

No. 91-1384C

(Filed January 16, 1998)

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HOFFMAN CONSTRUCTION

COMPANY OF OREGON

Plaintiff,

v.

THE UNITED STATES,

Defendant.

* Building renovation contract;
 * type I
 * differing site conditions; duty to
 * consult
 * materials referenced in bidding
 * docu-
 * ments; patent ambiguity
 * doctrine,
 * contract interpretation; delay
 * and impact claims; critical path
 * method; proof of causation
 * and resultant injury.

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C. Matthew Andersen, Spokane, Washington, for plaintiff.

William Alvarado Rivera, Washington, D.C., with whom was *Assistant Attorney General Frank W. Hunger*, for defendant.

OPINION

MEROW, *Judge*.

This government contract dispute comes before the court following a trial. Plaintiff Hoffman Construction Co. ("Hoffman") has brought six claims on behalf of its subcontractor, W.A. Botting Company ("Botting"), against the United States General Services Administration ("GSA"). The claims arise out of contract no. GS-09P-87-KTC-0120, involving the renovation of the Old Bonneville Power Administration ("BPA") Building in Portland, Oregon. GSA awarded the contract to Hoffman on September 15, 1987 for a price of \$10,239,000. The contract required, *inter alia*, asbestos abatement, fireproofing, and demolition and replacement of a substantial portion of the building's mechanical and

electrical systems. The contract also included options for tenant improvement work which GSA exercised through change orders issued after award.

Hoffman retained only a management role in contract performance. Hoffman subcontracted the asbestos abatement work to Precision Contracting, Inc. ("Precision"), its wholly-owned subsidiary, and the mechanical and electrical systems work to Botting. Botting, in turn, subcontracted work involving the heating, ventilation and air conditioning ("HVAC") system to Superior Air Handling Corporation ("Superior") and insulation work to ACandS. Botting also subcontracted work involving controls to Careco.

Hoffman substantially completed performance on March 31, 1989, prior to the completion deadline of April 20, 1989 set forth in the contract. Throughout the course of performance, GSA issued approximately 164 change orders increasing the contract price by \$2,270,647. In addition, Hoffman, on behalf of its subcontractors, filed numerous claims due to alleged constructive changes, differing site conditions, and other unanticipated events which purportedly increased the cost of performance. On November 21, 1991, Hoffman and GSA executed an agreement in which Hoffman agreed to settle 36 of its outstanding claims for \$248,986.99, plus interest. Specifically excluded from the agreement were the six claims which form the basis of this action, claims 34, 35, 163, 380, 381, and 382. Hoffman submitted these claims to the appropriate GSA contracting officer ("CO") in accordance with the Contract Disputes Act ("CDA"), 41 U.S.C. §§ 601-613 (West Supp. 1997). Each claim was denied (or is deemed denied) by the CO in its entirety. Hoffman timely initiated this action, and the court has jurisdiction over the claims pursuant to the CDA and the Tucker Act, 28 U.S.C. § 1491 (West Supp. 1997). The background and merits of each claim is discussed below.

I. Claims 34 and 35 - Removal of Insulated Ductwork

In Claim 34, Hoffman, on behalf of Botting, seeks an equitable adjustment of \$46,040 for the removal and disposal of 120,000 pounds of sheetmetal ductwork from floors 2-8 of the Old BPA building. The ductwork, which comprised part of the building's HVAC system, was enclosed in sheetrock above a suspended acoustic panel ceiling. In Claim 35, Hoffman, on behalf of Botting, seeks an equitable adjustment of \$35,510 for the removal and disposal of insulation covering the ductwork. Hoffman asserts that the presence of the insulated ducts constituted a differing site condition under the terms of the contract because it was not indicated in the contract documents and could not have been discovered during pre-bid site visits. In addition, Hoffman argues, even if it should have anticipated the presence of the ductwork, it is entitled to compensation because there is nothing in the contract indicating that the ducts had to be removed.

The government contends that the presence of the insulated ductwork was not a differing site condition because the ducts were clearly depicted on information drawings referenced in the contract. In addition, the government asserts, ceiling grilles and registers visible during the site visits should have alerted Hoffman of the presence of ducts. Since the existence of the insulated ducts was foreseeable, the government reasons, Hoffman should have included the costs of their removal and disposal in its bid and must bear sole responsibility for failing to do so.

As discussed below, it is determined that claims 34 and 35 lack merit. Since the disputed ductwork was, as the government argues, clearly shown on the information drawings, the presence of the ducts was foreseeable and cannot constitute a differing site condition. Furthermore, while there is a discrepancy in the contract as to whether the ducts had to be removed, the discrepancy is obvious. Hoffman was therefore required to seek clarification of its obligations from the government prior to submitting a bid.

Having failed to do so, Hoffman cannot recover.

a. Background

The contract between Hoffman and the government called for the demolition of ductwork throughout the building but also indicated that some ductwork was to remain. Specifically, § 15050-7 provides:

Remove or relocate all ductwork, piping, oil tanks, chiller, cooling tower, fans, appurtenances, etc., as may be encountered in removed or remodeled areas in existing construction affected by this work. Disconnect service to equipment scheduled for removal. Cap and terminate all piping, ductwork, etc. to remain, and remove all abandoned equipment, ductwork, and piping.

Joint Exhibit ("JX") 2 at 618 (emphasis added). Section 1045-1 directed Hoffman to "refer to drawings and other sections of these specifications for 'Demolition' and 'Selective Demolition' work." *Id.* at 139. Likewise, § 2070-1 provides that the "[e]xtent of selective demolition is indicated on drawings." *Id.* at 207.

Section 1100 contains a list of "Contract Drawings" which include Asbestos Abatement drawings, Architectural (including Demolition) drawings, Structural drawings, Mechanical (including HVAC) drawings, Electrical drawings, and Landscape drawings. *Id.* at 153-56. None of the Contract Drawings show the disputed ductwork on floors 2-8. Consequently, the drawings do not indicate whether the ducts are to be removed or capped, terminated, and left in the building.

Section 1100 also identifies "Information Drawings" available for review by prospective bidders:

Information Drawings: A set of the original building construction drawings and a set of the major HVAC renovation drawings will be available for review during the bidding period. The drawings will be available at the BPA Federal Building, 1002 NE Holladay St., Portland, OR. Please contact Mr. Jack Gibson [503/230-3923 or Mr. Jim May 503/231-2107 to make an appointment for their review.

JX 2 at 156-57. The HVAC renovation drawings clearly depict the ductwork in question and show that it is insulated. Defendant's Exhibit ("DX") 4 at 9-AC-4 - 9-AC-10, 9-AC-15; Trial Transcript ("Tr.") at 984-88. The Information Drawings were kept in the Old BPA Building and were available for review by prospective bidders. Tr. at 970, 972, 808-09, 1138. In addition, both the government and Botting's field staff had and used copies of the drawings during contract performance. Tr. at 973, 1205, 1207, 1220. However, neither Hoffman nor any of its subcontractors reviewed the Information Drawings prior to bidding. Tr. at 399-40, 808-09, 910.

The scope of the pre-bid visual inspection contemplated under the contract is set forth in § 1100-6 under the heading "Inspection of the site." Bidders were instructed "to visit the work site prior to bidding, to ascertain the exact nature and location of the work." JX 2 at 158-59. Bidders were also directed to GSA Clause 21 (§ 52.236-2 of the Federal Acquisition Regulation ("FAR")), "Differing Site Conditions," and GSA Clause 22 (FAR 52.236-3), "Site Investigation and Conditions Affecting the Work." JX 2 at 158-59, 81; 48 C.F.R. §§ 52.236-2, 52.236-3 (1987). The latter requires the contractor to "satisf[y] itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract." JX 2 at 81; 48 C.F.R. § 52.236-3(a). Bidders were also informed that GSA would be conducting two guided building tours on specified dates but that "[i]nspection of the existing building plans as noted elsewhere is to be coordinated separately." JX 2 at 159. The "existing building plans as noted elsewhere" are the Information Drawings identified in § 1100. Tr. at 971.

As stated, neither Hoffman nor any of its subcontractors reviewed the Information Drawings as part of their pre-bid visual inspection. It is also not clear if Hoffman or its subcontractors participated in the guided tours of the building. Thomas Cherpeski, Botting's project manager, testified that he did not participate but was "in the building throughout the bid period." Tr. at 375-76. The insulated ductwork on floors 2-8 was not readily visible during the site visits because it was located above suspended acoustic-panel ceilings and encased in sheetrock. Tr. at 156. HVAC grilles and diffusers comprising part of the ceiling system were visible, however. Tr. at 137. In some cases, these appurtenances are attached to ductwork. Tr. at 140-41.

