ARMED SERVICES BOARD OF CONTRACT APPEALS

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| Appeals of -- | ) | |
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| Centex Construction Company, Inc. | ) | ASBCA Nos. 51906, 51908 |
| | ) | |
| Under Contract No. DACA21-95-C-0007 | ) | |

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OPINION BY ADMINISTRATIVE JUDGE SHACKLEFORD

These appeals are from final decisions denying claims for additional compensation for work appellant was required to perform which it considered to be outside the scope of its contract. Both claims are on behalf of a second tier subcontractor with pass-throughs to the first tier and prime contractors, both of whom claim mark-ups. Only entitlement is before us for decision.

FINDINGS OF FACT - GENERAL

1. On 15 August 1994, the U.S. Army Engineer District, Savannah, Georgia (Government), issued Solicitation No. DACA21-94-B-0033 seeking sealed bids for "Hospital Replacement - Phase III Fort Bragg, North Carolina." On 16 December 1994, Contract No. DACA21-95-C-0007 was awarded to Centex Bateson Construction Company, Inc., now known as Centex Construction Company, Inc. (Centex) in the amount of $190,977,335.00. (R4, tabs 4, 248)[1] The project consisted of four different

[1] In addition to the transcript of the three-day trial, the record in these appeals is as follows:

buildings—the Energy Center where boilers and chillers were located, building A which included clinic and administrative areas, building B which contained surgery and x-ray areas, and building C, which housed patients and also included a kitchen and dining area (tr. 313-14).

2. Centex awarded a subcontract for the mechanical work to Atlantic Coast Mechanical, Inc. (ACM). ACM, in turn, entered into a second tier subcontract with McCorvey Sheet Metal Works, Inc. (MSM) in the amount of $8,955,000 generally for the sheet metal ductwork. The effective date of agreement between ACM and MSM was 5 April 1995, but the agreement was not signed by MSM until 13 July 1995, nor by ACM until 21 July 1995. (R4, tab 247; tr. 309) Other than its existence, we have no evidence of the agreement between ACM and Centex.

3. The contract included the clause prescribed at FAR 52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (APR 1984), which provided in pertinent part as follows:

> (a) . . . Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern.

(R4, tab 5)

## FINDINGS OF FACT - ASBCA No. 51906

### General

4. The contract included Specification Section 15895, Air-Supply and Distribution System (For Air-Conditioning System) (§ 15895). This specification incorporated standards published by the Sheet Metal and Air Conditioning Contractors' National

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ASBCA No. 51906 - Government Rule 4 file, tabs 1-17; Government Supplement to Rule 4 File, tabs 18-250; Government exhibits at trial, tabs 251-58 - collectively (R4, tabs 1-258).

ASBCA No. 51908 - Government Rule 4 file, tabs 1-8; Government Supplement to Rule 4 File, tabs 9-35; Government exhibits at trial, tabs 36-37 - collectively (R4 (51908), tabs 1-37).

Both dockets—appellant introduced six exhibits at trial, referred to as (exs. A-1 to -6).

Association (SMACNA) including SMACNA-06, the 1985 edition of "HVAC Duct Construction Standards - Metal and Flexible" (1985 SMACNA). (R4, tab 6 at 15895-1, -5).

5. Paragraphs 2.7 and 2.8 of § 15895 provide in pertinent part that:

> 2.7 CONTROLS
>
> Controls shall be provided as specified in Section 15951: DIRECT DIGITAL CONTROL SYSTEMS FOR HVAC.
>
> 2.8 DUCTWORK COMPONENTS
>
> 2.8.1 Metal Ductwork
>
> 2.8.1.1 General: All aspects of metal ductwork construction, including all fittings and components, shall comply with SMACNA-06, SMACNA's Round Industrial Duct Construction Standards, and SMACNA's Rectangular Industrial Duct Construction Standards, unless otherwise specified.

(*Id.* at 15895-10)

6. Paragraph 2.8.3.3, Manual (Balancing) Volume Control Dampers, of § 15895, provided:

> . . . Manually operated volume control dampers shall be provided where indicated on the drawings and at all branch connections of all duct systems including supply, return and exhaust systems.

(*Id.* at 15895-13)

7. Paragraph 2.11.3, Variable Air Volume (VAV) Terminal Units, provided in pertinent part as follows:

> VAV air terminal units shall be the type, size, sound power levels and capacity shown and shall be mounted in the Distribution Zone (interstice) or in the ceiling cavity where no distribution zone is present. Units shall be factory built, pressure independent, factory set field adjustable volume and shall be suitable for single system applications. Each terminal unit shall be equipped with an air flow measuring device. Actuators and controls shall be equipped with an air flow

> measuring device. Actuators and controls shall be as specified in Section 15951: DIRECT DIGITAL CONTROL SYSTEMS FOR HVAC.
>
> . . . .
>
> 2.11.3.4 Variable/Constant Volume Electronic DDC Control: shall be as specified in Section 15951: DIRECT DIGITAL CONTROL SYSTEMS FOR HVAC, for factory installation to provide constant output (specific percentage of maximum specified flow) within inlet pressure guidelines specified herein. Controller setpoints shall be factory adjusted and field resettable. Terminal units shall be provided with a calibrated air volume sensing device, air valve or damper. Units shall control air volume to within plus or minus 5 percent of each air set point volume as determined by the thermostat with variations in inlet pressures from 3/4-inch to 6-inch water gauge.

(*Id.* at 15895-38, -39)

8. Drawing MML-01, Mechanical Symbols and Abbreviations List, depicts a manual volume control damper as a large L with the small letters MD adjacent to the lower leg (R4, tab 7).

9. Drawing MMD-04 (Details, General) includes Detail 3, Typical Flat Oval Supply Duct Take-off at Level S-2 to S-3; and Detail 4, Typical Round Supply Duct Take-off at Levels S-2 to S-3 (R4, tab 8).[2] Both details show manual volume dampers at branch take-offs from main supply (tr. 394, 396). The manual volume dampers are shown upstream of the VAV boxes (tr. 396-97). On 168 separate mechanical drawings, there were 2,276 manual volume dampers shown to be furnished and installed upstream of the VAV boxes (tr. 749, 764-65).

