



UNITED STATES
CIVILIAN BOARD OF CONTRACT APPEALS

GRANTED IN PART: November 16, 2011

CBCA 1539

RELIABLE CONTRACTING GROUP, LLC,

Appellant,

v.

DEPARTMENT OF VETERANS AFFAIRS,

Respondent.

William E. Dorris of Kilpatrick Stockton LLP, Atlanta, GA, counsel for Appellant.

Anna C. Maddan, Office of the General Counsel, Department of Veterans Affairs, Palm Desert, CA, counsel for Respondent.

Before Board Judges **DANIELS** (Chairman), **BORWICK**, and **SHERIDAN**.

SHERIDAN, Board Judge.

This is a pass-through claim brought by Reliable Contracting Group, LLC (Reliable), the prime contractor, on behalf of itself and its first tier subcontractor, Fisk Electric Company (Fisk). Reliable was contracted to design and construct a new utility plant and electrical distribution system at the Department of Veterans Affairs (VA) Medical Center (VAMC) in Miami, Florida. Reliable seeks an equitable adjustment in the amount of \$1,305,825 for a VA-directed change related to upgrades to the electrical equipment for the backup emergency generation system.

The parties have stipulated that the change entitles appellant to an equitable adjustment and that the dispute involves the amount of the equitable adjustment that Reliable is due. The VA asserts it should not have to compensate Reliable for any costs incurred as

the result of installing underrated electrical equipment prior to the final short circuit study. Because the VA has made this assertion, certain facts needed to be elicited beyond those simply related to quantum. Testimony was received from appellant's witnesses: Michael Ware, Vice President, Secretary, and Treasurer, Reliable; Dave Conkin, Senior Project Manager, Reliable; James Muhl, Senior Vice President, Fisk; Pat Clyne, Branch Manager, Fisk; and Eric Jackson, P.E., Brooks & Jackson. The VA called as witnesses: John Blake, the VA contracting officer; Leonard Romano, VA Senior Resident Engineer (SRE); Tomas DeCastro-Quirez, VA Resident Engineer (RE); John McLeod, Electrical Engineer, Ellerbe Becket Architects & Engineers (Ellerbe Becket); and Melvin Johnston, Electrical Engineer, a consultant to the VA.

Background

This case arose out of a contract issued by the VA for the design and construction of a new utility plant and electrical distribution system at the VAMC in Miami, Florida. One of the primary purposes of the project was to upgrade and consolidate the electrical equipment at the VAMC. The basis of design¹ documents and drawings prepared by the VA's architect/engineer (A/E), Ellerbe Becket, required the contractor's design/build (DB) team to complete the design for the project in accordance with the requirements of the request for proposals (RFP) and then build the project for a fixed price. The RFP was structured to allow the award of items I, II, and III (general construction, asbestos abatement, and hazardous waste removal, respectively), as well as alternates 1 through 5 (which additionally increased the scope of the work). Alternate 1 required the contractor to provide an additional 1825 kilowatt (kW) generator (for a total of three new 1825kW units) and associated paralleling switchgear² and wiring, demolish the electrical wiring and fuel connections to the existing fourth floor generator, and abandon that generator in place.

On February 10, 2003, the VA awarded all three items and the five alternatives to Echo Construction Company, for a total contract amount of \$20,345,000. Alternate 1, requiring the additional 1825 kW backup generator and associated work, was awarded at the contractor's proposed price of \$400,000. As the result of a corporate reorganization, a novation agreement was executed on March 31, 2003, transferring the contract from Echo

¹ "Basis of design" is a term used in engineering. It typically consists of text paragraphs, preliminary drawings, equipment lists, etc.

² The paralleling switchgear provided the control for the backup generation system. It integrated the metering, protection, communication, and controls to deliver peak performance, system reliability, and operating economy. The parties alternately referred to switchgear as "breakers."

to Reliable. Pertinent to this dispute, Reliable's DB team included its DB A/E, Mason & Hanger Group, Inc. (Mason & Hanger), and Fisk.

The contract contained the Federal Acquisition Regulation (FAR) and VA Acquisition Regulation (VAAR) clauses mandated and suggested for inclusion in VA construction contracts. The contract incorporated by reference the VA Supplemental Changes clause, VAAR 852.236-88, CHANGES - SUPPLEMENT (VAAR 852.236-88 (a) & (b) (JUN 1987)). Section (a) of VAAR 852.236-88 is applicable for changes that are valued at over \$500,000, while section (b) is applied when the change is valued at \$500,000 or less. 48 CFR 852.236-88 (2001). The June 1987 version of the VA Supplemental Changes clause for changes costing over \$500,000 is applicable to this dispute and provides, in pertinent part:

(a) When requested by the contracting officer, the contractor shall submit proposals for changes in work to the resident engineer. Proposals, to be submitted within 30 calendar days after receipt of request, shall be in legible form, original and two copies, with an itemized breakdown that will include material, quantities, unit prices, labor costs (separated into trades), construction equipment, etc. (Labor costs are to be identified with specific material placed or operation performed.) The contractor must obtain and furnish with a proposal an itemized breakdown as described above, signed by each subcontractor participating in the change regardless of tier. When certified cost or pricing data are required under FAR Subpart 15.804, the cost or pricing data shall be submitted on Standard Form 1411 (SF 1411), Contract Pricing Proposal Cover Sheet, in accordance with FAR 15.804-6

(b) When the necessity to proceed with a change does not allow sufficient time to negotiate a notification or because of failure to reach an agreement, the contracting officer may issue a change order instructing the contractor to proceed on the basis of a tentative price based on the best estimate available at the time, with the firm price to be determined later. Furthermore, when the change order is issued, the contractor shall submit a proposal for cost of changes in work within 30 calendar days.

(c) The contracting officer will consider issuing a settlement by determination to the contract, if the contractor's proposal required by paragraphs (a) and (b) of this clause is not received within 30 calendar days, or if agreement has not been reached.

