ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of --	)	
	)	
Kaco Contracting Company	)	ASBCA No. 44937
	)	
Under Contract No. N62467-87-C-0085	)	

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OPINION BY ADMINISTRATIVE JUDGE COLDREN

This appeal was taken by Kaco Contracting Company (appellant) from a final decision of the contracting officer denying appellant's claim in the amount of $1,096,143. The claim is for alleged delay and extra costs under a construction contract resulting from errors and omissions in the site work design drawings allegedly omitting trees to be removed (C), improper interpretation of soil compaction (D) and step tie beam (E) requirements, failure to timely demolish overhead electrical pole system (F), reduced production rates in the excavation of Lake No. 2 (G), errors and omissions in the structural steel (H), delays in installing Government Furnished Government Installed (GFGI) equipment (I), errors and omissions in the intrusion detection system (IDS) (J), and standby costs to redesign area west of Felton Road (K). Appellant alleged a 289-day delay, of which 123 days were accelerated, leaving 166 days of actual delay. A nine day hearing was held in Orlando, Florida, on the issues of entitlement and quantum.

FINDINGS OF FACT

A. The Solicitation and Contract

1. On 12 May 1989, the Naval Facilities Engineering Command, Southern Division (Government), issued an invitation for sealed bids for the construction of a Commissary and Exchange building (project), Naval Air Station, Key West, Florida (R4, tab 1). The solicitation included the contract specifications and drawings. In the Instructions to Bidders, the solicitation provided three days for site visits by appointment. (R4, tab 1)

2. On 27 June 1989, appellant submitted its bid and was awarded the contract on 20 July 1989. Appellant provided performance and payment bonds from Hartford Accident & Indemnity Company (Hartford) dated 20 July 1989 (R4, tab 2). On 4 August 1989, the pre-construction conference was held. Shortly thereafter, appellant mobilized to the site and began work on 7 August 1989. (R4, tabs 1, 17, 255)

3. The contract work was divided into three phases. Phase I consisted of completing all work necessary to "provide, finish, and secure" the building within 340 consecutive calendar days after the commencement of work date, computed starting 15 days after the date of award. Phase II was a 45-day period during which appellant would undertake and complete all work necessary to finally connect Government furnished equipment. Phase III consisted of a five-day period for the installation of the emergency generator and contract close out. The time for completion of the entire project was 390 consecutive calendar days, excluding turf and plant establishment periods. The contract specified that liquidated damages be assessed against appellant for each calendar day of delay, as follows: Phase I: $2,025; Phase II: $203; and Phase III: $22. It further provided that:

> [i]f an event occurs which under the contract clauses warrants a time extension, the Contractor shall submit a revised order of phasing the construction. If the revised order of phasing the construction is accepted in writing, it will be the official order of construction for all purposes. In no event shall use of any specified phased order of construction mean that the Government assumes in any way control or direction over performance of work on the project.

(R4, tab 1 at Amendments 0001, 0002, § 01011 at ¶ 4)

4. The contract award document established the completion dates as 10 July 1990 for Phase I, 24 August 1990 for Phase II, and 29 August 1990 for Phase III (R4, tab 1).

5. The contract included the following standard Federal Acquisition Regulation (FAR) clauses: TIME EXTENSIONS (FAR 52.212-6, APR 1984); SUSPENSION OF WORK (FAR 52.212-12, APR 1984); DISPUTES (FAR 52.233-1, APR 1984); DIFFERING SITE CONDITIONS (FAR 52.236-2, APR 1984); SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (FAR 52.236-3, APR 1984); MATERIAL AND WORKMANSHIP (FAR 52.236-5, APR 1984); SCHEDULES FOR CONSTRUCTION CONTRACTS (FAR 52.236-15, APR 1984); SPECIFICATION AND DRAWINGS FOR CONSTRUCTION (FAR 52.236-21, APR 1984); CHANGES (FAR 52.243-4, AUG 1987); INSPECTION OF CONSTRUCTION (FAR 52.246-12, JUL 1986); WARRANTY OF CONSTRUCTION-ALTERNATE I (FAR 52.246-21, APR 1984); and DEFAULT (FIXED PRICE CONSTRUCTION) (FAR 52.249-10, APR 1984).

6. The contract also included Department of Defense FAR Supplement (DFARS) clause 252.236-7002, CONTRACT DRAWINGS, MAPS AND SPECIFICATION (SEP 1987) by reference and in full text at § 01011-8, ¶¶ 8.1 and 8.2:

> 8.1 Omissions: Omissions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or mis-described details of the work, but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.
>
> 8.2 Notification of Discrepancies: The Contractor shall check all drawings furnished him immediately upon their receipt and shall promptly notify the Contracting Officer of any discrepancies.

(R4, tab 1 at §§ 01011-2, -8) Specification § 01011, ¶ 18: "Progress Charts and Equipment Delivery Schedule" stated in pertinent part:

18.1 Progress Charts: The Contractor shall, within 15 days after receipt of Award, prepare and submit to the Contracting Officer for approval a practicable construction schedule in accordance with clause entitled "Schedules for Construction Contracts" of the Contract Clauses except as modified herein. The schedule shall be in the form of a progress chart on Form 6ND-SOUTHDIV-4355-1. The Contractor shall maintain current with each submittal, at least the following information:

a. The various classes and areas of work, broken down into:

(1) Times projected for submittals, approvals, and procurement;

(2) Times for installation and erection;

(3) Times for testing and inspection.

b. The work completed and the work remaining to be done to complete the project.

c. Any items of work which will delay the start or completion of other major items of work so as to delay completion of the whole project.

. . . .

18.3 The Contractor shall update the progress chart . . . at monthly intervals or at intervals directed by the Contracting Officer. The revised documents shall reflect any changes occurring since the last updating.

. . . .

> 18.5 Network System: Optionally, the Contractor may use the "CPM" (Critical Path Method), the "PERT" (Program Evaluation and Reporting Technique), or, subject to approval of the Contracting Officer, some other system which will give similar and equal information and control to that provided by the named systems, in lieu of the progress charts specified above. The use of one of these methods shall be subject to the terms of clause entitled "Schedules for Construction Contracts" of the Contract Clauses.

(R4, tab 1 at §§ 01011-13)

7. Ensign (ENS) Charles Smith was the Government's Assistant Resident Officer in Charge of Construction (AROICC) from the inception of this contract until June 1990, at which time he was replaced by ENS Ray Green. ENS Smith reported to Lieutenant Commander (LCDR) George Eichert, the Resident Officer in Charge of Construction (ROICC), the contracting officer for purposes of changes. (Tr. 4/11-12) Ms. Wendy J. Warren was a contracting officer in the latter stages of the contract. Mr. Russell was the designated construction representative for the Government. He submitted daily Construction Representative Reports (CRR) in evidence at R4, tab 261. ENS Smith and Mr. Russell testified for the Government at the hearing, as did Mr. Daniel Brown, project manager for appellant during the majority of the project.

8. Appellant's president and vice president during this construction project were Mr. Richard J. Coble and Mr. Robert E. Lacey, respectively (tr. 3/38, 132). They visited the site periodically during contract performance and testified at the hearing. Mr. Mickey Cameron was appellant's Contractor's Quality Control Representative (CQCR). Mr. Cameron did not testify (tr. 9/11), but his Contractor's Quality Control Daily Reports (CQCDR) are in evidence (R4, tabs 258-60). Mr. Robert D. Frasier was a consultant for appellant during contract performance, and testified for appellant at the hearing. Mr. Daniel Brown was appellant's on-site project manager. He was in charge of the overall project, all submittals, submittal review, documents for beginning the project (such as the schedule of values), scheduling subcontractors, supervision of appellant's personnel on-site, and certified payrolls. He was also designated as assistant vice president in order to submit payment requests and to negotiate with the Navy. He submitted Daily Reports to Inspector (DRI) detailing the progress on the project, in evidence at R4, tabs 255-57. Appellant fired Mr. Brown on 20 April 1990 and he left the site that day. (Tr. 7/5-8, 15-16; R4, tab 11)

9. On 14 and 17 February 1990, the parties executed bilateral Modification Nos. P00010 and P00011 extending the contract completion dates by a total of five calendar days to 15 July 1990, 29 August 1990 and 3 September 1990 for the respective phases. On 6 August 1990, Hartford took over managing the performance of the contract at appellant's request (R4, tab 244 at ¶ 7). On 31 August 1990, the Government took beneficial

occupancy (BO) of the site and on 13 September 1990 there was a "grand opening" of the new facility. Bilateral Modification No. P00034, signed by the Government and Mr. John McClellan, Jr., Bond Claims attorney, Hartford, extended the completion date to 15 October 1990. (R4, tabs 1, 212)

B. Appellant's Claim, Notice of Appeal and Pleadings

10. On 14 December 1990, appellant submitted a request for equitable adjustment (REA) of $1,096,143 to the contracting officer. Appellant certified the REA as a claim on 17 June 1991 and requested a contracting officer's final decision. The claim included two "PERT" schedules, one for the building and one for the sitework (R4, tab 4). Each PERT schedule contained an "As Planned," "As Built," and "Bar Chart of Concurrent Delays" or "Bar Chart of Delays" section. Appellant's REA stated that:

> [n]o attempt has been made to follow each activity on the original CPM. The [Building PERT] focuses on six (6) areas of delay impact that produce the overall project delay. A similar review technique used on the Sitework portion is divided into eight (8) major areas.

(R4, tab 5) The six delay areas on the building PERT were structural steel, roof and ductwork, interior finishes, GFGI, building completion and IDS, for a total of 289 days delay. Elsewhere on the building PERT, appellant indicated that the overall project delay was 166 days, evidently calculated from a projected early completion date of 31 March 1990 to the grand opening on 13 September 1990. The delay areas on the sitework PERT were utilities (97 days), trees (15 days), soil compaction (3 days), sitework production (equipment delay, lost earnings due to failure to "timely" correct design errors) (259 days), reduced production excavating Lake No. 2 (79 days), and reduced production working under and around energized overhead power lines (278 days). (R4, tabs 4, 5, 7) Appellant did not present documentary evidence or testimony on the issues relating to the 97-day, 259-day, and/or the roof, ductwork, and interior finishes delay areas or address them in its post-hearing brief, with the exception of the design error at Felton Road and the housing office, and we deem them abandoned with that exception.

11. Appellant's claim alleged that the difference between the 289 days of total delay with respect to the building and the 166 days of actual delay was due to appellant's overtime and acceleration. The claim included a "Damage Summary:"

1)	Job Overhead	$ 251,656
2)	Home Office Overhead	368,852
3)	Equipment	190,402
4)	Balance, Tree Claim	90,543
5)	Step Tie-Beam	3,925

6)	IDS System	12,257
7)	Disruption Costs	98,468
8)	Overtime	21,876
9)	Loss of Production	13,125
10)	Added Supervision	30,433
11)	Added Living Expense	6,592
12)	Soils Compaction Added Cost	8,014
	TOTAL	$1,096,143

Premise of Damages:

(1)	Defective Plans & Specifications	
(2)	Kaco Planned Early Finish	
(3)	Total Delay	289 Days
(4)	Actual Delay	166 Days
(5)	Acceleration	123 Days

Appellant calculated job overhead, home office overhead, and equipment based on a daily rate for 166 days (R4, tab 5).

12. The contracting officer denied the claim in a final decision dated 5 May 1992. This timely appeal followed. (R4, tab 14)

C. Extra Trees Claim

13. Drawing C-3, "Demolition Plan," depicts the project site and what trees were to be removed on that site (R4, tab 128 at C-3). This drawing had a "LEGEND" in its lower left hand corner which indicated that an existing "TREE" is a symbol having an appearance of a cloud and that an existing "TREE" to be removed is the same cloud symbol with an "X" drawn through it (*id.*). Sixty-five clouds were depicted with "X's" drawn through them, followed by a number in feet with a "theta" symbol (*id.*). A "theta" symbol is a small circle with a line drawn through it, which represents the diameter of the tree (tr. 3/98, 150, 7/31). Four types of trees, Florida Holly, Australian Pine, Ficus, and Sea Grape, are shown at various locations from which arrows flow to one or more clouds to identify the type of tree represented by each cloud.

14. Of the 65 clouds, 49 are 2.5 feet or less in diameter with the smallest being 0.9 feet in diameter (R4, tab 128 at C-3). Two have diameters that range from 2.5 to 5 feet (*id.*). Seven of the 14 remaining clouds have the word "(cluster)" marked after the diameter indication. "Cluster" is not defined in the contract. Two are 10-foot clusters with one being labeled Ficus and the other Sea Grape. Another two are 20-foot clusters with each cluster being marked Florida Holly. Still another two are 40-foot clusters with each cluster being labeled as Florida Holly. One of the 40-foot clusters has a lone Australian Pine depicted at its edge. The one remaining is an 80-foot cluster being marked Australian

Pine. The remaining seven clouds have diameters between 6 and 24 feet but are not designated as "clusters." One is six feet in diameter and labeled Australian Pine. Another is 10 feet in diameter and marked Australian Pine. Two are 12 feet in diameter with each labeled as Australian Pine. Another two are 15 feet in diameter with one marked as Australian Pine and the other as Florida Holly. The final one is 24 feet in diameter and labeled as Sea Grape.

15. Appellant did not conduct a site visit prior to submitting its bid even though a "Conditions Affecting the Work" clause warned bidders to do so (tr. 3/133). This clause warned:

> Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Failure to do so will not relieve bidders from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Government will assume no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of the contract, unless included in the invitation for bids, the specifications or related documents.

(R4, tab 1 at § 00101, ¶¶ 2, 3)

16. Appellant's president testified that he prepared the tree removal portion of appellant's bid, interpreted drawing C-3 as indicating that each cloud depicted represented one tree to be removed, and counted 64 clouds which equals 64 trees to be removed (tr. 3/46, 50-51, 102; ex. A-9). He testified that a "cluster" means a grouping of something in that area, but that C-3 does not indicate whether more than one tree was within those clusters, although there could be (tr. 3/100, 102). Appellant's vice president also testified he prepared the tree removal portion of appellant's bid but differed with appellant's president by indicating that a "cluster" refers to more than one tree (tr. 3/148-52). Appellant's president supported his view that each cloud was a tree by noting that the labels for the clouds indicating the type of tree, such as "Australian Pine," were singular, including the 80-foot cloud marked as a "cluster" (tr. 3/97-100; finding 14). In any event, no evidence was presented as to how many trees a reasonable contractor should have included in its bid for the larger than six feet unmarked clouds and the 10 feet or larger clouds marked as "clusters".

17. Appellant's vice president testified that he was somewhat familiar with Australian Pines from his work on this project and did not think he had ever seen one with a diameter of more than five feet (tr. 3/150-51).