10. Detail 3, Circular Ductwork High Pressure Take-offs, on drawing MMD-05, (Details, General), includes the following note:

> NOTE: IN HIGH PRESSURE SYSTEMS DO NOT INSTALL ANY SPLITTER OR VOLUME DAMPERS.

[2] Levels S-2 and S-3 are interstitial spaces (tr. 395). An interstitial space is a short floor providing clear space between finished floors (tr. 210).

Detail 8, Air Terminal Unit Connection, on the same drawing, shows a manual volume damper upstream of the VAV box. (R4, tab 9; tr. 392) The contract does not define "high pressure system" (tr. 439, 533, 665).

11. The 1985 SMACNA was preceded by the 1975 SMACNA, which did not apply to this contract. However, with respect to pressure-velocity classifications, the 1975 SMACNA states that:

> The use of the terms "low" and "high" as applied to velocity and/or pressure is arbitrary.

The 1975 SMACNA also includes a Table 1-1, Pressure-Velocity Classification which depicts classes of pressure, high pressure at 10 inches of static pressure, medium pressure at 6, 4, and 3 inches of static pressure, and low pressure with 2, 1, or 1/2 inch of static pressure. (R4, tab 11 at 1)

12. The 1985 SMACNA lists changes made from the 1975 edition and states in ¶ 3 that:

> The terms *low, medium and high are discontinued*. Since seven rectangular duct construction pressure classifications exist, it is essential that the designer assign numerical pressure classes for each duct system. [Emphasis in original]

(R4, tab 12 at vi) The 1985 SMACNA further provides:

> The use of the terms "low" and "high" as applied to velocity and/or pressure is arbitrary, and it has been discontinued. The designer *must select a numerical static pressure class* or classes which satisfy the requirement of the particular system. [Emphasis in original]

(*Id.* at 1-4)

13. On 5 September 1995, MSM submitted a Request for Information to ACM concerning volume dampers in primary duct, as follows:

> Detail 8 on drawing MMD-05 indicates a volume damper in branch take off for typical terminal units. Detail 3 on drawing MMD-05 states do not install volume dampers in high pressure ducts. Past experience on prior jobs have not had volume dampers on branch take offs to terminal units. Please advise.

(R4, tab 16)

14. On 6 September 1995, ACM passed on the RFI to Centex, whose Chief, Quality Control (CQC) recommended deletion of the requirement (R4, tab 24).

15. On 14 September 1995, Centex referred the RFI along with its CQC recommendation to delete the requirement to the Corps of Engineers which responded on 19 September 1995 that it concurred with the Centex CQC comment to delete the volume dampers shown prior to the VAV boxes, but stated:

> This is considered a credit clarification to the contract, which will be formally forwarded to you in an upcoming RFP. This is not a Notice to Proceed with this change. If you disagree, please contact me as soon as possible.

(*Id.*)

16. Centex passed on the Corps' response to ACM (R4, tab 25) which in turn passed it on to MSM, which advised ACM on 4 October 1995 as follows:

> In response to Centex Bateson's Letter dated September 21, 1995 regarding the above subject matter; we would like to request that you review Drawing MMD-05, Detail 3, which contains the following note.
>
> > "In high pressure systems do not install any splitter or volume dampers."
>
> As volume dampers are not used in VAV Systems and this note instructs us not to use either volume or splitter dampers, we did not include them in o[u]r bid, therefore, no credit can be offered.

(R4, tab 26)

17. Allen Rowe, the Government's resident engineer on the project (Rowe), contacted the Corps District design group on 18 December 1995 for help in resolving the problem concerning the use of manual dampers just prior to the VAV boxes. Rowe opined that to him the note on Detail 3 on drawing MMD-05 voided the requirement for dampers in high pressure ducts. He also stated that the A/E advised that the dampers were necessary and should be installed as shown on the plans, suggesting deletion of the words "or volume dampers" from the note to Detail 3. (R4, tab 29)

18. On 12 January 1996, Rowe advised Centex that his instruction to install the dampers as shown remained valid and the contractor should be proceeding to accomplish that work. His rationale was as follows:

> 1. The Detail 3/MMD-05, of course has the note that reads, "In high pressure systems do not install any splitter or volume dampers."
>
> This design does not utilize high pressure ducts as defined by the old discontinued duct classification by SMACNA. All HVAC duct on this project is class 6 or lower which is medium to low pressure ductwork.
>
> The note really just does not apply to any duct with in [sic] this project.
>
> 2. The idea that the dampers before the VAV box were not necessary was incorrect. Normally ductwork for VAV systems is designed using the "static regain" method and volume dampers are usually not required because the intent of this sizing method is to create a constant static pressure at the entrance of each VAV box. However, another industry acceptable method, the "equal friction" method, was chosen by the design A/E due to his concerns of noise problems associated with the static regain method for systems of this magnitude. The equal friction method is not a self balancing method and the volume dampers will be required to assist in balancing the system.

(R4, tab 17)

19. A response to the questions raised by Rowe was developed by David T. Lynch (Lynch), the Corps' lead mechanical design reviewer for the project (tr. 647), and was transmitted on 16 January 1996. Lynch advised that it was his opinion and that of the A/E that the note in Detail 3, drawing MMD-05, should be deleted because the design does not utilize high pressure ductwork as that term was previously used in the discontinued 1975 SMACNA; and the terms low, medium and high pressure ductwork are no longer used for classifying ducts per the 1985 SMACNA. Finally, Lynch explained the design intent as follows:

> . . . Normally ductwork for VAV systems is designed using the "static regain" duct sizing method, and volume dampers are usually not required because the intent of this sizing method is to create a constant static pressure at the entrance of each VAV

> box. However, another industry-accepted duct sizing method, the "equal friction" method, was chosen by the design A-E due to his concerns of noise problems associated with the higher velocities required by the "static regain" sizing method. The equal-friction method is not a self-balancing method, it does not provide equal static pressure at succeeding VAV boxes, therefore the volume dampers will be required to assist in balancing the system.

