



**Metro**

Los Angeles County  
Metropolitan Transportation Authority

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**August 10, 2020**

**TO: BOARD OF DIRECTORS**

**THROUGH: KAREN GORMAN  
INSPECTOR GENERAL**

**FROM: SUZANNA STERLING  
CONSTRUCTION SPECIALIST INVESTIGATOR**

**SUBJECT: CHANGE ORDER CONSTRUCTION SPOT CHECKS**

**ISSUE**

On January 25, 2018, the Metro Board directed the Office of the Inspector General ("OIG") to conduct random spot checks on the projects listed in the quarterly program management report to ensure that the CEO Delegation of Authority to approve construction the Change Orders policy is performing in the manner desired by the Board of Directors.

**BACKGROUND OR DISCUSSION**

The OIG's Spot Check Program ("Spot Checks") focuses on approved Change Orders and Modifications that exceed \$1,000,000. The four Change Orders in this report were selected from the August 2020 Program Management Major Project Status Report covering March 1 to May 31, 2020. The information for the Spot Checks was collected from the Program Management Information System (PMIS) which is the department's database system. Also, in-person and telephonic interviews were conducted with Metro Program Management, Project Control, and Procurement staff from each project office.

We found that all four of the Change Orders in this report were negotiated and executed more expeditiously than would have occurred pursuant to the former Board approval process, and all four were approved faster with the new delegation of authority. In addition all four Change Orders were negotiated at lower cost than the contractors' proposed price. This quarter's Spot Checks of Change Orders found the delegation of authority has resulted in:

- A negotiated amount that was reasonable for the work to be done,
- Enabled the contractor to immediately order parts and materials, reducing delay,

- Contractor and was able to continue working without stoppages related to these change orders, and
- Zero construction delay costs were incurred for these changes.

Each Spot Check summarizes the following areas:

- Description of the Change Order,
- Facts of the Change Order,
- Scope of Work,
- Budget,
- Schedule: Time to execute the Change Order, and
- Recommendations if any.

Metro's Program Control department will provide responses to the recommendations in this report to the OIG Spot Checks within 30 days after this Board report. Included with this report is a separate spreadsheet of recommendations and the status of responses concerning former OIG Spot Check recommendations.

## **DISCUSSION**

### **Spot Checks Performed in this Quarter**

#### **A. Spot Check #1 – Purple Line Extension Section 1 Transit Project**

This OIG Spot Check report concerns the Purple Line Extension Section 1 Transit Project (Contract C1045 MOD-00095) Phase 5 Golder EOR Mitigation Plan Implementation.

#### **Facts of Change Order**

See Attachment A Spot Check #1 chart.

#### **Summary #1**

**Scope of Work** – This Change Order is the final phase of the gas mitigation plan to remove and depressurize the gasses that are present in the M-13 zone (underground on Wilshire Blvd., about 700 feet long, between McCarty Vista and Fairfax streets). The consultant, Golder Gas Company, will now implement the various mitigations along the alignment to extract the gasses present in the soil.

Implementing phase 5 will involve two parts: (1) depressurization will commence prior to the first tunnel boring machine (TBM) arrival at the M-13 gas zone and will continue until the TMB passes 50-feet beyond the M-13 gas zone; (2) after the depressurization is completed, abandonment of the 10 soil vapor extraction wells and the 7 monitoring observation wells, that were included in a prior change order report, will be performed according to the current Los Angeles County well abandonment requirements. Full street restoration and striping will be completed as well.

The Contractor will submit daily monitoring records of any gas migration through this zone to confirm that it has not entered into adjacent buildings. Additionally, the Contractor will provide complete “as-built” record drawings and issue a final report with a Certification of Completion for the Phase 5.0 work.

**Budget** - The cost for this Modification is \$8,187,405. The Contractor’s proposal was \$9,396,773. The independent cost estimate (ICE) was \$7,785,557. The award amount was \$1,209,368 (12.87%) less than the Contractor’s proposal. The negotiated amount was \$401,848 (5.16%) over the ICE. Staff has stated that funds for this change are within the approved Life-of-Project budget.

**Schedule** - The new CEO Delegation of Authority method was utilized for this Modification. The agreed upon scope of work occurred on February 20, 2020. The Modification was executed on April 1, 2020, and process was completed in 30 work-days. If the Modification had gone to the April Board for approval the process would have been 46 work-days later than under the CEO Delegated Authority method.

