

In the United States Court of Federal Claims

No. 05-376C

Filed January 31, 2008

* * * * *

MANHATTAN CONSTRUCTION COMPANY, *

Plaintiff, *

v. *

UNITED STATES OF AMERICA, *

Defendant. *

* * * * *

Contract Interpretation; Patent Ambiguity; Duty to Inquire; Conflict Between Drawings and Specifications; Federal Acquisition Regulation §§ 52.236-21(a) and 52.243-4.

Eli Robbins, Harrison Law Group, Baltimore, Maryland, for plaintiff.

Leslie Cayer Ohta, Trial Attorney, Commercial Litigation Branch, Civil Division, United States Department of Justice, Washington, DC, for defendant.

OPINION AND ORDER

Hodges, Judge.

Subcontractor Caigeann filed claims against the United States through plaintiff Manhattan Construction Company for equitable adjustments arising from alleged contract ambiguities.¹ Plaintiff contended at trial that the Government did not pay for work completed outside the contract's requirements. Defendant responded that any ambiguities in the drawings or specifications were patent, and this created in plaintiff an obligation to inquire. Moreover, the contract required all the work performed by the contractor.

The disputed contract requirements were the proper locations for steam traps, installation of air-handling units, and construction of a hot water temperature maintenance system.² Plaintiff alleged that ambiguities and conflicts in the specifications and drawings caused it to incur costs that were not included in the bid. If terms of the contract were ambiguous, or omissions in the

¹ This is a pass-through claim. For convenience, the subcontractor Caigeann is often referred to in this Opinion as plaintiff.

² Plaintiff abandoned a claim concerning the kitchen cooler and freezer condensate lines.

drawings caused conflicts, such ambiguities or omissions were obvious or glaring. Patent ambiguities are the contractor's responsibility to resolve. Plaintiff should have inquired of the Government regarding any confusion before submitting its bid. The contract required the work in question.

BACKGROUND

I. Factual Background

The United States Department of Agriculture solicited bids in January 2001, to construct a Human Nutrition Center in Beltsville, Maryland. The Center is a research facility consisting of two buildings housing USDA's Agricultural Research Service. The Government awarded the contract to Manhattan Construction Company on May 31, 2001. The value of the contract before changes, additions, and deletions was \$20,716,000. Manhattan chose a subcontractor, Caigeann, to install the mechanical and plumbing systems at a cost of \$6,117,000.

The research facility was to be constructed in two phases. The Department of Agriculture conducted a pre-award bid conference to give potential bidders an opportunity to ask questions about the project. Plaintiff did not attend the conference or conduct a site visit on the property. The Government typically distributes questions and answers that arise at such conferences to all bidders, but no one present asked a question.

Caigeann began work on the project soon after signing its subcontract with Manhattan in September 2001. Later, it submitted various requests for information through Manhattan to the Government. The questions concerned installation of steam traps at pressured steam risers, the piping required for the air-handling units, and the use of heat-maintenance cable. According to plaintiff, the drawings did not show proper sites for installation or placement of these devices and the work, therefore, was not contemplated by the contract. Defendant responded that installation of these components was required, and they were within the scope of the contract. The specifications and drawings together gave information sufficient for plaintiff to install the necessary components. Plaintiff agreed to install the disputed components in both buildings, but insisted that additional costs would be the Government's responsibility.

A. Steam Traps at High and Low Pressure Risers

The plans call for a steam piping system to provide heat and hot water for the facility. Boilers generate the steam, and a system of pipes distributes it to both buildings. Pipes that carry the steam to higher floors are called risers. Steam turns from vapor to liquid as it cools, in a process called condensation. This process creates the heat that provides hot water for the building and ambient heat. The water produced by this process is called condensate.