(R4, tab 29)[3]

20. At the hearing, Lynch, who personally handled the HVAC design review (tr. 647-48), testified to the engineering reasons for inclusion of the manual volume dampers and his approval of that design (tr. 647-61). Early in the project design phase, the A/E mechanical designer asked Lynch if he could deviate from the standard duct design used for the VAV system, the static regain method, and use a different approach, the equal friction method (tr. 649).

21. According to Lynch, the concern with the static regain method was that very high air velocities occur going through the ducts and near the end of the runs the duct was designed in such a way that it did not get much smaller from start to finish. There was trouble threading the ductwork through the interstitial spaces due to conflicts with various piping runs sharing the space. The designer convinced Lynch that using equal friction which ends up with much smaller ductwork near the end of runs was the only way they would be able to thread the ducts through the interstitial space. There was also concern with the static regain system because the extremely high velocities in the ductwork generate noise which might be a hindrance to the A/E meeting its noise criteria. (Tr. 649-50)

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[3] With regard to the document at R4, tab 29, appellant stated in a footnote to a proposed finding of fact in its brief that it "objected to the receipt of the hearsay testimony regarding the A/E and continues to take exception to the Board's use of such testimony" and suggests that we take a negative inference from the absence of the A/E from the hearing (at 13 n.1). Appellant did not object to R4, tab 29 (tr. 9), but did object to a question concerning communications with the A/E during the administration of the contract regarding HVAC design as leading (tr. 520). That objection was overruled (tr. 521) as was a later objection based upon hearsay (tr. 523). The specific information that was objected to was a communication concerning the design intent of the A/E with regard to the use of manual volume dampers. Substantially the same testimony had already been admitted without objection in R4, tab 29. The admissibility of hearsay is discretionary (*see* Board Rule 20). We affirm the ruling of the presiding judge and do not draw a negative inference from the absence of the A/E.

22. The design intent for nearly all VAV applications is to try to end up with a 1 inch static pressure at the inlet of the VAV box (tr. 651-52). The static regain system typically uses VAV boxes and is designed so that it produces the same inlet static pressure at the front of every VAV box in the system regardless of whether it is close to the air handler or the one farthest away (tr. 651).

23. Equal friction design starts with a little larger duct than static regain, but it continues to get smaller and smaller as you go down the length of the line. This method requires the use of VAV boxes but because the intent is to have a 1 inch static pressure at the inlet of all boxes, you must install dampers in the branch ducts to reduce the static pressure going to that box to allow it to get down to 1 inch static pressure. (Tr. 653)

24. We find Lynch's testimony credible. While appellant questioned the necessity for the manual volume dampers upstream of the VAV boxes and believed them to be wasteful, the design intent was rational and we do not deem the dampers economically wasteful.

25. MSM took issue with the Government position in a letter, dated 26 February 1996, taking exception to the Government's interpretation of the use of high pressure:

> As you know, there is a high pressure side and a low pressure side to a VAV Box and the note on Detail 3/MMD-05 states that no volume dampers are to be installed in the high pressure system (i. e. the entering side), which is how we interpreted this note.
>
> It should also be pointed out that the Contract Specifications refer to SMACNA Version 06 which does not address high, low or medium pressure ducts. Instead, this Version refers to inches of water pressure classifications and as Mr. Rowe stated in his letter these are the old discontinued duct classifications. Therefore, we believe that the reference to a high pressure system clearly supports our position of referring to the entering side of the VAV Box.
>
> Therefore, it is our opinion that the only conclusion that could be determined was that the volume or splitter dampers are not required on the higher pressure side of the box.
>
> Also, please note that if these dampers are required we will be pursuing our rights to make a claim for compensation.

(R4, tab 27)

26. MSM proceeded with the directive in Rowe's 12 January 1996 letter and installed the volume dampers on what it termed the high pressure side or upstream of the VAV boxes and on 6 August 1997 submitted a claim to ACM in the amount of $255,859.00 for the additional cost associated with such installation. ACM added claims for other second tier subcontractors (Insulation Services - $22,955.73 and Environmental Testing Services - $74,977.50) and its own mark-up and, on 19 March 1998, submitted a claim to Centex in the amount of $402,997.00. On 29 April 1998, Centex submitted the claim to the Government, and including the Centex markup, the claim totaled $489,733.00. (R4, tab 3)

27. On 10 September 1998, the contracting officer rendered a final decision denying the claim in its entirety, deciding that the contract as a whole clearly required manual dampers upstream of the air terminal units and found appellant's interpretation unreasonable (R4, tab 2).

28. By notice dated 7 December 1998, the final decision was appealed to the Board (R4, tab 1) and docketed as ASBCA No. 51906.

Bidding the Manual Volume Dampers

29. Anthony McCorvey (McCorvey) is president of MSM. MSM is the largest sheet metal contractor in the State of Texas and one of the top 10 or 15 contractors in the United States. The business was started by McCorvey's grandfather in 1925, was subsequently run by his father, and McCorvey, who started working in the business at seven years of age, is the current owner. (Tr. 305-06)

30. In 1994, McCorvey alone prepared the bid for MSM and submitted it to ACM and to other mechanical contractors who were bidding the job (tr. 309, 336). In bidding the air supply and distribution systems, McCorvey first reviewed the specifications which told him the various types of ducts, manual volume dampers, variable volume boxes, automatic dampers, etc. and the instructions for what to do with them. He did not notice anything unusual about the specifications for air supply and distribution, or about the VAV boxes or the air terminals. He determined that the type of box required was pressure independent with direct digital control (DDC). The air terminal units were consistent with what he expected as most projects at the time were going to be pressure independent with DDC control boxes. (Tr. 315-16)

31. He next went to the drawings and noticed that there were manual volume dampers in front of VAV boxes and in the primary duct line. He found this unusual because in his experience a manual volume damper is never placed in front of a VAV box or in the primary duct line, because it does not allow a VAV box to work. (Tr. 317)

