ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeals of -	)	
	)	
Harry Pepper and Associates, Inc.	)	ASBCA Nos. 62038, 62039
	)	62040, 62042
	)	
Under Contract No. NNS14AA30T	)	

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APPEARANCES FOR THE GOVERNMENT:	Scott W. Barber, Esq. NASA Chief Trial Attorney Jeffrey A. Renshaw, Esq. Shannon A. Sharkey, Esq. Jennifer L. Rawls, Esq. Trial Attorneys Stennis Space Center, MS

OPINION BY ADMINISTRATIVE JUDGE O'CONNELL

Harry Pepper and Associates, Inc. (HPA) appeals final decisions by a contracting officer from the National Aeronautics and Space Administration (NASA). The Board conducted a hearing from March 1-12, 2021, at which we heard testimony from 12 witnesses and received into evidence more than 600 exhibits or Rule 4 documents. Only entitlement is before us. The Board sustains appeal No. 62038 in part, and denies Nos. 62039, 62040, and 62042.

FINDINGS OF FACT

1. NASA's Stennis Space Center in Mississippi awarded HPA an indefinite delivery/indefinite quantity, multiple award construction contract on August 3, 2012 (R4, tab 1 at 3-4[1]). The contract contained various relevant clauses, including G.1, Contract Administration, and G.2, Technical Direction, which defined the authority of the contracting officer (CO) and the contracting officer's representative (COR), respectively (*id.* at 11-12). The contract also included Federal Acquisition Regulation (FAR)

[1] Rule 4 file cites are to the .pdf page number in the electronic file.

52.236-2, DIFFERING SITE CONDITIONS (APR 1984) (the DSC clause), FAR 52.236-3, SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984), FAR 52.243-4, CHANGES (JUN 2007), and FAR 52.246-12, INSPECTION OF CONSTRUCTION (AUG 1996) (R4, tab 1 at 9, 26-27).

2. On January 9, 2014, NASA awarded HPA the above-referenced task order in the amount of $36,577,459 for the B2 Test Stand Restoration, Work Package 3, which required HPA to complete the work within 400 days (R4, tab 2 at 2-4).

3. NASA constructed the B2 test stand in the 1960s to test the Saturn V rockets that carried humans to the Moon during the Apollo program. Work Package 3 is part of a program that restored and augmented the stand to test the core stage of NASA's new Space Launch System (SLS), the cornerstone vehicle for NASA's Artemis Program that (it is hoped) will return humans to the Moon in the 2020s. (R4, tab 18 at 7; s*ee* https://www.nasa.gov/sites/default/files/atoms/files/b-2_test_stand_v1.pdf)

4. HPA performed an earlier contract on the B2 test stand referred to as Work Package 1. Through its work on that contract, HPA had access to the test stand for 15 months prior to award of Work Package 3. (Tr. 6/208-09) In addition, prior to the submission of bids for the task order, NASA allowed bidders to attend a site visit on October 22, 2013 (tr. 6/205; ex. G-20).

5. HPA has filed these appeals on behalf of its subcontractor, Quality Iron Fabricators, Inc. (Quality Iron) and Quality Iron's sub-subcontractor, River City Erectors, LLC (River City) (app. supp. R4, tabs 7-8, 142). Neither Quality Iron, nor River City, attended the pre-bid site visit (tr. 6/205; ex. G-20).

6. The existing test stand structure included a booster support frame, which is referred to as the "battleship" and is made of heavy steel plates reminiscent of a naval vessel (tr. 1/48-51, 6/118; R4, tab 5 at 6, tab 18 at 8). The Saturn V rocket was placed in the interior of the battleship during testing (tr. 6/118). Above the battleship was the main propulsion test article (MPTA) structure, the top of which is the "corvette," also in the naval sense, and made of steel plate like the battleship (tr. 1/46-47, 51, 6/118).

7. The contract required placement of temporary steel track to relocate the MPTA structure by moving it 20-feet north (R4, tab 18 at 7). HPA had to lift the structure, which weighed about 1.2 million pounds, place it on the track, carry out the move, and then remove the track (*id.* at 7-8; tr. 1/61; app. supp. R4, tab 26).

8. Due to the loads applied during the move, and those to be applied in the future, the contract also provided for the battleship to be reinforced. To accomplish this, HPA

had to weld 28 structural steel shapes to the existing steel plates. These steel shapes are referred to as "WTs" or "split tees" because they are an I-beam that has been cut in half (forming a tee shape). (R4, tab 18 at 8; tr. 1/85, 237-38, 4/94) As detailed below, a variety of issues with the WTs form the basis of request for equitable adjustment (REA) nos. 1 and 4, which are at issue in ASBCA No. 62038.

9. The contract called for the addition of plates (doubler plates) at the bottom of existing columns in the MPTA structure to carry the increased loads, as well as the thrust from the core stage engine tests (R4, tab 4 at 17 (S-505), tab 18 at 8; tr. 1/112-13, 4/94). HPA alleges in REA Nos. 9 and 10 that it performed additional work on these baseplates (ASBCA Nos. 62039 and 62040).

