year because the local funding is only partial of total project programmed funding. Since this is a multi-year contract/project, the Managing Executive Officer will be accountable for budgeting the cost in future years for LACMTA share within the existing project budget.

ALTERNATIVES CONSIDERED

If Metro does not authorize this CCO, the construction cost and project budget will likely further increase due to construction delays.

NEXT STEPS

Immediate action is desired for this Board Report. As stated, the contracts are currently in construction and delays to concurrence of these modifications could cause additional costs to the contract.

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