**Recommendation** – The OIG is in agreement with applying extra safety precautions that the Metro project office has put forward. Where conditions are relatively unique to the tunneling industry, more prescriptive specifications for means and methods in these zones is warranted.

Since the Contractor, Golder Gas, performed the entire mitigation plan including removal and mitigation, the OIG recommends that LA Metro ensure that Golder Gas is held contractually, jointly, and severally liability for any future incident involving gas in the area where the soil vapor extraction wells and the monitoring wells are installed and abandoned. This is the common practice in environmental cases where a “consulting expert” is hired to monitor and mitigate a hazardous substance issue.

**B. Spot Check #2 – Purple Line Extension Section 1 Transit Project**

This OIG Spot Check report concerns the Purple Line Extension Section 1 Transit Project (Contract C1045 MOD-00106), Center Muck Shaft at La Brea (ECI-03)

**Facts of Change Order**

See Attachment A Spot Check #2 chart.

**Summary #2**

**Scope of Work** – This change order is for the construction of a shaft through the decking at the La Brea station to help increase the rate of wet soil and construction materials removal. To facilitate the construction of the shaft, the original support of excavation (SOE) design needs to be modified to provide size for the shaft.

The contractor shall provide re-design, construction materials, utility relocation, and cost to maintain and operate the shaft, until the excavation is complete, for a period of 15 months.

**Budget** -The cost for this Modification is \$5,031,831. The contractor's proposal was \$6,484,514. The ICE was \$4,350,188. The award amount was \$1,452,683 (22.4%) less than the contractor's proposal. The negotiated amount was \$681,643 (15.7%), over the ICE. Staff has stated that funds for this change are within the approved Life-of-Project budget.

**Schedule** - The new CEO Delegation of Authority process was utilized for this Modification. The agreed upon scope of work occurred on February 25, 2020. The Modification was executed on April 2, 2020, and process was completed in 28 work-days. Under the prior Board approval method for change orders, assuming an April Board meeting date, it would have taken an additional 43 work-days to complete the process.

**Recommendation** – The OIG recognizes that this type of shaft at the La Brea station can serve a legitimate purpose and that the OIG recommends that use of such methods should be considered and contemplated in future project specifications and a reserve for same should be made when the savings in time, expense, and safety outweigh the cost of such a shaft.

### **C. Spot Check #3 – Purple Line Extension Section 1 Transit Project**

This OIG Spot Check report concerns the Purple Line Extension Section 1 Transit Project (Contract C1045 MOD-00107), Additional Dewatering Treatment and Discharge, La Brea Station

#### **Facts of Change Order**

See Attachment A Spot Check #3 chart.

#### **Summary #3**

**Scope of Work** – This Change Order developed from the several differing site conditions related to dewatering at the La Brea station. These differing site conditions have resulted in an additional design, construction, maintenance of the dewatering system, and other associated impacts to the excavation.

Due to a higher than expected elevation of bedrock and a higher groundwater inflow rate than those indicated in the geotechnical reports, additional groundwater controls and associated transport equipment were needed to dewater the station below the slab elevation. Special drains were required to lower the groundwater to the necessary level and achieve a dry soil condition.

**Budget** -This Modification was negotiated and the award amount is \$15,864,922. The contractor's proposal was \$19,678,507 and the ICE was \$14,042,018. The award amount was \$3,813,585 ((19.4%)), under the contractor's proposal. The

negotiated amount was \$1,822,904 (12.98%) over the ICE and 40% over the contractor's proposal.

**Schedule** - The new CEO Delegation of Authority delegation process was utilized for this Modification. The agreed upon scope of work occurred on March 11, 2020. The Modification was executed on April 9, 2020, and was completed in 22 work-days. Using the March 2, 2020 V/CM submission date, this Change Order would have gone to the April Board. The scenario of utilizing the Board for approvals on change orders would have been 32 work-days later instead of the 22 actual work-days incurred utilizing the delegated authority. The dewatering work required 2 years to perform.

**Recommendation** – The OIG is concerned that a bid of 40% over an ICE, when you are in a noncompetitive circumstance, may not be a good faith offer or bad communication on specifications. Such behaviors can have the effect of damaging a relationship during an early phase of construction and create distrust that can harm project collaboration in the future. We appreciate a contractor's willingness to proceed on work even without a commitment from Metro in some cases for the payment for that work, but recommend the contractor exercise greater care in formulating its proposals and that Metro be clear and fair but diligent and firm in its ICE calculations and negotiations stance.