10. The contract provided for construction of a new SLS Support Tower on top of the existing structure for testing larger and more powerful rocket engines, as well as an Access Tower directly on top of the SLS Support Tower. This new structure (described in the specifications as a "space truss") was 93-feet tall and more than 300-feet above grade. (R4, tab 18 at 8; tr. 4/94-95) In REA 12 (ASBCA No. 62042), HPA alleges that it encountered unexpected thermal movement of the structure above the top of the battleship during the construction of the SLS structure.

ASBCA No. 62038 (REAs 1 & 4)

11. NASA issued a notice to proceed on February 7, 2014 (R4, tab 3 at 2).

A. REA 4

12. The WTs were 27-feet long, which was only a few inches shorter than the interior height of the battleship, and weighed 99 pounds per foot (tr. 1/62, 71). To bring them inside, the contract drawings provided that HPA could cut a 36-inch diameter hole in the top or bottom plate of the battleship (although the specifications mentioned only the top plate) (R4, tab 6 at 7, tab 18 at 8).

13. During the hearing, there was a sharp difference of opinion between HPA and NASA with respect to the feasibility of lowering the WTs by crane through holes cut in the top plate of the battleship. The Quality Iron and River City witnesses testified that there were too many obstructions inside and above the battleship to do so. (Tr. 1/69-71, 93, 98-99, 225) The HPA witnesses also testified that it was impossible to bring the WTs in through the bottom (*e.g.*, tr. 1/89-91, 240). NASA believed that both were possible (*e.g.*, tr. 8/38, 107-08).

14. The witness whose testimony the Board found most credible on this issue was Charles Stewart, who was Head of Construction for NASA at Stennis Space Center from 1986 to 2003 (tr. 6/157-58). According to CO Jason Edge, Mr. Stewart knew the B2 test stand "like the back of his hand" (tr. 7/137). More than a decade after he left NASA, Mr. Stewart became Head of Field Operations for HPA on this task order, supervising the field superintendents and subcontractors and coordinating with NASA (tr. 6/124-25).

15. Mr. Stewart characterized lowering the WTs through the top plate by crane as "doable." He agreed that there were obstructions in a few places, but testified that HPA could have worked around them. (Tr. 6/128-29) Mr. Stewart was more concerned with cutting through the 2.25-inch thick steel plate, which he characterized as "doable ... but very complicated" because it required "heat stress and a tremendous amount of welding" (tr. 6/127; R4, tab 6 at 7 ("EXIST 2 1/4 TOP PL")). Mr. Stewart worked out an alternate approach that would avoid cutting the holes and which, in his view, saved "a lot of time" and was less expensive (tr. 6/127-28, 179). River City's project manager agreed that this procedure allowed them to work within and above the battleship simultaneously and that it saved time (tr. 1/105).

16. Consistent with Mr. Stewart's testimony, HPA submitted request for information[2] no. 62 (RFI 62) to NASA on April 29, 2014, seeking approval of an alternate method of bringing the WTs into the battleship due to the concern that heat generated by cutting an access hole could warp the top plate. Specifically, it proposed to cut the WTs into three equal-sized pieces (of about 9 feet each) and transport them through a door on the north side of the test stand and weld them back together when they were installed. HPA did not justify the procedure by citing obstructions inside or above the battleship. Nor did it state that this procedure would cost more money or require additional time. (R4, tab 53b at 3) In fact, the previous day Quality Iron had informed HPA that there would be no time or cost impact of the change (ex. G-3).

17. NASA's COR, Brennan Sanders, approved HPA's proposed method on May 1, 2014 (R4, tab 53b at 2). NASA (like Mr. Stewart) expected the new procedure to save money because HPA would no longer have to cut through the top plate (tr. 6/218).

18. One aspect of RFI 62 that would come to light involved the type of weld that would be used to put the WTs back together once they were inside. The contract required

[2] The contract provided that an RFI was "an easy way to document questions and answers" (R4, tab 18 at 360). But it also provided that an "RFI shall not result in a cost or schedule impact to the contract", nor should it "result in a change to the contract cost, scope, or schedule" (*id.*).

HPA to use "complete joint penetration" (CJP) welds to attach the WTs to the battleship (R4, tab 6 at 7). A CJP weld involves welding two metal pieces together so that they become one and the load is passed through the members. By contrast, in a partial joint penetration (PJP) weld, the weld does not go all the way to the back of the material. The witnesses at the hearing agreed that while a PJP weld is a "good" weld, a CJP weld is stronger. (Tr. 1/57, 227, 8/33) In RFI 62, HPA proposed to use a PJP welding procedure at the two seams to rejoin the three WT pieces. (R4, tab 53b at 3) The contract did not specify a type of weld for rejoining WTs if they had to be cut.