Section 1500-1 of the contract informed Hoffman that the discovery of concealed mechanical work would be treated in accordance with the Differing Site Conditions clause:

Concealed mechanical or electrical work may be encountered in work being removed, the existence of which was not indicated on the drawings or could not have been anticipated by visual inspection or by the presence of installed appurtenances. Work of this nature requiring rerouting will be considered as changed conditions in accordance with clause 21 of the GSA Form 3506 ["Differing Site Conditions," FAR 52.236-2].

JX 2 at 181-82. The referenced clause entitles a contractor to an equitable adjustment upon the discovery of type I differing site conditions, *i.e.*, "subsurface or latent physical conditions at the site which differ materially from those indicated in this contract," if the conditions cause an increase in the contractor's cost of performance. JX 2 at 81; 48 C.F.R. § 52.236-2(a)-(b). The clause also entitles the contractor to an equitable adjustment upon the discovery of type II differing site conditions which increase the cost of performance, *i.e.*, "unknown physical conditions at the site of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this contract." *Id.* The existence of type II differing site conditions has not been alleged in this action.

By letter dated February 8, 1988, Superior, Botting's HVAC subcontractor, informed Botting of its discovery of the insulated ducts on floors 2-8 and asked Botting how to proceed. Around the same time, GSA learned that demolition work had ceased while Superior was awaiting direction. By letter dated February 9, 1988, Rick Thomas, GSA's resident engineer, informed Hoffman that demolition of the ductwork was "a substantial part of this project and is clearly defined throughout the plans and specifications as being within the scope of your work." Mr. Thomas directed Hoffman to "proceed with the work . . . immediately and without delay" and warned that "[d]elaying work which is a part of the Project Scope will be fully your responsibility." Plaintiff's Exhibit ("PX") 34-2. There was not enough room above the new suspended ceiling Hoffman was required to install to accommodate both the new and the existing ductwork. Tr. at 995-1001, 1005, 1007.

Superior removed and disposed of the sheetmetal ducts at a cost of \$33,368. PX 34-22. With the addition of appropriate costs and markups for Botting and Hoffman, the total cost of removal, including a reasonable profit, was \$46,040. PX 34-30, 34-28. Hoffman submitted a claim to the CO for these costs (identified as Claim 34) in accordance with the CDA.

Superior also removed and disposed of the insulation covering the ducts at a cost of \$23,636. PX 35-7. ⁽¹⁾ With the addition of appropriate costs and markups for Botting and Hoffman, the total cost incurred, plus a reasonable profit, was \$35,510. PX 35-10. Hoffman also submitted a proper CDA claim to the CO (identified as Claim 35) for these costs. The CO never issued a final decision on either claim as required by the CDA, 41 U.S.C. § 605. Both claims are therefore deemed denied by the CO. 41 U.S.C. § 605(c) (5).

b. Discussion

As stated above, the Differing Site Conditions clause entitles Hoffman to an equitable adjustment if the existence of type I differing site conditions, *i.e.*, "subsurface or latent physical conditions at the site which differ materially from those indicated in this contract," caused an increase in Hoffman's cost of performance. JX 2 at 81; 48 C.F.R. § 52.236-2(a)-(b). In determining what was "indicated in the contract," the court looks to "not only the bidding documents (Invitation for Bids, drawings, specifications and other documents physically furnished to bidders) but documents and materials mentioned in the bidding documents as well." *McCormick Constr. Co., Inc. v. United States*, 18 Cl. Ct. 259, 263 (1989), *aff'd*, 907 F.2d 159 (Fed. Cir. 1990); *Ashbach Constr. Co.*, PSBCA No. 2718, 91-2 B.C.A. ¶ 23,787 at 119,134, *aff'd*, 960 F.2d 155 (1992); *Hunt & Willett, Inc. v. United States*, 168 Ct. Cl. 256, 265, 351 F.2d 980, 986 (1964); *Flippin Materials Co. v. United States*, 160 Ct. Cl. 357, 367, 312 F.2d 408, 414 (1963). Thus, to prevail on a type I differing site conditions claim, "[t]he conditions actually encountered must have been reasonably unforeseeable based on all the information available to the contractor at the time of bidding." *Stuyvesant Dredging Co. v. United States*, 834 F.2d 1576, 1581 (Fed. Cir. 1987); *Mojave Enters. v. United States*, 3 Cl. Ct. 353, 357 (1983).

In this case, the contract specifically informed prospective bidders that "Information Drawings," consisting of original building construction drawings and major HVAC renovation drawings, were available for review. JX 2 at 156-57. The HVAC renovation drawings clearly depict the disputed ductwork on floors 2-8 and show that it is insulated. These drawings were, in fact, available to potential bidders and there is no evidence of any hindrance which prevented Hoffman or its subcontractors from reviewing them prior to submitting a bid. Thus, the presence of the insulated ducts was foreseeable based on the available information and cannot constitute a differing site condition, regardless of what the site visits should have revealed.

Hoffman attempts to avoid this result by arguing that claims 34 and 35 are not, strictly speaking, differing site conditions claims. Instead, Hoffman asserts, § 1500 defines "[c]oncealed mechanical or electrical work" as a differing site condition if its existence "was not indicated on the drawings or could not have been anticipated by visual inspection or by the presence of installed appurtenances." JX 2 at 181-82. Since the ductwork on floors 2-8 met these criteria, Hoffman reasons, it constituted a differing site condition under the terms of the contract and Hoffman is entitled to compensation for its removal and disposal.

This interpretation of § 1500, even if correct, does not save claims 34 and 35. The ductwork was not "concealed" because, contrary to the requirements of § 1500, it was plainly "indicated on" the Information Drawings. Plaintiff apparently assumes that the phrase "indicated on the drawings" in § 1500 encompasses only the Contract Drawings. This assumption is unfounded. As stated, "[c]ontract 'indications' generally include information both in the solicitation itself and in documents to which bidders are directed in the solicitation." *Ashbach*, 91-2 B.C.A. at 119,134.

In addition, § 1500 requires a finding that the presence of the ducts "could not have been anticipated by visual inspection." JX 2 at 181. As discussed above, the visual inspection contemplated under the contract included an inspection of the Information Drawings. Section 1100 instructed bidders to coordinate an "[i]nspection of the existing building plans," *i.e.*, the Information Drawings, as part of their site inspection. JX 2 at 159. Likewise, GSA clause 22, "Site Investigation and Conditions Affecting Work," required Hoffman to "satisf[y] itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site . . . as well as from the drawings and specifications made a part of this contract." JX 2 at 81 (emphasis added); 48 C.F.R. § 52.236-3(a). To fulfill its duty under this clause, "a bidder must inspect information referenced in the contract documents and made available for inspection." *A.S. McGaughan*

Co., Inc. v. United States, 24 Cl. Ct. 659, 666 (1991), *aff'd*, 980 F.2d 744 (Fed. Cir. 1992). Furthermore, as a practical matter, a reasonable and prudent contractor preparing to bid on a multi-million dollar contract involving demolition and renovation of a building's HVAC system is certainly responsible for inspecting "major HVAC renovation drawings" referenced in the bidding documents prior to submitting a bid. *See W.G. Thompson, Inc.*, HUD BCA No. 79-353-C11, 81-2 B.C.A. ¶ 15,411 at 76,533 ("A reasonable site inspection is properly evaluated against what a rational, experienced, prudent and intelligent contractor in the same field of work could discover"). These considerations preclude a finding that the ducts "could not have been anticipated by visual inspection." JX 2 at 181.

There is simply nothing in the language of § 1500 or any other provision of the contract which relieved Hoffman of its basic obligation to review relevant government materials referenced in the contract prior to bidding:

[A] contractor cannot call himself misled unless he has consulted the relevant Government information to which he is directed by the contract, specifications, and invitation to bid . . . [A] contractor is not permitted to rest content with the materials physically furnished to him; he must also refer to other materials which are available and about which he is told by the contract documents.

Flippin Materials, 160 Ct. Cl. at 367, 312 F.2d at 414 (footnote omitted); *Ballenger Corp.*, DOT CAB Nos. 74-32, etc., 84-2 B.C.A. ¶ 16,973 at 84,421, *modified on other grounds*, 84-2 B.C.A. ¶ 17,277. Since the Information Drawings referenced in the bidding documents depict the insulated ductwork on floors 2-8, plaintiff cannot claim that the presence of the ducts was unforeseeable.

Plaintiff's final contention is that, even if it should have anticipated the presence of the ducts, there is nothing in the contract indicating that they had to be *removed*. Consequently, plaintiff argues, the removal was extra work for which it is entitled to compensation.