#### **Spot Check #4 – Purple Line Extension Section 2 Transit Project**

This OIG Spot Check report concerns the Purple Line Extension Section 2 Transit Project (Contract C1120 MOD-00073), Century City Constellation Station Track work extension.

#### **Facts of Change Order**

See Attachment A Spot Check #4 chart.

#### **Summary #4**

**Scope of Work** – This Change Order is to extend track at the West end of the Century City Constellation station. Metro had previously issued construction drawings which did not have adequate track between the end of the platform and the bumper post. This resulted in track that was not long enough to establish safe braking distance to create redundant backup brake space in case of a malfunction of any the Automatic Train Control (ATC) for a six-car train. The station will be a temporary terminus in accordance with Metro's Rail Design Criteria.

A redesign and construction will be necessary to establish and maintain a safe braking distance in accordance with Metro Rail Design Criteria. Redesign will allow Automatic Train Control (ATC) and a redundant back up space for a six-car train when the station operates as a temporary terminus.

**Budget** -This Modification was negotiated and the award amount is \$1,180,087. The contractor's proposal was \$2,929,409 and the ICE was \$1,009,266. The award amount was \$1,749,322 (59.7%) under the contractor's proposal.

**Schedule** - The new delegation process was utilized for this Modification. The agreed upon scope of work occurred on March 26, 2020. The Modification was awarded on May 7, 2020, and was completed in 31 work-days. Under the prior Board approval method for change orders, assuming an May Board meeting date, it would have taken an additional 45 work-days to complete the work.

**Recommendation** – 1. Same recommendation as in Spot Check #3 above, and LA Metro is having to absorb the cost of track extension change orders that arose due to errors and omissions on the part of the engineering consultant WSP. The OIG was informed that WSP miscalculated the braking distance in the initial project definition drawings that were supplied to the construction contractor. Metro will have to cover this expense with the contractor, but should look to the design engineering firm for reimbursement to Metro of the costs it would not have had to otherwise incur less amounts saved or mitigations.

2. The OIG additionally recommends that Metro review the current Metro Rail Design Criteria (MRDC) compared to the newly released FRA track design standards for accommodating a train entering a stub-end to determine if any modification or update to our MRDC is warranted.

## **FINANCIAL IMPACT**

Report will have no Financial Impact to the agency.

### **Impact to Budget**

For all of the Construction Change Orders, Metro states the funds are within the approved budget, and will utilize the contingency funds to cover the costs.

- Spot Check #1) \$8,187,405 Purple Line Extension Section 1
- Spot Check #2) \$5,031,831 Purple Line Extension Section 1
- Spot Check #3) \$15,864,922 Purple Line Extension Section 1
- Spot Check #4) \$1,180,087 Purple Line Extension Section 2

## **IMPLEMENTATION OF STRATEGIC PLAN GOALS**

The recommendations that the Office of Inspector General has put forward support Metro's Strategic Plan Goal #5: Provide responsive, accountable, and trustworthy governance within the Metro organization. The OIG mission includes reviewing expenditures for fraud, waste, and abuse. For each selected Change Order reviewed, the OIG evaluates if fraud, waste, or abuse is taking place. We report the details of the significant Change Orders, and make recommendations consistent with the OIG's Construction Best Practices report dated February 29, 2016, more particularly focusing on lessons learned, improving efficiencies, and

prudent spending.

Our goal is to provide rational, trustworthy information to the Board and support the efforts of Metro management to constantly improve and refine its efforts for the benefit of the public. The Office of the Inspector General will continue reporting to the Board the results of Construction Change Order Spot Checks selected from the Program Management Major Project Status Quarterly Report.

## **NEXT STEPS**

The OIG shall provide every quarter, an on-going spread sheet of recommendations to Program Control. Program Control and Program Management agrees to respond to the recommendations of the OIG within 30 days. The OIG continues to meet periodically to discuss reports, recommendations, and the status of implementation of recommendations, with Project Management and receive updates. The list of OIG recommendations and Metro management responses, is an attachment to this OIG report.