19. COR Sanders did not understand that RFI 62 provided for PJP welds when he approved it, but, when he realized that it did, he became concerned that the WTs would not be strong enough (tr. 8/33-34). On July 31, 2014, he issued a revised response to RFI 62 stating CJP welds were required (R4, tab 53c at 2). By that point, River City had already performed most of the PJP welds (app. supp. R4, tab 157 at 2-3; tr. 1/88). Because of this and because NASA directed HPA in the revised RFI response to "upgrade" the welds, the Board finds that NASA knew that it would cost additional money to perform this work.

20. After nearly another two months passed, on August 26, 2014, HPA submitted RFI 62A, proposing that in lieu of upgrading to CJP welds it weld 0.5-inch thick diamond-shaped plate onto the seams attached by the PJP welds (R4, tab 53e at 3). The Board finds that RFI 62A was an effort to mitigate HPA's costs that resulted from the revised response to RFI 62. NASA approved the procedure with some technical adjustments on September 4, 2014 (*id.* at 2).

21. On October 8, 2014, HPA advised NASA that HPA considered NASA's revised response to RFI 62 to be a constructive change to the contract and that it had incurred additional costs and time. HPA stated that at the time of NASA's revised response on July 31, 2014, it had already performed 99% of the work. HPA once again stated that its purpose in submitting RFI 62 had been to prevent warpage in the top plate of the battleship. (App. supp. R4, tab 157 at 2-3)

22. On October 27, 2014, HPA submitted Field Change Request[3] (FCR) 37 on behalf of Quality Iron and River City for the work they performed in response to RFI 62 and 62A. HPA requested a total of $118,439 and 17 days. (App. supp. R4, tab 10 at 2) There does not appear to be a response to this FCR in the record, but on January 11,

[3] The contract provided that the purpose of FCRs was "to document, track, and implement changes" and that they could be initiated by anyone associated with the project (R4, tab 18 at 358).

2016, HPA submitted REA 4, which increased the amount sought to $148,140.31 (app. supp. R4, tab 20).

23. In a July 5, 2017 supplement, HPA combined REA 4 with REA 1 (discussed below) and demanded $2,346,074.77 (app. supp. R4, tab 23(c) at 4). In this supplement, HPA shifted away from contending that the top plate would warp if River City cut through it. HPA now contended that NASA's design was defective because the WTs could not be lowered through a hole cut in the battleship top plate (*id.* at 3-4, 8). Consistent with this, at the hearing the HPA witnesses focused on the alleged impossibility of lowering the WTs through the top of the battleship due to obstructions (tr. 1/98-99, 225, 230, 238, 241-46, 3/276-77; app. supp. R4, tabs 179-179c). HPA did not present any testimony from an outside expert who contradicted Mr. Stewart's assessment that the cutting through the top plate was "doable . . . but very complicated" (tr. 6/127).

24. The parties entered into negotiations that were not successful (tr. 7/59-60). On August 10, 2018, CO Edge issued unilateral Modification No. 44 (Mod. 44), which attempted to resolve a number of pending REAs, including REAs 1 and 4. Mod. 44 provided for a payment to HPA of $415,356, as discussed below, pursuant to the DSC clause. (R4, tab 53m at 2-3)

25. On December 19, 2018, HPA submitted a certified claim that increased the total amount sought for REA 1 and 4 to $3,103,204.40, which, after subtracting the amounts paid in Mod. 44, resulted in a net claim of $2,687,848.40, plus a 90-day time extension (R4, tab 48 at 13). HPA contended that, due to obstructions, the specified procedure of lowering the WTs through a hole in the top was "unworkable and, as such, a material misrepresentation" (*id.* at 6). It alleged that HPA, Quality Iron, and River City had no way of knowing about the obstructions that prevented lowering the WTs through the top plate because they had been barred from entering the battleship pre-bid (*id.* at 3, 6). HPA asserted a variety of theories, including defective specifications, the Changes clause, NASA's breach of its duty not to hinder or interfere with HPA's work, superior knowledge, differing site conditions, and cardinal change (*id.* at 8-12).

26. The Board finds the allegation that NASA denied HPA and its subcontractors access to the interior of the battleship prior to bid to be inaccurate. As we have already found, Quality Iron and River City did not even attend the pre-bid site visit; HPA, on the other hand, had been working on the test stand for 15 months (findings 4-5). At the hearing, HPA did not present testimony from any HPA official who attended the site visit. COR Sanders, who did attend (ex. 20 at 2), testified credibly that because this task order provided for work on all levels of the stand, they walked around the entire stand and the bidders were not prohibited from looking anywhere (tr. 8/24-25). In addition,

even if River City and Quality Iron were not available on that date, HPA could have requested badges for them and brought them to the site (*id.* at 27-28). The Board further finds that if River City and Quality Iron had inspected the site prior to bid they would have been aware of at least many of the challenges of bringing the WTs in by crane from overhead because, for example, two of their witnesses described the battleship as a "maze" (tr. 1/96, 246).