Plaintiff is correct that the contract did not indicate whether the 12,000 linear feet of ductwork on floors 2-8 was to be removed or capped, terminated, and left in the building. Sections 1045-1 and 2070-1 directed bidders to the drawings to determine what was to be demolished, but the Information Drawings do not provide any direction and the Contract Drawings do not even show the ducts. Plaintiff points out that the Asbestos Abatement drawings state that "HVAC insulation remains intact." DX 1 at AA-7. However, these drawings do not show the insulated ducts in question and, as stated above, the removal of the ducts was not an asbestos abatement project implicating these drawings. *See supra* n.1. Furthermore, the Asbestos Abatement drawings direct the contractor to "refer to the renovation drawings and specifications for work concerning the new and existing HVAC ducts," neither of which show the ducts in question. DX 1 at AA-1. Adding to these discrepancies is the fact that there was not enough space in the new ceiling system for both the old and the new ductwork. Tr. at 995-1007.

In these circumstances, it is determined that the omission of any indication of what was to be done with the 120,000 pounds of ductwork on floors 2-8, and the inconsistency between the Information Drawings which show the ducts and the Contract Drawings which do not, were obvious and therefore constituted patent ambiguities in the bidding documents. *Beacon Constr. Co. v. United States*, 161 Ct. Cl. 1, 7, 314 F.2d 501, 504 (1963) (patent ambiguity may manifest itself in an "obvious omission, inconsistency, or discrepancy of significance"). "The existence of a patent ambiguity in the contract raises the duty of inquiry, regardless of the reasonableness of the contractor's interpretation." *Fortec Constructors v. United States*, 760 F.2d 1288, 1291 (Fed. Cir. 1985); *Interstate Gen. Gov't Contractors v. Stone*, 980 F.2d 1433, 1434-35 (Fed. Cir. 1992). "That duty requires the contractor to inquire of the contracting officer as to the true meaning of the contract before submitting a bid." *Triax Pac., Inc. v. United States*, 1997 WL 742572, *5 (Fed. Cir.). "Absent such inquiry, a patent ambiguity in the contract will be resolved against the contractor." *Id.* "Although we do not wish to penalize a contractor because of a contract that was poorly

drafted by the government, the very fact that this contract is patently ambiguous places a burden on the contractor to seek clarification of its rights and obligations before bidding." *Interstate Gen.*, 980 F.2d at 1436. Hoffman failed to discharge this burden and must therefore lose on its claims for equitable adjustments.

II. Claim 163 - External Insulation of Low Pressure Ductwork

In Claim 163, Hoffman, on behalf of Botting, seeks an equitable adjustment of \$54,906 for externally insulating low pressure ductwork more than ten feet downstream of air terminal units. Hoffman contends that the contract required only the internal insulation of the first ten feet of the ducts and that the government's order to perform additional external insulation constitutes a constructive change. The government's position is that the contract clearly required Hoffman to perform the work.

As discussed below, it is determined that the contract unequivocally required Hoffman to externally insulate the low pressure ducts more than ten feet downstream of the air terminal units. As a result, Claim 163 must be rejected.

a. Background

Section 15250 of the contract sets forth certain requirements for "[d]uctwork insulation and liner." JX 2 at 679. In this context, "insulation" means *external* insulation and "liner" means *internal* insulation. Section 15250-5 states that low pressure ductwork is to be "[e]xternally insulated with 1-inch thick, 1-1/2 pcf density except where internally lined or fiberglass ductwork is shown or otherwise specified. Specifically, see Section 15930." JX 2 at 683. Section 15930 instructs the contractor to "[i]nstall a minimum of 10-feet of lined sheetmetal ductwork on discharge of terminal units before first outlet." JX 2 at 738. Section 15890-6 also pertains to duct insulation and states that low pressure ductwork "on downstream side of air terminal units" is to be "[l]ined sheetmetal where shown otherwise insulated sheetmetal." JX 2 at 726a. The low pressure ducts more than ten feet downstream of the air terminal units are not shown to be lined or made of fiberglass and are not dealt with in any other provisions of the contract, including § 15930.

On July 15, 1988, Abide American, GSA's construction quality management firm, sent a memorandum to Hoffman stating that it "noticed that the low pressure ductwork has not been insulated beyond the internally insulated section." The memorandum referenced § 15250-5 and stated that the additional external insulation was required. PX 163-1. Hoffman forwarded the memorandum to Botting who responded by letter dated July 18, 1988. Botting stated that, in its view, § 15250-5 merely refers the contractor to § 15930 which "directs us to internally insulate for a minimum of 10 feet and nothing more." PX 163-3. Hoffman forwarded Botting's letter to GSA.

Rick Thomas, GSA's resident engineer, responded to Hoffman by letter dated July 21, 1988. Citing § 15890 and § 15250, he stated that "[t]he Specifications are clear that all low pressure ductwork, that is not internally insulated, must be externally insulated," and instructed Hoffman to "proceed with this contract work, so that it does not delay the schedule for the project." PX 163-4.

ACandS, Botting's insulation subcontractor, performed the work at a cost of \$38,409. PX 163-8. With the addition of appropriate costs and markups for Botting and Hoffman, the total cost of the work, including a reasonable profit, was \$54,906. PX 163-9, 163-12. Hoffman submitted a proper CDA claim to the CO for these costs but the CO never issued a final decision. The claim is therefore deemed denied by the CO. 41 U.S.C. § 605(c)(5).

b. Discussion

Section 15250-5 required the external insulation of the low pressure ducts downstream of the air terminal units "except where internally lined or fiberglass ductwork is shown or otherwise specified. Specifically, see Section 15930." JX 2 at 683. Plaintiff argues that since § 15250 directed it to § 15930, and since § 15930 required only the installation of "a minimum of 10-feet of lined sheetmetal ductwork on discharge of terminal units before first outlet," JX 2 at 738, plaintiff was obligated only to internally insulate the first ten feet of low pressure ductwork.

"Contract interpretation begins with the plain language of the agreement." *Foley Co. v. United States*, 11 F.3d 1032, 1034 (Fed. Cir. 1993); *C. Sanchez and Son, Inc. v. United States*, 6 F.3d 1539, 1543 (Fed. Cir. 1993). In addition, "[w]hen interpreting the language of a contract, a court must give reasonable meaning to all parts of the contract and not render portions of the contract meaningless." *M.A. Mortenson Co. v. United States*, 29 Fed. Cl. 82, 96 (1993); *Fortec Constructors*, 760 F.2d at 1292. Sections 15250-5 and 15890-6 plainly require external insulation of low pressure ductwork *except* in three instances: 1) where it is internally lined; 2) where it is made of fiberglass; or 3) where otherwise specified. The low pressure ducts more than ten feet downstream of the air terminal units were not internally lined, made of fiberglass, or dealt with in any other provision of the contract, including § 15930. Accordingly, the contract clearly required Hoffman to externally insulate these ducts. Plaintiff's contrary interpretation, which renders meaningless all of § 15890-6 and § 15250-5 (except the reference to § 15930), is simply untenable.

Plaintiff nonetheless argues that its interpretation should be adopted because it is a common industry practice "not to insulate the low pressure duct below ten feet." Pl. Post-Trial Reply Br. at 11. However, the evidence plaintiff offers in support of this contention, which is inconclusive at best,⁽²⁾ is irrelevant. "Neither a contractor's belief nor contrary customary practice . . . can make an unambiguous contract provision ambiguous, or justify a departure from its terms." *R.B. Wright Constr. Co. v. United States*, 919 F.2d 1569, 1572 (Fed. Cir. 1990); *George Hyman Constr. Co. v. United States*, 832 F.2d 574, 581 (Fed. Cir. 1987) ("evidence of trade usage and custom cannot be used to vary or contradict the terms of a contract"). Plaintiff is not entitled to an equitable adjustment for the external insulation of the low pressure ductwork more than ten feet downstream of the air terminal units, as this was plainly within the scope of its work under the terms of the contract.

III. Claim 380 - Extended Jobsite Costs

In Claim 380, Hoffman, on behalf of Botting, seeks to recover the costs Botting incurred keeping its supervisor, Steve Sciborski, on the job 115 work days beyond its planned early completion date. Hoffman states that "Botting was held out of work and delayed in completion of its work effort as scheduled" due to "(1) asbestos change orders, (2) PCB [polychlorinated biphenyls] change orders, (3) fireproofing change orders, (4) delay in response to DCVR's [Design Clarification or Variation Requests] and (5) unscheduled additional demolition." Pl. Post-Trial Reply Br. at 14. According to Hoffman, "[t]he change orders for the additional asbestos abatement, PCB work and the fireproofing are clearly differing site conditions" while "[t]he failure to respond to DCVR's in a timely manner and the additional demolition can be identified as work delay and suspension. All five of the impacts can be viewed as changes to the contract necessitating an equitable adjustment." *Id.* at 15. The total amount of the claim is \$59,369.

Defendant contends that the claim should be rejected because plaintiff has not met its burden of proof. Specifically, defendant asserts that plaintiff has not shown that Botting's planned early completion date was feasible and attainable or that government action caused any of Botting's extended performance time.

Defendant also argues that Claim 380 is barred under the doctrines of accord and satisfaction and waiver and release.