18. At some point between 27 July and 9 August 1989, appellant discovered that there were more trees on the project than it believed were reflected on the plans. Its president counted over 120 trees. (Tr. 3/47-48, 57-58, 105) Since appellant's president was returning to Orlando, he asked appellant's vice president to verify the actual locations and diameters (tr. 3/105). Appellant's vice president testified that he counted the trees, but that at the time of the hearing, he could not tell how many there were (tr. 3/137).

19. Appellant's president also instructed appellant's project manager to count and document the extra trees beyond those shown on the drawings (tr. 7/19). He took pictures of the trees on the site on 8 August 1989, but was unable to document them with photography accurately because they were not labeled or organized prior to tree removal (tr. 7/28, 34, 156-57). These photographs are not a part of the record. Appellant's project manager presented a large scale drawing of the trees on the site, based on these unreliable pictures, to the contracting officer in early 1990 as evidence of the extra trees. By the time of the hearing, this drawing was so faded as to be unreadable, and we find it to be of no evidentiary value. (Ex. A-13; R4, tabs 35, 38; tr. 7/34, 156-57, 161)

20. The "cluster" sites contained more than one tree, including 12 to 15 trees at the 80-foot "cluster" site (tr. 7/29-30). In addition, 8 to 10 Australian Pines were at one of the locations marked on drawing C-3 as a single 12-foot diameter Australian Pine; no Australian Pines with a diameter of 12 feet were located on the site (tr. 7/29-32). Other than vague general statements that there were more than 120 trees and the approximate number of trees at two sites, no evidence was included in the record as to the number, location, size, and kind of these additional trees. In a letter dated 17 January 1990, appellant admitted that it did not keep records distinguishing trees depicted on C-3 and extra trees not shown (R4, tabs 33, 45).

21. The first DRI indicating tree clearing is dated 10 August 1989; noting that appellant "[d]elivered Trailer & Hauled Logs Orlando." Tree clearing continued from time to time until 6 December 1989. (R4, tabs 255, 256)

22. Appellant's project manager notified the Government AROICC sometime between 14 and 18 August 1989 that there were trees in the northeast and southeast corners of the project site where no trees were shown on the drawing C-3 (tr. 4/46-48, 7/32-33). On that date, they walked the site and agreed that there were 10 additional trees in the northeast corner at the projected retention pond site (Lake No. 2), additional shrubs in the southeast corner at a second projected retention pond site (Lake No. 1), and one additional tree just outside of the Lake No. 1 area (*id.*). ENS Smith made a rough sketch and measured the diameters of each of the 11 trees, which ranged from 1 to 2.9 feet (*id.*). This notification did not address the alleged additional trees in the remainder of the site, specifically, in the 14 "cluster" and non-cluster clouds in excess of five feet (*see* finding 14). The AROICC also observed, and we find, that appellant using its heavy equipment had

turned over approximately 15% of the trees as of this date, with some removed from the site. (R4, tabs 44-45, 128 at C-3; tr. 4/51-56, 67-68, 72-79, 7/36-41)

23. On 16 August 1989, appellant submitted its demolition plan for approval purportedly before demolition commenced which indicated that approximately 100 trees in varying sizes were to be removed from the project site (R4, tab 19). Nothing in that demolition plan indicated that extra work beyond the contract terms was to be performed. This plan was approved by the AROICC (*id*.).

24. On 21 August 1989, the Government issued unilateral Modification No. P00001, directing appellant to remove the 11 additional trees and the shrubs in the northeast and southeast corners of the project site as shown on an attached copy of drawing C-3, and requesting a proposal by 11 September 1989. The copy of C-3 was annotated with the locations and diameters of the additional 11 trees, and with the location of the shrubs (R4, tab 44).

25. In a letter dated 24 August 1989 which was not received by the Government until 15 September 1989, appellant's project manager disputed unilateral Modification No. P00001, saying: "I also take exception to your tree removal drawing which in no way is representative of the number of trees removed. We have compiled a complete photo record of the 46 additional trees scheduled for removal" (R4, tabs 21, 24; tr. 4/90).

26. On 14 and 17 February 1990 respectively, appellant and the Government signed a bilateral modification (P00011) definitizing Modification No. P00001 by increasing the contract price by $12,241 ($1,112.81 per tree) for removal of the 11 trees and additional shrubs in the northeast and southeast corners of the project site where no trees were shown on the drawing C-3. The modification included a three-day extension of time and a statement of accord and satisfaction. (R4, tab 45) Modification No. P00011 was not intended to address the additional trees claimed in this appeal beyond these 11 (tr. 2/23, 4/89).

27. By a letter dated 6 June 1990, appellant requested a contracting officer's decision to compensate it in the amount of $120,409.67 for 52 additional trees beyond the 11 trees and shrubs (R4, tab 41). In its claim, appellant reduced the amount claimed on 6 June 1990 to $90,543 after deducting the amounts paid by the Government under Modification Nos. P00001 and P00011 plus overhead (R4, tab 5; tr. 2/9, 29, 3/73-74).

Decision: Extra Trees Claim

Appellant claims $90,543, and a 15-day extension of time for removal of the additional trees on the contract site that were not shown on drawing C-3, excluding the 11 trees and three days allowed by Modification No. P00011. This claim raises two questions: first, how many trees were depicted on C-3, and, second, how many trees

appellant actually removed from the project site. Appellant has failed to meet its burden of proving either.

We turn to the first question as to how many trees were depicted on drawing C-3. Appellant argues that each "cloud" of the 65 depicted on C-3 was one tree for a total of 65 trees (findings 14, 16). However, seven of the clouds were marked as "clusters" and ranged from 10 to 80 feet in diameter and another seven were from 6 to 24 feet but not marked as clusters (finding 14). This raises the question as to whether each of these clouds included more than one tree.

In construing a contract, the language of the instrument is given its ordinary and commonly accepted meaning unless it is shown that the parties intended otherwise. An interpretation which gives a reasonable meaning to all parts of an instrument will be preferred to one which leaves a portion of it useless, inexplicable, inoperative, void, insignificant, meaningless or superfluous. *Hol-Gar Manufacturing Corp. v. United States*, 351 F.2d 972, 977, 979 (Ct. Cl. 1965).

As used in drawing C-3, the term "cluster" is used for seven of the larger-drawn clouds. The parties do not dispute that the term "cluster's" plain meaning is, as appellant's president testified, a grouping of something, and we find that the only reasonable interpretation of the clouds with this designation is that there was more than one tree for each cluster. (Findings 13-14) *See* Webster's Third New International Dictionary, Unabridged 430 (1971) which defines "cluster" as: "a number of things of the same kind (as fruit or flowers) growing close together."

Further, appellant, and not the Government, has the burden of establishing that trade custom or practice gives the term "cluster" a special meaning. Appellant has not presented any evidence on this point. *John E. Day Associates., Inc.*, ASBCA No. 43758, 94-1 BCA ¶ 26,337 at 130,999. Indeed, appellant would have us ignore the term altogether in order to support its reading that each cloud is one tree, an outcome which we reject as contrary to the above-stated rules of contract interpretation.

We note that appellant attempts to inject ambiguity into the reading of drawing C-3 by arguing that the use of the singular "Australian Pine," with arrows pointing to various clouds, means that only a single tree exists at that cloud, even if one of those clouds is a "cluster:"

> [V]irtually every cluster . . . refers to a shrub-type cluster rather than a tree cluster. The word "cluster" is nowhere used directly with the word "Australian Pine," and the reference to Australian Pine has arrows drawn to various locations which for the most part are single trees, <u>even when the single tree is at the edge of a cluster</u>.

(App. br. at 15) Appellant is incorrect that the word "cluster" is not used directly with the words "Australian Pine." The words "Australian Pine" are placed with arrows pointing to different clouds, including one designated as a cluster. We find appellant's distinctions strained and an unreasonable interpretation of C-3.

The clouds depicted on drawing C-3 that are not denoted as "clusters," but shown to be six feet or greater present a different issue, but one which we also resolve in favor of the Government. Drawing C-3 erred where it depicted clouds of Australian Pines with diameters six feet or greater, but did not designate each of them as a "cluster" because none of the Australian Pines had a diameter of five feet or greater on the project site (findings 14, 17). In addition, 51 of the clouds were five feet or less (finding 14). All of the clouds marked as "clusters" were 10 feet or greater (*id*.). Six of the seven remaining clouds not marked as "clusters" were also 10 feet or greater (*id*.). A reasonable bidder should have realized that these large clouds contained more than one tree and should have been marked as "clusters."

We find that the failure to mark these clouds six feet or greater in diameter as "clusters" was a patent error. The Contract Drawings, Maps and Specification clause (DFARS 252.236-7002) required appellant to promptly notify the contracting officer of any discrepancies in the drawing upon receipt. The Specifications and Drawings for Construction clause (FAR 52.236-21) likewise required appellant to promptly notify the contracting officer of any discrepancies. Appellant had a duty to inquire about these patent discrepancies and to seek clarification prior to submitting its bid, which it did not do. Appellant therefore bears the consequences of this failure, which here, constitute additional trees to be removed without reimbursement or an extension of time. *Constructora Experta, S.A.*, ASBCA No. 39262, 90-2 BCA ¶ 22,932 at 115,117-18.

Appellant's claim fails for lack of proof as to the number, location, size, and kind of any additional trees beyond those depicted on drawing C-3 (finding 20). All that was proved is that more than 65 trees were depicted on C-3 but without defining exactly how many (findings 13, 14). Accordingly, appellant's claim for the removal of additional trees is denied.

D. Soil Compaction Claim

28. Drawing S-13 depicts all of the footings for the building as being 12 inches deep (R4, tab 128). Note 12 of S-13 is entitled "General Notes" and states:

> All footings designed to bear on compacted soil, with a minimum soil bearing capacity of 3000 p.s.f. Site preparation and foundation work shall follow recommendations in "Report

> of Geotechnical Exploration" dated Oct. 15, 1987 submited [sic] by KBC Consultants Inc.

(*Id.*)

29. The Geotechnical Exploration Report dated 15 October 1987 described the project site as having "silt, and fill soils" "deposited or placed above . . . Miami Limestone" (R4, tab 165 at 2). It further stated that borings indicated that the first three feet of depth were very firm sand and gravelly limestone, the next seven feet were very loose to fine sand with gravelly limestone, and below this to the termination of the borings was moderately hard limestone (*id*. at 2-3). It opined that this site was created by placing fill on the sea bed (*id*. at 3).

30. This report recommended that the Commissary and Exchange be built using shallow foundation construction since most of the project site would be adequate to support the one or two story building after compacting with a heavy, vibratory, compacting roller and removing and replacing those weak areas where it was not with new fill (R4, tab 165 at 3-4). It also recommended that these new fill areas be compacted to 95% for the upper two feet if located where slabs or footings were to be placed (*id*. at 5-6). It further recommended that the geotechnical engineer who was familiar with the foundation design, construction assumptions, and the intent of the geotechnical report, *i.e.*, Mr. Thomas J. Kaderabek, be present for the earthwork construction and, in particular, the excavation and placement of all shallow foundations (*id*. at 6, 7).

31. Section 02221 of the contract specifications is entitled "Earthwork for Structures and Pavements" and states in pertinent part:

> 1.3.1 Backfill: Material used in refilling a cut or other excavation.
>
> . . . .
>
> 1.3.3 Compaction: The process of mechanically stabilizing a material by increasing its density at a controlled moisture condition. "Degree of Compaction" is expressed as a percentage of the maximum density obtained by the test procedure described in [American Society of Testing and Materials Publication] ASTM D 1557 for general soil types abbreviated in this specification as "95 percent ASTM D 1557 maximum density".
>
> 1.3.4 Embankment: A "fill" having a top that is higher than adjoining ground.

. . . .

1.3.6 Fill: Specified material placed at a specified degree of compaction to obtain an indicated grade or elevation.

. . . .

1.3.8 Lift: A layer (or course) of soil placed on top of a previously prepared or placed soil in a fill or embankment.

. . . .

3.1 SURFACE PREPARATION:

. . . .

3.1.2.1 Subgrade Proof Rolling: After removal of topsoil or other overburden, proof roll the existing subgrade with 6 passes of a 15-ton pneumatic-tired roller. . . . Proof rolling shall be done in the presence of the Contracting Officer. *Any putting or pumping shall indicate unsatisfactory material and the material shall be undercut as directed by the Contracting Officer and replaced with the appropriate fill material* [emphasis added].

. . . .

3.5 COMPACTION: Compact each layer or lift of material specified so that the in-place density tested is not less than the percentage of maximum density specified in Table 3.6:

TABLE 3.6

	Percent ASTM D 1557 Maximum Density
Fill, Embankment and Backfill	
Under footings, building slabs, steps, and pavements	95

. . . .

> 3.7 FIELD SAMPLING AND TESTING:
>
> 3.7.1 Samples: Provide the following samples to the CQC and obtain approval before proceeding with the work. Submit one 50-pound composite sample for each 500 cubic yards of subgrade being compacted and fill material being placed.
>
> . . . .
>
> 3.7.2 Tests: Testing shall be the responsibility of the Contractor and shall be performed at no additional cost to the Government. . . . Test fill materials for moisture density relations in accordance with ASTM D 1557. . . . Perform density tests in randomly selected locations and in accordance with ASTM D 1556 as follows: one test per 5000 square feet in each layer of lift. Determine moisture content of soil material in place in accordance with ASTM D 3017 at every location where in-place density is tested. Copies of test results shall be furnished to the CQC within 24 hours of conclusion of physical tests.

(R4, tab 1)

32. Paragraph 2.4 of § 01400 of the contract specifications states that "the only construction authorized to proceed prior to the CQC [Contract Quality Control] Plan being approved is mobilization . . . but does not include . . . performing any permanent work" (R4, tab 1).

33. The large roller to be used to proof roll and compact the site was delivered to the project site on 26 August 1989. The site was leveled in preparation for proof rolling, compacting, and digging of footers on 27 August 1989. Appellant's cement finishers installed forms for concrete footings and leveled ditches for these forms on 28 August 1989 but were warned by the Government construction representative not to place any more of these forms without Government approval of the CQC plan. Additional forms for concrete footings were placed on 29-30 August 1989 over the repeated objections of the Government construction representative that this work should not be performed until appellant's CQC plan was approved. (Tr. 6/74-75; R4, tabs 255, 258, 261)

34. On 31 August 1989, appellant had soil samples taken of the bottom of some of the spread footings. KBC Consultants, Inc. (KBC) performed a Field Density Test

on these samples. The results of these tests, dated 12 September 1989 and signed by Mr. Kaderabek, show that 95% ASTM D1557 is the "% Compaction Specified" and the actual percent of compaction as 93, 97, 94 and 89 percent on the respective samples. (R4, tab 258)

35. On 1 September 1989, appellant poured 272 lineal feet of concrete footings without having provided soil compaction test results to the Government. Appellant's president signed the CQCDR on that date, noting that KBC's Senior Testing Engineer, Mr. Pete Valentino, was present during the test. (R4, tab 258, CQCDR) However, no evidence in record indicates that a geotechnical engineer familiar with the design of the footings was present or that Mr. Valentino was that engineer. The first instance that a geotechnical engineer was present was Mr. Kaderabek of KBC on 8 September 1989 (findings 39, 40).