27. CO Edge issued a final decision on March 27, 2019, denying the claim, that is, refusing to pay any amounts beyond those paid in Mod. 44 (R4, tab 53). CO Edge stated in the final decision that NASA had calculated that River City had experienced a cost saving of $311,002 from not cutting access holes in the top plate (*id.* at 5).

28. HPA filed a timely appeal on April 15, 2019.

B. REA 1

29. While REA 4 concerned problems that started with getting the WTs inside the battleship, REA 1 involves difficulties HPA experienced once it got the WTs inside.

30. River City began installing the WTs on June 12, 2014 (R4, tab 53k at 2). The condition of the interior walls to which the WTs would be welded – and the extent to which this could have been observed pre-bid – is a matter of dispute. NASA's main witness on this topic, COR Sanders, believed that the walls were straight (or plumb) (tr. 8/97-98). While COR Sanders was generally a credible witness, the Board found the testimony of Mr. Stewart (HPA's former head of field operations) to be more convincing. Mr. Stewart testified that in the "upper reaches" of the battleship, which was about 28-feet high, "the walls . . . were no longer plumb . . . so you had gaps that [were] tremendously hard to fill with weld" (tr. 6/127). This impacted the work because River City, among other things, had to perform additional weld passes to fill the gaps (*id.* at 164; app. supp. R4, tab 18 at 45-53 (describing particular welds required by the conditions)). Mr. Stewart testified that this could not have been discovered on a site visit even if the contractors had spent more than a day inspecting the test stand. HPA only discovered the problem when "we got into the battleship, cleaned up lead paint, built scaffolding, and got lights up there where we could see it" (tr. 6/183).

31. On August 4, 2014, HPA submitted RFI 140, notifying NASA of the problem and requesting approval of a procedure that would involve cutting the WTs into three pieces (a confusing request because HPA was already cutting the WTs into three pieces under RFI 62). COR Sanders approved the procedure two days later, once again adding a note in bold reminding HPA that it needed to inform the CO if "Any comment resulted in

a change in cost, scope or schedule. . ." (App. supp. R4, tab 65 at 2-4) HPA did not inform the CO at this time of any increase in cost, scope, or schedule.

32. By the time that HPA submitted RFI 140, it had completed or was close to finishing installation of the WTs because the record reflects that it was able to move the MPTA structure on August 8, 2014, which could only take place after the WTs had been installed (ex. G-22; *see* finding 21).

33. A second issue in REA 1 involves the relocation of five WTs after River City installed them. On April 22, 2014, COR Sanders provided HPA with revised drawings that changed the location of the WTs (R4, tab 53h). In June, River City nevertheless began installing the WTs in the original locations; when this was discovered they had to be moved to the updated locations. Credible testimony established that HPA simply failed to inform the subcontractors of the location change. (Tr. 5/183, 8/124-25)

34. On June 29, 2015, HPA submitted REA 1 seeking $1,198,516.24 (app. supp. R4, tab 18). This amount included $763,527 for the subcontractors due to the out-of-plumb conditions and $142,571.45 for subcontractors for the WT relocation, with the remainder being overhead and profit for HPA (*id.* at 5, 7, 17).

35. As stated above, on July 5, 2017, HPA combined REA 4 with REA 1 and requested $2,346,074.77 (app. supp. R4, tab 23(c) at 4). With respect to RFI 140, the REA supplement clarified that the increased costs were necessary because "no welding of the split tees to the existing walls could be made without extensive repeated efforts of placing the WT against the wavy wall then profiling, trimming and grinding the WTs usually three (3) times before the WTs could be welded to the wavy wall" (*id.* at 8, *see id*. at 53). With respect to relocation of the WTs, HPA admitted that it had received the changed locations before installing them in the original locations but it contended that it was bound to do so until it received a contract modification (*id.* at 58-59).

36. As stated above, after unsuccessful negotiations, on August 10, 2018, CO Edge issued Mod. 44, which attempted to resolve a number of pending REAs, citing the DSC clause (R4, tab 53m at 2-3). CO Edge calculated that HPA was entitled to $435,978, for additional welding and trimming costs due to the out-of-plumb walls described in REA 1 and $179,378, for REA 4, but that NASA was entitled to a credit of $200,000 because HPA did not have to cut 14 holes in the top plate, resulting in a net amount due HPA of $415,356 (*id.* at 3).

37. The CO's March 27, 2019, final decision did not award HPA any additional money for the REA 1 work beyond that granted in Mod. 44. With respect to the out-of-plum walls, CO Edge admitted that it was possible that they were out-of-plum

beyond 5/16," which he identified as the allowable tolerance under the contract. However, he stated that NASA could no longer determine the extent to which the walls were out of plumb, nor could it determine if the WTs had been within tolerances (or warped) because HPA had performed the work before it notified NASA of a differing site condition. (R4, tab 53 at 5-6)

The Board's review of HPA's claims is *de novo* and we are not bound by CO Edge's determination in Mod. 44 that there was a DSC. *Wilner v. United States*, 24 F.3d 1397, 1401 (Fed. Cir. 1994) (*en banc*). The Board will address each of the four discrete issues in this appeal.