## **..Attachments** **ATTACHMENTS**

Attachment A – Charts for Spot Checks

Attachment B – Tracking Sheet of OIG Recommendations and Responses

Attachment C – Power Point for August 2020 Construction Spot Checks

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Reviewed by: Karen Gorman, Inspector General, (213) 244-7337

  
Karen Gorman  
Inspector General

**Spot Check #1 - Purple Line Extension Section 1 Transit Project - Contract C1045****Facts of Change Order**

<u>Description of Modification MOD-00095</u> Phase 5 Golder EOR Mitigation Plan Implementation	
<u>Change Order Dates:</u>	
Scope of Work approved	February 20, 2020
Modification Executed	April 1, 2020
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process	30 work days
Estimate using former Board approval process Agenda for the April Board	46 work days
<u>Cost of Change Order:</u>	
Metro independent cost estimate (ICE)	\$7,785,557
Contractor's proposed cost	\$9,396,773
Negotiated amount	\$8,187,405
Percentage of negotiated amount over ICE	5.16%
Amount negotiated less than the Contractor's proposal	\$1,209,368

**Spot Check #2 - Purple Line Extension Section 1 Transit Project - Contract C1045****Facts of Change Order**

<u>Description of Modification MOD-00106</u> Center Muck Shaft at La Brea (ECI-03)	
<u>Change Order Dates:</u>	
Scope of Work approved	February 25, 2020
Modification Executed	April 2, 2020
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process	28 work days
Estimate using former Board approval process Agenda for the April Board	43 work days
<u>Cost of Change Order:</u>	
Metro independent cost estimate (ICE)	\$4,350,188
Contractor's proposed cost	\$6,484,514
Negotiated amount	\$5,031,831
Percentage of negotiated amount over ICE	15.7%
Amount negotiated under Contractor's proposal	\$1,452,683



**Spot Check #3 - Purple Line Extension Section 1 Transit Project - Contract C1045****Facts of Change Order**

<u>Description of Modification MOD-00107</u> Additional Dewatering Treatment and Discharge, La Brea Station	
<u>Change Order Dates:</u>	
Scope of Work approved	March 11, 2020
Modification Executed	April 9, 2020
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process	22 work days
Estimate using former Board approval process Agenda for the April Board	32 work days
<u>Cost of Change Order:</u>	
Metro independent cost estimate (ICE)	\$14,042,018
Contractor's proposed cost	\$19,678,507
Negotiated amount	\$15,864,922
Percentage of negotiated amount over ICE	12.98%
Amount negotiated under Contractor's proposal	\$3,813,585

**Spot Check# 4 - Purple Line Section 2 Transit Project - Contract C1120****Facts of Change Order**

<u>Description of Modification - MOD-0073</u> Century City Constellation Station Track work Extension	
<u>Change Order Dates:</u>	
Scope of Work approved	March 26, 2020
Modification Executed	May 7, 2020
<u>Elapsed Time for Executing Change Order:</u>	
Using new delegated process	31 work days
Estimate using former Board approval process Agenda for the MAY Board	45 work days
<u>Cost of Modification:</u>	
Metro independent cost estimate (ICE)	\$1,009,266
Contractor's proposed cost	\$2,929,409
Negotiated amount	\$1,180,087
Percentage of negotiated amount over ICE	16.9%
Amount negotiated under the Contractor's proposal	\$1,749,322

## ATTACHMENT B (August 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
August 2020 #1 Contract C1045 MOD-00095 Purple Line Extension Sect. 1 Transit Project: Phase 5 Golder EOR Mitigation Plan Implementation	<p>The OIG is in agreement with applying extra safety precautions that the Metro project office has put forward. Where conditions are relatively unique to the tunneling industry, more prescriptive specifications for means and methods in these zones is warranted.</p> <p>Since the Contractor, Golder Gas, performed the entire mitigation plan including removal and mitigation, the OIG recommends that LA Metro ensure that Golder Gas is held contractually, jointly, and severally liability for any future incident involving gas in the area where the soil vapor extraction wells and the monitoring wells are installed and abandoned. This is the common practice in environmental cases where a "consulting expert" is hired to monitor and mitigate a hazardous substance issue.</p>		
August 2020 #2 Contract C1045 MOD-00106 Purple Line Extension Sect. 1 Center Muck Shaft at La Brea (ECI-03)	<p>The OIG recognizes that this type of shaft at the La Brea station can serve a legitimate purpose and that the OIG recommends that use of such methods should be considered and contemplated in future project specifications and a reserve for same should be made when the savings in time, expense, and safety outweigh the cost of such a shaft.</p>		
August 2020 #3 Contract C1045 MOD-00107 Purple Line Extension Sect. 1 Center Muck Shaft at La Brea (ECI-03)	<p>The OIG is concerned that a bid of 40% over an ICE, when you are in a noncompetitive circumstance, may not be a good faith offer or bad communication on specifications. Such behaviors can have the effect of damaging a relationship during an early phase of construction and create distrust that can harm project collaboration in the future. We appreciate a contractor's willingness to proceed on work even without a commitment from Metro in some cases for the payment for that work, but recommend the contractor exercise greater care in formulating its proposals and that Metro be clear and fair but diligent and firm in its ICE calculations and negotiations stance.</p>		

