

DISPUTE REVIEW BOARD REPORT AND RECOMMENDATIONS

**Project: EJMC 480V MCC Replacement
NHPP 0703-435
PCN 21223R**

WIRING DISPUTE (MERIT ONLY)

Hearing Date: January 29, 2021

Hearing Location: Held Virtually through Zoom

Party Attendees:

Casey Industrial

Eric Helland, C.O.O
Aaron Saunders, D.O.E
Dan Kenny, Project Manager
Zach Gumper, Project Engineer
Peter Armstrong, Sage Consulting
Brett Gross, Counsel
Calvin Lee, Project Manager

CDOT

Gus Bieber, Consultant Project Engineer
Justin Ulrich, Consultant Master Electrician
Neal Retzer, CDOT Resident Engineer
Mike Keleman, CDOT Program Engineer
Paul Jesaitis, CDOT Reg. Transp. Director
Mark Straub, CDOT Area Engineer
Kathy Young, First Asst. Attorney General

Background

The subject Colorado Department of Transportation (CDOT) project No. NHPP 0703-435 (21223R) (Project) is located at the Eisenhower and Johnson Memorial Tunnel (EJMT) on I-70 in Clear Creek and Summit Counties and provides for the replacement of the 480V Motor Control Center (MCC). The scope of the Project includes removing and replacing the existing electrical equipment, conduit, wiring, and completing other associated electrical work.

The Project was initially bid with all bids being rejected as they were significantly over budget. The revised Project scope was bid on July 11, 2019 under the design-bid-build project delivery method, and CDOT received two bids. Casey Industrial (Casey or Contractor) was the low bidder with a bid of \$8,077,723.20, which was 8.58% under the other bid of \$8,771,135 submitted by Sturgeon Electric. The engineer's estimate was \$6,293,525.62. With the Project exceeding CDOT's budget, CDOT had to go through its over-funding process to award, which delayed the notice to proceed to October 29, 2019. Before notice to proceed was issued, Casey provided a value engineering cost proposal (VECP) which CDOT accepted. During construction the Contractor encountered asbestos which resulted in two change orders for approximately \$1,000,000 for abatement. Other change orders increased the contract value another \$500,000.00. The Contractor mobilized in April 2020, and the current scheduled completion date is March of 2021.

Casey has indicated that On May 27, 2020, it identified and notified CDOT of circuits that were not identified in the bid documents resulting in an increase to the required quantity of 3/C 750 variable frequency drive (VFD) cable required to complete the Project. Between May 29, 2020 and July 10, 2020, several meetings, including two walk-through meetings, were held between CDOT and Casey pertaining to this issue.

On July 20, 2020, Casey submitted a Change Order Request (CMO-008) which was rejected by CDOT. On July 28, 2020, CDOT sent a memo to Casey indicating they disagreed with Casey's assessment of the situation and rejected Casey's CMO. Subsequently, on August 10, 2020, Casey provided CDOT a notice of dispute and on August 24, 2020, Casey submitted a Request for Equitable Adjustment (REA) for compensation for the additional costs arising from a change that increased the wiring quantity in the bid schedule (Item 613-1000).

The parties thereafter turned to the DRB process provided in the Project contract, and in late 2020 formed a three-person On Demand DRB. The amount requested by Casey in its REA was \$230,727, which would have qualified the Board to be a one-person DRB, but the parties collectively decided to form a three-person DRB recognizing that there were potential time and direct costs associated with the dispute and to address future potential disputes.

The initial DRB meeting was held with the parties via Zoom on December 16, 2020. Shortly thereafter the parties agreed to a dispute hearing date of January 29, 2021 to be held via Zoom. Position papers were exchanged, and a pre-hearing telephone conference call was held on January 19, 2021 in accordance with the contract requirements.

Joint Statement of the Dispute

The Eisenhower and Johnson Memorial Tunnel consists of two tunnels originally constructed in 1973 and 1979. The tunnel has 3 buildings on the east and another three buildings on the west ends. These structures contain electrical equipment that monitor traffic along the I 70 corridor. The buildings also house supply and exhaust fans, motors, and electrical equipment that remove dangerous carbon monoxide gasses from the tunnels 24 hours per day. This Project consists of re-wiring and replacing existing controls with state-of-the-art equipment.