A. Bringing the WTs into the Battleship

While HPA has raised numerous legal theories, HPA's claim for bringing the WTs into the battleship fails on the facts. HPA signed up to do a project that specified that the WTs could be brought into the battleship by cutting holes in the 2.25-inch steel plate. HPA (or River City) had second thoughts about this "very complicated" procedure and proposed an alternative that it believed would save time and money. (Findings 15-16) Apparently, this did not work out as well as HPA/River City intended. But NASA bears no responsibility for cooperating with the contractor and approving an alternative approach, particularly where the contractor failed to inform the CO up front that it would cost more time and money (finding 16).

The Board also finds that HPA's contention that obstructions made it impossible to bring the WTs in through the top is not believable in light of the testimony of HPA's director of field operations (Mr. Stewart) that it was "doable" (finding 15). To be sure, other HPA witnesses strongly disagreed, describing the battleship as a "maze" due to the number of obstructions (finding 26). But this simply left the Board wondering why, if there were so many obstructions, HPA had not noticed them prior to bid.

HPA attempted to illustrate the obstructions through contract drawings S-101, S-102, and S-105, and then creating an overlay of one drawing on top of the other (app. supp. R4, tab 179-179c; tr. 1/95-96). But these drawings contain dates in September 2013, several months before contract award. Reasonable diligence prior to bid would have made HPA and its subcontractors aware of any difficulties illustrated by these drawings.

The contract incorporated FAR 52.236-3, Site Investigation and Conditions Affecting the Work (finding 1), which provided in relevant part:

> The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site . . . as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(Emphasis added) "It is well-settled that a contractor is charged with knowledge of the conditions that a pre-bid site visit would have revealed." *H.B. Mac, Inc. v. United States*, 153 F.3d 1338, 1346 (Fed. Cir. 1998). Thus, even if we believed HPA's contention that it was impossible to bring the WTs in through the top plate, it would still not be entitled to recover because one could not miss a "maze" on a reasonably diligent site visit or review of the drawings.

B. Changing the Welds from PJP to CJP after HPA rejoined the WTs

A different problem is presented by NASA's belated prohibition of PJP welds on the seams of the rejoined WTs in its revised response to RFI 62. The contract does not specify the type of weld to be used if the WTs have to be cut and then rejoined, but the contract required NASA to respond to RFIs within five working days (finding 18; R4, tab 18 at 360). While NASA's original response was timely, its revised response nearly three months later was not (findings 16-19). HPA relied on the original response and installed most of the WTs with PJP welds at the seams (finding 19). It is clear that if NASA had reviewed RFI 62 carefully this would not have happened because the RFI clearly stated that HPA intended to use PJP welds.

NASA addresses ASBCA No. 62038 at pages 15 to 42 of its opening brief. While it discusses at considerable length the reasonableness of HPA's site investigation, the feasibility of bringing the WTs in through the top of the battleship, the condition of the interior battleship walls, and the reasons why HPA had to relocate WTs that had already been installed, it is relatively quiet on its revised response to RFI 62. NASA does not contend that COR Sanders lacked authority to respond to RFI 62 or to revise its response.

NASA's sole contention seems to be that WTs rejoined with PJP welds are not as "solid" as those with CJP welds (gov't br. at 29 (PFF 22[4])). This would be more relevant if NASA had denied RFI 62 at the outset but it does not even begin to address the contractual requirement that it respond to RFIs within five days, and the effect of changing its response nearly three months later when HPA/River City had already performed most of the work. The Board holds that it was unreasonable for NASA not to review RFI 62 carefully and that it was unreasonable for it to wait nearly three months to change its response. The government is liable when it unreasonably fails to issue approvals or delays in taking actions required by the contract. *See*, *e.g.*, *Law v. United States*, 195 Ct. Cl. 370, 397-99 (1971) (government caused delay by failing to act on shop drawings and waiting too long to make permitted changes.); *cf. Relyant LLC*, ASBCA No. 59809, 18-1 BCA ¶ 37,085 at 180,539 (unreasonable delay in government response to request to modify contract constituted a breach of duty of good faith and fair dealing under the circumstances).

Finally, in the introduction to its brief, NASA references its motion for summary judgment in which it contended that HPA failed to provide NASA timely notice under the Changes or DSC clauses that the work would entail additional costs, but it does not develop this argument in its post-hearing brief. In any event, the Board disagrees. As we observed on the parties' cross motions for summary judgment, while notice requirements are enforceable, there are a variety of exceptions, including actual or constructive notice of the conditions encountered. *Harry Pepper & Assocs., Inc.*, ASBCA No. 62038 *et al.*, 21-1 BCA ¶ 37,760 at 183,300. In this appeal, it is inconceivable that NASA did not know, when it issued the revised response to RFI 62 nearly three months later, that HPA had installed most or all of the WTs. Thus, it knew that changing the welds would require extra work (finding 19).