## ATTACHMENT B (August 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
August 2020 #4 Contract C1120 MOD-00073 Purple Line Extension Sect. 2 Century City Constellation Station Track work Extension	<p>1. The OIG is concerned that a bid is almost 3 times over the ICE, when you are in a noncompetitive circumstance, may not be a good faith offer or bad communication on specifications. Such behaviors can have the effect of damaging a relationship during an early phase of construction and create distrust that can harm project collaboration in the future. We appreciate a contractor's willingness to proceed on work even without a commitment from Metro in some cases for the payment for that work, but recommend the contractor exercise greater care in formulating its proposals and that Metro be clear and fair but diligent and firm in its ICE calculations and negotiations stance.</p> <p>LA Metro is having to absorb the cost of track extension change orders that arose due to errors and omissions on the part of the engineering consultant WSP. The OIG was informed that WSP miscalculated the braking distance in the initial project definition drawings that were supplied to the construction contractor. Metro will have to cover this expense with the contractor, but should look to the design engineering firm for reimbursement to Metro of the costs it would not have had to otherwise incur less amounts saved or mitigations.</p> <p>2. The OIG additionally recommends that Metro review the current Metro Rail Design Criteria (MRDC) compared to the newly released FRA track design standards for accommodating a train entering a stub-end to determine if any modification or update to our MRDC is warranted.</p>		

## ATTACHMENT B (April 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
April 2020 #1 C0980 MOD-00161 Regional Connector - Procure Medium Attenuation Fasteners in Lieu of Standard Direct Fixation Rail Fasteners for the 2nd & Broadway Crossover	<p>Regional Connector project is very unique because of all the existing historical buildings above the construction. Noise pollution has become a major concern for urban transit dwellers and authorities. The rule of thumb is a 10decibel technical increase in noise is heard by the human ear as "doubled" in loudness. When constructing underground for tunnels and stations the Environmental Impact Report must remember to always mitigate sound and vibration to protect the potentially impacted fragile surface buildings.</p> <p>The OIG recommends this scenario be written into the Lessons Learned file for future similar situations when constructing under historic or special case existing buildings.</p>	<p>The Regional Connector Project has extensive vibration mitigation elements included in the design where the operating guidway passes nearby sensitive receptors including recording studios, music venues and hotels. The project also requires that noise and vibration monitoring be performed during construction near sensitive facilities.</p> <p>The lesson learned and responded to in the referenced Contract Modification, is that information gathered during construction monitoring should be used to adjust the designed mitigations where field conditions indicate they are necessary.</p>	Completed with issuance of subject contract modification. Equipment to be installed 3rd quarter 2020
April 2020 #2 C1045 MOD-00098 Purple Line Sect. 1 Additional Air Scrubbers at Fairfax Station	<p>The OIG recommends further questioning to Southern California AQMD to determine why on a previous Metro construction contract (at the same location) they set the emission limit at 50 parts per billion, and the published standards are set at an emission limit of 30 parts per billion. On this contract the limits are set at 15 parts per billion. The inconsistency of the emissions limit should be taken under consideration and request in writing from AQMD why the standard emission limit could not be applied to this permit.</p> <p>The OIG further recommends in future construction pre-bid meetings, disclose to all potential contractors that the AQMD permit values necessary for the technical specification, "Temporary Construction Ventilation for Scrubber Units" has varied in the recent past and to verify the amount with an AQMD representative. If possible a commitment needs to be obtained from AQMD by the contractor at the time of submission of a bid amount, that the standard is firm for a defined period.</p>	<p>The emissions limit for equipment was set at the time the Contractor submitted the specific ventilation plan to SCAQMD for permit.</p> <p>The SCAQMD does not have a set standard for hydrogen sulfide, but the states standard is 30 parts per billion. SCAQMD develops their requirements based on specific site conditions. Our EIR states Metro and its contractors will set and maintain work equipment and standards to meet SCAQMD standards.</p> <p>A letter will be sent to SCAQMD for clarification on how SCAQMD can consistently apply emissions regulations for hydrogen sulfide for Metro's future projects.</p>	
April 2020 #3 C1120 MOD-00064 Purple Line Sect. 2 Geotechnical Instrumentation Installation and Monitoring AT&T and Beverly Hills High School	The OIG recommends that the independent estimator visit the field location concerning where the work for this change order will occur. The construction manager should walk the estimator through the scope of the changes for which they are developing a cost estimate. The independent estimate was a 126.7% lower than the negotiated price. Where such significant discrepancies in price estimates exist, either the estimator for Metro, or the estimator for the contractor needs to re-evaluate the scope of the change order.	Agreed. Moving forward the estimating group will endeavor to work even more closely with available subject matter experts to assure a thorough understanding of scope and of the engineering and construction processes involved.	
April 2020 #4 C1151 MOD-00001 Purple Line Sect. 3 Revise the Tail Track Exit Shaft Location from US Army Reserv to Veterans Affairs Property	<p>If the Army Reserve location had been negotiated prior to the contract award, these amounts might have been included in the original bid, although the price then and now might have been the same for this different location.</p> <p>The OIG recommends Real estate arrangements should be negotiated as early as possible.</p>	Metro agrees with the OIG's comment regarding the price of the change. The cost would roughly be the same whether it was negotiated prior to contract award or after award. We agree that real estate arrangements (agreements) should be negotiated as early as possible. The project initiated contact with the property owner for the Exit Shaft property acquisition after the project was identified to be accelerated from the original 2035 Revenue Service Date. Metro did engage in talks with the VA early in the Project but obtaining VA approval to access their property has not been without a few challenges that Metro was able to overcome.	