Condensate collects at low points in the piping system, such as the bottoms of risers. When condensate flowing in one direction collides with steam traveling at high speed in the opposite direction, "condensate hammering" can occur. Condensate hammering can cause damage to the piping system because quick changes of liquid condensate's direction causes

banging or “hammering” in the system.³

To prevent condensate hammering, a steam system uses drip legs and steam traps to collect and remove condensate from the pipes. Drip legs are short segments of pipe extending downward where the pipe changes direction from horizontal to vertical. Steam traps catch the condensate as it moves through the pipes. Condensate collected by drip legs and steam traps returns to the boiler via condensate lines so the system can convert it back into steam.

The section of the contract pertaining to drip legs and steam traps directs the contractor to

[i]ninstall drip legs at low points and natural drainage points such as ends of mains, bottoms of risers, and ahead of pressure regulators, control valves, isolation valves, pipe bends, and expansion joints On straight runs with no natural drainage points, install drip legs at intervals not exceeding 60m where pipe is pitched down in direction of steam flow Install steam traps close to drip legs.

Section 15182, part 3.6, subsection L (J. Ex. 002).

Drawings of the basement mechanical room show the risers, but do not display a symbol for every steam trap required. The drawings include a detailed diagram of the base of each riser, however, and the diagram includes the symbol for steam traps.

Plaintiff’s bid team did not interpret the contract as requiring steam traps at the base of risers, according to testimony, because the team did not believe the base of the risers were always the lowest points of the pipe. As the project progressed, however, plaintiff became concerned that the absence of steam traps at the base of the risers would be detrimental to the steam system. Manhattan forwarded requests for information to the USDA in July and October 2002, inquiring about the need for three additional steam traps. The contracting officer confirmed that the contract required steam traps at the base of all risers. Caigeann installed the steam traps on the risers and submitted a cost proposal to Manhattan. Manhattan requested a total of \$16,672 for installing steam traps at the base of the risers. The contracting officer denied these requests.

B. Air-Handling Units

Air-handling units are large metal boxes containing fans, filters, and coils that provide heating, ventilation, and air conditioning to a building. Air is heated or cooled as it moves past coils containing hot or cold water. Each coil in an air-handling unit requires a supply and return pipe for the water. A single-coil unit has one supply and one return connection. Each coil of a

³ The presence of condensate in a steam boiler system can result in a condensate impulse, or a change of momentum. The liquid condensate “slam[s] into the next solid object . . . in its way, which very often is . . . a portion of the steam system that could easily be damaged by this impulse of rapid moving water or condensate.” (Tr. 180:13-17).

stacked-coil unit has its own supply and return connections.

The contract specifies three manufacturers from whom contractors could order air-handling units. An Air-Handling Unit Schedule references five units from York International, which manufactured the units that defendant used to design the system. The Schedule shows the manufacturer and the model number of each unit, and it notes the symbol used on the drawings and specifications. York's product data sheets reveal that two of the five units used stacked coils. The contract also refers to drawings that detail the connections needed for single-coil units.⁴

Plaintiff used York single-coil units and corresponding piping requirements in calculating its estimates, then ordered the York units listed in the drawings. After placing the order, plaintiff realized that some of the units had stacked coils, which would require additional piping. Manhattan submitted a request for stacked-coil piping detail on plaintiff's behalf in June 2002. The Government directed plaintiff to install the stacked-coil piping as shown in the drawings and specifications.⁵ Plaintiff installed the stacked-coil units and submitted a cost proposal to Manhattan. Manhattan requested \$23,138 for installation of the extra piping on the stacked coils. The USDA denied this request in early 2004.

C. Hot Water Temperature Maintenance System

A temperature maintenance system is designed to eliminate the delay of hot water received from fixtures by maintaining the water at a constant temperature, typically 120 degrees. Plaintiff's contract with the Government incorporates the International Plumbing Code by reference. The Plumbing Code requires hot water supply systems to have "a method of maintaining the temperature of hot water to within 100 feet of the fixtures," when the pipes extend more than 100 feet from the source of the hot water supply. (J. Ex. 014). The contract instructs contractors to "[f]urnish and install a UL-listed system of electric self-regulating heating cable and components for maintaining the water temperature in the hot water lines as indicated on the drawings."⁶ A note on the drawings states, "all plumbing work . . . shall be installed in accordance with the specifications, the IPC plumbing codes, and all applicable city codes." Drawing P001 (J. Ex. 005-006).

