

**AMELCO ELECTRIC
CONTRACT NO. V640C-1128**

VABCA-3785

**VA MEDICAL CENTER
PALO ALTO, CALIFORNIA**

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OPINION BY ADMINISTRATIVE JUDGE ROBINSON

This appeal is from a final decision of the Contracting Officer (CO), denying the claim of Amelco Electric (Amelco or Contractor) for costs associated with the construction of foundations for modular "impact" trailers at a medical center operated by the Department of Veterans Affairs (VA or Government). Amelco contends that the Contract documents contained no indication of the type of foundation required beneath the modular trailers at four (and part of a fifth) of the six locations specified for placement. Because of this informational void, Amelco bid on one particular type of trailer foundation. It claims that it incurred additional costs and delays as a direct result of unknown and unusual subsurface conditions at the project site which rendered an otherwise sufficient foundation system unreliable and required that a more costly foundation be constructed. Amelco further contends that the VA implicitly recognized the deficiencies in their own foundation design and effectively authorized the Appellant's more costly approach to dealing with the expansive soils at the project site. Because of these soil conditions, the Contractor claims the costs of the investigation, redesign, construction and attendant delay associated with, and required for, foundation redesign. In addition to 67 days of compensable delay, Amelco seeks remission of liquidated damages which were assessed by the VA. The total amount sought is \$273,837.

The Government denies that there was a changed condition or that it in any way consented to pay Appellant for any foundation work beyond that which was depicted on the contract drawings for Sites A and B, or upon which the Contractor bid or planned for Sites C through F. To the contrary, the VA contends that the Contractor was derelict in not having properly investigated the site before bidding. The VA argues that because this project was located in an earthquake fault zone, it was incumbent on any prospective bidder to acquaint itself with the local soils characteristics before bidding on a particular foundation system. The VA further contends that any ambiguities between the various drawings relating to the type of foundations required were patent, requiring a pre-bid inquiry by Appellant. It attributes the Contractor's added costs to inexperience and mistaken judgment concerning how to bid a project such as this.

A hearing was held in San Francisco, California. Witnesses testifying on behalf of the Appellant were: Edward J. Miller, Amelco's chief estimator; Robert J. Merriam, Amelco's project manager; James T. Miller, Amelco's field superintendent; Dan Thomas, vice president of Amelco's Los Angeles office; Robert W. Magoon, Jr., vice president of

Amelco's San Leandro office; William J. Rowan, owner of Inter Mountain Engineering; James R. Miller, owner of J. R. Miller & Associates. Testifying on behalf of the Government were: Melba M. Cato, the contracting officer (CO); Charles Goodenough, the contracting officer's technical representative (COTR); Jack E. Hampson, former director of construction for Scotsman Buildings; William P. Dasher, owner and principal of DASSE Design, Inc.; William J. Rogers, president of Modular Constructors.

The evidentiary record includes the five volume hearing transcript (Tr. I-V). In addition to the transcript, the Board bases its decision upon the Government's Rule 4 file (R4, tabs 1-73 and 113-33), Appellant's supplement (R4 Supp., tabs 74-112), as well as several hearing exhibits (Exhs. G-1 through G-4; Exh. A-2; Exh. B-1). Both entitlement and quantum were litigated. Counsel for the parties have filed thorough and helpful briefs in the matter.

Because the witnesses often used different terms in referring to similar structures, it is helpful to provide a limited glossary. The individual *modular trailers* which contribute to the building complexes measure 12 feet by 60 feet, and are sometimes referred to as *units* or *frames*. The *footings* are the reinforced concrete structures which are placed on compacted earth, serving as the bases for support mechanisms such as walls of hand laid *masonry block units* or *wood shear walls* composed of studs covered on both sides with exterior grade plywood siding. The footings may also be used as bases for individual adjustable *steel piers* - similar to jackstands. The exterior *perimeter* piers are stabilized by the use of cables extended to *earth anchors* of some type - often an auger device "screwed" into the earth to provide lateral stability. The combined earth anchor and cable, to the point of attachment to the structure, is referred to as the *tie-down*. The interior piers may rest either on unreinforced *concrete pads* or on treated *wood pads*, both of which are placed on compacted earth. These interior piers support the trailer floors and prevent sagging and associated problems such as utility disconnections. After the trailers have been properly positioned, these *isolated* interior piers are adjusted so that the trailer floors are level. The term *foundation* refers to all structural elements upon which individual trailers rest - everything between ground and trailer. This would include the footings with walls or piers.