(d) Bond premium adjustment, consequent upon changes ordered, will be made as elsewhere specified at the time of final settlement under the contract and will not be included in the individual change.

48 CFR 852.236-88(a).

The RFP required that, following award, Reliable's A/E, Mason & Hanger, was to prepare and submit complete construction documents for review and approval by the VA in accordance with standard professional practice, the VA's RFP, and applicable standards and codes as described in VA program guides. Mason & Hanger was also required to review the contractor's shop drawings and submittals for conformity with the requirements of the RFP and construction documents, and make recommendations to the VA. SRE Romano had a degree in electrical engineering and had final approval authority of the shop drawings and submittals.

Paragraph 1.77 of the General Conditions in the RFP, titled "RESPONSIBILITY OF THE DESIGN-BUILD CONTRACTOR," stated:

(a) The Contractor shall be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and other services furnished by the Contractor under this contract. The Contractor shall, without additional compensation, correct or revise any errors or deficiencies in its designs, drawings, specifications, and other services.

(b) Neither the Government's review, approval or acceptance of, nor payment for, the services required under this contract shall be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the performance of this contract, and the Contractor shall be and remain liable to the Government in accordance with applicable law for all damages to the Government caused by the Contractor's negligent performance of any of the services furnished under this contract.

The part of the project that gave rise to this dispute involved the furnishing and installation of the backup emergency generation system to provide power to the VAMC if power from the local utility, Florida Power & Light (FP&L), became unavailable due to a hurricane, outage, or other cause. The VA's RFP stated that: "[p]roject design criteria requires total facility backup from emergency standby generators in the event of loss of utility power." The electrical narrative called for two emergency generation systems, one to backup essential loads (known as the essential emergency generation system) and another to backup equipment and normal loads (known as the backup emergency generation system). The

backup system covering the nonessential building loads, set forth in the RFP, required that two 1825 kW generators be installed and stated that those two generators would support the other loads for the entire site, as follows:

C. Equipment and Normal Backup System:

- 1. A separate backup emergency system will be created for backup of essential equipment branch load and certain normal building load for the entire site.
- 2. Two 1825 kW prime-rated diesel generators will support these loads

An 1825 kW generator is capable of producing approximately 3000 amps. Operating simultaneously, the two backup generators were capable of producing a combined 6000 amps. The two backup generators were to be connected to paralleling switchgear, and the paralleling switchgear for the emergency backup generation system was required to be rated for 6000 amps. These two backup generators were to be installed on the fourth floor of the new utility plant, above the flood plain. Three of the existing emergency generators were to be removed. By awarding Alternate 1, the VA added an additional 1825 kW generator to the backup system.

The contract required Reliable to have qualified engineers of the high voltage switchgear manufacturer prepare a short circuit study³ for the equipment to be installed in order to ensure proper equipment capabilities and personnel protection. The pertinent specifications required:

1.5 ANALYSIS

- A. Analyze the short circuit calculations, and highlight any equipment that is determined to be underrated as specified. Propose approaches to effectively protect the underrated equipment. The Government will take the proposed major corrective modifications under advisement, and the Contractor will be given further instructions. Provide minor modifications to conform with the study.

. . . .

³ A short circuit study, also referred to as a short circuit analysis, examines the power flow after a fault occurs in a power network.

1.6 ADJUSTMENTS, SETTINGS AND MODIFICATIONS

A. Accomplish necessary final field settings, adjustments, and minor modifications to conform with the study without additional cost to the Government.

Early in the project, Reliable encountered difficulty getting information from the local utility, FP&L, that was necessary to make the submittals on the electrical switchgear and the short circuit study. FP&L had not released the necessary information because the VA had delayed in setting up an FP&L account. SRE Romano acknowledged that the project was being delayed for lack of the short circuit study.

Fisk, through Reliable, made several submittals for the electrical equipment. The submittal for the switchgear and transfer switches was returned “Approved, as Noted, Resubmit See attached DB A/E (Mason Hanger) comments.” Early in 2004 Reliable had difficulty generating the short circuit study because the VA was unable to provide timely information of the actual loads on the various existing circuits. The RFP documents made clear that Reliable’s DB team was not responsible for tracing out branch circuits to definitively identify the loads on each circuit or to determine if a circuit fed critical, life safety equipment or normal loads. Rather, the RFP document provided: “VA personnel and the existing panel directories will be used to determine the nature of branch circuit loads.” However, the VA was slow in providing this information. On May 22, 2003, by way of request for information (RFI) 44, Reliable noted that its DB A/E had requested that the VA physically verify that the panel schedules of all existing panels affected by the project were correct as currently labeled. When the VA finally sent some electrical panel directories information, it was three volumes of outdated, marked up schedules from the VA’s A/E, Ellerbe Becket. Reliable responded that it was proceeding, but disclaimed responsibility for the VA’s decision to proceed with outdated information.

On December 17, 2003, the VA returned submittals of the shop drawings on all relevant electrical equipment, including the switchgear, marked “approved as noted, resubmit.” On April 15, 2004, the VA reviewed the short circuit study submittal and returned

it to Reliable, marking it “approved as noted, resubmit.”⁴ SRE Romano noted on the return of submittal:

1. Approval based upon the following:
 - a. All devices noted as “inadequate” will be resolved as the work in the field progresses.
 - b. This will be noted in a resubmitted final study.
 - c. The referenced one line drawing 03-252 will be provided in draft as it is today and will be submitted in final along with the final study.
 - d. All the information noted in 16501, 1.4 C & D will be provided.

The submittal for the substations was approved on April 29, 2004.