Contractors utilize both electrical drawings and plumbing drawings to determine the location of heat-maintenance cables, which the system uses to maintain water temperature.⁷ The

⁴ Section 15854, part 3.4, subsection A. (J. Ex. 003); Drawing M702 (J. Ex. 005-006).

⁵ *See id.*

⁶ Section 15140, part 2.5, subsection A. (J. Ex. 004).

⁷ The parties referred to heat-trace cable in addition to heat-maintenance cable. Heat-trace cable is an electric heating cable used to protect outside pipes from freezing. Contractors might use such cables inside for unheated areas of a building. Heat-maintenance cables and heat-trace cables have "different purposes." (Tr. 359:12-13).

electrical drawings reference the location of a junction box as the power connection point for the heat-maintenance cable, and instruct contractors to verify requirements with the corresponding section of the contract. The plumbing drawings depict the water heaters as the starting point for the system.⁸ None of the drawings shows the symbol for heat-maintenance cable.

Industry standards list requirements for heat-maintenance cables in the specifications and leave the details of placement to the contractor. Heat-maintenance cables are not normally depicted on drawings.

Manhattan submitted a request for information for its subcontractor in August 2002, inquiring about the purpose of the heat-trace power connection points and whether heat-tracing cable was required for interior domestic water piping. The USDA informed Manhattan that installation of the heat-maintenance cable was required under the contract.⁹ Caigeann installed heat-maintenance cables on the hot water piping and submitted a cost proposal of \$17,195. The contracting officer denied this request in March 2004.

Plaintiff completed work on the contract and appealed the contracting officer's denial of its requests for compensation. Its claims for equitable adjustments are based on alleged additional work performed pursuant to the Changes Clause of the contract. *See* Federal Acquisition Regulation § 52.243-4, 48 C.F.R. § 52.243-4 (1987). Plaintiff argued that the work in question fell outside the four corners of the contract, and in the alternative, the contract was ambiguous.

DISCUSSION

I. Jurisdiction

This court has “jurisdiction to render judgment upon any claim against the United States founded either upon the Constitution . . . or upon any express or implied contract with the United States” 28 U.S.C. § 1491(a)(1). Plaintiff’s action arose from an express contract with the Department of Agriculture. Neither party disputes this court’s jurisdiction.

II. Legal Issues

A. Equitable Adjustment

The Changes Clause authorizes the contracting officer to make equitable adjustments for changes that cause an “increase or decrease in the Contractor’s cost.” *See* 48 C.F.R. § 52.243-4(d) (1987). Courts use equitable adjustments to reimburse contractors when the Government

⁸ The “HP” symbol designating the starting point was mislabeled on the plumbing drawings as a “heat-trace connection point.” (Tr. 422:18 – 425:12).

⁹ USDA’s response cited section 15140, parts 2.5 and 3.7, and clarified that the “HP” symbols at the water heaters referred to the start of the heat-maintenance cables.

makes changes to the contract. *Conner Brothers Const. Co., Inc. v. United States*, 65 Fed. Cl. 657, 670 (Fed. Cl. 2005). A contractor may not use equitable adjustment “for reasons unrelated to a change . . . [such as] underestim[ing a] bid or encounter[ing] unanticipated expense[s] or inefficiencies” *Pac. Architects & Eng’rs, Inc. v. United States*, 491 F.2d 734, 739 (Ct. Cl. 1974).