For the reasons stated below, it is determined that Claim 380 must be rejected because plaintiff has not proved that government action was the sole proximate cause of any of Botting's extended performance time.

a. Background

Pursuant to section 1170 of the contract, the work schedule was to utilize the critical path method ("CPM"). JX 2 at 165-69. The CPM

is an efficient way of organizing and scheduling a complex project which consists of numerous interrelated separate small projects. Each subproject is identified and classified as to the duration and precedence of the work. (*E.g.*, one could not carpet an area until the flooring is down and the flooring cannot be completed until the underlying electrical and telephone conduits are installed.) The data is then analyzed, usually by computer, to determine the most efficient schedule for the entire project. Many subprojects may be performed at any time within a given period without any effect on the completion of the project. However, some items of work are given no leeway and must be performed on schedule; otherwise, the entire project will be delayed. These later items of work are on the "critical path." A delay, or acceleration, of work along the critical path will affect the entire project.

Haney v. United States, 230 Ct. Cl. 148, 168, 676 F.2d 584, 595 (1982).

Within 20 days of receipt of the notice to proceed, Hoffman was required to submit a schedule for the first 120 days of work accompanied by a graphic representation of the critical path. JX 2 at 165. Within 90 days, Hoffman was required to submit an "arrow diagram of the complete project schedule describing the activities to be accomplished and their dependency relationships." *Id.* The arrow diagram was to "show the sequence and interdependence of activities required for complete performance" as well as the "[a]ctivity duration (*i.e.*, the single best estimate, considering the scope of the activity and the resources planned for the activity)." JX 2 at 166.

Along with the arrow diagram, Hoffman was required to submit a computer-generated schedule identifying and describing each activity. The schedule was to include a cost and duration estimate and early and late start and finish dates for each activity. JX 2 at 165-66. In addition, the schedule was to show the "total float," *i.e.*, "the amount of time any given activity or path of activities may be delayed before it will affect the project completion time." JX 2 at 167-68. The schedule and arrow diagram were to be submitted to the CO and, upon the CO's approval, would become the project schedule until revised. JX 2 at 166.

Each month, Hoffman was required to submit "a revised arrow diagram showing all changes in network logic, including but not limited to changes in activity duration, and revised activity cost estimates as the result of contract modifications, changes in activity sequence and any changes in contract completion dates." JX 2 at 167. Hoffman was also required to submit a monthly update to the computer-generated schedule reflecting any changes in the arrow diagram. JX 2 at 167-68. Finally, Hoffman was required to submit a monthly narrative report containing "a description of problem areas, current and anticipated delaying factors and their estimated impact on the cost of performance of other activities and completion dates, and an explanation of corrective action taken or proposed." JX 2 at 168.

Donald Hildebrand, Hoffman's project operations manager, oversaw the development of the work schedule. Tr. at 714, 720. He testified that the schedule was prepared by Hoffman's project superintendent

with the help of two of Hoffman's in-house scheduling experts, including Kent Pothast, whom Mr. Hildebrand stated was "as well qualified as any consultant that you might find in scheduling to be able to do the CPM work." Tr. at 723. Hoffman also relied on input and feedback from its subcontractors, Precision and Botting. Tr. at 723-25. Mr. Hildebrand testified that the schedule was developed using CPM in accordance with the requirements of § 1170. Tr. at 720-23. In addition, the schedule was updated and distributed to the subcontractors on a monthly basis as required by § 1170. Tr. at 725, 736, 858, 1189-90.

Despite Hoffman's stated compliance with § 1170, most of the required scheduling documents are not in evidence. The record does not contain the initial schedule for the first 120 days of work containing a graphic representation of the critical path; it does not contain the complete computer-generated schedule or any monthly updates; it does not contain the arrow diagram showing the critical path or any monthly updates; and it does not contain any of the required monthly narrative reports describing any problems which were affecting the work schedule.

Instead, the record contains only page 27 of a computer-generated version of the schedule dated December 2, 1987. This page includes a description of some of the work activities planned for December 23, 1987 through April 6, 1988, and August 22, 1988 through November 3, 1988 as well as the early start and finish date, critical start and finish date, and float time for each activity. It also indicates that Botting planned to complete its work early on November 3, 1988. PX 380-10; Tr. 282-85.

Botting did not substantially complete its work until March 31, 1989. Tr. at 493, 947, 1204. Mr. Sciborski, Botting's supervisor, left the site shortly thereafter, 115 work days after Botting's planned early completion date but prior to April 20, 1989, the completion deadline set forth in the contract.⁽³⁾ Hoffman claims that "[t]he 115 working days in delay in completion was attributed to asbestos change orders, PCB change orders, fire proofing change orders, the delay in response to the DCVR and additional demolition that was not part of the original contract." Pl. Proposed Findings of Fact ¶ 7.8. Each of these purported causes of delay is discussed below.

(1) Additional Asbestos Abatement

Mr. Hildebrand testified that Precision, Hoffman's asbestos abatement subcontractor, "encountered a number of materials and unforeseen conditions that had to be tested. They were determined to be asbestos containing." Tr. at 738-39. He stated that the materials had to be removed and that the additional work resulted in the issuance of change orders increasing the contract price for asbestos abatement from \$497,000 to \$783,000. Tr. at 739-40. He did not, however, identify the relevant change orders.

Rick Thomas, GSA's resident engineer, identified eight bilateral modifications which, contrary to Mr. Hildebrand's testimony, increased the contract price for asbestos abatement from \$700,000 to \$820,000. Tr. at 1089-90, 1098.⁽⁴⁾ Because Mr. Thomas' testimony is supported by documentary evidence, and because plaintiff has not presented any evidence of other change orders or modifications adding asbestos abatement work, it is determined that the eight modifications identified by Mr. Thomas cover all of the asbestos abatement work added to the contract.

Five of the eight modifications state that they "provide for a full and complete equitable adjustment . . . as to cost and time." Hoffman also agreed to "release the Government from any further liability under this Contract for any additional equitable adjustment attributable to the circumstances giving rise to this modification," with one exception not relevant here. DX 3-9 (No. 0009), 3-10 (No. 0010), 3-19 (No. PC19), 3-23 (No. PC23), 3-35 (No. PC35).⁽⁵⁾ The remaining three modifications contain similar language:

In consideration of the modification agreed to herein as a complete and equitable adjustment of both cost and time for work incorporated in this change, the Contractor hereby releases the Government from any further liability under this contract for any additional equitable adjustments attributable to the circumstances giving rise to this modification.

DX 3-12 (No. 0012), 3-59 (No. PS59), 3-144 (No. PSE8).

None of the eight modifications--or any other evidence in the record--indicates the amount of time Precision spent performing the additional asbestos abatement work. Likewise, there is no evidence demonstrating the extent to which the additional work prolonged Hoffman's or Botting's critical path. Mr. Hildebrand stated in summary fashion that the schedule (which is not in evidence) indicated that asbestos abatement was on the critical path, Tr. at 737, and Mr. Cherpeski added that it had to be on the critical path because it "was a function that had to be complete before any of the other activities could be completed." Tr. at 510. However, no concrete, substantive documentary evidence or expert analysis was ever offered to support this testimony or show the extent of the impact. Neither Mr. Pothast nor Hoffman's other CPM expert who helped prepare the schedule was ever called to testify.

The record also reveals that Precision experienced difficulties performing the contract, its first involving asbestos abatement. Precision was late in submitting its asbestos abatement plan to GSA and the plan was incomplete when submitted. Tr. at 1048, 1063. The result was that Precision's start date was delayed by about two weeks. Tr. at 1048, 1210-11. When it finally began performance, Precision's work was further prolonged because its asbestos containment areas did not meet contractual requirements. Precision had to purchase additional equipment before continuing work. Tr. at 1066. Precision also had difficulty obtaining clearances for its work. Tr. at 1211. Mr. Thomas estimated that Precision's difficulties delayed Botting's start date by approximately six weeks, Tr. at 1078, 1210-12, but there is no CPM analysis or other documentary evidence in the record supporting this estimate.

(2) Removal of PCB-Contaminated Light Fixtures

Mr. Hildebrand testified that light fixtures containing PCBs were discovered during performance that had to be removed. Tr. at 739. He did not identify the change orders or modifications adding the work, but the record indicates that, pursuant to bilateral modification 0011 (resolving unilateral modification 0004), Hoffman was paid \$58,310 for the "[r]emoval and disposal of PCB's contained in fluorescent light fixture ballasts." DX 3-4, 3-11; Tr. at 823-26. The purpose of the modification was "to provide for a full and complete equitable adjustment . . . as to cost and time." Hoffman also agreed to "release the Government from any further liability under this Contract for any additional equitable adjustment attributable to the circumstances giving rise to this modification," with one exception not relevant here (*see supra* n.5). DX 3-37. Since plaintiff has not identified any other modifications or change orders relating to the removal of PCBs, it is determined that modifications 0011 and 0004 cover all such work.