FINDINGS OF FACT

On February 21, 1991, the VA issued an Invitation for Bids (IFB) for Project No. 640-042, titled "IMPACT TRAILERS," at its Palo Alto, California, Medical Center (Palo Alto VAMC). The project was described in the IFB as follows:

All work necessary including but not limited to all labor, tools, equipment and materials, to construct six (6) each one story trailer complexes consisting of one (1) each approximately 15,480 square feet **SITE "A"** (Audiology, Chapel, Waiting/Conference Lounge, Library, Recreation, Voluntary Services); one (1) each approximately 6,800 square feet, **SITE "B"** (Canteen Service) with 320 square foot lounge; one (1) each approximately 2,880 square feet **SITE "C"** (Biomedical Service Offices/work space); one (1) each approximately 1,440 square feet, **SITE "D"** (Dietetics Service) with approximately 1,200 square feet of 10 degree F. walk-in freezer space and 2,240 square feet of 34 - 36 degree F. walk-in refrigerated space and 880 square feet

of non food storage; one (1) each approximately 720 square feet, **SITE "E"** (Credit Union); one (1) each approximately 2,880 square feet, **SITE "F"** (Recreation Service Activities). Construction to include all earthwork, concrete work, steel and wood frame construction, roofing, interior construction and finishing, mechanical, electrical, plumbing, architectural work, telephone outlets, fire alarm system, intrusion alarm system and other miscellaneous items required by Drawing Number 1281, Sheets 1 through 24 and Contract Specifications. Contractor to extend all utility services, and fire alarm system 10 feet beyond trailer limits as indicated on contract drawings . . . The following items and services to be provided by others: landscaping and all utilities to be provided within ten (10) feet of site by others.

Notwithstanding the inclusion of "all earthwork" within the scope of this project, the VA in fact let a separate contract for the final grading and compaction of engineered fill at Site A with another contractor, Echo West. Because Echo West had been contracted to erect prefabricated buildings on a site immediately adjacent to Site A, the VA included the Site A grading within the scope of that firm's contract. (Tr. II/62-63)

The IFB and resulting contract's General Conditions (GC) contain the usual clauses required by the Federal Acquisition Regulations (FAR), including

GC-26, DIFFERING SITE CONDITIONS (FAR 52.236-2, APR 1984), and GC-27, SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (FAR 52.236-3, APR 1984). The latter clause states, *inter alia*, that:

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and *that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to . . . the conformation and conditions of the ground . . .* The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government. (emphasis added)

The contract General Requirements, at GR-5.A, PHASING AND OPERATIONS, specify that the:

Contractor shall furnish the Contracting Officer with a schedule of approximate dates on which Contractor intends to accomplish work in each specific area of site or portion [t]hereof. In addition,

Contractor shall notify the C.O.T.R. two weeks in advance of the proposed date of starting work in each specific area of site or portion thereof. Arrange such dates to insure accomplishment of this work in successive phases mutually agreeable to the C.O.T.R. and the Contractor.

Contract Drawing No. 1281, Sheet 2 is the SITE PLAN, showing the six trailer sites rather widely dispersed around the campus of the Palo Alto VAMC. In addition, Sheet 2's SITE DESCRIPTION references four of the contract drawings (Sheets 5, 7, 8 & 9) for details on the six sites. Additional information is provided regarding the numbers of trailers per location: Site A, 22 trailers; Site B, 9 trailers plus 1 toilet trailer; Site C, 4 trailers; Site D, 1 trailer; Site E, 9 reefer trailers and 2 office trailers; Site F, 4 trailers. Sheet 6 contains typical walkway and elevated ramp details for the trailer complexes. On the several sheets depicting the trailer buildings, all are shown to have elevated ramps and/or steps for access.