36. The ROICC and AROICC met later on 1 September 1989 with appellant's president, project manager, and consultant Frasier to express the Government's dissatisfaction with the fact that appellant had poured concrete footers without the Government's knowledge and without compaction test results or an approved CQC plan. Appellant's president expressed annoyance with its project manager and stated that he thought the Government knew about the concrete pour, and that the preparatory tests had been run on the soil. The Government told appellant that the contract required 95% compaction under the footings and to submit a request for equitable adjustment if appellant did not agree. (Tr. 2/206, 208-10, 4/206-08; R4, tabs 163, 164)

37. Appellant continued to set forms and re-bar on 4, 5, and 6 September 1989. On 6 September 1989, appellant took soil samples at unknown locations and its vice president hand carried them to KBC in Miami for analysis. The Government's construction representative complained on 6 and 7 September 1989 that appellant failed to notify the Government of the soil samplings, and the lack of preparatory footing inspection or test reports prior to pouring footings, *inter alia*. He recommended that the first footing be removed, subsurface prepared and compacted, and all footings be re-poured as required by the specifications. (Ex. A-1 - Soil Compaction at tabs 2, 3, 4; R4, tabs 258, 261)

38. During a late afternoon meeting at the ROICC office on 7 September 1989, the ROICC directed appellant to comply with the Government's interpretation that § 02221 of the contract required that appellant scarify and compact the subgrade under the footings to 95%, and submit in writing why the contract did not so require along with an equitable adjustment request if appellant disagreed. The ROICC also requested that appellant provide the density test results so the Government could determine if the footings poured on 1 September 1989 would have to be removed and the subgrade recompacted. He also advised appellant's representatives that appellant's CQC plan was approved and stated that appellant was authorized to commence construction (R4, tab 92 at Report No. 2, tabs 164, 168)

39. To expedite resolution of this issue, appellant took the following actions on 8 September 1989. First, appellant's president, project manager, and consultant Frasier flew to Miami to pick up Mr. Kaderabek of KBC, for the purpose of having Mr. Kaderabek view the site and meet with the Government on this issue. (Tr. 1/145, 2/216, 224)

40. On that same date, appellant's project manager wrote the ROICC stating:

> Enclosed is a copy of note 12 on page S13 of the structural plans, which refers us to "Follow Recommendations in Report of Geotechnical exploration stated [sic] Oct. 15, 1987 submitted by KBC Consultants.["]
>
> We have recieved [sic] this report and find that further communications and clarification is [sic] necessary. At our expense we have flown Mr. Tom Kaderabek a partner in the firm of KBC Consultants Inc. to the job site for consultations. We hope to meet with you to discuss the footing compaction problem at your earliest convenience.

(R4, tab 166, *see also* tab 167) No evidence is included in the record that either the contacting officer or the AROICC ever directed appellant to hire and bring Mr. Kaderabek to the project site to resolve the dispute over whether either the contract or construction practice required that the soil under the concrete footings be compacted. Moreover, no evidence is included in the record why Mr. Kaderabek had to view the site again since his firm had prepared the Geotechnical Exploration Report.

41. By a letter dated 18 September 1989, the ROICC summarized the meeting with appellant on 8 September 1989 as follows:

> Mr. Kaderabek told us all that is technically required for the concrete footings is to remove the topsoil and proofroll the existing subgrade. He said the existing conditions were ideal and no settling would occur.

(R4, tab 168) The ROICC agreed that appellant could proceed with the pouring of the concrete footings but informed appellant that the Government would negotiate a credit for appellant's not having to compact under the footings (*id.*). The Government later decided not to pursue a credit (R4, tab 175).

42. In a 29 September 1989 follow-up letter to appellant's project manager concerning his site visit on 8 September 1989, Mr. Kaderabek of KBC stated in part:

> KBC Consultants, Inc. was requested for [sic] perform field density tests during construction, beneath foundation areas, in order to document that fill soils were compacted to the specified 95% compaction. However, the bottom of shallow foundations bear in existing soils at approximate elevation +5 feet NGVD and are therefore not in compacted fill, but rather in in-situ soils. The density tests performed indicated percent compactions ranging from as low as 82% to as high as 97% compaction and averaged 90% compaction, based on nineteen field density tests. The field density tests were performed on natural in-situ soils which were not mixed and conditioned with moisture. *The soil density of in-place soils cannot be readjusted unless these soils are reworked. The intent of our geotechnical recommendations was not to remove the soil bearing layer and rework it but rather to proof-roll it looking for weak or loose areas*. [Emphasis added]
>
> . . . . Based on our Geotechnical Report, our field observations, and our knowledge of foundation conditions in Florida, it is our professional opinion that shallow foundations constructed at approximate elevations +5 feet NGVD to support wall foundations can utilize an allowable bearing pressure of 3,000 psf and support the loads for the one to two-level construction.

(R4, tab 175 at attach.)

43. In the late afternoon on 7 September 1989, the ROICC ordered appellant to compact under the footings and to perform field tests to determine whether a previously poured footing should be removed and replaced (finding 38). Appellant chose not to follow the direction of the contracting officer. On the next day, the appellant instead brought Mr. Kaderabek of KBC to the project site, and as a result, the ROICC retracted its order that appellant compact under the footings (finding 41). We find that these actions were not incidental to carrying out the constructive change direction requiring compaction under the footings and were not pursuant to an order of the contracting officer.

44. Under the terms of the contract, appellant was not authorized to proceed with the construction of the concrete footings until its CQC plan was approved (finding 32). Appellant's CQC plan was not approved until late afternoon on 7 September 1989 when the soil compaction controversy was resolved (*id.*; tr. 4/207-08).

45. Appellant's construction schedule dated 1 September 1989 indicated that appellant would commence pouring footings in mid-August 1989 and complete the footings

by 1 October 1989 (R4, tab 87). This 1 September 1989 schedule indicated a contract completion date of 1 April 1990 (*id*.).

46. Appellant revised its 1 September 1989 schedule on 21 September 1989 after this soil compaction problem was resolved (R4, tab 89). It did not revise any of its footing activities nor the contract completion date (*id*.). Subsequently, appellant again revised its schedule on 7 November 1989 without changing any of the durations for the footings but showing a 30-day delay for structural steel (exh. A-7). Thus, we find that the record does not establish any delay for this soil compaction problem.

47. Appellant claims $8,014 and a three-day extension as a result of the soil compaction controversy broken out as follows:

Week of September 9, 1989

Fly soil sample to Miami (single engine): 3 hrs @ $150		$ 450
Fly to Miami, pick up KBC Engineer & return twin engine: 6 hrs @ $300		$ 1,800
KBC Engineer, technicians and proctors:	TOTAL	$ 1,914

KACO PERSONNEL

Richard J. Coble:	14 hrs. @ $75	$ 1,050
Dan Brown:	14 hrs @ $50	700
Robert D. Frasier:	14 hrs @ $75	1,050
Robert E. Lacey:	14 hrs @ $75	1,050
TOTAL		**$ 8,014**

(R4, tab 5)

Decision - Soil Compaction Claim

Appellant argues that the contract did not require that the undisturbed soil at the bottom of the holes for the footings be compacted prior to the pouring of the concrete to form these structural footings. It claims that the ROICC's direction to compact this soil

before the pouring of the concrete was not contractually required and a contract change. It claims the ROICC compaction direction forced it to hire Mr. Kaderabek of KBC to avoid having to tear out the concrete footing it had already poured, to remove forms it had already constructed for an additional footing, and to perform compaction for these and the remaining footings. Mr. Kaderabek opined that there was no contract or design requirement for compaction under the footings because no fill had been placed there (findings 41, 42). Based upon Mr. Kaderabek's opinion, the ROICC retracted its directive that appellant compact the soil under the concrete footings (finding 41). Appellant seeks $8,014 and an extension of three days for its costs of mitigating the Government's direction to compact under the footings when compaction was not contractually or technically required.

The Government argues that the contract read as a whole requires compaction of the soil under the footings based on the specifications and the report. It contends that Note 12 on drawing S-13 requires that the concrete footings be placed on compacted soil and mandates that appellant follow the recommendations of the KBC report dated 15 October 1987 entitled Geotechnical Exploration (finding 28). It points to that portion of the report which requires that loosened bearing soils be recompacted prior to placement of reinforcing steel as requiring compaction of the concrete footings. It further contends that the compaction standard should be that of Table 3.6 on the contract specifications even though it admits that this table only applies to newly placed fill (Gov't br. at 58; finding 31).

We reject the Government's interpretation that the contract specification and drawings which incorporate the recommendations of the KBC report required compaction under the footings. Both the KBC report and specification only required appellant to proof roll the project site and remove and replace unsatisfactory areas with fill (findings 30, 31). The only areas where the 95% compaction requirement was applicable was where the top soil was unsatisfactory and replaced with new fill in areas under footings, building slabs, steps, and pavements (*id*.). This was exactly what Mr. Kaderabek of KBC advised the Government on 8 September 1989 (findings 41, 42). Thus, the ROICC's direction on 7 September 1989 to compact under the concrete footings would have been a change entitling appellant to an equitable adjustment under the contract (finding 38). However, this ROICC direction was retracted before any compaction work under the footings had been performed by appellant (finding 41).

Appellant seeks to recover its costs to bring Mr. Kaderabek of KBC to the project site to convince the ROICC to withdraw his directive to compact under the concrete footings. However, appellant did not follow this order of the contracting officer (finding 43). Neither the AROICC nor the contracting officer ever ordered appellant to hire and bring Mr. Kaderabek to the site (finding 40). Appellant clearly recognized this when its project manager wrote the ROICC indicating it was flying in Mr. Kaderabek at appellant's expense (*id*.). Accordingly, appellant's action was not incidental to carrying out the direction of the contracting officer and instead was an elective expense for which no

compensation is owed. *S-TRON*, ASBCA Nos. 45893, 46466, 96-2 BCA ¶ 28,319; *Len Company And Associates v. United States*, 385 F 2d 438, 443 (Ct. Cl. 1967).

CONCLUSION

Appellant's soil compaction claim is denied.

E. Step Tie Beam

48. The Commissary and slightly larger Exchange being constructed under this contract are shaped approximately as rectangles with a common interior wall (R4, tab 128 at A-1, C-4). The southwest wall (Wall 1) of the Commissary is depicted on the drawings on the vertical axis at Column Line 1, and runs from horizontal Column Lines D to K (R4, tab 128 at A-1, S-6, S-7). The northeast wall (Wall 30) of the Exchange is opposite from Wall 1 and depicted on the vertical axis of the drawings at Column Line 30, and runs from horizontal Column Lines E to L (R4, tab 128 at A-1, S-8, S-9).

49. Walls 1 and 30 were each to be made of concrete masonry units, or cinder block, with horizontal concrete beams at specified intervals in the cinder block running the length of the wall (tr. 1/83-84, 4/144-47; R4, tab 128 at S-6, S-7, S-8, S-9). The concrete beams are labeled "B-2" and "RB-6" which means Roof Beam 6 (tr. 2/90-91, 4/164). Drawing S-13 included a table which indicated elevations for the beams: B-2's elevation was specified as 11 feet 4 inches. RB-6's elevation was not depicted other than stating "See Plan." The plans, however, do not otherwise provide a specific elevation for RB-6. (R4, tab 128 at S-6, S-7, S-8, S-9, S-13, S-14; ex. A-12; tr. 1/90-91, 93, 5/52-55)

50. Appellant planned to construct RB-6 of concrete at one continuous horizontal elevation in Walls 1 and 30 when it bid the job (app. br. at 3; tr. 1/85, 94, 2/119, 131, 4/141, 161). The Government asserts that the elevation of RB-6 was supposed to coincide with the varying elevations of roof joists that connect to these walls, to support the wall (Gov't br. at 29-30; tr. 1/89-90). Appellant's vice president Frasier opined that it would be much cheaper to build a horizontal beam than one that stepped or sloped with the changes in elevation of the roof joists which required much additional work to construct (tr. 1/90, 2/115, 133-34).

51. The roof joists supporting the roof run perpendicular to Walls 1 and 30 and slope down at ½ inch per foot from the highest point or apex of the roof at Column Line H. The elevations of the top of the joists start at Column Line D at 19 feet 10 inches, rise to 20 feet 1 inch at Column Line E, continue to ascend to 22 feet 8 inches at the highest point at Column Line H, then descend to 20 feet 4 inches at Column Line K, and then stop at 18 feet 9 inches at Column Line L. (R4, tab 128 at S-6, S-7, S-8, S-9; tr. 5/41-45, 49)

52. The southwest elevation of drawing A-11 depicts the exterior of the building including a dotted line labeled "TOP OF JOIST/SEE ROOF PLAN/TYPICAL." This dotted line represents the joists as they slope from Column D upward to the apex at Column Line H and then slope down to Column Line K. RB-6 is not depicted on this drawing. (R4, tab 128 at A-11; tr. 1/91-93)

53. Drawings of Wall 1 contain a symbol at two specified points (R4, tab 128 at S-6, S-7; tr. 4/152-55). This symbol refers the reader to a detail drawing of a cross-section of Wall 1 at Section 4 (4/S-14) of drawing S-14 (R4, tab 128 at S-14; ex. A-10; tr. 4/152-55). Symbol 4/S-14 is depicted between Column Lines D and G on drawing S-6, and a second time between Column Lines J and K on drawing S-7 (R4, tab 128 at S-6, S-7; tr. 4/152-55). Utilizing the scale of these drawings S-6 and S-7, 4/S-14 between Column Lines D and G is approximately 44 feet from the highest point of the roof at Column Line H, while 4/S-14 between Column Lines J and K on the other side is approximately 34 feet from Column Line H. Symbol 4/S-14 appears on Wall 30 between Column Lines E and F, approximately 39 feet from Column H (R4, tab 128 at S-8, S-9). Because the roof joists slope at 1/2 inch per foot from Column Line H (finding 51), the three 4/S-14 symbols are at different roof joist elevations due to the symbols being located at varying distances from Column Line H.