Mr. Hildebrand testified that the time required to remove the PCB-contaminated light fixtures did not cause any problems but "getting a decision on what to do about it" did. Tr. at 741-42. However, nothing in the record indicates how long the government took to provide direction or the extent of any critical path delay resulting from the government's alleged tardiness.

(3) Additional Fireproofing

Mr. Hildebrand testified that unanticipated fireproofing was performed which resulted in the issuance of change orders increasing the contract price for fireproofing from \$942,000 to \$1,472,000. Tr. at 744-47. He did not identify these change orders, but the record indicates that, pursuant to bilateral modification PC37 (resolving unilateral modification PC20), Hoffman was paid \$35,000 for additional fireproofing.

DX 3-37, 3-20; Tr. at 827. Since plaintiff has not pointed to any other modifications or change orders adding fireproofing, it is determined that modifications PC37 and PC20 covered all such work.

The purpose of modification PC37 was "to provide for a full and complete equitable adjustment . . . as to cost and time." Hoffman also agreed to "release the Government from any further liability under this Contract for any additional equitable adjustment attributable to the circumstances giving rise to this modification," with one exception not relevant here (*see supra* n.5). DX 3-37.

Nothing in the record indicates how much time the additional fireproofing required. In addition, though Mr. Hildebrand testified in conclusory fashion that the work needed to be done "prior to going ahead with the rest of the finish work in the building," Tr. at 744, and that Botting was "held out of the area until the general flow of work could get going," Tr. at 747, there is no documentary evidence or CPM analysis supporting this testimony or showing the extent of the impact, if any, on the critical path.

(4) Unscheduled Demolition

Mr. Hildebrand testified that Precision had "more demolition to do than originally planned" resulting in the issuance of change orders increasing the contract price for demolition from \$350,000 to \$490,000. Tr. at 747-48. None of the change orders has been identified. There is also no evidence as to how much time the work required. Mr. Hildebrand stated that "most" of the work needed to be completed before other trades could get into the areas, Tr. at 748, but this conclusory testimony is unsupported by any documentary evidence or analysis and does not establish the extent of the impact (if any) on the critical path.

(5) Slow Response to DCVRs

When Botting perceived a difference between existing building conditions and the conditions depicted in the drawings, Botting would forward a DCVR to the government (through Hoffman) asking for direction. Tr. at 304-05. Mr. Hildebrand testified that numerous DCVRs were submitted and that Hoffman was not "getting answers back as fast as we wanted to." Tr. at 749. He added that the government sometimes took a month or more to respond, but there is no documentary evidence to support this testimony. In addition, none of the DCVRs to which the government was allegedly slow in responding has been identified. There is also no evidence as to the length of any critical path delay resulting from the government's allegedly slow responses.

Also relevant to Claim 380 is the evidence of the difficulties experienced by Careco, Botting's controls subcontractor. Careco began work in June 1988 and experienced a variety of problems on the job due to a lack of sufficient manpower, trouble acquiring parts, and an inability to complete its work. Tr. at 539, 1103, 1105. Both Hoffman and Botting became very concerned and upset about Careco's apparent ineptitude. Mr. Cherpeski wrote several letters to Careco telling it to get its job done and informed Careco that Botting was tired of defending Careco's deficient performance to Hoffman. Tr. at 556-60. In December 1988, Mr. Cherpeski asked Careco for a schedule indicating how it intended to finish its work. Tr. at 540-42; DX 44. Careco provided Botting with a schedule on December 12, 1988, indicating that it intended to complete its work on February 28, 1989. DX 44. In fact, however, Careco did not complete its work until June 1989.⁽⁶⁾

On redirect examination, Mr. Cherpeski testified that most of Careco's problems occurred after Botting substantially completed its work. Tr. at 681-83. The court finds this testimony unpersuasive, however, in light of Mr. Cherpeski's earlier testimony that he did not know when Careco started or finished. Tr. at 547, 553-55. Mr. Thomas testified that he became aware of Careco's problems in late November or early December of 1988. Tr. at 1105. This testimony is consistent with the fact that Mr. Cherpeski asked

Careco how it intended to complete its work sometime prior to December 12, 1988, indicating he was concerned about Careco at that time. DX 44. For these reasons, it is determined that Careco was experiencing problems prior to December 12, 1988 and that these problems continued, thereby causing Careco to miss its planned completion date of February 28, 1989 by nearly four months.

Mr. Cherpeski also testified that he was in charge of supervising Careco, not Mr. Sciborski, the foreman whose daily costs are sought in Claim 380. Tr. at 562-63, 683-84. This fact is immaterial. If Careco's inefficient was on the critical path, which is just as probable as it is improbable in light of plaintiff's failure to perform a critical path analysis or introduce the scheduling documents into evidence, then Careco's work could have interrupted and prolonged Botting's other work which Mr. Sciborski was supervising.

By letter dated March 12, 1990, Botting submitted a claim to Hoffman in the amount of \$53,972 for the costs of keeping Mr. Sciborski on the job 115 work days beyond Botting's planned early completion date. The amount sought includes Mr. Sciborski's salary, phone, office furniture and equipment costs, office consumables, and travel expenses. Botting asserted that these extended jobsite costs were the "result of owner initiated changes, design correction change orders, asbestos abatement scope changes and delays and unscheduled demolition." PX 380-1. By letter dated July 17, 1990, Hoffman submitted a proper CDA claim to the CO in the amount of \$59,369, consisting of Botting's costs set forth in its March 12, 1990 letter plus Hoffman's appropriate costs and markups. PX 380-4.

On August 29, 1990, the CO issued a final decision denying the claim in its entirety because of a perceived lack of proof of "a cause and effect relationship between the alleged delays and/or change orders and the cost for which recovery is sought." PX 380-5. The CO stated that GSA had "no way of determining whether these costs, as submitted, would be reasonable costs as we do not know what additional work was performed, and by who, etc., and the specific events that caused costs to accrue." PX 380-5.

b. Discussion

Since plaintiff is arguing that Botting's performance was prolonged by government action, Claim 380 is essentially a delay claim. "[W]hen the claim being asserted by the contractor is based upon alleged government-caused delay, the contractor has the burden of proving the extent of the delay, that the delay was proximately caused by government action, and that the delay harmed the contractor." *Wilner v. United States*, 24 F.3d 1397, 1401 (Fed. Cir. 1994) (en banc). In addition, when the contract utilizes CPM scheduling, the contractor must prove that the critical path of work was prolonged in order to prove a delay in project completion:

The reason that the determination of the critical path is crucial to the calculation of delay damages is that only construction work on the critical path had an impact upon the time in which the project was completed. If work on the critical path was delayed, then the eventual completion date of the project was delayed. Delay involving work not on the critical path generally had no impact on the eventual completion date of the project.

G.M. Shupe, 5 Cl. Ct. at 728; *Kelso v. Kirk Bros. Mechanical Contractors, Inc.*, 16 F.3d 1173, 1177 (Fed. Cir. 1994); *Wilner*, 24 F.3d at 1399 n.5; see also *J.A. Jones Constr. Co.*, ENG BCA No. 6252, 97-1 B.C.A. ¶ 28,918 at 144,168 ("To be compensable, Government-caused delay, if any, must interfere with the project's critical path, *i.e.* extend completion of the project").

Furthermore, proof that the government "was the 'sole proximate cause' of the delay" entails proof "that no concurrent cause would have equally delayed the contract regardless of the Government's action or

inaction." *Mega Constr. Co., Inc. v. United States*, 29 Fed. Cl. 396, 424 (1993) (quoting *Merritt-Chapman & Scott Corp. v. United States*, 208 Ct. Cl. 639, 650, 528 F.2d 1392, 1397 (1976)). If it is equally plausible that acts for which the government is not responsible caused delay, neither party can recover damages "unless there is in the proof a clear apportionment of the delay and expense attributable to each." *Blinderman Constr. Co., Inc. v. United States*, 695 F.2d 552, 559 (Fed. Cir. 1982) (quoting *Coath & Goss, Inc. v. United States*, 101 Ct. Cl. 702, 715 (1944)); *William F. Klingensmith, Inc. v. United States*, 731 F.2d 805, 809 (Fed. Cir. 1984).