B. Contract Interpretation

Contract interpretation is an issue of law. *Fortec Constructors v. United States*, 760 F.2d 1288, 1291 (Fed. Cir. 1985); see 11 Samuel Williston & Richard A. Lord, *A Treatise on the Law of Contracts* § 30:6 (4th ed. 2007). The court determines meaning from the plain language of the contract, considered in its entirety. We “give reasonable meaning to all of [a contract’s] parts.” *McAbee Constr., Inc. v. United States*, 97 F.3d 1431, 1435 (Fed. Cir. 1996). “Reasonable meaning” is the understanding of a “reasonably intelligent person acquainted with the contemporaneous circumstances.” *Hol-Gar Mfg. Corp. v. United States*, 351 F.2d 972, 975 (Ct. Cl. 1965); see also *Arizona v. United States*, 216 Ct. Cl. 221, 235-36, 575 F.2d 855, 863 (1978) (noting that “an interpretation which gives a reasonable meaning to all parts will be preferred to one which leaves a portion of [the contract] useless, inexplicable, inoperative, void, insignificant, meaningless, superfluous, or achieves a weird and whimsical result.”).

If the contract encompasses the disputed work, an issue may arise as to whether the contract terms are ambiguous. An ambiguity may exist if a contract term is subject to more than one reasonable interpretation. *Metric Constructors, Inc. v. NASA*, 169 F.3d 747, 751 (Fed. Cir. 1999). An ambiguity may be patent if it is “obvious, gross, or glaring.” *NVT Tech., Inc. v. United States*, 370 F.3d 1153, 1162 (Fed. Cir. 2004); see also *Hoppmann Corp. v. United States*, 18 Cl. Ct. 220, 225 (Cl. Ct. 1989) (holding that a patent ambiguity is an obvious omission, a significant discrepancy, or an apparent inconsistency). A latent ambiguity cannot be known to the contractor, and therefore is construed against the drafting party. The contractor is responsible for pointing out a patent ambiguity and seeking clarification. *P.R. Burke Corp. v. United States*, 277 F.3d 1346, 1355 (Fed. Cir. 2002). Patent ambiguities impose on the contractor a duty to ask the contracting officer the meaning of the provision *before* submitting a bid. See *Newsom v. United States*, 676 F.2d 647, 649 (Ct. Cl. 1982). “This prevents contractors from taking advantage of the Government; it protects other bidders by ensuring that all bidders bid on the same specifications; and it materially aids the administration of Government contracts by requiring that ambiguities be raised before the contract is bid on.” *Id.*

If contract language is clear and unambiguous, we follow the plain and ordinary meaning; however, if an ambiguity exists, we may use extrinsic evidence for interpretation. *McAbee*, 97 F.3d at 1435. Common forms of extrinsic evidence are trade practices and customs of the industry. *Teg-Paradigm Envtl., Inc. v. United States*, 465 F.3d 1329, 1338 (Fed. Cir. 2006). Extrinsic evidence may be useful where a provision “has an accepted industry meaning [that is] different from its ordinary meaning [or] . . . was omitted from the contract.” *Hunt Constr. Group v. United States*, 281 F.3d 1369, 1373 (Fed. Cir. 2002).

C. Order of Precedence Clause

The contract in this case incorporates an order of precedence clause from the FAR. *See* Federal Acquisition Regulation § 52.236-21(a). The FAR provides, “[a]nything 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.” *Id.*; (J. Ex. 001, §H.15). Thus, in the event of discrepancies between contract specifications and drawings, the specifications control the drawings.

III. Facts

A. Steam Traps at High and Low Pressure Risers

Specifications and drawings related to the steam and condensation piping contain mutually inconsistent information. The specifications direct plaintiff to “install drips legs at low points and natural drainage points such as ends of mains [and] bottoms of risers . . . [and to] install steam traps close to drip legs.”¹⁰ The HVAC Steam and Condensate Piping Flow Diagram depicts low-pressure steam risers attached to humidifiers in the attic, and high-pressure risers attached to autoclaves in the basement and the second floor; it does not show steam trap symbols at the base of those risers. *See* Drawing M401. However, Drawing M703, HVAC Details, includes detail-drawing D1, Base of Riser Trap, which depicts a riser with the steam trap close to a drip leg.