Drawing Sheet 5 is titled FOUNDATION PLAN. Two DETAILS are depicted on the bottom of this drawing. Detail 1 shows a vertical structure constructed of 6" x 8" x 16" concrete blocks and resting on a below-grade continuous reinforced concrete footing one foot deep and two feet wide. A note at the top of this block "stem wall" reads: "CONTRACTOR TO FURNISH & INSTALL TRAILER HOLD-DOWN & ANCHOR BOLTS (TYP.)." DETAIL 2 shows Contractor-furnished interior trailer piers, which are to be embedded in isolated subgrade concrete footings after "trailer support is set." Section A of the drawing shows the outline of the FOUNDATION PLAN for the Site A structure, which is to house the various activities described by the specifications. It is by far the largest complex, encompassing 15,480 square feet. At two locations on the left side of the foundation outline, there are arrows indicating that the foundation is to be composed of 6" Concrete Blocks. One of the arrows points to a note that reads: "6" x 8" x 16" CONCRETE BLOCKS (TYP.)." Within the Site A building's outline, another Note reads: "INTERIOR SUPPORT JACK LOCATIONS AS PER MANUFACTURER'S REQUIREMENTS, SEE DET. 2." Detail 2 shows a typical triangular adjustable steel pier which is to be placed beneath the interior area in accordance with the particular trailer manufacturer's requirements, and filled with unreinforced concrete after the trailer support is set.

Drawing Sheet 7 is titled FOUNDATION SECTION. This drawing shows the foundation plan for the Canteen at Site B. This drawing also contains a Detail showing a block foundation wall on a continuous reinforced concrete footing, as well as a Plan View of the Canteen foundation with arrows to a Note indicating that it is composed of "6" CONCRETE BLOCK WALL TYP." There is a separate view of the Toilet trailer that does not depict the foundation (or footings) on which it is to rest.

Drawing Sheet 8 contains the foundation plan views for three complexes: Recreation Services at Site F, Biomedical Engineering at Site C, and the Credit Union at Site D. The drawing contains no detail of any particular type of support structure (walls, piers, etc.) for the three trailer complexes at these sites, although footings are shown. There are no notes adjacent to the plan views indicating the type of foundation which is to support each of the trailer complexes. There is a Note 2, which reads: "FOR REINFORCED CONCRETE INFORMATION SEE DWG. NO. 5." The reinforced concrete on Sheet 8

was in depicted in plan view as the perimeter foundation footings for the three building complexes. (Tr. I/46, 50-53)

Drawing Sheet 9 contains the FOUNDATION PLAN for the Dietetics Service building and reefer complex at Site E. As with Sheet 8, this drawing contains neither details nor notations concerning the particular type of structural support system for the building complex on this site. This drawing also has a note referencing Drawing Sheet No. 5, for information on reinforced concrete work. Sheet 9 depicts reinforced concrete footings only for the adjoining large office building. The reefer complex itself is depicted above four inches of asphalt concrete over a six inch aggregate base, on grade after ten inches of excavation. (Tr. I/46-47)

There is no dispute concerning the requirement that all buildings shown on the drawings for the six sites be elevated. All drawings show ramps and stairs accessing the trailer complexes. Moreover, the code requirements governing this project call for an 18 inch crawl space beneath the floor joists of the buildings. (Tr. I/65)

Bids were opened on April 17, 1991. Amelco submitted the low bid of \$2,996,896. Altogether, there were six bids submitted. None of the six bidders, nor any other business which might have been interested in bidding, made any prebid inquiry concerning the type of foundations to be constructed at Sites C through F. The director of construction for one unsuccessful bidder (Scotsman Buildings, second lowest at \$3,017,598) testified that he had seen an ambiguity with respect to foundation walls for four of the sites. However, he resolved the "ambiguity" by pricing concrete block foundation walls for all six sites. He stated that he purposely did not raise this "ambiguity" with the VA because he did not wish to give any competitive advantage to any of the other bidders. He also admitted that he possessed information concerning site characteristics which were not readily available to other bidders. Because his firm previously had built several trailer structures for the VA at Palo Alto, it was uniquely familiar with the area. (Tr. IV/11-12, 41-42, 81)

Although the VA received several letters with technical inquiries from potential bidders, none of them raised questions concerning trailer support systems for Sites A through F. (R4, tabs 1-3)

Amelco's chief estimator for this project, Mr. E. Miller, testified that his firm had not based its bid on any subcontractor price quotes. Instead, Amelco relied upon his independent estimate for all categories of costs involved in this work. It was only after contract award that Amelco solicited price quotes from potential subcontractors. (Tr. I/33-35)