32. McCorvey noticed the numerous (2,276) manual volume dampers upstream of the VAV boxes (tr. 749, 764-65) and sought additional information to explain the anomaly. He went to the Detail 3, Circular Ductwork High Pressure Take-Offs, on drawing MMD-05, because all of the VAV boxes had round, circular or oval inlets to them on the high pressure side of the boxes. He saw the note to Detail 3 on that drawing which said not to install dampers in high pressure systems and concluded that the 2,276 manual dampers on 168 drawings were mistakes made by the draftsman and the note was the draftsman's method of correcting the mistakes. (R4, tab 9; tr. 319-322)

33. McCorvey testified:

> A . . . The way these things are made, the way they're done today, it's not like in the old days when you took a pencil and you drew it out.
>
> With autocad, you make a block. You make a picture and you'll take this picture of this duct or a box or a grill or a fan and you will pick it with an autocad puck, is what I call it, and you pick it and you place it where you want it on the drawing and it knows to tie into the lines or whatever you're tie into and you insert it.
>
> When the draftsman that detailed this thing, I believe, when he detailed this thing, he made his boxes and he made his templates and he inserted them and he inserted them with dampers all over the whole job.
>
> Now it's not a major deal to put a damper in a duct line, but it's a major deal if you go into it and you make a box and you insert it in your drawings and you finish the set of drawings before you find this mistake.
>
> You have to go back and you have to explode this block. It's a term that draftsmen use, autocad operators use. You have to explode this box. Everything that's in the box, basically, goes away. Then you would have to redraw it.
>
> You can't just take out the damper because it's a box. It's part of the whole entire function there, the whole entire template. You can't just take out the manual volume dampers. So I believe that what they were doing was . . . in order to meet the requirements of the specifications, you had to put that note

> in and say don't put in manual volume dampers on the supply side, on the high pressure side of the VAV box.
>
> That would accomplish their intent. That would accomplish their specification intent because that would allow the pressure-independent boxes to work in the proper manner because having that damper in front of them, restricting that box, making noise, you know, adding sound to the system would not allow a VAV box in the proper manner.

(Tr. 320-22)

34. The note to Detail 3 clarified the ambiguity in McCorvey's mind (tr. 324) and no money for manual volume dampers was included in his bid to mechanical subcontractors (tr. 329). Prior to submitting the bid, McCorvey did not call or talk to anyone with respect to this dilemma, either within his own company, or within ACM, Centex or the Corps of Engineers (tr. 375, 391).

35. With respect to both ASBCA Nos. 51906 and 51908, the record contains no evidence that ACM relied on MSM's bid in its bid to Centex. Nor does the record contain any evidence that Centex relied on ACM's bid in its bid to the Government.[4]

FINDINGS OF FACT - ASBCA No. 51908

36. Paragraph 2.10.1.1, Exhaust Duct for Canopy or Noncanopy Hoods, Contract Specification § 11400, Food Service Equipment, provides as follows:

> Exhaust duct for canopy or noncanopy hoods shall be constructed of 18-gauge stainless steel and shall have all external seams welded continuously, liquidtight. Duct size shall be based on a minimum air velocity of 1,500 fpm and maximum of 2,500 fpm. Duct shall be continuously welded, liquidtight, to hood duct collar as required by NFPA 96.

(R4 (51908), tab 5 at 11400-21)

37. Paragraph 2.11.1.1, Exhaust Duct for Canopy or Noncanopy Condensate Hoods, of § 11400 of the specifications, provided:

[4] Appellant has filed a Motion to Reopen the Record to receive affidavits purporting to prove reliance on MSM's bid by ACM and Centex. *See* findings 60-68. That motion is decided in the decision section of this opinion.

> Ducts shall be constructed of 18-gauge stainless steel. External seams shall be welded and liquidtight. Duct size shall be based on a minimum air velocity of 800 fpm. Duct shall be continuously welded, liquidtight, to hood duct collar as required by NFPA 96.

(*Id*. at 11400-23)

38. The specification for Ventilation and Exhaust Systems was set forth in § 15935. The requirements for sheet metal ductwork was described in paragraph 3.1.4 and required conformance with the 1985 SMACNA. The requirements for special duct systems, however, were set forth in paragraph 3.1.4.3, which provided in pertinent part as follows:

> d. Kitchen Range Hood Exhaust Ductwork:
>
> 1). Ducts Conveying Smoke and Grease Laden Vapors: Ducts conveying smoke and grease laden vapors shall conform to requirements of NFPA 96. Duct and accessories material shall be 16 gauge stainless Type 304L or 316L, liquid tight with continuous externally welded transverse and longitudinal seams and connection to range hood.

(R4 (51908), tab 6 at 15935-18)

39. Drawing MML-02, Mechanical Symbols and General Notes, included HVAC General Note 22 which provided as follows:

> ALL EXHAUST SYSTEMS CONVEYING GREASE LADEN VAPORS SHALL BE ENCLOSED IN 2 HOUR RATED ENCLOSURE IN ACCORDANCE WITH NFPA 90A AND AS DETAILED ON THE ARCHITECTURAL DRAWINGS. DETAIL 14 DRAWING AM-04 OF VOLUME 8. THE FOLLOWING EXHAUST SYSTEMS SHALL BE CONSIDERED TO BE CONVEYING GREASE LADEN VAPORS: EF-01B-K1, EF-01B-K5, EF-01C-K

(R4 (51908), tab 7)

40. Detail 14 on drawing AM-04, an architectural drawing, shows a typical kitchen exhaust duct enclosure and describes the type of enclosure required for a grease laden system but does not say anything about the material out of which the duct is to be constructed (R4 (51908), tab 32; tr. 473-74).

41. The exhaust fan schedule on drawing MMS-04 shows that the fan for EF-01B-K1 served kitchen hoods, that for EF-01B-K5 served the rotary oven and that for EF-01C-K served heat recovery exhaust, all three of which were in the kitchen area. Fan EF-01A-D, which was also on the exhaust fan schedule, was said to serve the Dining Room Hood. (R4 (51908), tab 8; tr. 87, 333)

42. While MSM was installing duct work in connection with the exhaust system running to the dining room in building C, a Government inspector informed the superintendent that the risers were incorrectly installed using galvanized steel when the contract called for stainless steel (tr. 80). Risers are the shafts through which the duct work goes (tr. 155). The superintendent went to Timothy McCorvey, the MSM project manager (cousin to Anthony McCorvey, but not an owner), and together they reviewed the drawings and found no evidence indicating to them that stainless steel was required (tr. 77, 80).