This dispute is based on a discrepancy in the plan sheet tabulations for the 750 KCMIL cable and what the Contractor is entitled to for the lump sum pay item for wiring. The original scope included compensation for the installation of all sizes of conductor wiring, through use of the lump sum item 613-10000 WIRING. The original planned estimated quantities for these two sizes of conductors are found on plan sheets #7, #8 (750 KCMIL) and plan sheets #9 and #14.

Casey Industrial submitted a change order to CDOT for the 3/C 750 VFD Circuits which was rejected by CDOT. Casey Industrial is seeking an adjustment to the contract for the procurement and installation of the 3/C 750 VFD Cable between the Switchgear and the VFD for the EJMT 480V Switchgear Project. Casey Industrial is stating that the 3/C 750 VFD Cable was not included

in the CDOT provided bid drawings and bid cable schedule, or in Casey's bid for the EJMT 480V Switchgear Project.

The scope of the desired DRB decision is:

1. Determine whether the Contractor is due an equitable adjustment, or whether the original bid unit price should stand for compensation of the work.
2. If equitable compensation is warranted, determine the equitable adjustment for the work.
(Note: This is no longer applicable as during the Pre-Hearing Conference call, the parties agreed that the DRB's scope of consideration would not include quantum.)

Pre-Hearing Submittals

Both parties provided the DRB with Pre-Hearing Submittals which included Position Papers and documentary evidence relevant to the issues. Casey's "Total Equitable Adjustment Request" was revised on January 5, 2021 by Field Change Order Estimate to include nine days of indirect costs, bringing the total requested amount to \$302,307.62 plus nine days of contract time extension. No Common Reference Documents were submitted by the parties. No witnesses were listed by either party. Both parties provided the DRB with their lists of attendees.

Pre-Hearing Conference Call

On January 19, 2021, a Pre-Hearing Conference Call was held between the Parties and DRB members in accordance with the contract. There was a discussion about the use of Zoom for the meeting, which was scheduled and organized by DRB Member Dick Fullerton. Different screen views, screen sharing of documents, and separate break-out rooms would be provided for the hearing through Zoom.

CDOT indicated it would be submitting a rebuttal paper and committed to do so by close of business Friday, January 22, 2021. Casey reserved the right to respond to CDOT's rebuttal paper after it has an opportunity to review.

There was a discussion of whether or not to include quantum as part of hearing. CDOT indicated they did not want to have to address quantum during the hearing as they would have no basis against which to argue. Although the Joint Statement indicated the hearing would cover both merit and quantum, CDOT stated that they did not know the claim was going to exceed \$250,000 and per Section 105.24 (c) of the contract, an audit must be performed before addressing quantum. As a result it was agreed that the January 29, 2021 hearing would only address merit of the claim, and the issue of quantum would not be addressed. If the parties wish the DRB to hear the quantum arguments, that will be arranged at a future time.

Following the Conference Call, CDOT indicated that it would not be submitting a rebuttal paper.

Summary of Casey's Position

Casey submitted a change order request to CDOT for the 3/C 750 VFD Circuits which was rejected by CDOT. Casey is seeking an adjustment to the contract for the procurement and installation of the 3/C 750 VFD Cable between the switchgear and the VFD for the Project. The 3/C 750 VFD cable was not clearly delineated in the CDOT-provided bid drawings and bid cable schedule, or in Casey's bid for the Project.

Casey argues that:

- The 3/C 750 VFD Circuits were not included in the bid documents. Based on the pricing, neither the Engineer nor the competing contractor included the circuits within the pay item 613-1000, Wiring.
- Casey is a contractor and not an engineer. It is industry standard that design engineers are responsible for circuit identification.
- The bid documents provided did not have the information required to perform a full takeoff of every circuit. No elevation drawings were provided of the existing facility.
- Casey was not shown the full scope of the work during the job walk. Casey was not shown the West Portal Fan Deck, West Portal North Garage, West Portal Center Garage, West Portal Electrical Room, West Portal Interstitial Space, East Portal Interstitial Space, or the East Portal North Garage.
- The information provided to Casey and the other bidder was not sufficient to identify the incomplete engineering and the missing information on the cable schedule.