54. Symbol 4/S-14 shows that the top of the roof joist is at the same elevation as RB-6 and that they are connected to one another (via an "L" angle and self-drilling expansion anchors). It depicts that the bottom of the roof joist connects to masonry below RB-6 via a "3 ½ x 3 ½" x ¼" x 0' - 8" @ bracing w/2-5/8" O [on center] anchor bolts in grouted cell 6" all around bolt." It also shows the elevation for the top of RB-6 as "SEE PLAN." It further describes the elevation for the top of the roof joist as "EL. VARIES." (R4, tab 128 at S-14; ex. A-10; tr. 1/85-87, 89-90, 93-95, 2/105, 129-31, 4/155-56, 158-63, 5/36-48)

55. Two other sectional details in the area where the garden shop utilizes a portion of Wall 30 as one of its walls depict how the roof joists intersect with RB-6. The common portion of Wall 30 is approximately 27 feet 2 inches (R4, tab 128 at A-1, -17, S-5 at Roof Framing Plan Area E & Foundation Plan Area E). A symbol "E/A-17" is located approximately 18 feet from Column Line H on Wall 30 between Column Lines H and J (*id.* at A-1). Detail E/A-17 depicts the top of the roof joists as contiguous with RB-6 but slightly lower than the top of RB-6 (*id.* at A-17). It also contains a note indicating that the elevation of the roof joists vary.

56. The Roof Framing Plan Area E and Foundation Plan Area E of drawing S-5 when considered together appear to indicate that the symbol "1/S-12" on the Roof Framing Plan is at Column Line H on Wall 30 (R4, tab 128 at S-5; tr. 2/126-28, 5/84-86). Detail 1/S-12 indicates that the elevation of the top of the roof joist is approximately the same as that of RB-6 with the top of the roof joist slightly higher than RB-6 (*id.* at S-12, ex. A-11).

57. Because the roof joists slope down at ½ inch per foot from the highest point or apex of the roof at Column Line H (finding 51), these garden shop details are also at different roof joist elevations due to their varying distances from Column Line H.

58. Detail 1/S-12 shows an "L" shaped anchor bolt placed through RB-6. It also depicts that the top of the joist attaches to the masonry immediately above RB-6 with a "3 ½" x 3 ½" x ¼" cont. w/ 5/8" O x 4" Lg. anchor bolts @ 24" o.c. [off center]." The bottom of the joist connects to the masonry just below RB-6 with the same anchorage as the garden shop joists. (R4, tab 128 at S-12; ex. A-11; tr. 1/87-88, 5/48-52, 84)

59. On 23 October 1989, appellant's concrete finishers were constructing the forms for the low tie or grade beam along Wall 1 where the top of that beam was at an elevation of 11 feet (R4, tab 128 at S-14, Section 4, tab 255 at Report No. 75; tr. 2/105). On 26 October 1989, Ambach Masonry (Ambach), was constructing the masonry along Wall 1 (R4, tab 255 at Report No. 78). As of 30 October 1989, Ambach had placed the first 4 feet 8 inches of masonry along Wall 1 between Column Lines H and K and appellant's concrete finishers had poured concrete for the grade tie beam along Wall 30 (R4, tab 255 at Report No. 82; tr. 2/99-104).

60. On 31 October 1989, Ambach raised a question about the elevation of RB-6 in Wall 1 with appellant so that Ambach would know where to stop placing the masonry (R4, tabs 255, 258, 261; tr. 2/87-88, 92, 107, 132-33). On that same date, appellant's submittal specialist discussed this problem with the AROICC stating that he thought RB-6 was to be installed in a stepped fashion rather than being installed in a horizontal fashion (R4, tab 48; tr. 1/84-85, 2/88, 104, 4/137-38, 7/59-60). The AROICC immediately consulted with its architect and engineer (A&E), H. J. Ross Associates, who in turn faxed a sketch as to how to place RB-6 to the AROICC (R4, tab 47; tr. 4/138-40). The AROICC that same day provided that A&E sketch to appellant (R4, tab 48). The A&E sketch was entitled "Wall Elevation" for Wall 1 and showed RB-6 in a "stair-step" configuration between Column Lines D and K.

61. The sketch places the elevation of the top of RB-6 at Column Line D at 21 feet, rising in "stepped" fashion to 23 feet 10 inches by Column Line H, the center, then descending in similar "stepped" fashion to Column Line K, where the top of RB-6 is at 21 feet 3 inches. (R4, tab 47)

62. In a 2 November 1989 letter to appellant, the AROICC disapproved appellant's planned method of placing the roof beam at one elevation and tying the roof joists into the masonry wall instead of into RB-6. The letter further stated:

> There are alternate ways of achieving an acceptable product as discussed with Mr. Dowling on 1 November 1989. The

> underlying necessity is that the structural steel members of the roof and support system be tied to the wall at the tie beam to give sufficient support to the wall.

(R4, tabs 47, 48; tr. 4/137)

63. By a letter dated 13 November 1989, the Government confirmed that a second sketch from the A&E had been provided to appellant's CQCR on 6 November 1989 and forwarded a second copy of that sketch to appellant. The sketch showed the elevation of RB-6 in a similar stepped manner in Wall 30. The 13 November letter noted that: "This is to assist you in planning this work. There are alternate ways of achieving an acceptable result." (R4, tab 51)

64. By a letter dated 10 November 1989, appellant alleged to the Government that its masonry work had been held up since 26 October 1989 on Wall 1 due to the lack of agreement on the elevation of RB-6 (R4, tab 50).

65. We find that appellant was not delayed in its work because appellant was provided with the Government's response to its questions concerning the elevations of RB-6 on the same day appellant raised the issue (findings 60, 61). No where in the daily reports of appellant or the CQCDR does it state that Ambach was unable to work due to the issue concerning RB-6 (tr. 2/113). In addition, no evidence was presented as to how much additional time was required to construct RB-6 in a stepped rather than continuous horizontal fashion other than generalized testimony that it was more complicated to construct RB-6 in a stepped fashion (finding 50).

66. Appellant constructed RB-6 in Walls 1 and 30 in accordance with the stepped fashion depicted in the A&E's sketches, and did not request alternate solutions to this issue, nor attempt to develop its own. (R4, tabs 52, 53; tr. 2/133, 7/60)

67. Appellant claimed $3,925 for the additional cost to change RB-6 from a horizontal to stepped configuration. The claim did not allege delay specifically for this item, but alleged a total of 289 days delay, 166 days of actual delay and 123 days of acceleration. (R4, tabs 5, 14)

Decision - Step Tie Beam

Appellant claims $3,925 and eight additional days of delay for the step tie beam (app. br. at 2). Its position is that RB-6 was to be poured at one continuous elevation in Walls 1 and 30, and that the Government's direction to "step" the beam caused it to incur additional costs and an eight-day delay. From the fact that the plans did not specify specific elevations for the RB-6, and because 1/S-12 was a cross-section of Wall 30 and showed "connection" of the joists to the masonry above and below the joists and 4/S-14 were cross-

sections of Walls 1 and 30 at specific points and showed varying permitted "connections" of the joists at its top elevation to RB-6 and at its bottom to the masonry below the joists, appellant essentially argued that RB-6 could be one continuous horizontal elevation and connected to the masonry. (Tr. 1/89, 91, 2/130-31, 4/153-54; app. br. at 4-5)

From the evidence presented, we conclude that RB-6's elevation had to vary in concert with the change in elevation of the roof joists and, therefore, could not be constructed in a horizontal fashion as asserted by appellant. We have found that the symbol referring the reader to 4/S-14 is located on Wall 1 at non-equidistant points (44' and 34' respectively) from the apex of the roof (finding 53). Similarly, the same symbol is located on Wall 30, 39 feet from the apex of the roof (*id*.). Symbol 4/S-14 shows that the top of joist is at the same elevation as RB-6 and directly connected one to the other (finding 54). The record is also clear that the elevations of the joists slope down at 1/2 per inch per foot from the apex of the roof (finding 51). Thus, the three locations for the 4/S-14 symbol being varying distances from the apex of the roof are at differing elevations, placing the top of RB-6 at differing elevations. Furthermore, 4/S-14 indicates that the elevation for the top of the roof joists varies. Thus, appellant's argument that the drawings permit RB-6 to be constructed in a horizontal fashion must be rejected.

Appellant contends that 1/S-12 indicated that the top elevation of RB-6 could be connected to the masonry wall rather the roof joists and this would permit appellant to construct RB-6 in a horizontal fashion. It is true that the 1/S-12 detail in the garden section of Wall 30 appears to show that roof joists were connected to masonry wall above and below RB-6 (finding 58). More importantly, however, it clearly shows that roofing joists and RB-6 are at the approximately same elevation with the roof joists being slightly lower than RB-6 (*id*.). The symbol for 1/S-12 appears to be located at the roof apex on Wall 30 which again is a different elevation for RB-6 than those depicted for detail 4/S-14 (findings 53, 56). Consequently, the drawings do not permit RB-6 to be constructed in a horizontal fashion.

CONCLUSION

We deny the claim for the step tie beam.

F. Electric Pole System Claim

68. The contract specifications provide in pertinent part:

> 14. UTILITIES FOR CONSTRUCTION AND TESTING: The Contractor shall be responsible for obtaining, either from available Government sources or local utility companies, all utilities required for construction and testing. The Contractor shall provide these utilities at his expense, paid for at the

> current utility rate delivered to the job site. The Contractor shall provide and maintain all temporary utility connections and distribution lines, and all meters required to measure the amount of each utility used.

(R4, tab 1 at § 01011-9)

> 6. LOCATION OF UNDERGROUND FACILITIES:
>
> . . . .
>
> 6.1 Existing Telephone Lines and TV Cables: Upon proper notification, local telephone and television cable companies will identify and, if necessary, relocate these services to prevent their damage. Prior to beginning excavation, the Contractor shall properly notify these companies and make all such arrangements.

(*Id.* at § 01012-2)

69. Drawing C-3 entitled "Demolition Plan" depicts six wooden poles shown as circles, power lines and cable television lines connecting them shown as dashed lines, and a label indicating "O. E. & C", overhead electric and cable T.V. line. The six circles and the dashed lines between them were "cross-hatched" indicating that they were to be removed. The utility company was to perform the removals. (R4, tab 128 at C-3; tr. 4/105)

70. Drawings C-4 "Site and Paving Plan" and E-1 "Electrical Site Plan" show that one new electric power pole was to be erected on Felton Road with overhead power and telephone lines joining it and seven power poles were to be left undisturbed (*id.* at C-4, E-1).

71. In early August 1989, appellant's project manager Brown requested assistance from the AROICC in getting City Electric System (CES) to remove the power lines. Mr. Brown also asked if the AROICC had any objection to leaving the poles in place until appellant could decide which poles to use for temporary power to the project, after which appellant would remove and dispose of them. The AROICC had no objection, met with CES along with Mr. Brown on 8 August 1989, and wrote a follow-up letter to CES on 10 August 1989, requesting that the power lines be removed and the poles left in place for temporary power during construction, after which the poles would be removed and turned over to CES (R4, tab 143; tr. 4/107-10, 6/73, 7/48-49).

72. Appellant's 16 August 1989 demolition plan, approved by the Government on 21 August 1989, reflects the agreement reached by the parties concerning the power poles by stating:

> Overhead electric lines are to be removed by the City Electric System. . . . In an agreement with City Electric, the Contractor has agreed to remove the poles in order to expediate [sic] the work. The poles will be offered to the goverment [sic] by the Contractor, if they do not want them the Contractor will ship them back to Orlando, Florida by it's [sic] own trucks.

(R4, tab 19; tr. 4/110, 7/49)

73. CES removed the power lines and left the poles in place as requested by appellant (tr. 4/109-10). Appellant's project manager testified that appellant could have removed any electrical power pole on site at any time appellant desired (tr. 7/51). He also stated that because of this ability to remove the poles at anytime appellant was not delayed (*id*.).

74. By a letter dated 28 February 1990, appellant's consultant Frasier alleged that the Government and CES's failure to remove the "pole line" had delayed the project and caused damage to appellant because the poles obstructed construction. It also requested that the new pole be installed:

> Drawing C-4 calls for a new power pole to be relocated at the corner of the Housing Authority Bldg. This work should have already been done to facilitate the work described on the Demolition Plan.

(R4, tab 148)

75. By a letter dated 13 March 1990, the Government responded that this was the first notice that the two remaining poles were interfering with construction and that appellant requested that CES leave them in place for appellant's use in obtaining temporary power. It continued that CES had been requested to remove the two poles and to install the new pole. CES installed the new pole on 13 March 1990. (R4, tabs 149, 261)

76. The AROICC testified that the two poles were removed after receipt of Mr. Frasier's 28 February 1990 letter, but did not specify a date (tr. 4/113-14).

77. By its 14 December 1990 REA, appellant alleged in pertinent part that the Government failed to timely perform the demolition of the existing overhead electrical

pole system required by appellant's demolition plan, which caused disruption, loss of production and working out of sequence. Its equitable adjustment request also alleged that appellant repeatedly requested that the electrical service pole be installed but that it was installed late. Appellant requested $98,468 for disruption and $13,125 for loss of productivity. Appellant's accompanying "As Built" PERT sitework construction schedule claimed 278 days (2 August 1989 through 6 May 1990) for "reduced production working under & around energized overhead power lines . . . scheduled to be 'removed by others' in first 30 dys. of contract." (R4, tabs 4, 5)

78. Appellant did not present any direct testimony (documents were included at ex. A-1), nor cross-examine ENS Smith, Mr. Brown, or Mr. Russell, who testified for the Government with respect to the electric pole system claim. In addition, appellant failed to address this claim in its post-hearing brief.

79. We find no delay or disruption to appellant's work caused by the power lines or poles.

Decision - Electric Pole System

We have found that there is no evidence as to any disruption, loss of production or working out of sequence as a result of power pole or line removal or installation. The unrebutted evidence is that appellant requested that the poles remain for its own use for temporary power, which the contract obligated appellant to arrange for itself (findings 68, 71). CES and the Government agreed to this request (findings 71-73). There is no explanation for appellant's decision thereafter to assert that the Government was responsible for the poles' removal.

The letter of 28 February 1990 from Mr. Frasier is the only evidence pertaining to the new power pole (finding 74). That letter was the first and only notice to the Government addressing the pole, and did not allege any delay or damage. The Government notified appellant on 13 March 1990 that the pole would be installed, and it was in fact installed that day (finding 75). We conclude that appellant's subsequent allegation that late installation of this pole delayed the project is without substance.

Appellant has the burden of proving its affirmative claims. *Commercial Energies, Inc.*, ASBCA No. 47106, 96-2 BCA ¶ 28,474. Appellant has failed to meet that burden. Without evidence, and absent a brief to aid in our decision, we deny appellant's claim for disruption, loss of production and working out of sequence due to the electric pole system (findings 78, 79).

G. Excavation of Lake No. 2

80. By its claim narrative dated 14 December 1990, appellant claims a loss of production for the period of time during which it had to excavate on a "reduced production" basis because it did not know the location of water lines running from an off-site 125,000 gallon water tank through one of the areas where a projected water retention pond was to be located (Lake No. 2) (R4, tab 5 at 5). It did not want to sever the water lines during excavation, thereby flooding the site and cutting off water to the residents of Sigsbee Island. Appellant's bar chart of delays has a line labeled as "Reduced Production 79 days excavating Lake No. 2" (R4, tab 4).