Plaintiff has not met its burden of proof under these principles. First, plaintiff has not presented any specific evidence of the extent of any government-caused delay or impact. Instead, plaintiff offered only conclusory assertions from Mr. Hildebrand and Mr. Cherpeski to the effect that the extra 115 work days were caused by various change orders and contract modifications which increased the contract price and the government's allegedly slow response to unspecified DCVRs. "Broad generalities and inferences to the effect that defendant *must* have caused some delay and damage because the contract took . . . longer to complete than anticipated are not sufficient." *Wunderlich Contracting Co. v. United States*, 173 Ct. Cl. 180, 199, 351 F.2d 956, 969 (1965) (emphasis in original); *see also Interstate Gen. Gov't Contractors v. West*, 12 F.3d 1053, 1060 (Fed. Cir. 1993) (conclusory, self-serving assertion from contractor's witness that "if it had not been for this delay . . . we would have finished it six months earlier" is "legally insufficient to prove causation"); *Commerce Int'l Co., Inc. v. United States*, 167 Ct. Cl. 529, 543, 338 F.2d 81, 89 (1964) ("Plaintiff has contented itself with broad generalities when specificity is essential").

Likewise, despite Hoffman's stated compliance with the contract's CPM scheduling requirements, Hoffman's in-house CPM experts were never called to testify and no critical path analysis was ever presented through any other witness or documentary evidence. Consequently, nothing in the record shows precisely (or even approximately) how the change orders and purported delay in response to DCVRs prolonged the critical path. Instead, the record contains only self-serving, conclusory testimony from Mr. Cherpeski and Mr. Hildebrand to the effect that none of the originally-planned work could continue until the additional work was completed and the government responded to DCVRs. Tr. at 509-10, 737, 744, 747-48. Plaintiff also offered several unhelpful documents, none of which shows the critical path or how it was affected by government action.⁽⁷⁾ "The court cannot rely on assertions of a contractor, not supported by a critical path analysis of the project, to award critical path delay costs." *Mega*, 29 Fed. Cl. at 435.

Even if a critical path analysis *per se* is unnecessary, a contractor must supply some form of "specific proof that [its] performance was affected by the Government's undue delays," *Commercial Contractors, Inc. v. United States*, 29 Fed. Cl. 654, 662 (1993), and plaintiff has not done so in this case. The mere identification of five potential causes of delay and extended performance time does not establish that the former caused the latter. "It is immaterial that some particular event came along which disrupted certain work or delayed its start or completion. It may well have been that that item was not one which would delay the project completion or have any effect on it. We cannot presume that, merely because some extra work was ordered and compensation paid by the contracting officer, there would have been a delay to the completion of the project." *Essential Constr. Co., Inc. and Hinmount Constructors, Ltd., Joint Venture*, ASBCA No. 18706, 89-2 B.C.A. ¶ 21,632 at 108,834.

This is especially true given the existence of other potential causes of delay for which the government is not responsible. For instance, the record indicates that Precision's difficulties delayed Botting's planned start date. Tr. at 1048, 1066, 1078, 1210-12. Careco's difficulties are another potential cause of some or all of Botting's extended performance time. Tr. at 539, 540-42, 547, 553-60, 1103-05. In addition, Botting obviously did not allocate time in its schedule for the work described in claims 34, 35, and 163 because it asserts that the work was unanticipated. The record indicates that Superior spent 663 labor hours over 45 consecutive work days (March 7, 1988 to May 6, 1988) removing the insulation from the ductwork on

floors 2-8 (Claim 35) and an additional 936 labor hours over an unspecified period removing the ductwork itself (Claim 34). PX 35-7, 34-22. In addition, ACandS externally insulated the low pressure ductwork (Claim 163) during August 1988, although the labor hours and the number of work days utilized cannot be determined. PX 380-1 - 20. This work, for which Hoffman was responsible, easily could have prolonged Botting's overall performance time--in fact, plaintiff *argues* in its pre-trial filings that this work *was* the cause of the delay.⁽⁸⁾ While the record does not reveal precisely how these items affected the critical path, "the plain inference is that there was a substantial concurrent delay. This inference suffices, together with the proof of the other difficulties, to counterbalance the general inference of Government-caused delay drawn by plaintiff." *Commerce Int'l*, 167 Ct. Cl. at 545, 338 F.2d at 91; *Mega*, 29 Fed. Cl. at 435 ("Without a critical path analysis the court cannot exclude the possibility that the contractor caused concurrent delay on the project"). Since there is no basis in the record for even attempting to apportion the delay attributable to each party, plaintiff cannot recover delay or impact costs. *Blinderman*, 695 F.2d at 559; *William F. Klingensmith*, 731 F.2d at 809.

In short, Claim 380 must be rejected because plaintiff has not demonstrated that government action was the sole proximate cause of any of Botting's extended performance time. Given plaintiff's failure to carry its burden of proof, defendant's assertion that Botting's planned early completion date was unreasonable, as well as its defenses of accord and satisfaction and waiver and release, need not be addressed.

IV. Claim 381 - Labor Inefficiency in the Basement, Auditorium, Penthouse, Risers, and Boiler Room

In Claim 381, Hoffman, on behalf of Botting, seeks an equitable adjustment of \$85,207 for labor overruns Botting experienced in areas of the basement, auditorium, central penthouse, risers, and boiler room. Plaintiff asserts that the overruns were caused by the sheer number of DCVRs Botting submitted to the government due to perceived discrepancies between the contract drawings and existing conditions. Tr. at 589. According to plaintiff, the impact of the DCVRs "disrupted [Botting's] logical labor flow and caused additional manpower costs due to the delay in clarification, the need to mobilize and remobilize crews as well as the need to alter its crew size." Pl. Proposed Finding of Fact ¶ 8.13.

Defendant contends that the claim should be rejected because Hoffman has not proved that government action caused Botting's overruns and because many of the DCVRs either had no impact on Botting's work or were resolved by bilateral modifications releasing the government from further liability.

As discussed below, it is determined that Claim 381 must be rejected because plaintiff has not proven causation and resultant injury.

a. Background

Plaintiff's Exhibit 381-3 lists the labor overruns Botting experienced in the five areas at issue:

Basement: 629

Auditorium: 249

Penthouse: 788

Risers: 56

Boiler Room: 956

Total: 2,687

These figures are derived from Plaintiff's Exhibit 381-1, a "Costing Report" dated October 31, 1989, which lists Botting's estimated and actual labor hours for the original contract work and change order work in the five areas in question. Botting attributes 85% of the overruns (2285 hours) to the government. PX 381-3. According to Mr. Cherpeski, Botting was responsible for some of the inefficiencies and "was rather generous to the Government in assigning 15 percent of the responsibility to the Botting Company." Tr. at 321, 578-79.

During the course of performance, Botting initiated over 200 DCVRs due to a perceived difference between the contract drawings and existing conditions. Mr. Cherpeski stated that "in some cases it was taking a month or more to get responses," Tr. at 597, and that individuals would often have to stop work until a DCVR was resolved. Tr. at 670. He added that Botting's work did not go as planned or proceed in an orderly fashion as a result of interruptions, redirections,

and change orders associated with the DCVRs. Tr. at 303. Botting did not analyze the impact of any of these factors on its labor productivity as they arose. Tr. at 305-06.

Plaintiff's Exhibit 381-3 lists 101 of Botting's DCVRs relating to work in the five areas at issue. Also in the record is Botting's working set of contract drawings containing Mr. Sciborski's shorthand descriptions of the DCVRs and, apparently, some of the government's responses. PX 1-A, 380-9 - 380-13. Nothing in the record identifies when each DCVR was submitted or when the government responded. The record is also devoid of any evidence revealing the specific nature or extent of the impact caused by the alleged delay, interruptions, redirections, and change orders allegedly associated with each of the 101 DCVRs. Mr. Cherpeski also acknowledged that some of the DCVRs relate to credits owed the government and others had no cost or time impact. Tr. at 589, 597. With a few exceptions, neither the DCVRs nor the government's responses are even in evidence.

Eight of the 101 DCVRs listed on Exhibit 381-3 are circled, meaning they represent cost proposals for additional work Botting performed in the five areas at issue. These cost proposals were still in dispute at the time but were subsequently resolved by the November 1991 settlement agreement pursuant to which Hoffman was paid \$248,986.99. Tr. at 323; DX 3-151. ⁽⁹⁾ Botting's labor hours associated with the resolved cost proposals must be deducted from the overruns listed on Exhibit 381-1; this exhibit was produced on October 31, 1989, almost two years before the settlement agreement was executed. As a result, it cannot possibly account for Botting's labor hours resolved by the settlement. ⁽¹⁰⁾ The number of Botting labor hours associated with the resolved cost proposals cannot be determined from the record.