Caigeann’s president, Donna Fleming, testified that she viewed the section pertaining to steam traps and drip legs as a guide. In her opinion, Detail D1 in Drawing M703 applied only to risers that depicted steam trap symbols on Drawing M401. Ms. Fleming testified that M401 would have shown other steam traps had the engineer required them. She asserted that the phrase “such as” in the specification meant the items that followed were merely examples of possible low points, not where one would always find such points.

The order of precedence clause establishes that contract specifications control the drawings. The contract uses “such as” to describe various locations of the drip legs. Locations listed after the phrase “such as” describe the low and natural drainage points where the contract requires the installation of drip legs. The list includes “bottoms of risers.” *See* William A. Sabin, *The Gregg Reference Manual* §1101, at 333 (10th ed. 2005).

Plaintiff argued that the location of every low point was impossible to determine from the specifications and drawings. The specification section also states, “[i]ninstall steam supply piping at a uniform grade of 0.2 percent downward in direction of steam flow.”¹¹ If the steam pipes slope downward in the direction of the steam flow, the steam travels toward the base of the risers

¹⁰ Section 15182, part 3.6, subsection L. (J. Ex. 002).

¹¹ Section 15182, part 3.6, subsection D. (J. Ex. 002).

before turning up to the other floors. This makes the base of a riser the low point.

The contract requires steam traps at the base of risers. The specification section identifies the installation position of the drip legs and the corresponding steam traps. A detailed drawing shows a steam trap at the base of a riser. A reasonable contractor could have determined the location of required steam traps by reading the drawings with the specifications. Contract requirements for steam traps placed at high and low-pressure risers are not ambiguous.

B. Air Handling Units

Requirements for the air handling unit coils and connections are listed in section 15854, parts 2.3, 2.6, and 3.4. Industry standards allow a contractor freedom to choose the type of coils in the unit.¹² Contractors could use single-coil or stacked-coil units. This allowed the contractor latitude to obtain the most cost-effective product for the project. The specifications provide that “drawings indicate the general arrangement of piping, fittings, and specialties.”¹³

Ms. Fleming claimed that the need for stacked-coil units constituted a change because the contract did not require them; the drawings detailed only a single-coil unit. Plaintiff’s bid team did not establish whether units used as the basis for the drawings were single-coil or stacked-coil. After winning the bid, plaintiff received the manufacturer’s product data sheets for the units listed on the schedule, passed the data sheets to defendant for approval, received approval to use the listed units, and ordered the units – all without noting whether the coils were single or stacked. Plaintiff did not learn that the units used stacked coils until after the manufacturer began production. It then submitted a request for information about the installation procedures for a stacked-coil unit and informed defendant that additional charges would apply.¹⁴

A contractor could reasonably conclude that some of the recommended air-handling units used stacked coils by reading the drawings together with the specifications. Specification section 15854, part 3.4, subsection A.4 states that the detail in drawing M702 shows the general arrangement of the piping connections and that the hot and chilled water pipes must connect “to supply and return coil tapings . . . at each connection.” Plaintiff could choose any manufacturer; it should have verified system requirements before placing an order. The contract was not ambiguous. Plaintiff was responsible for providing the correct piping connections for the units it purchased.

C. Hot Water Temperature Maintenance System

Contract specifications require the installation of a hot water temperature maintenance system. Section 15140, part 2.5 instructs the contractor on what to do, why to do it, and where to

¹² See Tr. 73:15-23, 360:19-25.

¹³ Section 15854, part 3.4, subsection A. (J. Ex. 003); Drawing M702 (J. Ex. 005-006).