81. A huge 125,000 gallon water tank was located next to Lake No. 2 (tr. 4/188, 7/80). Government public works thought that water lines ran from this tank into and through Lake No. 2 but did not know for sure because the area of Lake No. 2 had not been surveyed (tr. 4/188-90; 7/80).

82. On 21 August 1989, appellant's public works representative came to the project site and advised the AROICC and appellant that an eight-inch water line ran from the large water tower 13 to 14 feet into Lake No. 2 and then ran the entire length of the lake (tr. 7/81; R4, tab 258; ex. A-1 - Excavation of Lake at tab 4). On 24 August, and again on 28 August 1989, appellant attempted to locate the water lines, but was unsuccessful (R4, tabs 255, 258).

83. On 19 September 1989, appellant excavated at the place where the eight-inch water line exited the water tank and continued along the water line. The water line did not enter Lake No. 2 but turned 90 degrees and ran adjacent to it. The AROICC observed this excavation which took a day to a day and a half. (Tr. 4/191-92, 7/81-82; R4, tab 92 at Report No. 3, tabs 157, 255, 258, 261) Lake No. 2 was excavated at normal production rates after the water line was located (tr. 7/82) and there were no other excavation difficulties (tr. 7/84).

84. On 2 October 1989, the ROICC issued a unilateral modification (P00002) to the contract for the work covered by the exploratory excavation (R4, tab 212, *also* tab 153). Modification No. P00002 added $1,500 to the contract, establishing that amount as a cap on the eventual definitization of this modification, and scheduling receipt of the contractor's proposal thereon for 27 October 1989 (*id.;* tr. 4/192-95, 7/82).

85. On 10 October 1989, the Government received a letter from Mr. Brown, dated 1 October 1989, stating that the "jumping around because of the uncharted water lines is causing a considerable amount of delay and cost to this contractor." The Government responded on 11 October 1989 and requested that appellant provide its costs and delays, with justification, in its proposal for definitizing Modification No. P00002 by 27 October 1989. (R4, tabs 152, 156)

86. On 16 December 1989, appellant proposed $8,437 and a 16-day extension of time for the work in Modification No. P00002 (R4, tab 157 at 8, 24, 26, 28, 30, 32).

87. Negotiations were conducted on 21 December 1989 and 16 January 1990 between the ROICC and ENS Smith for the Government, and Mr. Frasier, Mr. Brown and Mr. Dowling for the appellant. The parties settled on $3,354 (including the $1,500 that was cited in P00002), and a two-day extension of time. (R4, tab 157 at 1, 2, 7, 11-12, n. 3)

88. On 14 February 1990, the parties executed Modification No. P00010, which definitized Modification No. P00002, increased the contract price by an additional $1,854, and extended the contract completion time by two calendar days (to 12 July 1990 for Phase I, to 26 August 1990 for Phase II, to 31 August 1990 for Phase III). Modification No. P00010 concluded with an accord and satisfaction paragraph:

> Acceptance of this modification by the contractor constitutes an accord and satisfaction and represents payment in full (for both time and money) for any and all costs, impact effect, and/or delays arising out of, or incidental to, the work as herein revised and extension of the contract completion time.

(R4, tab 212)

89. Other than general testimony from appellant's president that it was difficult to excavate to locate the water lines in Lake No. 2 because the ground was hard (tr. 3/62), appellant did not otherwise present any direct testimony (documents were included in ex. A-1), nor cross-examine the witnesses who testified for the Government on this issue. In addition, appellant did not address the excavation of Lake No. 2 in its post-hearing brief.

Decision - Excavation of Lake No. 2

Any claim that appellant has for 79 days of delay in the excavation of Lake No. 2 due to the lack of location for the anticipated water line running from the water tower into that lake is barred by the release it signed in Modification No. P00010 (finding 87). This modification contains a release of further liability by the Government for "any and all costs, impact effect, and/or delays" concerning the exploratory excavation to locate this water line (*id.*). We conclude that the only reasonable interpretation of this release provision is that the modification was intended to resolve all claims for delay damages due to the excavation needed to determine the location of the water line which was anticipated to be in Lake No. 2, including any loss of excavation production.

We deny the claim for delays relating to the excavation of Lake No. 2.

H. Structural Steel Delay Claim

90. The contract required appellant to submit a progress schedule which was to include time for preparation and approval of shop drawings (finding 6). Specification § 05120 "Structural Steel" required that the contractor obtain approval of structural steel shop drawings prior to fabrication. The contract also required approval from the contracting officer to work outside regular hours, or on Saturdays, Sundays, or holidays, the cost of which was to be included in appellant's bid price. (R4, tab 1)

91. Appellant entered into a subcontract with Lite Steel for structural steel in August 1989 (tr. 7/53-54). Lite Steel had no detailers or draftsmen in house so it in turn subcontracted with another firm to prepare the shop drawings for the structural steel (tr. 7/53). These detailers as well as appellant's consultant found discrepancies in the structural steel drawings including problems with elevations of various footings when preparing the structural steel shop drawings (tr. 2/73-74, 4/167-70, 7/57-58, 8/108-09).

92. On 24 and 25 August 1989, appellant forwarded questions from its structural steel subcontractor concerning the elevations of various footings and other discrepancies to the Government (tr. 4/167-68; R4, tab 67). The Government responded with addenda to the drawings (tr. 4/170). The first set of addenda were sent as attachments to a letter dated 7 September 1989 from the contracting officer to appellant providing revised drawings S-4 through S-14 (R4, tab 68). The second as attachments to a letter dated 11 September 1989 from the contracting officer to appellant providing revised drawings A-2, A-3, A-8, A-9, A-19, A-20, S-1, S-2, S-3, S-6, S-7, S-8, S-11 (R4, tab 69). Both letters stated that the Government did not believe these revisions caused a change in the price or performance time, and for appellant to submit a REA by 7 October 1989 if it felt otherwise (*id.*).

93. Both appellant's proposed project schedule dated 1 August 1989 which was submitted on 5 August 1989 as well as its proposed schedule dated 1 September 1989 which was submitted on 5 September 1989 failed to include any schedule for the preparation and approval of shop drawings for the structural steel (R4, tabs 83, 87). Each indicated that structural steel installation would begin in late October 1989 and end in late November 1989 (*id.*). The 1 August 1989 schedule was rejected, among other things, because it failed to include any indication of a critical path (R4, tab 83). The 1 September 1989 schedule was approved but with a requirement that it be resubmitted to correct deficiencies (R4, tab 87).

94. On 20 September 1989, appellant submitted the shop drawings to the Government for the structural steel (R4, tabs 71, 82). Most of the structural steel shop drawings had been approved by appellant's QAR but some of these drawings needed input from and approval of the A&E (tr. 4/171). Many of these related to questions of appellant's consultant Frasier as to whether some of the special joints were bottom or end bearing (tr. 2/73, 8/108-09). Thus, appellant attached one sheet of questions mainly in this area addressed to the Government's A&E (*id.*; tr. 4/171-72, 182-84)

95. By a letter dated 20 September 1989, the ROICC transmitted the shop drawings to the A&E requesting review and return by 4 October 1989 (R4, tab 71). The Government expedited review by transmitting these structural steel drawings to the A&E by Federal Express, and having the A&E Federal Express the reviewed structural steel drawings with comments back to the ROICC a few days later (tr. 4/183-84). The comments on the drawings were the answers to appellant's questions attached to its structural steel shop drawing submittal (tr. 4/184-85).

96. Appellant revised its 1 September 1989 progress schedule on 21 September 1989 (R4, tab 89). This 21 September 1989 schedule indicated that appellant would prepare its structural steel shop drawings during the period of 1 August through 1 September 1989, it would submit those shop drawings to the Government for review and approval during the period of 1 September and 1 October 1989, and it would have the structural steel fabricated and delivered over the three week period after 1 October 1989 (*id.*). This 21 September 1989 schedule indicated that all of these activities were on the critical path (*id.*).

97. By a letter dated 29 September 1989, the AROICC approved appellant's revised 21 September 1989 schedule (R4, tab 73; tr. 4/180-81). However, the AROICC indicated concern that the schedule appeared to be too optimistic, especially as to structural steel (*id.*). He indicated in this regard:

> [w]e understand structural steel will reuqire [sic] up to 5 weeks to fabricate and deliver but your current schedule only allots 2 1/2 to 3 weeks for this activity.

(*Id.*)

98. On 29 September 1989, the ROICC returned the structural steel shop drawings with the A&E's comments to appellant (R4, tab 82; tr. 7/57). The ROICC approved these drawings but with a requirement that they be resubmitted (*id.*).

99. Appellant's consultant Frasier testified that the approval with a resubmittal requirement meant that appellant could not proceed to fabricate the structural steel (tr. 2/74-76, 5/82, 8/108). On the other hand, appellant's project manager testified that appellant had all of its questions concerning the structural steel answered with those comments so that appellant's schedule requirements were met and the structural steel could be fabricated on schedule (tr. 7/57-58). The AROICC also testified that the structural steel could be fabricated on schedule without resubmittal of the structural steel shop drawings (tr. 4/184-86).

100. The only evidence that appellant ever resubmitted the structural steel shop drawings is a hand diagram prepared by appellant's consultant Frasier which indicates that Lite Steel resubmitted the shop drawings on 8 November 1989 (ex. A-1 - Structural Steel at tab 7). No testimony or corroborating exhibits were included in the record. In addition, appellant presented a revised progress schedule dated 7 November 1989 which indicates a 30-day delay for structural steel due to errors in column sizes as well as elevations and other dimensions (ex. A-7). Again, no testimony or corroborating exhibits were presented to detail these errors or how the delay was caused other than that appellant missed its steel fabricators' deadline for fabrication (tr. 2/75, 79).

101. No evidence was included in the record as to what work appellant had to perform to resubmit the shop drawings, how long it would take a reasonable contractor to perform that work, and what schedule its fabricator followed and how, if any, appellant missed any deadline in the fabricator's schedule. More importantly, we lack any evidence as to what, if any, additional work was required other than to include the A&E's comments in the shop drawings. Appellant did not present evidence as to the date that the steel fabrication order was placed other than the uncorroborated 7 November 1989 progress schedule with its general allegation of a 30 day delay without details.

Decision - Structural Steel Delay Claim

Appellant argues that the Government caused a 30 day delay due to the structural steel re-design that resulted in late approval of the submittals, and a corresponding late fabrication order (app. br. at 6). We deny this claim because appellant has failed to meet its burden of proving that the structural steel erection was delayed as a result of the Government's actions.

The record is clear that the Government issued defective drawings for the structural steel (findings 91, 92). It is also clear that the Government corrected these defects through the issuance of addenda to the drawings (finding 92). It is also clear that the Government did not fully approve the structural steel shop drawings on the 29 September 1989 date (findings 97, 98). However, this is where appellant's proof stopped. Appellant's progress schedule required approved structural steel shop drawings on or before 1 October 1989 (finding 96). The record does indicate that appellant had all the information it needed to fabricate the structural steel before this 1 October 1989 date (finding 99). Other than vague and conclusory evidence that appellant was delayed 30 days due to errors in the structural steel drawings, the record lacks information as to what work remained to correct the structural steel shop drawings, how long it would take a reasonable contractor to complete this effort, what schedule its steel fabricator was following, and exactly when appellant placed its fabrication order (findings 100, 101).

We deny the structural steel delay claim for lack of proof.

I. GFGI Claim

102. Under Phase I of the contract, appellant was required to complete all work necessary to "provide, finish, and secure" the Exchange and Commissary within 340 consecutive calendar days (finding 3; tr. 2/31). Under Phase II, the Navy Resale and Services Supply Office (NAVRESSO) through a contract with a firm other than appellant was to furnish and install equipment such as walk-in coolers for the Commissary and Exchange after which appellant would provide the electrical and plumbing connections for this equipment (*id*.). Phase II was to be completed within 45 days after the completion of Phase I (finding 3). This claim relates to appellant's responsibilities under Phase II to connect equipment which was to be first installed by NAVRESSO's contractor Tyler Refrigeration (Tyler).

103. The contract required that appellant notify the Government 15 calendar days prior to its determination that Phase I was substantially complete in order that arrangements could be made by the Government for inspection and acceptance of Phase I, and then to install the refrigeration and other equipment in Phase II (R4, tab 1 at § 01011, ¶ 4.2.1).

104. Drawing No. A-33 was the equipment and fixture schedule for the Commissary. It listed 60 "equipment" line items and 13 "fixture" line items, and for each item, the entity responsible to furnish, receive, install, and provide plumbing and electrical rough-in and final connection, *inter alia*. For instance, NAVRESSO was to furnish, receive, install, and perform the electrical final connection, for the first 21 items (meat, dairy, produce and frozen food cases and meat and poultry walk-in coolers, *inter alia*), and for all but four of those items, install the condensate piping, refrigeration piping and control wiring. Appellant was to provide the plumbing and electrical rough-in, and final plumbing connection for these 21 items. As a very general rule, the majority of items were to be furnished, received, and installed by NAVRESSO, and plumbing and/or electrical rough-in, performed by appellant. We refer to these items as "GFGI." NAVRESSO's subcontractor for the majority of the GFGI was Tyler. (Tr. 2/48; R4, tab 128)

105. Drawings A-50, A-51, and A-52 provided similar information for 135 line items of equipment scheduled to be put into the Exchange, of which 24 items were "Contractor Furnished, Contractor Installed" (CFCI). The remaining 111 items were GFGI. (R4, tabs 128, 212)

106. By a letter dated 24 October 1989, appellant's project manager Brown requested that the ROICC arrange a coordination meeting between representatives of appellant, its subcontractors, ROICC, NAVRESSO, and its contractor Tyler (R4, tab 176). The letter indicated that it would not be practical in some cases for NAVRESSO to install equipment after appellant completed its work in Phase I as was provided in the contract (*id*.). As an example, it pointed out that the walk-in freezer could not be installed

after the partition walls surrounding it on three sides were installed (*id*.). Appellant's project manager Brown testified that appellant wanted the GFGI equipment installed first to avoid damage to partition walls and tiles (tr. 7/74).

107. On 2 November 1989, representatives of appellant, its subcontractors, ROICC, NAVRESSO, and its contractor Tyler met to discuss the installation of GFGI equipment prior to the completion of Phase I of the contract (R4, tab 179; tr. 2/33, 7/75-77). Appellant's consultant Frasier testified that appellant's primary goal at this meeting was to convince the Government that it needed the information contained on the shop drawings for the GFGI equipment to be installed in Phase II as a part of its construction effort being performed in Phase I to perform the electrical and plumbing rough-in (tr. 2/42-43, 49, 4/210-11). Its representatives were distressed to learn that neither the ROICC nor NAVRESSO had these shop drawings because NAVRESSO had not yet issued purchase orders for this equipment and, therefore, no sellers were available to furnish shop drawings (tr. 2/32, 34-35, 48). The AROICC had no shop drawings, model numbers, or specifications for the GFGI equipment because NAVRESSO utilizing a separate contractor and contract had the responsibility for the installation of this equipment and the AROICC's responsibility was to supervise the construction indicated on the drawings and specifications not the installation of the GFGI equipment (tr. 4/255-56, 259-60).