The Board holds that HPA is entitled to recover for the additional costs of installing the diamond-shaped pieces on the WT seams. The Board remands to the parties for determination of quantum.

The Out-of-Plumb Battleship Walls

The DSC clause (finding 1) provided that:

> (a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract,

[4] "PFF" refers to a proposed finding of fact within the brief.

> or (2) 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 the contract.
>
> . . . .
>
> (c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required . . . .

FAR 52.236-2.

"A Type I [DSC claim] arises when the conditions encountered differ from what was indicated in the contract documents.[5]" *Renda Marine, Inc. v. United States*, 509 F.3d 1372, 1376 (Fed. Cir. 2007). To prevail on a Type I DSC claim, a contractor must prove that: (1) "a reasonable contractor reading the contract documents as a whole would interpret them as making a representation as to the site conditions"; (2) "the actual site conditions were not reasonably foreseeable to the contractor, with the information available to the particular contractor outside the contract documents, *i.e.*, that the contractor 'reasonably relied' on the representations" (3) the "contractor in fact relied on the contract representation"; and (4) "the conditions differed materially from those represented and . . . the contractor suffered damages as a result . . . ." *Int'l Tech. Corp. v. Winter*, 523 F.3d 1341, 1348–49 (Fed. Cir. 2008) (citations omitted).

In its brief, NASA contends that it did not represent that the battleship walls would be straight because the drawings show the battleship walls with dashed lines (gov't br. at 31). While it is true that the drawings use dashed lines, NASA does not cite any witness testimony stating the conclusion we should draw from this. In any event, the actions of the contracting officer during performance indicate that both parties understood that the walls would be generally straight, within a tolerance of 1/16" every 4-feet based on a note on the drawings and the American Institute of Steel Construction and the American Society for Testing of Materials standards incorporated in the contract (finding 37; app. supp. R4, tab 143 at 6 (citing R4, tab 6 at 3, structural steel note 6); R4, tab 18 at 113; app. supp. R4, tab 3 at 76-77; app. reply at 5, ¶ 6). This would be consistent with the norm for any structure, namely, that the walls will generally be straight up and down but that there may be small imperfections.

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[5] A Type II differing site condition arises when the conditions encountered are of an unusual nature and differ materially from those normally encountered in the kind of work contemplated by the contract. *Renda Marine*, 509 F.3d at 1376.

The Board has found that the condition of the walls differed from those represented, that HPA could not have discovered this condition pre-bid, and that it relied on the straightness of the walls for the number of weld passes and other work it would have to do to install the WTs (finding 30).

NASA relies most heavily on its notice defense. As stated above, the DSC clause required HPA to notify the CO "promptly, and before the conditions are disturbed . . . ." While such notice provisions are enforceable, precedent recognizes various exceptions, including lack of prejudice to the government. *Schnip Building Co. v. United States*, 645 F.2d 950, 959-60 (Ct. Cl. 1981). The government bears the burden of demonstrating prejudice. *A.R. Mack Construction Co., Inc.*, ASBCA No. 50035, 01-2 BCA ¶ 31,593 at 156,139-40.

HPA clearly submitted RFI 140 too late because it had already installed almost all of the WTs (finding 32). The Board would hold that HPA's claim is barred due to lack of notice if NASA had examined the conditions when it received notice but found that the conditions could no longer be verified. But the record indicates that because COR Sanders believed that the walls were not warped, he does not appear to have made any effort to verify HPA's representations. On cross-examination he was defensive when pressed by HPA's attorney:

> Q Where are your measurements of the wall that show that it's [not] warped?
>
> A I don't have any measurements of the wall, sir.
>
> Q You've had years to do that, haven't you?
>
> A Yes, if I was inclined to do that. I don't see a need to do that and what that would do for me.
>
> Q Well, it might give you some evidence of what you say that is, frankly, contrary to what your contracting officer has decided?[6]
>
> A Right, yes, sir. And you can go look at the wall and tell it's straight, and you can walk outside and see the sky is blue, and you don't have to measure it to know that it's blue.

[6] This was an apparent reference to the CO stating in Mod. 44 that there was a DSC and paying HPA money for the issue (findings 24, 36).

(Tr. 9/148-49) COR Sanders admitted that the walls between the WTs are still visible (*id.* at 152). It seems unlikely that the only place that the walls were warped were also the exact spots where the WTs were installed. Thus, if NASA had measured the walls or otherwise investigated and found that they were within tolerances, this likely would have been enough to defeat HPA's claim. But because NASA did not attempt to verify the conditions, it cannot demonstrate prejudice.