Summary of CDOT's Position

CDOT's position is that Casey's request for additional time and compensation for the Wiring - Lump Sum pay item - has no contractual merit. CDOT has refused Casey's claim based on several factors, but in summary, it is because the "Lump Sum" items are used when the amount of material to do the work cannot be completely determined by the designers, and/or the nature of the work is as such that the contractor can determine how to accomplish the work in several ways. In this case, the wiring item material quantity could not be fully determined by the design staff. In fact, as discussed further below, the plans that were provided to Casey and the other bidders on this project specifically stated that the estimated quantities were "For Information Only", therefore, leaving the quantity to be determined by the contractor and included in their competitive bid as they saw fit. It is CDOT's position that adjusting this item for Casey, without good cause, is not warranted under the Contract.

CDOT argues that:

- Standard Specifications 102.03 and 102.05 are very clear about the Contractor's responsibilities and expectations prior to bidding a CDOT project with lump sum items.
- The numerous provisions and specifications, that are very direct and redundant, are a part of the contract and require one lump sum payment without regard to the quantity installed.
- From the dictionary and Project Special Provision, the "For Information only" phrase at the top of tabulation sheets #7, #12, and #16 specifies quantities to be ballpark figures

subject to change depending on Contractor means and methods. The Summary of Approximate Quantities plan sheets reinforce this.

- The plans clearly define the route of the 750 KCML cable runs, allowing for an accurate estimate of the amount of cable needed to perform the work.
- A prudent contractor would certainly perform a takeoff estimate of the largest and highest priced wire, as a part of the highest priced bid item on the Project.
- The Contractor's high bid for the lump sum wire bid item is subject to interpretation that Casey's bid accounts for and includes the total required length of 750 KCMIL cable. Casey's claim that only the tabulation of quantities were used for their bid has never been proven to CDOT.

DRB Hearing

Administrative Issues.

At the outset of the meeting, the minutes from the January 19, 2021 Pre-Hearing Conference were approved. The use of Zoom was discussed and the parties were advised that Dick had set up separate break-out rooms for the parties and the DRB and that the attendees could request to go into their break-out rooms at any time.

CDOT provided description of Project and the status of construction.

Justin Ulrich provided an overview of the Project scope and status of construction. The scope of work includes removing 480V motor control centers (MCCs) and installing new MCCs, modifying switchgear, installing variable frequency drives and installing a new SCADA system to allow CDOT to control processes remotely. He indicated that for this Project there were five plan holders and two contractors provided bids. Before award, CDOT reissued some specification drawings. Asbestos abatement began in May 2020 with a price tag of \$800,000 to \$1,000,000 and necessitating some schedule readjustment. The original scope of work had the Contractor working on one fan at a time, but a new plan allows for one supply and one exhaust plan at a time. Internal wiring remains to be done. The Project is scheduled to be completed in March of 2021.

CDOT describe status of audit and time-frame expectations.

Neal Retzer indicated that they believed an audit could be complete within 60 days. Mike Keleman stated that CDOT would wait to hear DRB's decision on merit before proceeding with an audit. The federal government does not participate in a claim if there is no audit. An audit process includes the review of escrowed bid documents.

Casey presentation on merit.

Aaron Saunders stated that the issue presented is whether the 750 VFD cable was provided in the bid documents and that they are asking the DRB to determine whether the Contractor is due an equitable adjustment. Casey alleges that the cable schedules did not include all of the required 750 KCML cable and therefore were incorrect.

In May of 2020, Casey met with David Moller of WSP, design engineer, who completed a takeoff of the circuits and then confirmed that he did not include in the cable schedule the required lineal footage of 3/C 750 VFD for the cable from the switchgear to the VFD cabinet.

Cable Schedules #7 and #12 did not show the cable for the circuit in between the switchgear to the VFD. In July of 2020, Casey walked the switchgear to VFDs routing to determine the actual footage needed. That resulted in a determination of a difference of 2,778.72 extra cable. With 15% added for waste, an extra 3,196 of cable between the switchgear to the VFDs is needed. Before Casey ordered the cable, CDOT agreed that the cable did not need to be VFD-rated as a cost savings. Casey noted that during the two rounds of bidding for the Project, there were 60 questions asked.

CDOT presentation on merit.

CDOT indicated that it made an honest mistake with the calculation of the wiring needed.

New Information Issue.

CDOT began to present a slide presentation which Casey then pointed out had not been included in CDOT's position papers. The parties and DRB agreed to go to their respective break-out rooms to discuss how to deal with the issue of new information sought to be presented by CDOT.