108. At this 2 November 1989 meeting, appellant's project manager Brown requested that NAVRESSO and its contractor Tyler start to install the GFGI equipment prior to rather than after the close of Phase I and ROICC, NAVRESSO, and Tyler representatives agreed to this (R4, tab 179; tr. 2/33, 4/210-12, 267-68, 7/75-77). The ROICC placed no pressure on appellant to permit this early access for NAVRESSO and emphasized that the ROICC was providing for this for appellant's convenience (tr. 2/43, 4/211, 7/77). Its representatives insisted that the ROICC would remove NAVRESSO and its contractor Tyler if its installation of the equipment in any way harmed or delayed appellant (tr. 4/211, 7/76-77). It confirmed this in a letter to appellant dated 13 November 1989 stating:

> The advantage you gain by having Tyler work concurrent with you is it will be easier for you to install interior walls and coordinate your work. Should you change your mind at any time and feel it is not to your benefit to have another contractor working prior to completion of phase I, please inform us immediately and we will contact tyler [sic] refrigeration.

(R4, tab 179; ex. A-1 - GFGI at tab 2)

109. Appellant's approved schedule dated 21 September 1989 indicates that appellant intended to complete Phase I of the contract and commence Phase II on 1 March 1990 (ex. A-6; R4, tab 89; tr. 2/57; findings 109-10). Its proposed revised schedule dated

7 November 1989 provided that appellant would complete Phase I of the contract and commence Phase II on 1 April 1990 (ex. A-7). Appellant's 21 September 1989 schedule had a contract completion date of 1 April 1990 (ex. A-6; R4, tab 89) and its proposed 7 November 1989 schedule had a contract completion date of 1 May 1990 (ex. A-7). Both of these schedules had the GFGI equipment installed and connected in Phase II rather than as a part of Phase I. Appellant's consultant Frasier testified that appellant used these schedules to manage its contract effort (tr. 2/63).

110. The record does not indicate that appellant ever prepared, submitted, or had the Government approve a new schedule reflecting the change in sequence of activities from its approved 21 September 1989 schedule due to the re-sequencing of the Phase II activities to commence before the completion of Phase I. Thus, there appears to be no schedule reflecting the sequencing of the work to measure delay after the re-sequencing of Phase II activities.

111. The installation of the GFGI equipment during Phase I rather than after the completion of construction during Phase I was disruptive to both the GFGI installers and appellant due to the stacking of equipment and forces (tr. 2/68-69). However, appellant's consultant Frasier claimed that it helped to shorten the completion of the contract work (tr. 2/69).

112. On 29-31 January 1990, NAVRESSO's contractor Tyler commenced installing walk-in coolers in the Commissary (R4, tab 256 at Report Nos. 166-68). It continued to install refrigeration equipment on 5-6 February 1990 (R4, tab 259 at CQCDR dated 5-6 February 1990) and 8-9 March 1990 (R4, tab 256 at Report No. 204; R4, tab 259 at CQCDR dated 8-9 March 1990).

113. By a letter dated 14 February 1990, appellant's project manager Brown advised the ROICC that the scheduled date for the installation of the remaining refrigerated cases and other GFGI was 15 April 1990 (R4, tab 183; ex. A-1 - GFGI at tab 23). Brown testified that he did not mean all refrigerated equipment only the ones being coordinated with appellant's Phase I effort (tr. 7/170).

114. NAVRESSO's Tyler continued with its installation of the refrigeration equipment during the second half of May, June, July, the end of August and early September 1990 (R4, tab 257, Report Nos. 265-366, *passim*; tabs 260, 261).

115. By a letter dated 20 April 1990, appellant's project manager Brown scheduled NAVRESSO's mezzanine contractor to commence installation of the mezzanine on 23 April 1990 (R4, tab 188). This mezzanine contractor commenced installation of the mezzanine on 10, 21-24, 31 May 1990 (ex. A-1 - GFGI at tab 17; R4, tab 257 at Report Nos. 270-74).

116. By a letter dated 31 May 1990, appellant's consultant Frasier advised the ROICC that work on the mezzanine was moving slowly and needed to be expedited (ex. A-1 - GFGI at tab 31). The AROICC responded in a letter dated 4 June 1990 that the mezzanine contractor had completed as much work as it could but that the contractor would expedite its work after appellant completed the base molding in the shoe and layaway area and moved a water line installed in conflict with the location of the mezzanine (ex. A-1 - GFGI at tab 12).

117. The mezzanine contractor resumed work on 4 June 1990 and evidently finished on 8 August 1990 (R4, tabs 257, 260, 261).

118. Under the terms of the contract, appellant had the obligation to construct the Commissary and Exchange in accordance with the drawings and specifications including providing all plumbing and electrical rough-in specified therein. Correspondence attached to appellant's GFGI claim summary raises problems about the interface between the plumbing and electrical rough-in specified in the contract and the GFGI being installed by another contractor, Tyler, under a separate contract with NAVRESSO (ex. A-1 - GFGI at tabs 1-44). However, neither appellant's brief nor any of the testimony or other evidence specifically showed how any of these problems caused delay to the contract's critical path. The only evidence presented is that appellant took longer than planned to complete the work and these purported problems must have been the cause of the delay. See *infra*.

119. Appellant's consultant Frasier was appellant's sole witness as to how problems installing and connecting the GFGI equipment allegedly delayed appellant. His testimony merely summarized the documentary evidence listed at the GFGI portion of appellant's exhibit 1 as well as some of the CQCDR (tr. 8/85-94). The documents high-lighted were grouped by an area of the project and listed in appellant's exhibits A-19 through 21.

120. As to the mezzanine (ex. A-21), it appears that the mezzanine installation and erection were slowed because a water line had been installed by appellant at the location for the mezzanine and had to be moved by appellant (ex. A-1 - GFGI at tabs 12, 29; R4, tab 260 at CQCDR dated 4 June 1990). Although it appears appellant was going to be paid to move the water line (ex. A-1 - GFGI at tab 29), the record does not explain why appellant did not know that the water line would be in conflict with the mezzanine which was depicted on drawing A-49 (tr. 2/38). None of this or any other evidence shows how the contract completion date was delayed by Government-responsible mezzanine problems.

121. As to the Exchange (ex. A-19), NAVRESSO's contractor Tyler complained that some of the drains installed by appellant were not installed in a straight line (ex. A-1 - GFGI at tab 14); and NAVRESSO complained to the AROICC that appellant had installed the tile in the food service area so that it did not line up with the tile in the dining area (ex. A-1 - GFGI at tab 35). No evidence was presented as to how the contract required that appellant

perform this work so that we can determine liability and/or how these problems affected the contract completion date.

122. The AROICC admitted that the contract did not provide adequate information so that appellant could connect the refrigerated display cases to the building's HVAC system (ex. A-1 - GFGI at tab 5); and NAVRESSO indicated that extra electrical wiring was required when it changed to two 6-foot deli/dairy cases in lieu of one 12 foot case (ex. A-1 - GFGI at tab 35). Again no information was included to show how these problems affected the contract completion date.

123. Several of the problems involved the installation of the walk-in refrigerated cooling boxes. One concerned appellant's failure to install the contractually required roof supports for the roof mounting condensing units for these boxes (ex. A-1 - GFGI at tab 35). Another was that the wall soffit depicted on the contract drawings was too long requiring a contract modification to remove a part of this soffit so that the unit would fit into the space provided (*id*.). Finally, the thermal break shown on the drawings did not match what was required for these boxes (*id*.). No evidence was presented as to how either the contractor caused or Government caused problems affected the contract delivery date.

124. As to the Commissary (ex. A-20), NAVRESSO's contractor Tyler complained that some of the drains installed by appellant were not installed in a straight line (ex. A-1 - GFGI at tab 14). As with the Exchange, no evidence was presented as to (a) how the contract required appellant to install these drains so that we can determine which party was responsible for the problem nor (b) how this problem affected the contract completion date.

125. The AROICC admitted that, similar to the Exchange, the contract did not provide adequate information so that appellant could connect the refrigerated display cases to the building's HVAC system (ex. A-1 - GFGI at tab 5); appellant's project manager Brown complained that an extra electrical circuit was required for the refrigerated cases in addition to the two shown on the drawings (ex. A-1 - GFGI at tabs 9, 10); and appellant's purported project manager Hogan Herges, who succeeded Mr. Brown, complained that no water supply pipe was depicted on the drawings for the produce preparation room (ex. A-1 - GFGI at tab 36). Again no information was included to show how these problems affected the contract completion date.

126. Finally, appellant's Mr. Herges complained about undefined problems with the cooler walls and ceilings in the produce preparation room (ex. A-1 - GFGI at tabs 40, 41). No evidence was presented as to the details of this problem, whether the problem related to some defect in the drawings and specifications, and how, if any, they affected the contract completion date.

127. On 1 June 1990, appellant provided notice that it was within 15 days of completing Phase I and requested a Government inspection on 18 June 1990 to verify this (ex. A-1 - GFGI at tab 32). By a letter dated 8 June 1990, appellant admitted that the IDS, Intercom System, and Fire Alarm System would not be completed by the 18 June inspection date but claimed substantial progress had been made on these systems and that these deficiencies should not delay Government acceptance of Phase I (R4, tab 189). The letter requested that appellant be relieved of any liquidated damage penalty at the larger rate for Phase I and that any penalty be assessed at the lower rate for Phase II because appellant had permitted the GFGI work to proceed prior to the completion of Phase I (*id.*).

128. On 18 June 1990, the AROICC and other Government representatives including those from NAVRESSO inspected the contract work (R4, tab 261 at 18 June 1990). They determined that the work was not complete (*id.*). They opined that 7 to 10 days work remained on the Exchange and 21 to 28 days work remained on the Commissary to complete Phase I (*id.*). NAVRESSO in a letter dated 26 June 1990 listed in detail the work not yet complete for Phase I (ex. A-1 - GFGI at tab 35).

129. By a letter dated 20 July 1990, the AROICC advised the appellant that Phase I was complete as of 15 July 1990 (ex. A-1 - GFGI at tab 43). The letter further stated that Phase II had commenced on that date and that appellant had 45 days to complete Phase II under the terms of the contract (*id.*).

130. The Government proposed bilateral Modification No. P00030 dated 7 July 1990 extending the completion date for Phase I to 29 August 1990 to coincide with that for Phase II (R4, tab 212). The proposed contract modification specifically permitted the Government to install the GFGI equipment during Phase I but contained no statement that either the appellant or the Government was responsible for the proposed time extension (*id.*). Appellant refused to sign the modification (tr. 2/69-70) and the Government withdrew and canceled it by unilateral Modification No. P00047 dated 29 July 1991 (R4, tab 212).

131. The AROICC accepted the Exchange and Commissary for BO on 31 August 1990 except for enumerated punch list items (ex. A-1 - GFGI at tab 44; R4, tab 260 at CQCDR dated 31 August 1990, tab 261 at CRR dated 31 August 1990).

132. Appellant claimed that the GFGI equipment, scheduled to be installed in Phase II over a 45-day period, instead took 212 days to complete, although the Government subcontractors began before Phase I was completed. Appellant alleged on its PERT "As Planned" schedule, submitted with its claim, that it had contemplated a 14 February 1990 start date for Phase II, ending 45 days later on 1 April 1990. Instead, the Government's subcontractors started early, before Phase I was complete, and finished on 31 August 1990 when the Government took BO. Appellant claimed 167 days delay (212 less 45 days) as part of its total of 289 days delay to the building. (R4, tabs 4, 5; finding 11)

133. Phase II commenced on 16 July 1990 and should have been completed 45 days later on 29 August 1990. Appellant worked on punch list items during August 1990 (R4, tab 261). Thus, the record does not establish any Government-caused delay from 29-31 August 1990.

Decision - GFGI Claim

Appellant claims a 167-day delay to this part of the work, based on 212 days from the date when NAVRESSO's contractor Tyler first started work until 31 August 1990 when BO was taken by the Government, less 45 days (findings 112, 131). It claims that the Government had 45 days to complete the installation of the GFGI equipment after it gave notice that it wanted Phase II to commence before the completion of Phase I.

Appellant's argument ignores the language in the notice provision stating that the purpose of the 15-day notice was to give the Government time to prepare to inspect appellant's work in order to determine that Phase I was complete so that the 45 day Phase II period could begin (finding 103). Contrary to appellant's argument, this is how the parties interpreted the provision when appellant gave notice that Phase I would be complete in 15 days and the Government scheduled an inspection to determine whether it was (findings 127-28).

The Government determined that Phase I was complete on 15 July 1990 which was the contractually required date for the completion of Phase I (findings 9, 129). Since appellant completed Phase I by the contractually required date, appellant can only recover for delay if it can prove that it could have completed the contract early and would have done so but for delay by the Government. *Wickham Contracting Co., Inc. v. Fischer*, 12 F.3d 1574, 1582 (Fed. Cir. 1994). A contractor is obligated to prove:

> with reasonable certainty the extent of unreasonable delay which resulted from defendant's actions and to provide a basis for making a reasonably correct approximation of the damages which arose therefrom. [Citations omitted] Broad generalities and inferences to the effect that defendant *must* have caused some delay and damage because the contract took 318 days longer to complete than anticipated are not sufficient. *Commerce International Co., Inc. v. United States* [338 F. 2d 81 (Ct. Cl. 1964)]

Wunderlich Contracting Company v. United States, 351 F.2d 956, 969 (Ct. Cl. 1965).

Appellant's approved schedule dated 21 September 1989 and its proposed schedule dated 7 November 1989 both indicated early completion dates for Phase I of 1 March 1990 and 1 April 1990, respectively (finding 109). Both schedules indicated that the GFGI equipment would be installed after the completion of Phase I during Phase II (*id.*). Appellant never prepared, submitted, or used a new schedule reflecting the re-sequencing of the activities of Phase II as being concurrent with those of Phase I as required by the contract (findings 6, 110). Accordingly, the record does not contain a schedule which we can use to measure delay as the re-sequencing makes the 21 September and 7 November schedules not creditable for delay analysis.

Further, appellant failed to present proof to support its allegations that GFGI activities delayed its contract performance. Appellant's exhibit A-1 "GFGI" summary included a number of documents that raised problems about the interface between the electrical and plumbing rough-in and the GFGI to be installed in Phase II but without showing how any or all of these problems specifically caused delay to the contract's critical path (finding 118). In addition, appellant's consultant Frasier summarized these documents in testimony and by preparation of appellant's exhibits A-19 through 21 but again without demonstrating what effect, if any, they had on the critical path (findings 119-26).