43. When told the risers should be stainless steel, they had begun installing galvanized duct work, and the duct work had already been fabricated (tr. 155-56). The shop drawings prepared by MSM and submitted through ACM and Centex to the Government showed galvanized steel for this ductwork (tr. 81-82).

44. On 19 July 1996, Centex submitted a Request for Information (RFI No. 1008) to the Corps of Engineers as follows:

> On drawing 12022 [MKG-18] near Col. 5.2/E.B are shown two 16x30 ducts rising. The southern duct continues to drawing 12014 [MKG-09] where it is tagged "down to hood". This hood is shown on drawings 11070 [MHG-09] and 06174 [AFS-03]. The kitchen schedule, tag 134-K3410G, calls this hood a grease type.
>
> This exhaust duct runs up to drawing 11242 [MH3-18] where it is[]lost in the broken duct li[n]es. We believe this system to be connected to exhaust fan EF-01A-D. Please confirm.
>
> Should this be the correct interpretation; this duct is not a kitchen exhaust grease duct nor is the exhaust fan a kitchen type. Per note 22 on 11004 [sic] [10040, MML-02], this is not listed as a grease laden system. Please clarify.

(R4 (51908), tab 3)

45. The Government responded on 5 August 1996 as follows:

> 1. The souther[n] 16x20 [sic 16x30] exhaust duct riser shown on Drwg (12022) near columns 5.2 and E.8 is connected to EF-01A-D. This duct is serving kitchen hood K3410G shown on Drwg (06174) which is labeled as grease type hood.
>
> 2. Note 22 drwg (11004) lists grease laden exhaust systems. This list is not exclusive and should include exhaust system EF-01A-D.
>
> 3. Exhaust EF-01A-D must be provided with a scroll drain plug and hinged clean-out door. Ductwork shall comply with the Section 15935 para 3.1.7.[5]
>
> **This is considered a cost clarification to the contract.**

(*Id*., emphasis in original)

46. The Government response was made by Peter Kozak (Kozak), a Corps mechanical engineer assigned to the hospital project in the technical support branch (tr. 450-51). In reaching his conclusion, Kozak reviewed the specifications and the drawings. His analysis began with the requirement in section 15935 of the specifications that any duct work carrying grease-laden smoke or vapors be made out of stainless steel. Using the plans he traced out the duct system from start to finish to determine if the fan and the hood were actually connected. (Tr. 454)

47. Kozak began his analysis with drawing MKG-09, Ground Floor Area 09, Distribution HVAC Plan. Here he identified and highlighted a 30x16 duct at the end of which was a broken line diagonally through it which meant the duct work is going down from that point. The rectangle also included the designation "30x16 down to hood." (Tr. 455-56; R4 (51908), tab 23)

48. On drawing MHG-09, which is the finished ground floor Building C, he highlighted the duct in question on the drawing, a rectangular box with a solid diagonal through it which meant the duct work is going up from the page. The ductwork was in an area with the room legend number CG 1069, which was the "Grill/Fry/Broil Center." (Tr. 456; R4 (51908), tab 22)

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[5] This paragraph reference was a mistake. Paragraph 3.1.7 is listed as "omitted" in the specifications. However, as subsequent events attest, the parties took the Corps' reference to ¶ 3.1.7 to mean that stainless steel ductwork was required. The correct paragraph citation should have been 3.1.4.3(d).

49. Kozak highlighted the duct on drawing AFS-11, Ventilation Plans, a finished floor plan. Half of the box signifying the duct is blacked in which means it is an exhaust duct. A tag No. V134/K3410G is designated at the location of the duct. (R4 (51908), tab 19; tr. 458-59) This is the same tag number referred to in the RFI (R4, tab 3). A reference to drawing AFS-13, the Utilities Requirements Legend for kitchen equipment and electrical, plumbing and ventilation, reveals under the Ventilation Legend that said tag number refers to "16" X 30" Exhaust Collar-5960 CFM-1800 FPM-1.65"SP-Exhaust Hood." (R4 (51908), tab 37; tr. 459-60)

50. That hood, tag number 134/K3410G, is further described on AFS-01, a schedule of food service equipment, as "HOOD, EXHAUST, GREASE EXTRACTOR TYPE" (R4 (51908), tab 16; tr. 460-61). Drawing AFS-14, Food Service Equipment Elevations, shows, on Elevation D, that the hood (tag no. 134/K3410G) is located above a griddle, fryer and broiler (R4 (51908), tab 21; tr. 461).

51. Drawing MKG-18 depicts duct work in the interstitial space and a portion of a mechanical room. The duct in question is a highlighted box with a solid diagonal line at the top of the run which signifies that the duct work is going up or out of the page. (R4 (51908), tab 24; tr. 463)

52. Drawing MH1-18, finished floor level of the first floor mechanical room depicts a 16x30 duct going vertical through the page (R4 (51908), tab 26; tr. 464). Drawing MK1-18 is the first floor area 18 upper level HVAC plan and the duct in question is highlighted and is also going vertical through the page (R4 (51908), tab 25; tr. 465-66).

53. On drawing MH2-18, finished floor mechanical room on the second floor, the duct in question is highlighted and is going vertical through the page (R4 (51908), tab 27; tr. 466). The duct continues upward as shown on drawing MK2-18, the interstitial second floor HVAC distribution plan, mechanical room (R4 (51908), tab 28; tr. 467). Finally, the duct continues as depicted on drawing MH3-18 to the finished floor of a fan room located on the roof and the duct is highlighted on that drawing. One exits through a door in the fan room onto the roof. The roof is considered the third floor. (R4 (51908), tab 29; tr. 467-68)

54. MH3-18 also shows the duct leading to the exhaust fan associated therewith and designated as EF-01A-D (tr. 468). Having tracked the duct from the hood up through the space to the fan, Kozak concluded that in fact Hood Tag No. K3410G does connect to exhaust fan EF-01A-D. He also determined that the duct system should be part of Note 22 of drawing MML-02 which required that systems of that type should be fire wrapped or fire enclosed. (R4 (51908), tab 13; tr. 471-72)

55. In contract Modification No. P00061, the parties agreed to add Fan EF-01A-D to Note 22 and thus added the fire rated duct wrap for the duct served by that fan. While the

contractor's proposal included costs for providing stainless steel exhaust ductwork for EF-01A-D, the parties continued to disagree over whether it was a contract requirement and it was broken out of the costs included in the proposal (R4 (51908), tab 10).