Upon reconvening, the DRB announced that following the procedures outlined in the Operating Procedures, there were two paths forward: 1) CDOT could proceed with the hearing using only the information contained in its Pre-Hearing Submittals; or 2) the hearing could go into recess and re-convene no less than 10 days in the future to give Casey and the DRB an opportunity to review the new information. Casey indicated if there was a break it could set a precedent for future DRB hearings, it did not want to see the process tarnished, and that there had already been too much delay concerning this issue. CDOT stated they did not see continuing the hearing with the new slides as a disadvantage to Casey. Ultimately, the parties and DRB agreed to continue the hearing without the new slides and CDOT would be able to screen share pages from its Pre-Hearing Submittals.

CDOT continued with its presentation on merit with Neal indicating that this contract includes lump sum bid items in which you do not measure contract line-item amounts. Justin walked through the electrical drawings to explain that elevations and distances were available for bidders to estimate actual cable length. Casey is responsible for quantifying the wiring line item. The documents are accurate for bidding purposes and contractors should sharpen their pencils and do their own takeoffs. CDOT cannot change amounts (could not justify to an auditor) and neither should the contractor be able to change amounts. In contracts with lump sum bid items, sometimes the contractor benefits if there are underruns. During the bidding period, Casey had four weeks (more than the typical three) to discover and point out discrepancies in the plans and specs. Casey is required by Section 102.05 of the contract to examine the site of the work. The contract makes it clear that the estimated amounts in the schedule are "For Information Only".

The wiring line item is the largest pay amount in the contract. In response to Casey's argument that they are not an engineer, CDOT stated that Casey was able to provide a VECF proposal which was accepted by CDOT.

The scales vary between plans but contractors can realistically see what is needed. The linear feet based on the scales reflects elevations. Neal indicated that they are not wiring experts and that is why they required contractors to bid the wiring amount as lump sum. The mobilization and integration line items also relate to wiring. Although Casey states that everybody missed the inaccurate wire amount indicated in the bid schedule, CDOT said it cannot draw that conclusion and would need to see Casey's bid documents.

Casey Rebuttal.

Aaron stated that CDOT segregated both the geotechnical and borings from the implied warranty of the information, plans and specifications which it provided to the bidders, but it did not segregate the cable schedule. Therefore, there is an implied warranty that the cable schedule is accurate. Casey queried whether the missing cable or switchgear is considered incidental. There were no full elevation drawings provided for Casey to get full takeoff.

In closing, Casey indicated that the Project contract is to include all work as designed. The designed documents do not include switchgear to VFD circuits and no one addressed a design problem with the engineer's estimate after bids were opened.

CDOT Rebuttal.

In response to the statement that no one commented on the missing cable, the other bidder Sturgeon could have noticed but opted not to say anything.

Neal stated that quantities would have to have been included as you have to go to Point A to Point B to Point C which would include the cable alleged to be missing by Casey. Regarding the difference in elevations, this could have been answered/verified by a site visit before the bid. You can figure out the subject cable amounts off the vertical distance and take horizontal distance from there. Not all detail is shown at the outset but needs to be part of as-built drawings.

Parties and DRB exchange of questions and answers.

The parties asked and responded to each other's questions. The parties responded to questions posed by the DRB.

Casey Final Statement.

Eric Helland stated that the cable schedule is an engineer-produced document. In 99% of bid situations, Casey trusts that estimated amounts included in bid schedules are accurate and does not do its own takeoff. It is very abnormal for estimated numbers in a bid schedule to be off by 40%.

CDOT Final Statement.

There is not a lot typically shown in job walks during pre-bid conferences. There is no

mandatory pre-bid and no protocols for job sharing.

Mike Keleman stated that CDOT is looking for a DRB recommendation based on the contract documents and findings that indicate how they tie to the contract.