Testimony was elicited at the hearing that indicates that the VA should have realized in reviewing the submittal that the short circuit study was based on only two backup generators providing power simultaneously. At the hearing, SRE Romano characterized the initial short circuit study submittal as “a joke.” However, instead of rejecting the initial short

⁴ The short circuit study, prepared by Fisk supplier Square D, showed that the ampere interrupting capacity (AIC) rating for all of the larger pieces of equipment, the GE switchgear, and the substations would be adequate. AIC is the current in amperes that a fuse, circuit breaker, or other electrical apparatus is able to withstand without being destroyed or causing an electric arc with unacceptable duration. AIC is also known as the breaking capacity. A circuit breaker is an automatically operated electrical switch designed to protect an electrical circuit from damage caused by overload or short circuit. Its basic function is to detect a fault condition and, by interrupting continuity, to immediately discontinue electrical flow. Unlike a fuse, which operates once and then has to be replaced, a circuit breaker can be reset (either manually or automatically) to resume normal operation. Circuit breakers are made in varying sizes, from small devices that protect an individual household appliance up to large switchgear designed to protect high voltage circuits feeding an entire city. In the short circuit study, several smaller pieces of equipment, such as distribution panels, were shown to be inadequate. The approved short circuit study submittal was based on two backup generators providing power to the paralleling switchgear simultaneously.

circuit study, and Fisk's interpretation of the contract documents showing two generators running simultaneously, the VA's SRE approved the submittal. While SRE Romano, who is an electrical engineer, acknowledged that he failed to note only two generators were operating simultaneously, RE DeCastro-Quirez, who is also an electrical engineer, but did not review the short circuit study submittal, testified that, had he reviewed the submittal, he likely would have rejected the submittal because it did not have sufficient information, and, specifically, did not have the "one line drawing" that showed the equipment was sufficiently protected.

Reliable and Fisk interpreted the return of submittal as a release for manufacturing of the equipment, and for inadequacies shown in the study to be resolved in the field as the work progressed. Fisk planned that after it received the field guidance from the VA, it would submit the final short circuit study. It believed that the items noted in the return of submittal were minor and could easily be resolved in the field. Mr. Jackson, Reliable's consultant, testified that, in his experience, "approved as noted" means that the contractor should proceed with everything that had no notations and resolve those issues that were noted. The paralleling switchgear which distributed the power to eight electrical substations and a pump was manufactured by General Electric (GE) and supplied to Fisk by Electrical Supplies, Inc. (ESI). The substations, manufactured by Square D and distributed by Mercedes Electric Supply, Inc. (MES), provided current to numerous electrical panels and other pieces of equipment.

By early 2005, the new utility plant was nearing completion. Fisk had installed all of the electrical distribution equipment and was finalizing the wiring. At that point, SRE Romano asked about the sequence of operation of the three backup generators. He was informed that the sequence of operation was consistent with two of the three generators providing emergency power simultaneously with the third generator serving as backup in case one of the other two generators failed. According to James Muhl, Fisk's Senior Vice President, Fisk contemplated that all three backup generators would be wired to be able to provide power to the paralleling switchgear, but only two would be in simultaneous operation at any particular time. Since two backup generators were, according to the RFP, capable of supporting the required loads for the entire site, Fisk believed that only two of the three backup generators would need to provide power to the paralleling switchgear at any one time. If one of the backup generators providing power to the switchgear malfunctioned or was off line for maintenance, its breaker would then stop the current, and the third generator would take its place with its breaker permitting power to go to the switchgear. Such a sequence of operation, according to Fisk, was consistent with other aspects of the basis of design.

SRE Romano told Reliable that the VA expected all three backup generators to simultaneously provide power to the paralleling switchgear. While Fisk did not agree with

SRE Romano's position, in order to determine what would need to be done to safely run three backup generators simultaneously, Fisk had Square D prepare another short circuit study based on the assumption that all three backup generators would provide power to the paralleling switchgear simultaneously. The resulting March 2005 short circuit study showed that several large pieces of the electrical equipment, including the paralleling switchgear and three of the substations, were not adequately protected if the three backup generators were running simultaneously. The parties met to discuss implications and exchanged extensive correspondence. It was noted that the issue could have a significant cost and time impact.

In the process of determining whether the contract required the backup generator system to be capable of supporting all three backup generators running simultaneously, contract drawings E-900 and E-900A were compared. Drawing E-900 showed the new electrical equipment for the base bid with two new 1825 kW backup generators. Drawing E-900A in the RFP showed the new electrical equipment for Alternate 1 with three 1825 kW backup generators. These two electrical drawings provided detailed information regarding all of the new electrical equipment, including the required AIC rating for each piece of equipment. The AIC ratings for the paralleling switchgear and electrical equipment shown on the two drawings were the same. The drawings for Alternate 1 did not show any of the equipment with increased AIC ratings or indicate a need to increase any AIC ratings to accommodate the running of all three backup generators simultaneously.

Reliable retained a consultant, Eric Jackson, P.E., an electrical engineer with Brooks & Jackson, to provide a report and expert testimony at the hearing. Messrs. Muhl and Jackson testified that it is common practice to have spare emergency generation capacity for facilities such as hospitals and data facilities. A stated purpose of the electrical design was to provide total facility backup and protect electrical capacity in the case of major flash flooding from a Class 5 hurricane. Mr. Jackson testified that since the purpose of the project was to ensure high reliability in the event of a natural disaster, extra backup capacity would be common.

Fisk believed that under the sequence of operation, once the second backup generator synchronized with the paralleling switchgear, it would handle all the remaining loads and the third backup generator would never need to connect to the switchgear as long as the other two were connected and operating. The inadequacy of the AIC ratings for the electrical equipment was not apparent to anyone involved with the project until SRE Romano raised the issue of running three generators simultaneously. The fact that the AIC ratings remained unchanged from drawing E900 to drawing E900A did not raise a red flag for Fisk because it considered its plan of having the third generator as a spare generator consistent with good engineering practices, and had seen such arrangements on other projects where the owner

intended to have spare generation available. Fisk understood the short circuit study submittal marked “approved, as noted” as consistent with its interpretation.