By letter dated March 11, 1990, Botting submitted a claim to Hoffman in the amount of \$77,461 for labor overruns of 2284 hours. Botting asserted that, due to "numerous demolition items encountered but not delineated on the contract documents, our production was impacted by delays, disruptions and interferences." PX 381-4. The amount sought consists of the following:

2284 Hours at a Crew Rate of 26.81/hr. \$61,234.00

15% Home Office Overhead 9,185.00

Sub-Total \$70,419.00

10% Profit 7,042.00

Total Claim \$77,461.00

PX 381-4. On July 17, 1990, Hoffman submitted a proper CDA claim to the CO in the amount of \$85,207, consisting of the above costs plus Hoffman's appropriate costs and markups. PX 381-6. On August 29, 1990, the CO issued a final decision denying the claim in its entirety. The CO asserted that since Hoffman had "not demonstrated that these alleged delays, disruptions, and/or interferences increased [its] costs, no adjustment will be made." PX 381-8.

b. Discussion

"To receive an equitable adjustment from the Government, a contractor must show three necessary elements--liability, causation, and resultant injury." *Servidone Constr. Corp. v. United States*, 931 F.2d 860, 861 (Fed. Cir. 1991). Plaintiff presented evidence that Botting initiated 101 DCVRs pertaining to work in the basement, auditorium, penthouse, risers, and boiler room, and that it experienced labor overruns in these areas. However, plaintiff has not presented any specific, persuasive evidence or analysis demonstrating how any government action associated with the DCVRs caused Botting's overruns. A contractor must present more than general, unsubstantiated pronouncements from its own witnesses that various acts of the government caused labor overruns. *Luria Bros. & Co., Inc. v. United States*, 177 Ct. Cl. 676, 696, 369 F.2d 701, 713 (1966); *see also Transtechnology Corp. v. United States*, 22 Cl. Ct. 349, 398 (1990) (inefficiency claim fails where "[t]here is no testimony of a single specific interruption or slowdown, and therefore nothing concrete in terms of length of interruption, what happened on the production line, who made decisions about whether to keep workers in place, whether other tasks could be performed, or how often interruptions occurred"); *Holloway Constr. Co. v. United States*, 18 Cl. Ct. 326, 334 (1989) (inefficiency claim fails where plaintiff offers "very little specific evidence about inefficiency delays" and relies instead on "its witnesses' impressions"); *River Equip. Co., Inc.*, ENG BCA No. 6042, 94-3 B.C.A. ¶ 26,996 at 134,467 ("More than the mere suggestion of the probable effect of an event on efficiency is required"). Conclusory testimony to the effect that unproven government delay in response to DCVRs and unidentified disruptions, redirections, and change orders associated with DCVRs resulted in labor overruns simply does not establish the necessary element of causation. ⁽¹¹⁾

Plaintiff also has not proved the extent of any injury resulting from the labor overruns. As stated above, eight DCVRs listed on Plaintiff's Exhibit 381-3 represent cost proposals for work Botting performed in the five areas at issue. These proposals were resolved in the 1991 settlement agreement, yet Botting's labor hours covered by the proposals have not been deducted from the overruns for which plaintiff seeks compensation. Since there is no way to determine or even approximate Botting's labor hours associated with these proposals, there is no way to determine what portion of the overruns the government has already paid for pursuant to the settlement agreement.

In light of plaintiff's failure to prove the necessary elements of causation and resultant injury, Claim 381 must be rejected.

V. Claim 382 - Labor Inefficiency on Floors 6-8

In Claim 382, Hoffman, on behalf of Botting, seeks an equitable adjustment of \$27,046 for labor overruns Botting experienced on floors 6-8. Hoffman claims the overruns resulted from "the out of sequencing of the work which was caused by the numerous design clarifications and changes, unscheduled demolition and differing site conditions." CX 5, Pl. Pre-Trial Br. at 11. Hoffman also asserts that the overruns resulted from "stacked trades due to accelerated tenant improvement work only on floors 6, 7 and 8." Pl. Post-Trial Reply Br. at 26.

Defendant contends that the claim should be rejected because Hoffman has not proved that the

government caused the overruns and because Hoffman was already compensated for inefficiencies resulting from the "out of sequencing of work."

As discussed more fully below, Claim 382 must be rejected because plaintiff has again failed to prove the necessary elements of causation and resultant injury.

a. Background

Botting planned to begin demolition and rough installation on the second floor and work up through the building. Trim and finishing work was to be done in the opposite direction, beginning with the eighth floor and finishing with the second, so that Botting's crews would not be moving through finished areas. Mr. Cherpeski testified that because of change orders adding tenant improvement work, Botting was "working everywhere at once" and experienced "labor impacts" on floors 6-8 due to "crowded conditions," "trades on top of each other," and "change orders and disruption." Tr. at 355, 361, 635.

Plaintiff's Exhibit 382-7 is a one-page summary of the basis of Claim 382 prepared by Mr. Cherpeski. Tr. at 612. It shows the labor overruns Botting experienced on floors 6-8:

Level 8 523 hours

Level 7 130 "

Level 6 202 "

Subtotal 855

85% Attributed to Owner .85

Total 725 hours

These figures constitute the overruns Botting experienced performing "SET FIXT. & EQUIP.," "ROUGH-IN," and "HVAC PIPING" on floors 6-8. PX 382-1. Botting again attributes 15% of the overruns to its own inefficiencies. Tr. at 361.

Exhibit 382-7 states that Botting's overruns resulted from "DCVR's and response time causing delays, encountered asbestos delays and tenant additions." Botting's work was "done all at the same time in conjunction with the tenant work." Its "crews would be 'bounced' all over the job trying to cover all the basis [sic] and get back to the schedule." Botting was "faced with stacking of trades, dilution of supervision, crew size inefficiency and a ripple effect from excessive revisions and/or clarifications." *Id.*

Exhibit 382-7 also refers to sample daily job reports pertaining to floors 6-8 "showing frustration of supervision." These reports indicate that Mr. Sciborski was frustrated with the government's responses (or lack thereof) to DCVRs. PX 382-6; Tr. at 367-68. The reports also indicate the existence of other potential causes of disruption on floors 6-8, such as Precision's work and the removal of the insulated ductwork (claims 34 and 35). For instance, the daily report for January 14, 1988 states that Botting was attempting to remove fixtures in the toilet rooms "anywhere the asbestos abatement people [*i.e.*, Precision] don't have the toilet rooms tied up." PX 382-6 at 1. Likewise, the daily report for December 28, 1997 states that, "[b]ecause of the problems that they are having w/ the asbestos work our work is going to be at a stand still by mid week and I will have to have my man stay home if more area[s] don't

open up." PX 382-6 at 2. Whether the disruptions Precision was causing were government-caused or contractor-caused cannot be determined.

The daily report for March 4, 1988 discusses GSA's direction to remove the insulated ductwork from floors 2-8 with a half mask and states that "[w]ork has stopped on removal." PX 382-6 at 12. Superior spent 1,599 hours removing the insulated ductwork from floors 2-8, which amounts to approximately 228 hours per floor or 685 hours for floors 6-8. In addition, the record indicates that the external insulation of the low pressure ductwork performed by ACandS (Claim 163) took place exclusively on the sixth and eighth floors, PX 163-8, although the number of labor hours needed to perform the work is unclear. The effect of this unanticipated work (which was Hoffman's contractual responsibility) on Botting's labor efficiency cannot be determined.

Finally, plaintiff introduced Exhibit 382-8, a chart showing Botting's estimated and actual labor hours on each floor. The chart indicates that, at various times, Botting was performing work on almost every floor at once. The labor hours are not broken down by tasks, however, and the exhibit does not indicate how government disruptions or change orders caused Botting to exceed its labor hour estimates for "SET FIXT. & EQUIP.," "ROUGH-IN," and "HVAC PIPING" on floors 6-8.

On May 1, 1989, GSA executed contract modification PSD4 which Hoffman had signed on April 18, 1989. The modification resolved "Not to Exceed" modification PCA4. DX 3-130, 3-103; Tr. at 1112-13. Pursuant to the modification, GSA paid Hoffman \$21,730 to

fully compensate the Contractor for construction sequence changes due to the tenant change order finalization process.

The Contractor expected to complete one floor totally, and then move down to the next floor and complete it totally. In reality, the Contractor was required to move from one floor to another and then back to a previous floor to finish work. This sequence was necessary in order to maintain the original Construction Schedule.