Amelco's estimator, based on his examination of the contract drawings, had priced the concrete block walls on reinforced concrete perimeter foundations for all of Site A and for Site B with the exception of the toilet trailer. He saw no ambiguity or discrepancy in the lack of specific foundation wall notes with respect to Sites D through F. Instead, he interpreted the absence of any such specific information as a direction to the Contractor to determine the type of trailer support systems to install at those four sites (and beneath the toilet trailer). He was not sure why the VA would call for block walls on two sites but not on four others. He thought that it might have had to do with the "concentration of

people" expected to be using the buildings on Sites A and B. Because a system of "piers and pads" - actually, adjustable jacks on individual treated wood pads - was less expensive than the concrete block walls, the estimator priced a pier and pad system for the Site B toilet trailer. (Tr. I/38-45, 48)

On Sites C, D, and F, the foundation would consist of piers and pads installed on the reinforced concrete footings depicted on the drawings. Because the drawings did not depict the footings running completely around the outside perimeters of these sites, Appellant bid piers to rest on treated wood pads in the "gaps" in the perimeter footings as shown on the plan views. All of the *interior* support jacks would be placed on treated wood pads resting on compacted soil. The precise numbers, locations and spacing for these interior piers would have been determined by the Contractor and its set-up subcontractor after consulting with the trailer manufacturing subcontractor. (Tr. I/45-46, 48)

Only piers *on pads*, for both perimeter and interior support, were priced for the reefer trailer complex at Site E, where these elevated trailer units were shown to be installed over 4 inches of asphalt concrete on a 6 inch aggregate base, with no concrete footings depicted to be constructed, except for the stand-alone dietetics office. (Tr. I/46-47)

In the experience of Amelco's estimator, such a system of adjustable piers on footings with tie-downs was adequate to withstand the lateral forces which might be imposed during a major earthquake. Amelco had previously used such a system in the Los Angeles area, which is classified as a seismic Zone 4 -- the same as the Palo Alto area. The Contractor was aware that the purpose of these "Impact Trailers" was to house various activities that were then housed in buildings damaged by the Loma Prieta Earthquake in 1989. (Tr. I/36, II/80)

In computing Amelco's bid estimate, Mr. E. Miller had added up the total linear footage for each overall building complex "footprint" wherever the drawings called for reinforced footings. From these figures, he determined the number of blocks per site and applied a unit price to arrive at a total cost for labor/materials for that item (at Sites A and B only). He converted the linear feet to cubic yards to calculate the costs of excavation and placement of reinforced concrete. Although he calculated the linear footage of rebar, the estimator failed to apply any price to these items on any of the site estimate sheets. For Site E, the reefer complex, in addition to calculating the costs of reinforced concrete footing for the dietetics office, Miller calculated the square footage beneath the reefers themselves and applied a unit price for asphalt, as the drawing required. For all six of the trailer complexes, Miller applied a uniform figure of \$1,098 for set-up cost per trailer unit. For example, at Site F, where four trailers were required, the total set-up cost was estimated at \$4,392 (4 x \$1,098). Miller stated that this trailer set-up cost had been recently experienced in two other projects constructed by Amelco. He further testified that it was "an industry standard" for the set-up subcontractor to provide and install the piers and pads. (R4 Supp., tab 75; Tr. I/49-54)

Amelco made no arrangements to conduct a site visit because its estimator had previously priced and installed a pier, pad and tie-down support system for another modular trailer project. This project had been satisfactorily constructed at a wastewater treatment facility in the Los Angeles area in the same seismic zone as Palo Alto, in

normal soil conditions. Since the Contract implicitly indicated that the soil conditions were normal, the estimator based its bid on its prior experience and what was depicted in the plans. (Tr. I/37-51, 81-84)

The VA awarded the contract to Amelco, at its bid price, on June 3, 1991. The contract contained a Liquidated Damages provision. The sum of \$500 was to be assessed the Contractor for each day of unexcused delay beyond the completion date. The Notice to Proceed was acknowledged by the Contractor on July 1, 1991. This established a completion date of September 29, 1991 for this 90 day project. Contract change orders issued by the VA (unrelated to this dispute) extended the contract completion date by 67 days, through December 5, 1991. (R4, tabs 4, 7 & 130; Tr. III/53, 144)