SRE Romano wrote Reliable on May 26, 2005, directing it to provide equipment with adequate AIC ratings to support running all three backup generators simultaneously. He also indicated that if additional cost or time was needed to make the AIC upgrades, Reliable should submit a claim. Around the same time, Square D prepared a revised short circuit study based on running all three backup generators simultaneously. Square D concluded that a significant portion of the electrical system was inadequate for the simultaneous operation of the three backup generators and recommended several equipment upgrades. The contracting officer’s letter of July 12, 2005, ordered the contractor to increase the AIC rating of numerous pieces of electrical equipment as a result of the new short circuit study.

According to Fisk, the modifications necessary to increase the AIC ratings were largely performed from July through October 2005. The modifications required, among other things, that previously connected wiring be disconnected, additional bracing be installed in the electrical equipment, and then the wires be reconnected. As noted by Mr. Conkin, dismantling and pulling cables from an otherwise completed system was a “monumental” task, resulting in a “Medusa’s head” of cables emerging from the gear.

On March 27, 2006, Reliable submitted a certified claim on behalf of Fisk as a result of the VA’s directive to increase the AIC ratings. The claim, in the amount of \$1,721,180, requested a contracting officer’s final decision within sixty days.⁵ When the contracting officer failed to issue a decision on its claim, Reliable timely appealed the nondecision to the Civilian Board of Contract Appeals, where it was docketed as CBCA 1539.

In its complaint, Reliable averred that the costs it incurred for the change were \$1,326,266.⁶ However, prior to the hearing, Reliable modified its claimed costs as follows:

Fisk

Major Materials

ESI (GE)	\$354,843
MES (Square D)	364,416

⁵ Reliable, based on subsequent critical path delay analysis, determined that the work that was the subject of the claim did not delay the critical path of the project. Reliable, therefore, did not request a time extension for the claimed work.

⁶ All costs in this decision have been rounded to the nearest whole dollar.

Miscellaneous Vendors	13,885
Labor	143,583
Project management	4,565
CAD operator	4,854
Truck rentals	<u>15,000</u>
Subtotal	901,146
Overhead (10%)	<u>90,115</u>
Subtotal	991,261
Profit (5%)	<u>49,563</u>
Subtotal	1,040,824
Fisk Bond	<u>38,371</u>
Fisk Subtotal	1,079,195

Reliable

Overhead (10%)	<u>107,919</u>
Subtotal	1,187,114
Profit (10%)	<u>118,711</u>

TOTAL **\$1,305,825**

Appellant also provided evidence of damages through a “damages notebook” and the testimony of Mr. Muhl, Fisk’s Senior Vice President, and Mr. Ware, Reliable’s Vice President, Secretary, and Treasurer. Mr. Muhl had oversight over the preparation of the damages notebook and testified at length as to its contents and accuracy. Mr. Ware testified about Reliable’s overhead and profit portions of the claim.

Reliable asserts that it relied on Fisk’s interpretation of the contract documents as providing for two backup generators to provide power at any one time to the paralleling switchgear. Fisk asserts that it based its interpretation on the basis of design, which indicated that two generators would support the loads for the entire site.⁷

⁷ The portion of the basis of design that Fisk references is contained in section 16051, paragraph 11.3.C, which stated that “1. A separate backup emergency system will be created for backup of essential equipment branch load and certain normal building load for the entire site,” and “2. Two 1825 kW prime-rated diesel generators will support these loads” Fisk concluded that the specification meant that two 1825 kW generators were to support the loads described in the section “Equipment and Normal Backup System.”

Fisk posits that because two generators would support the loads for the entire site, the third generator that was to be installed pursuant to Alternate 1 was a spare generator. It claims that this interpretation is common in emergency generation systems and consistent with systems looking for high reliability. Reliable also notes that drawing E-900A does not show any AIC rating increases required for the paralleling switchgear and other related equipment. This, it argues, leads to an interpretation that only two generators were to be running simultaneously because, had three been required to run simultaneously, higher AIC ratings would have been shown on the drawings.

The VA interpreted the basis of design and the contract documents as providing for the running of the three backup generators simultaneously. SRE Romano testified generally that “if you look at the paralleling gear, RFP document and construction specific documents, it tells you very clearly how these things are supposed to operate.” SRE Romano did not provide any explanation as to why the AIC ratings for the paralleling gear remained unchanged from RFP drawing E-900, which provided for two backup generators as per the base bid, to E900A, which provided for three backup generators as per the award. SRE Romano also did not explain his purported interpretation of the specific RFP document that indicates two 1825 kW prime-rated generators would support the backup loads for the “entire site.”

Mr. McLeod, from Ellerbe Becket, the VA’s A/E, testified that the intent of the specifications was to require the three backup generators to all be connected to the paralleling switchgear and able to run simultaneously. However, Mr. McLeod also acknowledged that the statement that “two” 1825 kW backup generators could support loads for the “entire site” was a mistake and should have said “three.”⁸

Mr. Johnston concluded there was sufficient information in the specifications and the drawings for Fisk to conclude that three backup generators were required to run concurrently because “the electrical narrative combined with the written specifications and the electrical drawings define a consistent electrical scope for the VAMC project.” Mr. Johnston based this conclusion on an expectation that Fisk would “carefully assess” the demand and design loads provided in the basis of design and an indication of “future load growth.” Mr. Johnston

⁸ On cross-examination, both Messrs. Johnston and McLeod acknowledged that drawing E303 showed that only two backup generators were needed to provide power to all eight substations, including substation F. Mr. Johnston admitted that drawing E303, which he understood was part of the RFP drawings, was inconsistent with his interpretation of the documents. Mr. McLeod further acknowledged that drawing E303 was in fact consistent with the statement that two generators could support the backup loads for the entire site.

also posited that “backup generators will provide an alternative source for all facility loads . . . both existing and new facility loads added during the project plus provide for future growth.” Fisk provided testimony that as a subcontractor, it would not perform the detailed calculations related to load design totals that Mr. Johnston spoke of, but rather, would rely on the information and calculations provided by the VA A/E, Ellerbe Becket, and the DB A/E, Mason Hanger.