56. In contract Modification No. P00108, the parties agreed to an adjustment for increasing the thickness of the duct for Fan EF-01A-D, but the question of whether stainless steel duct was a contract requirement was excluded from this modification as well (R4 (51908), tab 11).

57. On 13 February 1998, MSM submitted a claim to ACM for $89,878.00 representing the difference in cost of installing stainless steel ductwork in lieu of galvanized sheet metal for Exhaust System EF-01A-D. The foundation for the claim was said to be the absence of EF-01A-D from the Note 22 list of the exhaust systems considered to be "grease laden;" the exhaust fan schedule listing EF-01A-D as part of a dining room system rather than a kitchen system; the Government's 5 August 1996 response to RFI No. 1008 stating the entire exhaust system serving dining room hood K3410G is to be constructed of stainless steel and the Corps revision of Note 22 on drawing MML-02 to include EF-01A-D as a grease laden system. (R4 (51908), tab 3) In bidding the exhaust system, McCorvey assumed there were no cooking facilities in the dining room, so he did not include money in the MSM bid for stainless steel duct work serving that area. He testified as follows:

> As far as the dining room, I did not look, think, believe there to be a kitchen cooker in the dining room. I heard this yesterday [at the hearing] that there was a kitchen cooker in the dining room, a broiler or a griller. I would never have imagined that.

(Tr. 334-35) In fact McCorvey did not know if he even had the food service specification (§ 11400) when he bid the job (tr. 403).

58. ACM added its own mark-up and, on 19 March 1998, submitted the claim to Centex in the amount of $102,378.00. On 29 April 1998, Centex submitted the claim to the Government, properly certified, and including the Centex mark-up, totaled $124,600.00. (*Id.*)

59. On 15 September 1998, the contracting officer issued a final decision denying the claim. After analyzing the claim, the contracting officer summarized the basis for the denial as follows:

> The contract as a whole clearly required the exhaust duct for the Cafeteria hood to be stainless steel because the hood was specifically listed as part of the Food Service Equipment. The fact that it was also a grease extractor type hood further

> confirms that the duct should be stainless steel. Your argument that the fact the exhaust fan was not identified on the drawings as one conveying grease laden vapors meant that duct connected to the hood did not have to be stainless steel is unreasonable. The list of exhaust fans, in note 22 on MML-02, does not indicate that only those three listed fans, and no others, would convey grease laden vapors. It is not relevant to the requirement for stainless steel exhaust duct whether or not the fan is identified as handling grease laden vapors. What is relevant is that the duct was connected to a hood listed in the Food Service Equipment specifications.

(R4 (51908), tab 2 at 5) Appellant's timely appeal was docketed as ASBCA No. 51908.

Additional Findings of Fact Relevant to Motion to Reopen Record

60. After completion of the hearing and submission of initial briefs, appellant filed a Motion to Reopen the Record for receipt of two affidavits. The stated impetus for the motion was an argument made by the Government in its initial brief with respect to each appeal, that "there is an absence of proof of reliance by Centex, the prime contractor on the bids of the mechanical subcontractor and the bid of the sub-subcontractor McCorvey Sheet Metal Works, Inc." (App. mot. at 1) Attached to the motion was an affidavit from Gerson B. Kramer, Esq., co-counsel for appellant and five exhibits pre-dating the hearing. The Government responded in opposition to the motion and attached thirteen exhibits including an affidavit of Henry R. Richmond, Esq., co-counsel for the Government, prepared for the opposition to the motion. (Gov't resp.) The affidavits appellant would submit if the record is reopened, are included in exhibits 5 and 7 to the Government response to the motion. The additional findings that follow relate to the basis for the motion.

61. Mr. Kramer was assigned to these appeals in 2002 while they were pending, when prior counsel departed due to illness. At the time the Government had propounded interrogatories, but appellant had not yet responded to them. On 25 March 2002, Mr. Kramer called Mr. Richmond and in his absence left a voice mail message indicating he thought the Government's discovery requests were too complex since the claims belonged to MSM and it appeared to him that ACM had relied on MSM's bid and Centex had relied on ACM's bid. (Kramer aff., ¶ 5; Gov't resp., ex. 1)

62. On 26 March 2002, Mr. Richmond responded in writing to the voice mail message, agreeing based upon the representations in the message that the amount of discovery could be reduced, and further stating:

> However, to do so would require that we receive an admissible affidavit regarding whether ACM received the bid of McCorvey

> prior to submitting its bid to Centex and whether ACM relied on McCorvey's bid in formulating its bid to Centex. It would require an additional admissible affidavit from Centex on whether Centex received ACM's bid prior to submitting its bid to the Government and whether Centex relied on ACM's bid in formulating its bid to the Government on this contract.

Finally, Mr. Richmond advised that if affidavits were provided as he suggested, "it might be possible to limit the document discovery to McCorvey and limit the depositions to the McCorveys and Mr. Bukowski." (App. mot., ex. A, Kramer aff., ¶ 6; Gov't resp., ex. 1)

63. Mr. Kramer responded also on 26 March 2002 stating that he would check and get back to Mr. Richmond on the affidavits (app. mot., ex. B, Kramer aff., ¶ 7). On 15 April 2002 Government counsel advised counsel for appellant that he had not heard from them concerning the affidavits (Gov't resp., ex. 3) and on the same day appellant's counsel replied advising that during the last two weeks, he had been:

> . . . [C]ontacting the relevant individuals at Centex and Atlantic Coast Mechanical regarding the details demanded by you for the affidavits you requested. I have now received confirmation of the necessary facts and will send you the affidavits as soon as they can be circulated and are properly executed.