DRB Observations and Analysis

- For the wiring line item in the bid schedule, the engineer's estimate was \$506,188; the amount included in Casey's bid was \$992,695.66; and the amount included in Sturgeon's bid was \$859,320. The significant variances between the engineer's estimate numbers and the numbers included by the bidders suggest an obvious miscalculation of the engineer's estimated costs.
- WSP, CDOT's engineer, admitted that they did not include the cable amount between the switchgear and the VFDs in the estimated amount for wiring in the bid schedule. CDOT indicated at the beginning of its presentation on merit that it made an honest mistake with the calculation of the amount of wiring needed.
- The differences between the engineer's estimate and the bid prices were apparent at the time of the bid opening, but the increased cost was accepted by CDOT in order to move forward with the Project work.
- By memo dated August 22, 2019 from CDOT's CMA Branch Manager to CDOT's Executive Director with the subject "Award to Low Responsible Bidder C.R.S. 43-1-113(16)", a cost analysis of bids and the engineer's estimate for the Project was performed. In the memo it is stated that "the engineer's estimate was under the estimated cost for the overall project due to the unique nature of 45 year old electrical and mechanical equipment being retrofitted. **Providing an accurate engineer's estimate proved challenging with the lack of historical data being available.**" The memo further stated that "rebid on the project for a third time is unlikely to yield a different result". (*Note: This information was not provided by the parties but was found doing research about the Project on CDOT's website. It is a public record and, as such, can be used by the DRB in formulating its decision.*)
- The DRB appreciates the fact that the contract Special Provisions provide that wire and cable were not to be measured, but were to be included in the contract and paid as lump sum items, wiring. The DRB also knows that the wiring amount indicated in the bid schedule is an estimate. Estimated amounts in lump sum cost items are just that; they are estimates and not guarantees of what the actual amount will be. But here, with the obvious discrepancy between the estimated and actual amounts, the difference is too great to overlook, especially in a case such as this one where the wiring line item represents the largest line item in the bid schedule. A contractor should not be held responsible for the consequences of such inconsistency between the estimated and actual wiring amounts in the plans and specifications. Additionally, CDOT should not be able to shift responsibility for this difference in the estimated and actual amount based on a

lump sum line item.

- During the hearing, the Contractor indicated that they relied on the estimated amounts in the bid schedule for the wiring. They also indicated that in 99% of bids for lump sum items, they do not perform a takeoff to confirm the actual quantity, but rather rely on the estimated amount provided by the design engineer. CDOT had an opportunity to rebut this and say that such a reliance was not reasonable or correct, but they did not do so.
- CDOT asserts that the Contractor should not rely on estimated amounts provided in the bid schedule because of the “For Information Only” (FIO) language contained in the contract. The FIO language does address inexact quantities contained in the cable schedules but should not extend to gross miscalculations as part of the plans and specs. Further, the responsibility of CDOT to provide accurate plans and specifications is not overcome by the contract clause requiring builders to visit the site before bidding. Should the FIO and site visit provisions be interpreted broadly to cover any errors or omissions in the cable schedules, the purpose of the schedules would be rendered meaningless, and CDOT could become the recipient of financial windfalls.
- In response to comments made by CDOT during the hearing, we do not consider Casey to have been practicing engineering when it submitted a VECP. VECPs are common practice and intended to add value to the project. If engineering changes are required because of a VECP, that would have to be done by the design engineer.
- The DRB understands and acknowledges the importance of adherence to the contract and the application of contract law. These fundamentals should flow to both CDOT and the Contractor. The Contractor is contractually bound to build according to plans and specifications prepared by CDOT, but that obligation is negated in situations such as this where there are errors in the plans and specifications.
- In its position paper and during the hearing, CDOT stated that the quantities shown in the tabulation (sheets #7, #12 and #16) were intended to be rough, “in the ballpark” numbers that could change based on Contractor means and methods or other construction experience factors not considered during design. Because of the magnitude of the cable quantity omission, and using the same baseball line of thinking, the DRB would consider the estimated number in the wiring line item to be a “foul ball”. We do not consider the Contractor’s means and methods or other construction experience factors to have a bearing on this reasoning.

DRB Findings

DRB Finding No. 1.

The DRB finds that the contract **cable/conduit schedules (Sheet #7 and Sheet #12) did not include cable quantities required from the switchgear to the VFDs.**

DRB Finding No. 2.

The DRB finds that as a result of Finding No. 1, **the cable/conduit schedules which are a segment of the contract plans and specifications appear to be in error.**

DRB Finding No. 3

The DRB finds that as a result of Findings No. 1 and 2, **Casey Industrial is not responsible for the costs arising out of the incorrect cable quantities indicated in the cable/conduit schedules.**

DRB Recommendation

For the reasons included in the “DRB Observations and Analysis” above, and in response to the question posed in the Joint Statement of the parties, it is the DRB’s Recommendation that **the Contractor be provided an equitable adjustment.**

Respectfully submitted by the DRB this 12th day of February, 2021:

Mari K. Bochanis

Mari K. Bochanis

Wm. P. Caldwell

William (Bill) Caldwell

R. Fullerton

Richard Fullerton