Amelco subcontracted with Scotsman Buildings (Scotsman) for construction of the trailer modules. Scotsman had submitted the second lowest bid for the Palo Alto project. The first Scotsman shop drawing submittals to the VA, dated July 15, 1991, were for the Dietetics Service building complex on Site E, and the Biomedical Engineering building on Site C. On July 23, 1991, Mr. Goodenough, the COTR, prepared the VA's comments on this submittal. Relevant to this appeal was the following comment, which applied to both sites: "Scope of Work is not complete. Examples (1) Trailer Foundation Walls, (2) Intermediate Interior Trailer Foundations (Piers), [etc.]" (R4, tab 10)

At a meeting held on July 31, 1991, representatives of the VA and its Contractor met at the job site. During the course of their discussions, Amelco's Field Superintendent, Mr. Jim Miller, stated that his firm only intended to construct block foundation walls for the trailer complexes on Sites A and B, in compliance with the contract drawings. COTR Goodenough told him to put his questions about foundation requirements "in writing." (R4, tab 11)

On August 1, the COTR forwarded comments on Amelco's 100% submittals for Sites A and B. With respect to both of the sites, the COTR noted that the foundation drawings and loading calculations were required to be stamped and approved by a Professional Engineer. Regarding the Site A buildings, the COTR noted that "[I]ack of foundation/pier spacing data continues to be of concern." (R4, tab 12)

Mr. Magoon, another of Amelco's vice presidents assigned to prepare the construction schedule for this project, sent a letter of August 1 to the CO, Melba Cato. He reiterated the position taken by Mr. Miller during his July 31 site meeting with the COTR. He stated that "no perimeter foundation is shown for" the toilet trailer on Site B, nor for any of the buildings depicted on Sites C through F. Mr. Magoon noted that the VA wanted masonry block walls at all of the above-mentioned sites, where Amelco considered none to be specified. He asked that the VA "provide details as to what is requested for accurate pricing," by August 9 to avoid an impact on progress. (R4, tab 13)

The COTR was on annual leave from August 1 until on or about August 13 when a meeting was held with Amelco representatives. At that time, both the CO and the COTR were persuaded that the drawings were ambiguous with respect to foundation requirements for four of the sites. After dropping their insistence on block foundation walls for *all* of the building sites, the VA officials informed Amelco that it was free to

submit the block walls at sites A and B, and pads, piers and tie-downs at the other four sites. This was in accordance with the manner in which the Contractor, according to its representatives, had interpreted the drawings and bid this project. Mr. Thomas assured COTR Goodenough that a submittal package for the pier system could be assembled quickly since Amelco had recently completed such a foundation system for modular buildings on a Southern California project. (Tr. II/79-80)

Mr. William Rogers, the President of Modular Constructors (MC) had furnished a price quote for a trailer set-up subcontract to Scotsman. After bids were opened, Amelco negotiated with Scotsman to supply the impact trailers. The subcontract transmitted by Scotsman contained a revised total price of \$1,540,000. The subcontract's scope of work clearly indicated that foundations were the responsibility of the Prime Contractor. The subcontract was signed on July 25, 1991. (R4 Supp., tabs 76, 83)

Amelco had assumed that the trailer manufacturer would also provide the detailed engineering design for the "trailer support systems" (layouts of piers/pads and foundations). In a letter of July 23, 1991, Scotsman's Manager, Jack Hampson, advised Mr. Merriam that his firm would provide information on the structural loads, but would not design foundations. Mr. Hampson further stated that: "Information given to you in the contract documents by VAMC is not sufficient to build from. Additional design work is necessary to complete the project." However, Scotsman subsequently agreed to provide foundation designs on a time and material basis, not to exceed \$10,000. Mr. Merriam confirmed the agreement in a letter dated August 6, 1991. However, when Merriam saw what Scotsman was drafting he was dissatisfied and told the firm not to proceed further. (Tr. I/192-95; R4 Supp., tabs 80, 84)

Scotsman had contacted Mr. Rogers to see if his firm was interested in doing the set-up work for Amelco. Thereafter, Mr. Rogers contacted Amelco's Mr. Merriam to indicate that Modular Constructors was willing to do this work. Rogers then faxed a proposal totaling \$694,964 to Merriam on August 1, 1991. (Tr. V/34-38; R4 Supp., tab 82)

According to Mr. Rogers, Merriam had told him that Amelco had left out part of the foundation costs in its bid and that he was worried about losing money on the project-and its reflection on Merriam personally. Mr. Merriam was not clea