Appellant asserts that the amounts paid by Fisk to ESI and MES for the AIC upgrade work were in addition to the amounts Fisk paid for the equipment for the original contract work and that none of the payments for the AIC upgrade created any savings for Fisk on the original materials. The invoiced amounts were questioned by the Defense Contracting Audit Agency (DCAA) audit for several reasons, including Fisk’s failure to demonstrate that the Government required additional work, as well as differences disclosed between the claimed material costs and costs verified to Fisk’s project costs and associated invoices. According to the audit, Fisk did not properly identify materials and did not segregate costs claimed in its accounting system for the alleged increased work. The auditor was not called to testify at the hearing.

Mr. Muhl testified extensively on the \$719,259 Fisk claims it incurred in major equipment costs. He asserted that the major equipment that was invoiced was used only for the AIC upgrade. A review of the invoices for major equipment reveals that Reliable seeks \$354,843 on two invoices from ESI. Documentation supporting this portion of the claim shows that on June 2, 2005, GE proposed to Fisk a total lot price of \$575,000 to provide various pieces of GE switchgear equipment and associated services needed to perform the changed work associated with the AIC upgrade. ESI invoice 5255901 shows ESI invoicing a “lot price” of \$405,076 to “replace circuit breakers,” “provide TVSS [transient voltage surge suppressor] in NEMA [National Electrical Manufacturers Association] 1 enclosure,” “provide new vertical section #103,” “provide extra bus and bracing as necessary,” provide “UL [Underwriters Laboratories Incorporated] site certification startup and commissioning,” and “modify NEMA 1 enclosure.” Fisk was ultimately able to get GE to reduce its invoice to \$354,415, which it then paid. According to Mr. Muhl, the \$354,415 that Fisk paid reflects credits Fisk was able to obtain for return of some of the removed, underrated equipment to GE. Reliable also seeks \$428 that Fisk paid for a panel that was associated with the AIC upgrade.

The major equipment needed to upgrade the substations was manufactured by Square D and supplied by MES. Fisk negotiated with Square D to provide substations, incidental equipment, and field supervision to ensure that it was properly upgrading the equipment. Mr. Muhl stated that Fisk essentially “re-manufactured” the substations in the field. On May 31, 2005, Square D proposed to Fisk that the labor and equipment to do its part of the upgrade

was \$426,255. Square D was willing to provide Fisk a credit of \$29,341 on returned equipment for a total proposed amount of \$396,914. As support for its proposal, Square D provided a list of the bus bars that needed to be upgraded, including parts, equipment, and supervisory support.⁹ Fisk was able to negotiate the amount Square D proposed from \$396,914 down to \$364,416, which it paid.

The VA disputed the entire \$719,259 Fisk claimed in costs for major equipment, asserting that the equipment was listed in lots where the costs of the individual pieces of equipment could not be identified, and it was therefore impossible for the VA to determine the dollar value of the equipment. The VA also relies on the testimony of Mr. McLeod and RE DeCastro-Quirez, both of whom perform electrical estimates as part of their jobs. Mr. McLeod estimated that, based on the prices of the original switchgear and what are typical upgrades to take a system from 100kW to 150kW, the cost of changing the switchgear should have been around \$100,000. RE DeCastro-Quirez testified that he had reviewed the change to estimate what it should have cost the VA and determined that had the change been discovered prior to installation, the increased material costs for the switchgear and substations would have been around \$122,000. Neither witness provided a basis for, breakdown of, or backup for his estimates.

Regarding the miscellaneous vendor costs, Mr. Muhl testified that the materials in the invoices were used to reconnect wires, connect the conductors to the switchgear, tie the wires and cables in place during the upgrade, and otherwise accomplish the changed work, referred to as the AIC upgrade. RE DeCastro-Quirez testified that he considered these miscellaneous vendor costs to be acceptable.

For its labor costs, Fisk provided an estimate of the labor it anticipated needing to install the additional work, which was \$143,583. Mr. Muhl described how that estimate was prepared. For each of the categories of work shown in the estimate, a number of hours to perform that task was calculated and Fisk multiplied the hours by the labor rate the parties had negotiated for other changes on the project. Based on his knowledge of the additional work and the labor required to perform it, Mr. Muhl testified that, in his opinion, the estimate was a reasonable estimate of the additional labor required to perform the work. Mr. Muhl explained that Fisk did not separately track the actual labor costs for performing this or any other change, and that for other changes on the project, the labor charges were negotiated

⁹ In electrical power distribution, a bus bar is a strip of copper or aluminum that conducts electricity within a switchboard, distribution board, substation or other electrical apparatus.

based on estimates of the work. From July through December 2005, the period during which Fisk asserts the change was performed, it asserts it incurred approximately \$600,000 in labor costs on the project, which was substantially more in labor costs than the \$143,583 estimated for the AIC upgrade.

RE DeCastro-Quirez, who reviewed cost proposals on this project, acknowledged that all the wiring had to be removed in order to get access to upgrade the AIC rating of the paralleling gear.

Discussion

Prior to the hearing in this matter, the parties stipulated to entitlement but could not agree to the amount of the equitable adjustment to which Reliable is entitled. The VA argues it should not have to compensate Reliable for any costs incurred as the result of installing and removing the underrated electrical equipment prior to Reliable's submission of the final short circuit study and analysis. The VA posits that, prior to selecting the electrical equipment, Reliable, its subcontractors, and its suppliers should have performed a final short circuit study analysis to determine the proper type and size of equipment for the contract. The VA maintains that had a timely, final short circuit study analysis been submitted, the fact that Fisk intended to run only two backup generators simultaneously would have been discovered. An earlier discovery of the issue, the VA asserts, would have obviated the costs incurred for purchasing, installing, and then having to remove the underrated equipment. Taking the position that the final short circuit study analysis was not submitted in a timely fashion, the VA argues that Reliable, not the VA, should be responsible for the costs incurred for purchasing, installing, and removing the underrated equipment.