¹⁴ See Tr. 168:24 - 169:5, 170:19-24, 167:11-14, 171:11-16; J. Ex. 041-042.

install it. Additionally, the contract incorporates by reference the International Plumbing Code, which requires a method of maintaining the water temperature within 100 feet of the fixtures. Two sets of drawings are needed to determine the location of the heat-maintenance cable, the electrical drawings and the plumbing drawings. The electrical drawings portray the junction box used to power the heat-maintenance cable. The plumbing drawings denote the system's origination point near the hot-water heaters; however, the symbol used was labeled incorrectly.¹⁵

The heat-maintenance cable lines do not appear on the drawings. Because of this, plaintiff contended it could not reasonably anticipate the magnitude of the work required or calculate the amount of cable needed. Instead of contacting the Government and inquiring about the obvious discrepancy between the specifications and the drawings, plaintiff omitted the heat-maintenance system from its bid.

If discrepancies among the electrical drawings, the plumbing drawings, and the specifications created ambiguities, they were obvious during the bid process. If plaintiff was not sure whether to include heating cable in its bid, or otherwise was confused about the bid process, it should have requested assistance from the Government. *See, e.g., Newsom v. United States*, 676 F.2d 647, 649 (Ct. Cl. 1982) (holding contractor had a duty to raise patent ambiguities with the contracting officer before submitting its bid).

Plaintiff pointed to language in the contract stating that the contractor was to “[f]urnish and install a UL listed system of electric self-regulating heating cable and components for maintaining the water temperature in the hot water lines *as indicated on the drawings*.” Section 15140, part 2.5, subsection A (J. Ex. 004) (emphasis added). Plaintiff’s witnesses testified that the phrase “as indicated on the drawings” modifies or limits the entire system – *i.e.*, the “electric self-regulating heating cable and components.” Because the system and the heating cable do not appear on the drawings, plaintiff stated that its bid team assumed that the system was not to be included in the bid.

Rules of grammar state that the subordinate clause “as indicated on the drawings” modifies the noun or independent clause immediately preceding it. *See* Frederick C. Crews, *The Random House Handbook* 242 (5th ed. 1987). Also, the absence of a comma before the clause denotes that it applies only to the final noun or clause. *See Resolution Trust Corp. v. Nernberg*, 3 F.3d 62, 65 (3d Cir. 1993). Plaintiff’s interpretation might have had support if a comma set off the subordinating clause; but the disputed clause, “as indicated on the drawings,” does not have an offsetting comma. *See Id.* (noting that a comma preceding a subordinate clause “may indicate that the qualifying language [applies] to all of the previous phrases and not merely the immediately preceding phrase[.]”); *Demko v. United States*, 44 Fed. Cl. 83, 87-88 (Fed. Cl. 1999) (using normal rules of punctuation to interpret a statute). Thus, the lack of a comma setting off the modifying phrase, “as indicated in the drawings,” confirms that it does not apply to all of the preceding phrases.

¹⁵ *Supra* note 8.

The limiting phrase, “as indicated in the drawings,” applies only to the location of the hot water lines. The contractor was responsible for providing a “UL listed system of electric self-regulating heating cable and components,” regardless of whether it is shown on the drawings. Rules of grammar support this conclusion, but logic and common sense offer the same result. The contract was not ambiguous. Plaintiff should have known that the contract required the installation of heat-maintenance cable on the hot water lines.

CONCLUSION

The contract required the installation of the steam traps at high and low pressure risers and the hot-water temperature maintenance system. The specifications and drawings for the steam traps were not ambiguous. The drawings for the heat-maintenance system were patently ambiguous, leaving plaintiff the duty to inquire about the ambiguity, which it did not do. Therefore, plaintiff’s claims for compensation for the installation of the additional steam traps and the heat-maintenance system are DENIED.

The contract requirements for the air-handling unit were clear. A contractor could reasonably have determined that some of the recommended units used stacked coils. Plaintiff’s claim for compensation for the additional piping for the stacked-coils is DENIED. The Clerk of Court will dismiss plaintiff’s Complaint. No costs.

s/ Robert H. Hodges, Jr. _____
Robert H. Hodges, Jr.
Judge