NASA also contends that it was "severely prejudiced" because HPA denied Quality Iron's claim for the wall condition based on the notice requirements in the HPA-NASA contract, as well as the HPA - Quality Iron subcontract, which NASA presents as dispositive by itself (gov't br. at 26 (PFF 18 (citing ex. 9))). Despite this initial denial, HPA eventually agreed to present the claim to NASA. The initial denial does not affect our analysis of the merits of the DSC or the lack of prejudice to NASA. Moreover, the government cannot rely on the terms of a subcontract. Whether HPA is entitled to additional money is determined by the prime contract, not provisions in the subcontract concerning how the subcontractor must present its claim to HPA. *See Kellogg Brown & Root Servs., Inc. v. Sec'y of the Army*, 973 F.3d 1366, 1370-71 (Fed. Cir. 2020).

HPA is entitled to recover for a DSC concerning the condition of the battleship walls. The Board remands to the parties for determination of quantum.

C. Relocating Five Installed WTs

HPA does not dispute NASA's contention that River City installed the WTs in the original location even though NASA had provided new locations about two months before installation began (finding 33). Our finding that HPA simply failed to tell the subcontractors of the location change (*id.*) is dispositive of this issue.

HPA contends, however, that until the CO issued a modification it was bound to install the WTs in the original location (HPA reply at 5, ¶ 5). The Board disagrees. Under clause G.2, Technical Direction, the COR was authorized to provide directives to the contractor that approve "approaches, solutions, designs, or refinements" (finding 1; R4, tab 1 at 11). The apparently minor changes in the final locations for the WTs would be a solution, design, or refinement that this clause contemplates. If HPA had any doubts, it should have brought the issue to the attention of the CO, as also provided for in clause G.2, rather than installing the WTs in a location that it knew was wrong.

ADDITIONAL FINDINGS OF FACT *ASBCA Nos. 62039 AND 62040*

38. As stated on Drawing S-505, Note 2, the existing base plates at the bottom of the MPTA columns were "too thin" and needed to be thickened before the MPTA structure could be moved. On top of the existing plates, HPA was to install 2.5" thick A36 steel plates (a 36,000 PSI grade of material (tr. 4/28)) "cut to fit the columns, with 1 1/2" diameter holes drilled in them and edge preparations for CJP and PJP welds as indicated . . . ." (R4, tab 4 at 17).

39. The existing plates are referred to as "gusset plates" (*id*. at 17, n.6; tr. 1/72). The columns and the plates were perpendicular and were joined at the 90-degree angle with welds referred to as fillet welds (tr. 2/132; app. supp. R4, tab 29(b) at 9).

40. Drawing S-505, Flag Note 3 (a note referring to a flagged area on the drawing), provided that the contractor was to "cope and bevel around existing column flanges and fillet welds as required for base [plate] installation." On this same drawing, Note 6 provided that "Parts of existing gusset plates and parts of some welds will need to be partially removed . . . to allow proper fit up and welding." (R4, tab 4 at 17) As discussed below, HPA contends that these notes are contradictory, but it did not seek clarification from NASA prior to bid.

41. HPA retained Bell Steel Company (Bell Steel) to fabricate the steel plates. Bell Steel prepared shop drawings[7] that HPA submitted to NASA for approval, and which contained comments between Bell Steel and HPA. There is nothing on the shop drawings that indicated any confusion about the requirements of Drawing S-505 and, in fact, one of the comments (apparently from HPA) specifically indicated awareness of Note 6. (R4, tab 110 at 11-12; tr. 8/130-32)

42. Despite Note 6, HPA (or more specifically, River City) contends that NASA refused to allow HPA to remove the existing fillet welds. At the hearing, River City project manager Brian Ditty testified that someone with NASA (whom he did not identify) told him at a meeting that River City could not remove the existing welds. Mr. Ditty testified that personnel from both HPA and Quality Iron were also at the meeting, but no other witness testified that he was present at such a meeting and heard

[7] The contract incorporated FAR 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997) (R4, tab 1 at 27). FAR 52.236-21(d) defined shop drawings as: "drawings, submitted to the Government by the Contractor . . . showing in detail (1) the proposed fabrication and assembly of structural elements and (2) the installation (i.e., fit, and attachment details) of materials or equipment."

this direction. (Tr. 1/202-03) Notably, HPA's Certified Welding Inspector (CWI), Robert Mader, testified that he was not aware of any direction from NASA to leave the existing welds in place (tr. 7/265).

43. HPA does not allege that the CO gave this direction to River City. There is nothing in writing that documents this alleged direction, and HPA did not inform the CO that a lower level person had barred HPA from performing work authorized by the contract, or that this instruction would cause an increase in costs that it would later allege exceeds $1 million. The Board sees no benefit to NASA from leaving the welds in place in their entirety and thus no motivation to demand that they remain.