Both parties testified that they were anxious to keep this project on track and on time. The facts reveal that Reliable submitted an initial short circuit study analysis showing that the specified AIC rating for all of the larger pieces of equipment, the GE paralleling switchgear, and the Square D substations would be adequate. However, that short circuit study submittal was based on only two backup generators providing power to the paralleling switchgear simultaneously. SRE Romano returned the submittal marked "approved as noted, resubmit," but failed to observe that only two backup generators were listed or to address any of the larger pieces of equipment that later proved to be underrated for running the three backup generators simultaneously. SRE Romano noted on the return of submittal that "all devices noted as 'inadequate' will be resolved as the work in the field progresses," which leads the Board to conclude that the SRE was giving Reliable the go-ahead to procure and install the approved large equipment and make minor fixes in the field. While SRE Romano testified later that he considered the initial submittal was "a joke," he approved that submittal without requiring the one line drawing and without noting the deficiencies that later formed

the bases of this claim. There is no evidence that the VA warned Reliable it was installing large amounts of unapproved equipment or that the inadequacy of the AIC ratings was discovered before the March 2005 short circuit study that analyzed three backup generators providing power simultaneously.

The VA also failed to provide compelling evidence that Reliable should have discovered earlier than it did that the VA wanted the three generators to be capable of running simultaneously. Furthermore, the VA presented no testimony to controvert Messrs. Muhl's and Jackson's testimony that for hospitals' backup electrical systems, it is common practice to have a spare generator for the backup system. It is clear from the evidence that the VA failed to adequately review the submittals and is attempting to foist its own failures onto Reliable. Reliable's interpretation, that only two generators were required to run simultaneously, was reasonable. It is difficult for the Board to find sympathy for the Government when it operates in such a careless fashion and later attempts to obtain relief from such behavior. Based on the evidence before us, we see no reason to penalize the contractor for not earlier realizing the parties' differing interpretations regarding the backup generators, or the resultant need for a change to the contract. Clearly, the VA's sloppy handling of some of the electrical equipment submittals contributed to Reliable's escalated costs for the change. Appellant is entitled to be compensated for reasonable costs associated with removing underrated equipment and installing the equipment capable of safely running the three backup generators simultaneously.

We turn now to the VA's argument against specific claimed costs, which centers around Fisk's alleged failure to "adequately identify, itemize, and substantiate its claimed costs" incurred as the result of the VA's change to the contract that increased the AIC ratings. The pertinent contract clause for changes costing over \$500,000 requires appellant to provide an "itemized breakdown" of costs that includes "material, quantities, unit prices, labor costs (separated into trades), construction equipment, etc." Additionally, labor costs are to be "identified with specific material placed or operation performed." 48 CFR 852.236-88(a). The VA argues that Reliable's and Fisk's failure to adequately identify, itemize, and substantiate the claimed costs should defeat the claim. The VA also argues that portions of the claim should be rejected because they are only comprised of estimated costs as opposed to actual costs. The VA posits that since the work has been performed, making the actual costs available, Fisk's estimates of costs should be rejected.

The party seeking the recovery of incurred costs has "the burden of proving the amount . . . with sufficient certainty so that the determination of the amount . . . will be more than mere speculation." *Lisbon Contractors, Inc. v. United States*, 828 F.2d 759, 767 (Fed. Cir. 1987) (quoting *Willems Industries, Inc. v. United States*, 295 F.2d 822, 831 (Ct. Cl.

1961)). We recently discussed proving quantum in *Nu-Way Concrete Co. v. Department of Homeland Security*, CBCA 1411, 11-1 BCA ¶ 34,636 (2010):

An equitable adjustment encompasses the quantitative difference between the reasonable cost of performance without the added, deleted, or substituted work, and the reasonable costs of performance with the addition, deletion, or substitution. *J.L. Simmons Co. v. United States*, 412 F.2d 1360, 1370 (Ct. Cl. 1969) (citing *Bruce Construction Corp. v. United States*, 324 F.2d 516, 519 (Ct. Cl. 1963)). “When a party seeks recovery of costs incurred, it has ‘the burden of proving the amount . . . with sufficient certainty so that the determination of the amount . . . will be more than mere speculation.’” *Benmol Corp. v. Department of the Treasury*, GSBCA 16374-TD, 05-1 BCA ¶ 32,897, at 162,979 (citing *Lisbon Contractors, Inc. v. United States*, 828 F.2d 759, 767 (Fed. Cir. 1987) (quoting *Willems Industries, Inc. v. United States*, 295 F.2d 822, 831 (Ct. Cl. 1961)); *Advanced Materials, Inc. v. United States*, 54 Fed. Cl. 207, 209 (2002); *Twigg Corp. v. General Services Administration*, GSBCA 14386, et al., 00-1 BCA ¶ 30,772, at 151,975). “It is true, of course, that the proof of damages need not be exact. A reasonable basis is enough - but some convincing basis must be advanced.” *Twigg Corp.*, 00-1 BCA at 151,976.

Id. at 170,698. We address each of the categories of claimed costs, the pertinent arguments for and against awarding or denying those costs, and our conclusions regarding those costs in the paragraphs that follow.

Major Materials

Fisk alleges that as a result of the VA’s change, it incurred \$719,259 in additional major material costs: \$354,843 to upgrade the GE paralleling switchgear “breakers” it purchased from ESI and \$364,416 to upgrade the substations and panels it purchased from Square D’s supplier, MES. As proof of its costs, appellant provided copies of the ESI and MES invoices, and Fisk’s checks showing it paid the claimed amounts.