## ATTACHMENT B (January 2020)

OIG REPORT/ SPOT CHECK # MOD #	RECOMMENDATIONS	MANAGEMENT'S RESPONSES	COMPLETION DATE
Jan 2020 / #1 C0988-MOD-00437 Crenshaw/LAX UG1 (H2S) Ventilation Fans - Construction	none		
January 2020 #2 C0980 MOD-00154 Regional Connector - Acoustical Treatments for Areas Not on Finish Schedule	none		
January 2020 #3 C1045 MOD-00089 Purple Line Sect. 1 Development and On Site Validation of the Selected Gas Mitigation Option for M13	<p>While the soil at every site is unique, it is possible to create a standard for testing soils for gasses. There is no current rule or technical specification within Metro criteria for extraction of CH<sub>4</sub> or H<sub>2</sub>S from the soil.</p> <p>The OIG recommends after the final report is submitted by the contractor, that a technical specification for testing be developed and written into the MDRC to use in the future.</p>	<p>PLE1 Final M13 Mitigation Report will be forwarded to Metro Geotechnical Department for their review and further processing.</p>	
January 2020 #4 C1045 MOD-00090 Purple Line Sect. 1 Oil Well Investigation In Lieu of TBM Probe Ahead	<p>The implementation of the drilling and magnetometer survey from Section 1 has been incorporated into Purple Line Extension Section 2 and 3 contracts.</p> <p>The OIG recommends that the procedures implemented for locating tanks, pipes and other abandoned waste be added to the Lessons Learned database.</p> <p>The OIG further recommends that Metro evaluates whether to pursue recovery for waste removal costs under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act, also known as Superfund. Passed in 1980). The OIG recommends that Metro's Engineering Program Management provide information on this matter to Metro's Legal department to assist in making this determination and potentially pursuing this recovery.</p>	<p>PLE1 implemented methodologies for locating known tanks, pipes and other abandoned waste will be added to the Lessons Learned database. PLE1 notes that the hazardous waste removal is relatively small/negligible compared with the overall volume of soil removed. After reviewing the potential ROI on pursuing legal actions against any potential responsible parties for cost recovery the current determination based on the available data is that it is not worth the effort and cost at this time. However, <b>it was decided that Metro County Counsel would provide a preliminary review on the issue and it would be revisited in the future.</b></p>	