The sheer weight of documents, however, is insufficient to prove liability, causation and damage. Appellant has not provided the nexus between the allegation and the claimed delay that we must have in order to find in its favor. We rejected a similar attempt in *G. Bliudzius Contractors, Inc.*, ASBCA Nos. 42366 *et al.*, 93-3 BCA ¶ 26,074 at 129,592-93, wherein the contractor presented little more than "an array of war stories complaining about the Government's delay to the project." We stated that "[w]e cannot simply presume that since there was a Government caused delay, that it follows that completion of the project was delayed." *Id. See also Commerce International Company v. United States*, 338 F.2d 81, 89 (Ct. Cl. 1964):

> We are reminded in general terms that for want of a nail a kingdom could be lost, but there is no evidence or attempt to show, even by illustration, that the delay on this-or-that part held up work on so many tanks for such-and-such an approximate period. . . . There is no effort to differentiate, even by general classes, between the reasonable and the unreasonable Government delays, and to show the special effect of the unreasonable delays. Other important causes of delay (such as dilatory subcontractors) are ignored.

Id.

Finally, appellant asserts that proposed bilateral Modification No. P00030 dated 7 July 1990 extending the contract completion date for Phase I to 29 August 1990 and permitting the Government to install GFGI during Phase I represents an admission by the Government that it was responsible for 50 days of delay (finding 130). However, the proposed modification does not state that the Government delayed appellant, and, more importantly, was one appellant rejected and the Government retracted (*id*.). Thus, we find appellant's contentions concerning the impact of Modification No. P00030 to be without merit.

In summary, appellant failed to provide an analysis of the alleged Government actions to show how appellant was delayed, other than to assert that, because appellant finished later than projected, the delay must have resulted from these incidents. We deny the GFGI claim.

J. IDS Claim

134. Specification § 16727, entitled "Commercial Intrusion Detection Systems" requires that appellant install a new individual and self-contained IDS for the Commissary and Exchange (R4, tab 1 at ¶ 1.3).

135. Paragraph 1.3.1 of § 16727 indicates that approximately 60% of the components of the IDS will be furnished by the Government with the remaining 40% to be furnished by appellant (R4, tab 1). Paragraph 1.3.1.1 also indicates that the Government will make available telephone lines connecting the IDS to the NAS Security Department Dispatcher's console (*id*.). It makes it clear that appellant has the responsibility to install both Government furnished and contractor furnished components and to make the IDS totally operational (*id*.).

136. Paragraphs 1.3.1, 2.1, and 2.1.1 of § 16727 state that the Government would furnish appellant one alarm control unit (ACU) and one manual entitled "Installation, Operation and Checkout Procedures for Joint Services Interior Intrusion Detection System (JSIIDS)" for each of the Commissary and the Exchange as well as other components (R4, tab 1). Paragraph 2.2 indicates that the passive infrared units (PIU) are contractor furnished components which must be Aritech Corporation (Aritech) Model 851 or equal designed to interface with the Government furnished ACU's (*id*.). The PIU's put out beams or fingers of light which when broken by an intruder trigger the ACU which in turn sends a signal along the telephone wires to the monitoring station to notify that an intruder is present (tr. 6/17-18).

137. The Aritech PIU has an electrical current draw of 32 to 38 milli-amperes (tr. 6/19). Equivalent PIU's to the Aritech PIU (which appellant could choose under the

terms of the contract) have differing electrical current draws (*id*.). Thus, the current draw of the PIU's on the ACU's could not be determined until appellant submitted its shop drawings indicating what PIU's appellant had chosen in order to evaluate whether the selected PIU's were "equal" to the Aritech 851 PIU's (tr. 6/19-20).

138. The maximum current draw permitted by the ACU's furnished by the Government was 500 milli-amperes (tr. 6/20). To determine the number of PIU's supported by an ACU, divide the current draw of a single PIU into the maximum (500 milli-amperes) of the ACU (*id*.). If appellant used more than the maximum number permitted by this calculation, a fuse would blow because the maximum current draw of the ACU would be exceeded (tr. 6/20-21).

139. The PIU's selected by appellant as an "equal" to the Aritech 851 PIU's drew more current than the maximum permitted by the ACU's provided by the Government (tr. 6/20-21). Appellant did not prove that the contractually specified Aritech 851 PIU's drew more than the maximum current. In addition, it did not prove that other name brands of PIU's drawing less or equal current than that of the Aritech 851 PIU's did not exist. Thus, we cannot find that the specifications were defective as to the ACU's and PIU's.

140. Paragraph 2.3 of § 16727 provides that Light Emitting Diodes (LED) and shunt switches are contractor provided and installed components of the IDS (R4, tab 1). The shunt switches provide the function of turning the security for an area off or on (*id*.; tr. 6/21-23). The LED is a low voltage light which glows red or green to indicate whether the shunt switch had turned the security system on or off (*id*.).

141. Paragraph 1.3.2.3 of § 16727 indicates that the Exchange and Commissary are each to be divided into zones which operate independently from one another through the use of the shunt switches (R4, tab 1). For example, the Exchange was divided into the following zones: barber shop, main warehouse, administration, delicatessen and bank (tr. 6/21-22). The IDS was designed so that a shunt switch could turn the security system off for a zone such as the barber shop while the other zones remained protected (tr. 6/22).

142. Paragraph 1.4 of § 16727 requires that appellant provide the following data to establish that its installers have the necessary experience to install the IDS:

> Prior to installation, submit data for approval by the Contracting Officer, showing that the Contractor has a minimum of 5 years experience successfully installing IDS of the same type and design as specified herein or that the Contractor has a firm contractual agreement with a subcontractor having such required experience. The data shall include the names, locations, and points of contact of at least two installations of the same type and design as specified

> herein where the Contractor, or the subcontractor referred to above, has installed such systems. The Contractor shall indicate the type of each system and certify that each system has performed satisfactorily in the manner intended for a period of not less than 24 months.

(R4, tab 1)

143. Paragraph 1.5 of § 16727 and ¶ 1.4 of § 16011 require that appellant submit shop drawings of the IDS and receive contracting officer approval before procuring, fabricating, delivering, or installing the IDS (R4, tab 1). Paragraph 1.5.1 states that those shop drawings were to include complete details both as to what components were being used and their function, where they were to be installed, and how they were to be electrically connected. Paragraph 1.5 indicates that the shop drawings were to be scheduled to be submitted to the Government with sufficient time in advance of installation so that the Government had time to make any necessary corrections.

144. Appellant's approved schedule dated 21 September 1989 indicates that appellant intended to complete its submittals and start installation of the IDS by early October 1989 (ex. A-6; R4, tab 89). Its proposed revised schedule dated 7 November 1989 provided that appellant still intended to complete its submittals and start installation of the IDS by early October 1989 (ex. A-7). Appellant's 21 September 1989 schedule had a contract completion date of 1 April 1990 which is when appellant intended to complete the IDS (ex. A-6; R4, tab 89) and its proposed 7 November 1989 schedule had a contract completion date of 1 May 1990 which also included completion of the IDS (ex. A-7). Neither schedule indicated that the delivery and installation of the IDS was on the critical path. The record contains no other schedule by appellant.

145. In letters dated 20 June and 29 August 1990, the AROICC complained to appellant that it had not received either (a) shop drawings indicating what components appellant had chosen and how they were to be installed and/or (b) appellant's qualification statement or certification that its IDS installer met the contract's minimum experience requirements (R4, tabs 111, 231 at 13). In addition, the Government's security representative, Mr. Lawrence Williams complained to representatives of appellant's surety and appellant's IDS installer Warren Electric (Warren) at a 2 December 1990 meeting of the lack of appellant furnished shop drawings and/or equipment schedules (R4, tab 115 at ¶ a.7).

146. Appellant never submitted shop drawings or an equipment schedule indicating what PIU's or other equipment it was installing for the IDS (tr. 4/227-28, 6/23, 42, 7/115; R4, tab 82 at 4, tab 115 at ¶ a.7, tabs 227, 240, 241). In addition, it never submitted the

required qualification statement and certification indicating that its installers met the contract's requirements for prior experience in installing IDS equipment (*id*.).

147. The only prior experience for IDS installer Warren detailed in the record was testimony from the Government's security expert Williams that Warren had a prior contract to install a JSIIDS unit at the front gate of the Naval Air Station. This prior contract was a much simpler installation without multiple zones and one where Warren was unable to perform without technical assistance with the schematics and drawings from the Government's Williams. (Tr. 6/32-35) Warren's primary employees that installed the IDS did not have the contractually required five years of experience described in finding 142 (R4, tabs 1, 115 at ¶ a.6; tr. 6/42-44). These were moonlighting employees working for the Navy in aircraft maintenance with no prior experience with security system electronics (*id*.). Appellant's vice president Frasier admitted in letters dated 5 October 1990 and 3 May 1991 that Warren lacked the capability to install the IDS (R4, tabs 243, 244 at ¶ 7). We find that the IDS installer lacked the required fivc years of prior experience in installing security systems like the IDS and the capability to do so.

148. On 10 August 1989, the Government provided two JSIIDS manuals to appellant (R4, tab 102). On 23 February 1990, it furnished the remaining GFGI except for one ACU, one code plug, three magnetic switches, and one battery (R4, tab 104 at 2nd document, tab 218). The remaining items, including three additional code plugs, were given to appellant on 20 March 1990 (R4, tab 107).

149. Appellant's IDS installer began installation of the IDS in the Exchange on 18 June 1990 (R4, tab 257 at Report No. 298, tab 261 at CRR Nos. 92-93). It stopped its effort after 13 July 1990 indicating that it was waiting direction from the Government as to how the system was to work (R4, tab 257 at Report No. 323, tab 260 at CQCDR dated 16 July 1990).

150. On 24 June 1990, appellant's IDS installer Warren attempted to test its installation of the IDS, burned up a component of the Government furnished ACU, and requested technical assistance from the Government claiming that the ACU it was furnished was obsolete (R4, tab 5 at attach. 6 - letter dated 25 June 1990; ex. A-2 at tabs 23-25). The problem appears to have resulted from appellant's selection of PIU's as alleged equals to the Aritech 851 PIU's which made the power supply of the Government furnished ACU's inadequate (*infra*).

151. On 3 July 1990, the Government security specialist, Williams, worked with appellant's IDS installer on the installer's problems in installing the IDS system (R4, tab 260 at CQCDR dated 3 July 1990). This security specialist saw the Government drawings of the security system for the first time on 6 July 1990 (R4, tab 100 at 56 -17 July 1990 Williams Memorandum). As a result of this, the security specialist learned for the first time, as no shop drawings had been furnished by appellant, that

appellant had selected PIU's as equals to the Aritech 851 which had a larger current draw than the Government furnished ACU matching the Aritech 851 PIU's could provide (*id.* at 55 ¶ 2(d; tr. 6/30-31). He selected a larger power supply for the ACU's as a part of a recommended contract modification rather than forcing appellant to reinstall different PIUs (*id.*).

152. The Government security specialist Williams also found that the security system had been designed for the Government by the A&E with the off and on shunt switches in the zones which they controlled (R4, tab 100 at 54-55 ¶ 2(a)). He proposed as a part of a recommended contract modification that each be moved outside the zone it controlled as false alarms would be sent when someone entered the security zone to turn the security system for that zone on or off (*id.*).

153. The Government security specialist Williams also determined that some of the security zones designed for the Government by the A&E overlapped (R4, tab 100 at 55 ¶ 2(b), 2(c); tr. 6/29-32). Thus, one security zone might be open for business with the alarm turned off and a portion of another area would also be turned off and unprotected even though it was not open for business (*id.*). He proposed as a part of a recommended contract modification that the wiring be revised to separate the overlapping zones (*id.*).

154. On 6 August 1990, Hartford took over managing performance of the contract on behalf of appellant (finding 9). Hartford did so because appellant had cash flow problems (tr. 8/43-44). Appellant introduced Hartford on the job site as representing appellant (tr. 8/56). Hartford in turn employed D.T. Curry & Associates (Curry) to represent Hartford in the completion of the work under this contract (tr. 8/45). On 31 August 1990, the contracting officer issued unilateral Modification No. P00033 changing the contractor's address from appellant in Orlando, Florida to Hartford in Alexandria, Virginia (R4, tab 212). Subsequent Modification No. P00036 clarified Modification No. P00033 at appellant's request, to state that payments would be made to appellant in care of Hartford. No where else does the record indicate that Hartford ever became a contracting party.

155. No written agreement establishing the terms of Hartford's authority in managing the contract for appellant was included in the record (tr. 8/56). Appellant's president testified that the agreement between Hartford and appellant was that appellant would retain control over its delay and extended overhead claim and that Hartford would not waive any of appellant's rights concerning these claims (tr. 8/44, 48). No corroborating documentary evidence between Hartford and appellant establishes this limitation on Hartford's authority. No representative of Hartford testified at the hearing. No evidence was presented that this limitation of authority was ever communicated to the AROICC or contracting officer before the contract modification concerning the IDS was negotiated and/or signed (*see* tr. 3/21, 6/138-41, 8/55-58).

156. Curry placed Claude Caviness at the job site to manage the job (R4, tab 244 at ¶ 7). On 4 September 1990, Howard Hartman replaced Mr. Caviness as manager at the job site (*id.*).

157. On 6 August 1990, the Government sent a request for proposal (RFP) to move the shunt switches out of the zones each switch controlled, add power supplies to the ACU's to provide adequate power to the components appellant's IDS installer chose to install, and to separate the wiring so that the security zones would not overlap (R4, tab 100 at 12). Appellant received that RFP on 13 August 1990 and forwarded it to Curry on 16 August 1990 advising Curry that appellant was entitled to its costs and delays for wasted effort in installing an IDS that did not work as well as for the re-designed work (R4, tabs 5, 100 at 11, tabs 243, 244 at ¶ 7). On 5 September 1990, Curry requested an equitable adjustment of $11,548.22 plus 21 calendar days extension of the contract (R4, tab 100 at 20).

158. On 12 September 1990, a meeting of Howard Hartman for Curry, Senior Project Engineer Lonnie Dowling for appellant, Project Engineer Hogan Herges for appellant, Wendy Warren as contracting officer, AROICC Green, and Craig Tiber for the Government took place to negotiate the 5 September 1990 equitable adjustment requested by Curry on behalf of appellant to modify the IDS (R4, tab 100 at 4). The parties agreed to an equitable adjustment of $10,792 and to a 41-day extension of the contract completion date from 3 September to 15 October 1990 (R4, tab 100 at 4, 5).

159. On 22 October 1990, the contracting officer signed Modification No. P00034 modifying the design of IDS as agreed to during the negotiations. Mr. John McClellan, Jr., Bond Claims attorney, Hartford, signed for appellant on 18 October 1990. No officer or employee of appellant signed this modification. This contract modification included this release:

> In consideration of the modification agreed to herein as complete equitable adjustment for the Contractor's 5 September 1990 proposal for adjustment, the Contractor hereby releases the Government from any and all liability under this contract for further equitable adjustments attributable to such factors or circumstances giving rise to the proposal for adjustment.