DX 3-130. Hoffman also agreed to "release[] the Government from any further liability under this contract for any additional equitable adjustments attributable to the circumstances giving rise to this modification." *Id.*

On March 12, 1990, Botting forwarded a claim to Hoffman for \$24,587 stating that it "encountered design requiring an inordinate amount of clarification by the GSA. Many times, we would have to wait for a response which would disrupt production and momentum. Other disruptions were caused by owner initiated changes, asbestos abatement scope changes, and tenant scope changes on a 'crash basis.'" PX 382-2. The amount claimed consists of the following:

725 Hours at a Crew Rate of 26.81/hr. \$19,437.00

15% Home Office Overhead 2,916.00

Sub-Total \$22,352.00

10% Profit 2,235.00

Total Claim \$24,587.00

Id. On July 17, 1990, Hoffman submitted a proper CDA claim to the CO in the amount of \$27,046,

consisting of Botting's costs set forth above plus Hoffman's appropriate costs and markups. PX 382-4. On August 23, 1990, the CO issued a final decision denying the claim in its entirety due to a perceived lack of proof. PX 382-5.

b. Discussion

Claim 382 consists of two propositions. The first is that unspecified tenant improvement change orders, unproven government delay in responding to DCVRs, unspecified asbestos delays or scope changes, and other unspecified disruptions caused Botting to work everywhere at once, bounce its crews all over the job, experience crowded conditions, "a dilution of supervision, crew size inefficiency and a ripple effect from excessive revisions and/or clarifications." PX 382-7, 382-6; Tr. at 355, 357, 361, 635. The second proposition is that Botting exceeded its labor hour estimates for "SET FIXT. & EQUIP.," "ROUGH-IN," and "HVAC PIPING" on floors 6-8 by 855 hours. The claim fails because the first proposition has not been proved by any concrete, specific evidence or analysis and because a causal relationship between the first proposition and the second has not been established. *See Southwest Marine, Inc.*, ASBCA No. 36854, 95-1 B.C.A. ¶ 27,601 at 137,520 ("cumulative inefficiency or impact is not proved by the issuance of numerous change orders without proof that these change orders proximately caused that indirect or cumulative inefficiency or impact"); *Transtechology*, 22 Cl. Ct. at 396-98; *Holloway*, 18 Cl. Ct. at 334. The mere possibility that government action caused the overruns is insufficient to establish causation, especially since it is equally plausible that Precision's difficulties and the work described in claims 34, 35 and 163, both of which were Hoffman's responsibility, disrupted the orderly flow of Botting's work. *See Commerce Int'l*, 167 Ct. Cl. at 545, 338 F.2d at 91 (plausible inference that contractor was responsible for delay suffices "to counterbalance the general inference of Government-caused delay drawn by plaintiff."). [\(12\)](#)

Furthermore, plaintiff has not established the extent of any injury resulting from the overruns. Hoffman signed modification PSD4 pursuant to which it was paid \$21,730 as full compensation "for construction sequence changes due to the tenant change order finalization process" and for being "required to move from one floor to another and then back to a previous floor to finish work . . . in order to maintain the original Construction Schedule." DX 3-130. These are some of the very same factors on which Claim 382 is based. *E.g.*, CX 5, Pl. Pre-Trial Br. at 11 (Claim 382 based on "out of sequencing of the work"); Tr. at 361 (inefficiencies caused by Botting "working everywhere at once"); PX 382-7 (overruns resulted because Botting's "crews would be 'bounced' all over the job trying to cover all the basis [sic] and get back to the schedule"). Hoffman clearly and unequivocally released the government from any further liability attributable to these factors. DX 3-130. [\(13\)](#) Since Botting has not segregated and subtracted that portion of its overruns covered by modification PSD4, the extent (if any) to which Botting remains injured because of the overruns cannot be determined.

In light of plaintiff's failure to prove the necessary elements of causation and resultant injury Claim 382 must be rejected

CONCLUSION

For the foregoing reasons, it is determined that plaintiff is not entitled to prevail on any of its claims. The claims are therefore denied. The clerk is directed to enter final judgment in defendant's favor. Each party must bear its own costs.

James F. Merow

Judge

1. The insulation was attached to the ducts by three layers of glue. About 4-5% of the no. 3 glue layer, which comprised less than 1% of the entire insulation sample, contained asbestos. DX 8 at 3. There was no asbestos in the insulation itself, the foil backing, the reinforcing fibers, the no. 1 and no. 2 glue layers, and the mineral wool. *Id.* GSA recommended that half-masks be worn during the removal. *Id.* at 1. Otherwise, no special procedures were required or followed: the insulation was simply placed in a dumpster and hauled to a landfill. Likewise, the sheetmetal ducts were crushed, put in a container, and hauled away as salvage. Tr. at 1022-23, 484-85. Hence, the removal of the insulated ducts was not treated as an "asbestos abatement" project within the scope of § 2085 of the contract. JX 2 at 210-41; Tr. at 174, 178.
2. Bob Zink, ACandS' project manager, and Mr. Cherpeski both testified that the practice of externally insulating ductwork below air terminal units "can go either way." Tr. at 260, 167.
3. "It is, of course, settled that a contractor is not precluded from recovering delay (or impact) damages merely because it completed a contract within the period provided for by the contract." *G.M. Shupe, Inc. v. United States*, 5 Cl. Ct. 662, 677 (1984). However, the contractor must prove that its planned early completion date was feasible and attainable. *Frazier-Fleming Co.*, ASBCA No. 34537, 91-1 B.C.A. ¶ 23,378 at 117,287.
4. Mr. Thomas identified modification 0009 (DX 3-9; Tr. at 1093), modification 0010 (DX 3-10; Tr. at 1097), modification 00012 (DX 3-12; Tr. at 1096), modification PC19 (DX 3-19; Tr. at 1091-92), modification PC23 (DX 3-23; Tr. 1092-93), modification PC35 (DX 3-35; Tr. at 1094-96), modification PS59 (DX 3-59; Tr. at 1098), and modification PSE8 (DX 3-144; Tr. at 1098).
5. The modifications reserved a claim for "10% indirect overhead cost on subcontractor costs presently in dispute." These costs were subsequently resolved by modification PS51. DX 3-51.
6. Careco's work was an exception to Botting's substantial completion of the contract which occurred on March 31, 1989.
7. In its post-trial brief, plaintiff asserts that the "impact in scheduling of the effort is clearly shown on Pl. Ex. 382-8," a bar chart showing Botting's estimated and actual completion time in different areas of the building. Pl. Post-Trial Reply Br. at 17. Later, plaintiff asserts that "[t]he impact is shown on Pl. Ex. 380-9," a graph of Botting's estimated and actual labor hours over time. *Id.* at 24. Neither exhibit identifies the critical path, specific tasks or interrelationship of tasks, the extra work Botting was required to perform, or how the extra work or other government-caused delay prolonged Botting's performance time. Plaintiff also states that Exhibit 1A, Botting's working copies of the Contract Drawings covered with Mr. Sciborski's notes, "shows the delay in DCVR's response." *Id.* at 17. However, this voluminous exhibit does not indicate when each DCVR was submitted, when the government responded, or how the critical path was affected while Botting awaited a response.
8. Plaintiff states in its pre-trial filings that "[t]he 115 day delay was due to the unscheduled demolition (Claims #34 and #35), several design changes, clarifications and other changes or changed conditions"

and that Claim 380 is based on "the unscheduled demolition (Claim #34); the asbestos abatement scope changes (Claim #35); and other delays relating to scope changes (such as Claim # 163)." Court Exhibit ("CX") 5, Pl. Proposed Stipulated Facts ¶47, Pl. Pre-Trial Br. at 5.

9. This payment included \$49,165 for "Demo of Storm/Waste Piping in Basement," \$2,848 for "Basement Floor In. Fill & Grinding," \$2,991 for "Concrete Ceiling Demolition - Basement," \$1,326 for "Boiler Room Toilet Hook Ups," \$1,591 for "Finish Auditorium Columns," and \$1,717 for "Auditorium Column Enclosures." DX 3-151.

10. Plaintiff's Proposed Finding of Fact ¶ 8.15, which states that Botting's 15% reduction in the overruns was meant to take into account "settled issues relating to DCVRs," must be rejected. Mr. Cherpeski performed the 15% reduction on Exhibit 381-3 which was prepared prior to March 11, 1990, the date Botting submitted Claim 381 to Hoffman. Tr. at 579-80. As a result, the reduction could not have taken into account Botting's labor hours resolved in the November 1991 settlement agreement. Furthermore, the proposed finding is contrary to Mr. Cherpeski's testimony that the 15% reduction was to account for "some things we did that were bonehead moves as a result of the confusion that we have to shoulder responsibility for." Tr. at 321; *see also* CX 3 at 8 (plaintiff asserts that 15% discount was for Botting's "own faults"); CX 5, Pl. Pre-Trial Proposed Findings of Fact ¶ 57 (15% reduction was to "account for contractor inefficiencies").

11. Given the lack of proof of causation, the parties' debate over the appropriateness of the "total cost" or "jury verdict" method of calculating damages is irrelevant. *See WRB Corp. v. United States*, 183 Ct. Cl. 409 (1968).

12. Plaintiff even argues in its pre-trial brief that "Botting's labor inefficiency claim relates to the same conditions causing Claim Nos. 34, 35 and 163 as well as other design clarifications and scope changes." CX 5, Pl. Pre-Trial Br. at 6.

13. Given the clarity of the modification language, plaintiff's request that the court re-open proceedings to hear extrinsic evidence related to the modification is denied. *Beta Sys., Inc. v. United States*, 838 F.2d 1179, 1183 (Fed. Cir. 1988) ("extrinsic evidence will not be received to change the terms of a contract that is clear on its face").