# Office Of Inspector General Construction Change Order Spot Check Report

Presented By  
**Karen Gorman**  
Inspector General

# Spot Check Costs

File #  
2020-0476

## Summary of Selected Change Order Costs

Four OIG spot checks of Change Orders / Modifications reported

### **1 Change Order for Purple Line Section 1**

❖ Phase 5 Golder EOR Mitigation Plan Implementation = \$8,187,405

### **2 Change Order Purple Line Section 1**

❖ Center Muck Shaft at La Brea (ECI-03) = \$5,031,831

### **3 Change Order for Purple Line Section 1**

❖ Additional Dewatering Treatment and Discharge, La Brea Station = \$15,864,922

### **4 Change Order for Purple Line Section 2**

❖ Century City Constellation Station Track Work Extension = \$1,180,087

August 2020

Construction Committee

Los Angeles County Metropolitan Transportation Authority



# Spot Check Schedule Comparison

File #  
2020-0476

Schedule Comparison: new delegated process vs. former Board approval process

PROJECT	Title of Change Order	Time Saved Executed date to Board Mtg.	NEW Delegated Process final SOW to Executed date	Former Board Approval Process
WESTSIDE PURPLE LINE SECT 1	Phase 5 Golder EOR Mitigation Plan Implementation	16	30	46
WESTSIDE PURPLE LINE SECT 1	Center Muck Shaft at La Brea (ECI-03)	15	28	43
WESTSIDE PURPLE LINE SECT 1	Additional Dewatering Treatment and Discharge, La Brea Station	10	22	32
WESTSIDE PURPLE LINE SECT 2	Century City Constellation Station Track Work Extension	14	31	45

August 2020

Construction Committee

Los Angeles County Metropolitan Transportation Authority





# Spot Check Recommendations

File #  
2020-0476

#1

August 2020  
Contract C1045  
MOD-00095  
Purple Line  
Extension Sect. 1  
Transit Project:  
Phase 5 Golder EOR  
Mitigation Plan  
Implementation

The OIG is in agreement with applying extra safety precautions that the Metro project office has put forward. Where conditions are relatively unique to the tunneling industry, more prescriptive specifications for means and methods in these zones is warranted.

Since the Contractor, Golder Gas, performed the entire mitigation plan including removal and mitigation, the OIG recommends that LA Metro ensure that Golder Gas is held contractually, jointly, and severally liability for any future incident involving gas in the area where the soil vapor extraction wells and the monitoring wells are installed and abandoned. This is the common practice in environmental cases where a “consulting expert” is hired to monitor and mitigate a hazardous substance issue.

#2

August 2020  
Contract C1045  
MOD-00106  
Purple Line  
Extension Sect. 1  
Center Muck Shaft  
at La Brea (ECI-03)

The OIG recognizes that this type of shaft at the La Brea station can serve a legitimate purpose and that the OIG recommends that use of such methods should be considered and contemplated in future project specifications and a reserve for same should be made when the savings in time, expense, and safety outweigh the cost of such a shaft.

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# Spot Check Recommendations

File #  
2020-0476

#3  
August 2020  
Contract C1045  
MOD-00107  
Purple Line  
Extension Sect. 1  
Center Muck Shaft  
at La Brea (ECI-03)

The OIG is concerned that a bid of 40% over an ICE, when you are in a noncompetitive circumstance, may not be a good faith offer or bad communication on specifications. Such behaviors can have the effect of damaging a relationship during an early phase of construction and create distrust that can harm project collaboration in the future. We appreciate a contractor's willingness to proceed on work even without a commitment from Metro in some cases for the payment for that work, but recommend the contractor exercise greater care in formulating its proposals and that Metro be clear and fair but diligent and firm in its ICE calculations and negotiations stance.

#4  
August 2020  
Contract C1120  
MOD-00073  
Purple Line  
Extension Sect. 2  
Century City  
Constellation  
Station Track work  
Extension

1. Same recommendation as in Spot Check #3 above, and LA Metro is having to absorb the cost of track extension change orders that arose due to errors and omissions on the part of the engineering consultant WSP. The OIG was informed that WSP miscalculated the braking distance in the initial project definition drawings that were supplied to the construction contractor. Metro will have to cover this expense with the contractor, but should look to the design engineering firm for reimbursement to Metro of the costs it would not have had to otherwise incur less amounts saved or mitigations.

2. The OIG additionally recommends that Metro review the current Metro Rail Design Criteria (MRDC) compared to the newly released FRA track design standards for accommodating a train entering a stub-end to determine if any modification or update to our MRDC is warranted.

**August 2020**

**Construction Committee**

Los Angeles County Metropolitan Transportation Authority