Because the purpose underlying an equitable adjustment is to safeguard both contractors and the Government against increased costs engendered by modifications, an equitable adjustment must be closely related to and contingent upon the altered position in which the contractor finds itself by reason of the modification. *Nager Electric Co. v. United States*, 442 F.2d 936, 946 (Ct. Cl. 1971); *Bruce Construction Corp. v. United States*, 324 F.2d 516, 518 (Ct. Cl. 1963). An adjustment should not increase or reduce a contractor’s profit or loss, or convert any loss to a profit or vice versa, for reasons unrelated to a change.

Pacific Architects & Engineers Inc. v. United States, 491 F.2d 734, 739 (Ct. Cl. 1974); *KECO Industries, Inc. v. United States*, 364 F.2d 838, 850 (Ct. Cl. 1966). Where a contractor has established its actual costs and correlated them to a particular modification of the contract, it is error to disallow, increase, or otherwise adjust those costs in the absence of specific evidence. *Teledyne McCormick-Selph v. United States*, 588 F.2d 808, 810 (Ct. Cl. 1978); *Dawson Construction Co.*, GSBCA 5364, 82-1 BCA ¶ 15,701.

The VA disputes the entire \$719,259 Fisk claims it paid for major equipment. The thrust of the VA's argument generally appears to be that Reliable has not complied with the VA Supplemental Changes clause by "submitting a thorough and itemized and documented breakdown of the costs incurred for the modification." More specifically, as to the major equipment, "[the invoices presented are 'lot' types of purchase orders, where the costs of the individual major material electrical equipment [are not] listed. It is impossible to determine the dollar value of the two major materials because only a total of all equipment is listed on these types of purchase orders." The VA Supplemental Changes clause requires that the contractor provide "an itemized breakdown" that includes "material, quantities, unit prices, labor costs (separated into trades), construction equipment, etc." Such itemization must also be obtained from subcontractors participating in the change. The VA also relies on the testimony of Mr. McLeod and RE DeCastro-Quirez, both of whom perform electrical estimates as part of their jobs. Mr. McLeod estimated that based on the prices of the original switchgear and what are typical upgrades to take a system from 100kW to 150kW, the cost of changing the switchgear should have been around \$100,000. RE DeCastro-Quirez testified that he had reviewed the change to estimate what it should have cost the VA and determined that had the change been discovered prior to installation, the increased material costs for the switchgear and substations would have been around \$122,000.

The invoices in issue are not a model of clarity, are set forth as lots, and contain little itemization and much less detail than we would normally expect to see for invoices in a claim of this type. The way the invoices were structured severely limited the VA's ability to review the equipment and services provided in the invoices. Given the lack of information in the invoices, we understand the VA's reluctance to find the lump sums set forth in the invoices reasonable. Nevertheless, testimony was received at hearing from Mr. Muhl that clarified portions of the invoices and established appellant's *prima facie* case regarding the reasonableness of the costs associated with purchasing the major equipment.

The VA failed to provide compelling evidence to rebut appellant's *prima facie* case. Other than claiming the invoiced costs were excessive, the VA presented no theory as to how and why the invoiced costs were excessive. Neither VA witness provided much information or detail as to how his own estimate was developed and precisely which cost items it

covered.¹⁰ No basis, breakdown, or backup details were provided with the estimates, and they seemed to be more in the nature of guesstimates than estimates. We find that the VA failed to sufficiently rebut the minimal evidence appellant provided regarding the major equipment invoices. Reliable is entitled to recover \$719,259 in major equipment costs.

Miscellaneous Vendors

Reliable alleges it also incurred costs for miscellaneous materials totaling \$13,885. It was invoiced \$1282 by ESI, \$6535 by Graybar, and \$6068 by World Electric Supply, Inc. Appellant provided itemized invoices and proof of payment for all three of these vendors. Mr. Muhl stated that the miscellaneous materials were used to reconnect wires, connect the conductors to the switchgear, tie the wires and cables in place during the upgrade, and otherwise accomplish the changed work, referred to as the AIC upgrade.

The VA asserts that the claimed amounts for miscellaneous material and equipment were not supported as required by FAR 31.201-2(d). The DCAA audit questioned the charges because Fisk did not demonstrate a direct correlation between the claimed costs and the changed work. RE DeCastro-Quirez testified that he considered these miscellaneous vendor costs to be acceptable. Because the invoices were itemized and considered by RE DeCastro-Quirez to be reasonable for the changed work, Reliable is entitled to be paid \$13,885.

Labor

The portion of the claim for labor costs presents a difficult issue. Fisk alleges it incurred additional labor costs to install the materials and perform the work to increase the AIC ratings for the electrical equipment. However, Fisk only gives us its estimates for the labor costs, claiming it did not track its labor costs for the changed work. These estimates were generated before the work was performed and remained unchanged throughout the litigation.

The VA argues it should not have to pay the labor costs because the claimed amount should be based on actual costs as opposed to estimated costs, since the change has been performed. The VA further points out that Reliable has not itemized the labor hours for the

¹⁰ Based on the evidence, it appears that Mr. McLeod's and RE DeCastro-Quirez's estimates only covered the increased major equipment costs the Government believed Fisk would incur to upgrade the system from 100kW to 150kW. The estimates do not appear to cover incidental materials or labor costs.

various disciplines of work that would allow the VA to analyze the claimed hours. RE DeCastro-Quirez, who reviewed cost proposals on this project, acknowledged that all the wiring had to be removed in order to get access to upgrade the AIC rating of the paralleling gear. He offered no real criticism of Fisk's labor estimate and presented no estimate of his own. In fact, while the VA objected to Reliable's labor estimate, it proposed none of its own. The VA offered no compelling evidence discounting Fisk's labor estimate and presented no estimate of its own to assist the Board in determining a more reasonable figure.