(*Id*., ex. 4)

64. On 13 May 2002, Mr. Kramer faxed and mailed to Mr. Richmond, the affidavit of Bob Gist of Centex regarding Centex's reliance on ACM's bid and advised that a draft affidavit had been prepared for Leland Keeling, a former ACM employee, which had been sent to Keeling for signature (*id.*, ex. 5). On 3 June 2002, Mr. Richmond requested the status of the affidavit of Keeling (*id.*, ex. 6). On 8 July 2002, Mr. Kramer e-mailed "a copy of the text of Dave Bushea's affidavit with the signed original to follow by mail" and also faxed a copy that same day. Bushea was the general manager of ACM and the custodian of the business records of that company. Bushea's original signed affidavit was mailed on 9 July 2002. (*Id*., exs. 7, 8, 9)

65. Bushea's affidavit states that his predecessor Keeling received the MSM bid prior to submitting ACM's bid to Centex, and that based upon his review of the ACM records, ACM "relied upon and used the bid submitted by McCorvey for the sheet metal and duct work in making our bid submittal to Centex" (*id*., ex. 8).

66. Gist's affidavit states that, as vice president, he participated in the preparation of the Centex bid for the project, that Centex received the bid of ACM for the mechanical

portion of the work prior to submission of its bid to the Government and that Centex relied upon and used the ACM bid for the mechanical portions of the work called for by the specifications and drawings (*id*., ex. 5).

67. Mr. Kramer concludes his affidavit as follows:

> 13. In furnishing the two affidavits [of Bob Gist, vice president of Centex and Dave Bushea, vice president of ACM] to government counsel, it was my conclusion that government counsel understood that the affidavits regarding the bid submissions of the prime contractor and the subcontractor were furnished to him so that the issues in the instant case could be simplified and shortened by providing him with admissible evidence regarding the submission of the bids by the relevant entities.
>
> 14. It was my intention to be present at the hearing on the two appeals in this case but because of health reasons and the press of other work, I could not be present. Mr. Braude took over the trial of the case on appellant's behalf. Had I been present at the hearing I would have insisted that the Government make the two affidavits part of the record by producing the originals and making them part of the record in the instant case.

(Kramer aff.)

68. Mr. Richmond states in his affidavit that in all of the correspondence and in all of the telephone conversations between himself and either of appellant's counsel, "at no time did either of them suggest that their provision of affidavits was for a purpose other than that expressed in my correspondence of March 26, 2002, of limiting discovery." Further, he states that in the course of conversations and correspondence with appellant's counsel, "at no time did either of them request that I enter into any form of stipulation regarding reliance," nor "suggest an exchange of correspondence in any way formalizing any perceived 'understanding' regarding reliance" nor did either of appellant's counsel "request that I include either of the affidavits in the Government's supplement to the Rule 4 file." (Gov't resp., ex. 13, ¶¶ 9, 11, 12)

## DECISION

### Motion to Reopen the Record

Appellant's first argument in support of reopening the record to receive the affidavits of Gist and Bushea is that the parties had an understanding, apparently a tacit one,

that the issues "in dispute in the case" could be simplified by elimination of the matter of reliance by ACM and Centex. Nothing in the contemporaneous record, nor in Mr. Kramer's affidavit supports that view. The record and, indeed, the Kramer affidavit, clearly show that the only reason for preparation and submission of the affidavits to Government counsel was for purposes of curtailing the amount of discovery to be conducted.

Appellant next argues that Board "Rule 4(a)(4) requires the government to make any affidavits pertinent to the case part of the record when the Rule 4 is submitted." While conceding that the affidavits were obtained after the Rule 4 documents were submitted, appellant says the spirit of the rules requires they be part of a supplement to the Rule 4 file in order to give the Board a full and complete record of the facts. Actually, Board Rule 4(a)(4) says that the file should include affidavits "of any witnesses on the matter in dispute made prior to the filing of the notice of appeal with the Board." The affidavits in question were clearly prepared long after the notice of appeal was filed.

We observe that in its initial post-hearing brief, appellant proposed a finding of fact with respect to the manual volume damper issue as follows:

> 2. ACM relied on MSMW's bid in preparing its own bid for the mechanical work on the project, and Centex, in turn, relied on ACM's bid when preparing its unified bid for the project. Centex, as well as ACM and MSMW certified the claim pursuant to the Contract Disputes Act. Tr. 427.

Appellant's proposed finding 42 stated that reliance for the exhaust duct issue was the same as for the manual volume damper issue. (App. br. at 3, 26) The transcript citation clearly does not support reliance by Centex on the bid of ACM, and, while there is testimony on that page about receipt by ACM of MSW's bid, and why ACM gave the work to them rather than to the other two potential subcontractors who bid to them, there is nothing explicit on that page or elsewhere in the record that supports a finding that ACM relied on the bid of MSW while submitting its bid to Centex.

Appellant argues the Government "should be equitably estopped from raising the question of whether the contractors relied on McCorvey's bid" since appellant relied to its detriment on the Government's representation that the affidavits requested would be a satisfactory response to the inquiry concerning reliance (app. reply br. at 3-4). In fact we find no representation or course of conduct on the part of the Government as alleged by appellant. The arguments made by appellant in support of reopening the record for receipt of two affidavits proving reliance by ACM and Centex are without merit. The motion to reopen the record is denied.

Manual Volume Damper Claim (ASBCA No. 51906)

Appellant contends the contract did not require the installation of manual volume dampers upstream of the VAV boxes, even though there were clear statements throughout the contract calling for them, because of a note to a detail on the drawings which stated that manual dampers were not to be installed in high pressure systems. In appellant's interpretation the area upstream of the VAV box was the high pressure side. The Government contends such installation was clearly required and the note had no applicability.