(R4, tabs 100, 212)

160. On 6 August 1990, appellant received the re-design information on the IDS from AROICC Green (R4, tab 257 at Report No. 340). Appellant's IDS installer Warren

did not resume working on the IDS system until 21 August 1990 (R4, tab 260 at CQCDR dated 21 August 1990). It continued with the IDS installation sporadically thereafter (*id.*).

161. The Government determined that the IDS was a punch list item that would not delay the BO (tr. 1/163-64, 6/157). The project was accepted for BO without the IDS on 31 August 1990 (finding 145).

162. Appellant's IDS installer Warren continued installing the IDS sporadically with two workers on 13 September 1990 and one worker on 17, 26-27 September 1990 (R4, tab 260). Its sporadic work continued on 1, 2, 4 October 1990 (*id.*). No workers from Warren came to the job site from 5-15 October 1990 (*id.*). One worker appeared for two hours on 16 October 1990 and one hour on 18-19 October 1990 (*id.*). Two workers came to the site for one hour on 17 October 1990 (*id.*).

163. Appellant's QAR complained in quality assurance reports for 2, 4, 19 October 1990 about appellant's IDS installer Warren's manning of the work, progress, and ability to complete the IDS (R4, tab 260).

164. On 11 October 1990, appellant's vice president and consultant Frasier and Curry's Claude Caviness met with AROICC Green to discuss the settlement of claims under the contract, complete change orders, and perform other duties connected to this contract (R4, tab 260).

165. Appellant's IDS installer Warren attempted to connect the IDS to the telephone lines on 9 November 1990, via the 25-zone cabinet in the Boca Chica Security Office when it was electrically connected or hot (ex. A-2 at tab 56; R4, tab 112). Warren was unsuccessful, and disabled the cabinet through its failure to deactivate the power supply, leaving restricted zones unprotected (*id.*).

166. On 2 December 1990, the Government security expert Williams inspected appellant's IDS installer Warren's installation of the IDS system (R4, tab 115). He found that appellant had used the wrong wire and connectors in some locations (*id.* at 2, ¶ a.1; tr. 6/36-37). Color coding was not used so wires could be traced to trouble shoot the system (R4, tab 115 at 2 ¶ a.2; tr. 6/40-42). Some of the wires were made of strands of wire and appellant cut some of the strands to fit the stranded wire under a screw connector at one of the ACU's (R4, tab 115 at 2, ¶ a.2; tr. 6/38). This reduced the capacity of the wire as only the non-cut strands were connected.

167. Tamper switches were installed at each ACU to alert the security monitoring station that an intruder was tampering with the security system (R4, tab 115 at 2, ¶ a.3; tr. 6/39-40). The tamper switches were wired in series with the ACU's so that no alarm signal would be sent when the system was being tampered with (*id.*; tr. 6/38-40). Accordingly, the tamper function was disabled by the method of installation (*id.*).

168. Appellant's IDS installer Warren furnished push button shunt switches which were starting to rust and were not UL approved (tr. 6/23-24).

169. Appellant's claim dated 14 December 1990 included the problems with the IDS system alleging that the specifications were defective, requiring the IDS to be re-designed (R4, tab 5 at 4). It claimed that some of the ACU's were defective causing one to burn up (*id*. at 4, attach. 6). The claim was for (a) $12,257 for wasted work from 14 June until 13 July 1990 when all IDS work was stopped pending the new design including time for experimentation and testing which would not have been required if the design had not been defective and (b) delay damages (*id*.).

170. Curry hired Milcon Systems Corporation (Milcon) in December 1990 to replace IDS installer Warren (R4, tabs 116-18).

171. In late December 1990 or early January 1991, appellant's consultant Frasier advised the contracting officer that Hartford's authority in managing the project on behalf of appellant was that Hartford could negotiate and execute change orders but could not waive any delay damage claim of appellant (tr. 3/16-18, 20-21). He confirmed this in a fax to the contracting officer dated 9 January 1981.

172. The IDS was inspected, tested, and accepted for use by the Government on 8 April 1991, pending completion of certain deficiencies found during the inspection (R4, tabs 125-26).

Decision - IDS

Appellant claims that the specification for the IDS system was defective, that it incurred wasted costs in experimenting and testing the IDS to try to get it to work, and that it was delayed by the Government having to re-design the IDS system to overcome the defects of its earlier design. It claims that the issuance of the change order altering the design of the IDS is an admission that the specification was defective even though it takes the position it is not bound by the release in the bilateral change order because Hartford was not authorized to waive any of its delay claims.

It is true that bilateral Modification No. P00034 was signed by the contracting officer and a representative of Hartford and not by an employee or officer of appellant (finding 159). This modification contained a release waiving any further equitable adjustments "attributable to such factors or circumstances giving rise to the proposal for adjustment" (*id*.). The "factors or circumstances" which gave rise to the IDS equitable adjustment proposal presented by Hartford on appellant's behalf were the problems with the IDS system which were solved by the Government's changes to the IDS design (findings

157-59). Appellant's reliance on this modification to establish design defects is an admission of this. Thus, these problems were covered by the terms of the release.

Hartford was never a contracting party, was merely an agent of appellant authorized to manage the project, and the contracting officer knew this as evidenced by Modification No. P00036 (finding 154). Appellant introduced Hartford as being its representative at the job site (finding 154), had Hartford prepare and submit the equitable adjustment proposals for the re-design of the IDS (finding 157), and had representatives of Hartford along with several of its own EMPLOYEES negotiate the IDS contract modification (finding 158). Thus, appellant held out Hartford as its agent having authority to manage this job including negotiating and executing contract modifications on its behalf.

Apparent authority exists when a person manifests to another that a third person is his agent. *See* RESTATEMENT OF AGENCY, SECOND, § 8, Comment a. Secret limitations on that authority are not binding. *Id*. at Illustrations 2 through 4; *Menches Tool & Die, Inc.*, ASBCA No. 21469, 78-1 BCA ¶ 13,167.

Appellant as contracting party admits that Hartford as managing agent had the authority to negotiate and execute change orders on its behalf but claims that it was not authorized to waive any delay claims of appellant. However, this limitation on the authority of Hartford was not communicated to the contracting officer or the AROICC (finding 155). The first instance when the contracting officer learned that appellant was claiming that Hartford's authority was limited was in late December 1990 or early January 1991, long after Modification No. P00034 was executed by the parties on 22 October 1990 (findings 159, 171).

Under the doctrine of apparent authority, we conclude that Modification No. P00034 and its release were binding on appellant, and operated as an accord and satisfaction.

Even if we were to determine that Modification No. P00034 is not binding, appellant still could not recover for the problems relating to the IDS system. Appellant bears the burden of establishing the fundamental facts of liability, causation, and resultant injury. *Santa Fe Engineers, Inc.*, ASBCA No. 25549, 82-2 BCA ¶ 15,982 at 79,253.

Appellant claims that it is entitled to its cost of testing and experimenting before the Government discovered that the IDS had to be re-designed as well as for the delay resulting from the need for the Government to correct its design. Appellant's problems with the burning up of components in one of the ACU's and its inability to make the IDS function were caused by its selection of PIU's that were not compatible with the Government furnished ACU's (findings 139, 150).

The problems of overlapping zones and improper location of shunt switches used to shut off zones of the system were not discovered by appellant because the system would not function at all due to the compatibility problem of the PIU's with the ACU's (findings 150-52). These latter problems were discovered by the Government's security specialist Williams in attempting to resolve the compatibility problem of the alleged "equal" PIU's furnished by appellant (*id*.). Thus, we cannot hold that appellant is entitled to any testing and experimenting costs for the shunt switch and overlapping zone problems.

As to the compatibility problem of the alleged equal PIU's to the Aritech 851 PIU's with the Government furnished ACU's, the contract required that appellant furnish shop drawings indicating what components it selected for the IDS system including what PIU's it selected as equals to the Aritech 851 PIU's, the PIU's electrical characteristics, where the PIU's were to be located, and how they were to be electrically connected (finding 143). It barred appellant from installing the IDS until the contracting officer approved those shop drawings including whether the PIU's were equals (*id*.). If appellant had submitted the shop drawings, it is highly likely that the compatibility problems related to the equal PIU's and the ACU's would have been discovered. Appellant's failure to adhere to the contract's shop drawings requirements deprived the Government of its opportunity under the terms of the contract to catch this error (finding 147).

In addition, the record is clear that appellant lacked the experience and capability to properly install the IDS (finding 147). It lacked qualified installers (*id*.), lacked an adequate number of installers (findings 162-63), worked sporadically showing a lack of tenacity (findings 160, 161-62), and its IDS installation was of low quality and violated the terms of the contract (findings 150, 165-68).

In summary, appellant selected as alleged equal PIU's to the Aritech 851 PIU's ones which were not compatible with the Government furnished ACU's. Rather than requiring appellant to reinstall many new PIU's, the Government issued a change increasing the power supply of the ACU's. It also corrected several Government design errors in the way the IDS would function once it was operational. Appellant received an equitable adjustment for its costs and time under a bilateral contract modification definitizing that change order and is barred from further relief under the release contained in that modification. Even if not barred by the release, we are unable to determine that appellant would have incurred any harm had it followed the contract's terms and submitted shop drawings before it commenced installation. Moreover, appellant's problems with qualified manpower, tenacity, and poor workmanship make it impossible for us to determine how the design errors caused it any harm.

We deny the IDS claim.

K. Area West of Felton Road Claim

173. As a part of this contract, appellant re-constructed the portion of Felton Road across from the base housing office to an elevation of two feet above the existing grade with the road edge dropping off abruptly toward the housing office (R4, tab 54 (2nd pg.), tab 128 at drawing C-4; tr. 4/119-21, 6/117, 7/62-63). This increased slope from Felton Road toward the housing office caused water drainage problems in the front and rear of the parking lot for the housing office (*id*.).

174. The contract required appellant to add two small sections to the housing office parking lot immediately adjacent to and west of Felton Road, build a sidewalk adjacent to the west side of Felton Road, and to construct an entrance from Felton Road into the housing office parking lot (R4, tab 128 at drawing C-4; tr. 6/118, 7/61-62). This area is marked area 1 in red on drawing C-4. An area marked in red as 2 was completely outside the limits of construction (*id*.). The Government determined that both areas 1 and 2 had to be re-designed (R4, tab 54 (both pgs.)).

175. Neither the contracting officer, ROICC, or AROICC ever instructed appellant to hold its equipment at the job site to solve this grading problem adjacent to Felton Road near the housing office other than to advise them that this area had to be re-designed (tr. 2/190-91).

176. In early April, AROICC Smith discussed the grading problem with appellant's project manager Brown informing him that the area had to be re-designed and orally informed appellant that the parking lot and sidewalk work west of Felton Road was being deleted and was no longer part of the contract because of this grading problem (tr. 4/122-23, 126, 290-92, 5/25; R4, tab 54 (2d pg.)). Smith specifically instructed Brown not to keep its crews and/or heavy equipment at the site to perform this work (tr. 4/124-26). Brown replied that it would be to the Government's advantage to have appellant perform the re-grading of the area because it already had the grading equipment at the job site and appellant would have no remobilization costs (tr. 4/124, 290). Smith indicated that if the Government completed the design while appellant's heavy equipment and crew were still at the site appellant would be given the opportunity to compete for this work as a part of a formal RFP process (tr. 4/124).

177. Brown testified the Government never issued a written stop work order or orally ever ordered appellant not to perform any work west of Felton Road but asked that appellant perform the massive amount of other grading and paving work which remained until this grading problem at Felton Road could be resolved and that he stated that he had no problem with this (tr. 7/63-65, 190-92).

178. By a letter dated 3 May 1990 from appellant to the AROICC, appellant complained that it was awaiting direction concerning the grade change at the housing office, advised that appellant had incurred stand-by costs waiting for this direction, and requested that a change order be issued (R4, tab 52). The Government responded by letter dated 8 May 1990: "This work has not been accomplished and your field office has been specifically advised not to perform any work in these areas until we issue a modification. This status has not changed." (R4, tab 57).

179. Appellant never had any idle grading and paving equipment during Brown's tenure as appellant's project manager (tr. 7/64-65). It almost continuously used its heavy equipment to haul fill and lime rock and then spread them, graded, compacted, and then paved or poured access roads, parking lots, curbs, sidewalks, concrete drains and drainage ditches, and the loading dock area from April through June 1990 (tr. 4/134-35, 7/65; R4, tabs 256-61). The last recorded use of heavy equipment was the moving of fill for sidewalk areas on 2 July 1990 (R4, tab 257 at Report No. 311).

180. By letters dated 7 June and 6 July 1990, appellant complained to the Government about having been stopped from performing its work west of Felton Road since 20 April 1990 and not yet having receiving the re-design (R4, tab 58).

181. The Government's A&E re-designed the grading for the problem areas west of Felton Road and estimated costs of $18,080 to perform that work (ex. A-1 - Area West of Felton Road at tab 11, ex. A-5). Appellant's estimate dated 28 July 1990 to do this work was $68,782, which included a credit of $1,250 for original contract work that had been deleted by the re-design (ex. A-1 - Area West of Felton Road at tab 13).

182. Appellant never performed any work west of Felton Road in the areas marked 1 and 2 on drawing C-4 (tr. 6/118-20; R4, tab 128).

183. Appellant's claim is for idle equipment from 20 April to 13 September 1990, in the amount of $52,914 (R4, tab 5; ex. A-1 - Area West of Felton Road at tab 14).

Decision - Area West of Felton Road Claim

Appellant argues that it is entitled to $52,914 as the value of its idle equipment independent of any other Government-caused delays to the site or to the building (app. br. at 9). The contracting officer, ROICC, and/or AROICC never directed that appellant keep its heavy equipment available to perform the potential re-grading work which was never awarded to appellant and in fact advised appellant that this work was no longer part of the contract (findings 175, 176). In addition, appellant never had any idle heavy equipment after this grading problem west of Felton Road was discovered (finding 179).

The claim for idle equipment is denied.

CONCLUSION

We have found no entitlement to an equitable adjustment for either time or money. Without entitlement, appellant cannot recover for job overhead, home office overhead, equipment, overtime, added supervision, and added living expense. The appeal is denied in its entirety.

Dated: 7 September 2001

JOHN I. COLDREN
Administrative Judge
Armed Services Board
of Contract Appeals

(Signatures continued)

I concur

MARK N. STEMPLER
Administrative Judge
Acting Chairman
Armed Services Board
of Contract Appeals

I concur

EUNICE W. THOMAS
Administrative Judge
Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA No. 44937, Appeal of Kaco Contracting Company, rendered in conformance with the Board's Charter.

Dated:

EDWARD S. ADAMKEWICZ
Recorder, Armed Services
Board of Contract Appeals