We note that while we generally agree that evidence of actual costs is more compelling proof of damages, a change did occur here and that change had a labor price tag associated with it. Based on testimony at the hearing, it appears that the VA accepted estimates of labor costs on other negotiated changes. What is not clear is how those estimates were adjusted through negotiation prior to the parties reaching an agreement on the costs for any particular change. Fisk's failure to track its labor for the change, and the structure of its estimate, made it very difficult for the VA to effectively rebut the labor hours in Fisk's labor estimate. Nevertheless, "[w]here a contractor does not accumulate cost data and cannot identify its actual costs attributable to changes, estimates may be used to quantify the increased costs a contractor incurred." *Environmental Safety Consultants, Inc.*, ASBCA 53485, 05-1 BCA ¶ 32,903, at 163,019 (citing *Coastal Dry Dock & Repair Corp.*, ASBCA 36754, 91-1 BCA ¶ 23,324, at 117,002 (1990)). We considered the facts that the VA used Reliable and Fisk labor estimates to negotiate other changes and that appellant provided extra labor to replace and upgrade the equipment against the VA's failure to provide its own labor estimates or any convincing rebuttal of appellant's estimate of labor costs. We find Reliable entitled to \$143,583 in labor costs.

Project Manager and CAD Operator

Fisk alleges it incurred additional labor costs of \$4565 for having its project manager, John Mueller, on site for the months of August and September to oversee the project during the performance of the AIC upgrade.¹¹ It also claims it incurred additional labor costs of \$4854 for a computer assisted drawing (CAD) operator to input the changes to drawings.

The VA argues the costs for the project manager and the CAD operator "were provided for under the original performance of the contract as a normal recurring cost," and should therefore be denied.

¹¹ Fisk asserts that the additional costs for the project manager actually totaled \$20,565, but that \$16,000 of the costs were included in the labor estimate, leaving an additional \$4565 outstanding.

We deny these charges for a variety of reasons. Given the circumstances of this case, our decision in this matter has already compensated appellant for its labor costs. We find no compelling evidence indicating that additional project management or CAD operator labor was tied to or required for the changed work. Appellant has provided no compelling evidence to establish that it treated the claimed expenses as direct as opposed to overhead costs. Furthermore, these types of costs are ones associated with increased time, which appellant has not sought for this change, since it determined that the changed work did not delay the critical path of the project. Given the above factors, we deny the alleged costs associated with project management and CAD.

Truck Charges

Fisk alleges it incurred additional costs because it had four supervisory personnel involved with the AIC upgrade who were assigned company trucks. Each of these individuals was said to have been on the project longer than he would have otherwise needed to be because of the AIC upgrade work. As a result, Fisk included \$15,000 in its claim for the cost of the truck rental. Given the evidence, or lack thereof, that the change caused Fisk supervisory personnel extra time on the job, no extra compensation for truck rental is due.

Fisk Overhead and Profit

Fisk alleges it incurred additional overhead in connection with this work and included a ten percent mark-up to cover its increased overhead costs and five percent for profit. This was consistent with what was allowed on other changes paid for by the VA on the project. The VA has raised no objection to Fisk's claim of overhead and profit, and accordingly, we award ten percent mark-up to cover Fisk's increased overhead costs and five percent for profit.

Fisk Bond Costs

Pursuant to its subcontract with Reliable, Fisk was required to provide payment and performance bonds for the project. Stating that because Fisk's subcontract cannot be closed until this claim is resolved, Mr. Muhl maintains that Fisk has incurred additional bond costs of \$38,371 through the end of February 2011 and \$622 per month thereafter until a decision is issued on the claim and the subcontract closed. The additional bond costs were calculated as the difference in the bond charges Fisk accrued through February 2011 and the amount it accrued through the actual date of substantial completion of the project. Through substantial completion and without regard to this claim, Fisk asserts it accrued bond charges of \$68,696. Through February 2011, and considering this claim, Fisk accrued \$107,067 in bond charges. The amount claimed is the difference between the two amounts (\$107,067

minus \$68,696 = \$38,371). Mr. Muhl also testified that post-February 2011, Fisk continues to incur \$622 per month until a decision is issued and Fisk's subcontract is closed.

This is an unusual way of marking up a claim for bond costs. Typically, bond costs are calculated as a percentage of the equitable adjustment. However, the VA did not take issue with the claimed markup for bonds, so we award Reliable \$38,371 plus bond costs for nine months at \$622 a month (February through November 2011) for a total amount of \$43,969 in bond costs.

Reliable Overhead and Profit

Asserting that coordinating this change late in the project significantly increased its office work, Reliable claimed ten percent overhead and ten percent profit for itself as part of its claim. We do not see evidence of much Reliable involvement or coordination associated with this change and therefore are only willing to compensate it five percent overhead and five percent profit in this appeal.

Calculation of Quantum

Fisk

Major Materials	
ESI (GE)	\$354,843
MES (Square D)	364,416
Miscellaneous Vendors	13,885
Labor	143,583
Project management	0
CAD operator	0
Truck rentals	<u>0</u>
Subtotal	876,727
Overhead (10%)	<u>87,673</u>
Subtotal	964,400
Profit (5%)	<u>48,220</u>
Subtotal	1,012,620
Fisk Bond	<u>43,969</u>
Fisk Subtotal	1,056,589

Reliable

Overhead (5%)	<u>52,829</u>
Subtotal	1,109,418
Profit (5%)	<u>55,571</u>
Total Equitable Adjustment	1,164,889

Decision

The appeal is **GRANTED IN PART**. We award to Reliable \$1,164,889 plus interest from the date the certified claim was received by the contracting officer (on or about March 27, 2005) until the date of payment, at rates prescribed pursuant to 41 U.S.C.A. § 7109(b) (West Supp 2011).

PATRICIA J. SHERIDAN
Board Judge

We concur:

STEPHEN M. DANIELS
Board Judge

ANTHONY S. BORWICK
Board Judge