The basic principles of contract interpretation are well-established:

> When a contract is susceptible to more than one reasonable interpretation, it contains an ambiguity. *See Hills Materials Co. v. Rice*, 982 F.2d 514, 516 (Fed.Cir.1992). To show an ambiguity it is not enough that the parties differ in their respective interpretations of a contract term. *See Community Heating & Plumbing Co. v. Kelso*, 987 F.2d 1575, 1578 (Fed.Cir.1993). Rather, both interpretations must fall within a "zone of reasonableness." *See WPC Enters., Inc. v United States*, 163 Ct.Cl. 1, 323 F.2d 874, 876 (1963). If this court interprets the contract and detects an ambiguity, it next determines whether that ambiguity is patent. *See Newsom v. United States*, 230 Ct.Cl. 301, 676 F.2d 647, 649-50 (1982). The doctrine of patent ambiguity is an exception to the general rule of *contra proferentem* which construes an ambiguity against the drafter . . . . *See id.; Sturm v. United States*, 190 Ct.Cl 691, 421 F.2d 723 (1970). An ambiguity is patent if "so glaring as to raise a duty to inquire[.]" *Newsom*, 676 F.2d at 650. If an ambiguity is not patent but latent, this court enforces the general rule. *See Fort Vancouver Plywood Co. v. Unites States*, 860 F.2d 409, 414 (Fed.Cir. 1988).

*Metric Constructors, Inc. v. NASA*, 169 F.3d 747, 751 (Fed. Cir. 1999); *see also Burnside-Ott Aviation Training Center v. Dalton*, 107 F.3d 854, 860 (Fed. Cir. 1997).

A contractor pursuing recovery based upon its interpretation of an ambiguous contract must show reliance on that interpretation in submitting its bid. *Lear Siegler Management Services Corp. v. United States*, 867 F.2d 600, 603-04 (Fed. Cir. 1989). Moreover, where a contractor shows it used a subcontractor's bid and hence the subcontractor's interpretation in preparing its bid to the Government, the subcontractor's reliance can be imputed to the contractor. *Froeschle Sons, Inc. v. United States*, 891 F.2d 270, 272 (Fed. Cir. 1989).

Here, the contract provisions clearly and unambiguously required appellant to install manual volume dampers where indicated on the drawings and at all branch connections of all duct systems including supply, return and exhaust systems. The drawings depicted 2,276 locations where manual volume dampers were shown upstream of VAV boxes. In addition, both Detail 8 to drawing MMD-05 and Details 3 and 4 to drawing MMD-04 depict manual volume dampers in the supply duct system upstream of VAV boxes. Notwithstanding the clear requirement in literally thousands of places in the contract, McCorvey perceived that in his experience, manual volume dampers are never placed upstream of the VAV boxes. Rather than bringing this circumstance, unusual to him, to the attention of the Government prior to submitting his bid, he searched for a reason to ignore those dampers. He found justification in a note to Detail 3 on drawing MMD-05 which stated that volume dampers were not to be installed in high pressure systems. The contract, however, did not define "high pressure system." In fact, the 1985 SMACNA which was incorporated into the contract, specifically ended the practice set forth in the superseded 1975 SMACNA of differentiating between high, medium, and low pressure systems. Thus, the term "high pressure system" had no meaning in this contract. McCorvey chose to take that note as the drafter's means of correcting his or her errors in showing manual volume dampers upstream of VAV boxes and thus canceling the requirement. Consequently, McCorvey did not include the cost of installing these dampers in his bid.

We believe the contract to be susceptible to only one reasonable interpretation, that the manual volume dampers were to be installed where indicated. McCorvey's assumption that the note to Detail 3 was a correction was not based on any language in the note. It was just his opinion. If we make the assumption that the area upstream of the VAV box is the high pressure side of the box, as McCorvey did, then the note created an ambiguity so glaring and patent as to impose upon Centex/ACM/MSM a duty to inquire as to the Government's intentions prior to submitting its bid. At a minimum, McCorvey should have questioned the numerous instances directing the contractor to install work he thought improper and unnecessary prior to bidding.

As an alternative basis for deciding this appeal, we note that while MSM has demonstrated that it relied on its interpretation in submitting its bid to ACM, we have no evidence that ACM relied on the MSM bid in submitting its bid to Centex. Nor do we have evidence that Centex relied on the ACM bid in submitting its bid to the Government.

Thus the appeal relating to the claim for installing manual volume dampers upstream of the VAV boxes is denied.

Exhaust Duct Claim (ASBCA No. 51908)

Appellant contends the Government mistakenly omitted dining room Fan EF-01A-D from the list of fans said to be grease laden in Note 22 to drawing MML-02. Therefore,

appellant argues it properly assumed that the ductwork connected to that fan could be galvanized instead of stainless steel because it was not grease laden.

The Government agrees that it mistakenly omitted Fan EF-01A-D from Note 22 but says that this error only impacted the drywall contractor who was installing fire wrap and only the drywall contractor was entitled to rely on the note to ascertain which exhaust system required fire wrap.

The Government demonstrated in a rather complicated fashion that one could trace the duct between the hood servicing the grill/fry/broil center in the dining room to Fan EF-01A-D. This tracing in combination with several provisions in the Food Service Equipment specification demonstrates that Fan EF-01A-D is grease laden. This demonstration required the use of over 12 drawings, some of which were mechanical drawings and some of which were architectural drawings.

The specifications clearly provided in paragraph 2.10.1.1 of § 11400 that all canopy and non-canopy hoods for food service required stainless steel ductwork. Thus, whether or not the fan was grease laden and whether or not the duct was capable of being readily traced from fan to hood, this was a clear unambiguous requirement. While the contract as whole for the stainless steel requirement was less than perfect, the requirement that ducts servicing hoods be constructed of stainless steel was unambiguously stated.

Finally, as with manual volume dampers, even if the contract were ambiguous, appellant has failed to demonstrate reliance by Centex on the bid of ACM and reliance by ACM on the bid of MSM prior to submission of Centex's bid to the Government.

The appeals are denied.

Dated: 30 September 2003

RICHARD SHACKLEFORD
Administrative Judge
Armed Services Board
of Contract Appeals

I concur

I concur

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

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 Nos. 51906, 51908, Appeals of Centex Construction Company, Inc., rendered in conformance with the Board's Charter.

Dated:

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