44. Based on the weight of the evidence, the Board finds that no one from NASA – and certainly not the CO – told HPA or River City that the existing welds could not be removed. This leads to the question of why, if no such direction was given, would River City forgo removal of the welds. The Board finds that, like the REA 4 decision not to bring the WTs in through a hole in the top, this likely was a gamble by River City that it could save money if it did not take the time to remove the existing welds (tr. 7/265, 273-74). Like REA 4, NASA cooperated with HPA's attempt to avoid removing the welds, only to get blamed by HPA later on.

45. In support of its contentions, HPA draws our attention to RFIs 146 and 146A (one of which may be misdated but we find that HPA submitted both and received answers in August 2014). In RFI 146, HPA stated, in part, "Existing conditions, in the form of welds on W14 columns for MPTA, prevent the 2 1/2" thick plates from achieving proper CJP weld . . . ." and requested that NASA advise how it should proceed (app. supp. R4, tab 34c(9) at 3). The Board finds that HPA represented in this RFI that existing conditions prevented removal of the welds, but that is not the same thing as confirming a direction from NASA to retain the welds. Moreover, as we will describe below, the existing conditions did not prevent removal of the welds and River City or Quality Iron would eventually remove the existing welds in 2015.

46. HPA also directs our attention to NASA's response to RFI 146, which contains three sketches prepared by NASA's structural steel designer to address leaving the welds in place. The sketches refer to a weld identified as "Weld 3." The third sketch contains the following sentence relied upon by HPA: "Placing Weld 3 along the inside of the flanges and along the web requires dealing with the existing column to base plate weld staying, a large chamfer[8] is needed on the edge of the new plate . . . ." (App. supp. R4, tab 34c(9) at 6). While this again references at least some welds staying, it does not document that this direction came from NASA and merely repeats the representation

[8] "Chamfer" is synonymous with bevel (tr.1/125).

made by HPA in the RFI. Moreover, when these sketches define Weld 3, the designer also refers to areas where the existing fillet welds are to be removed, which contradicts the alleged proscription of weld removal (*id.* at 4). The Board finds that, on the whole, this RFI does not support the finding of a NASA direction not to remove the existing welds and, at most, reflects NASA's cooperation with leaving some of them in place.

47. Both parties pursue an in depth discussion of specific types of CJP welds, welding techniques, the meaning of welding symbols on construction drawings, and whether or not the sketches attached to NASA's response to RFI 146 would have resulted in proper CJP welds if HPA had followed them precisely, but because we find that HPA has not proven that NASA ever directed HPA not to remove the existing welds, or that existing conditions prevented removal of the welds, the Board need not delve into this.[9]

48. Drawing S-505, Note 5, provided that "CJP and PJP welds require 100% [ultrasonic testing] with a written report for the NASA COR" (R4, tab 4 at 17). Because the existing welds would now remain in place, HPA took the position that it was no longer feasible to test the welds using ultrasonic testing (UT). HPA submitted RFI 146A requesting that NASA waive the requirement and suggested "performing the welds under the supervision of NASA's CWI or designated representative ..." COR Sanders approved this, stating "[c]ontinuous visual inspection should be conclusive" but he did not state that NASA would be providing a CWI (App. supp. R4, tab 34c(9) at 7). The parties executed bilateral Mod. 2 in October 2014, providing NASA a credit of $2,136.77 for omitting the UT test requirement (R4, tab 54h at 4).

49. A question that would later emerge from RFI 146A was the meaning of the phrase "NASA's CWI or designated representative" (R4, tab 34c(9) at 7). The contract, in a section entitled "Structural Steel Welding" barred HPA from welding until it had submitted, among other things, inspectors for approval by the COR (R4, tab 18 at 114). The necessary inspectors included one with a CWI certification (*id.* at 117).

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[9] The Board finds, however, that River City did not follow the sketches even though it knew that the resulting welds would be inadequate. While the parties dispute whether the sketch attached to NASA's response to RFI 146 (app. supp. R4, tab 34c(9) at 6) contained two options or two steps to achieve a CJP weld, the Board reads the sketch as requiring two steps, primarily because it states at the top "STEPS IN EDGE PREP ON MPTA DOUBLER BASE PLATES FOR WELDS" (*id*.). River City did only the work on the top half of the sketch even though Mr. Ditty knew it would not result in a CJP weld. When asked why he did not alert NASA or the designer to this concern he testified that "it's kind of like questioning your father when you question the engineer of record." (Tr. 1/125-26)

50. During the project, HPA provided Robert Mader, who was employed by another subcontractor, Mandina's Inspection, as its CWI (tr. 7/201). This did not change when River City performed the baseplate work following RFI 146A, and no one from HPA appears to have questioned why NASA did not have its own CWI at the site. In any event, under clause G.1 (finding 1), the CO is "the only person authorized to approve changes or modify any of the requirements under this contract . . . ." Thus, when he issued the response to RFI 146A, COR Sanders did not have the authority to obligate NASA to hire its own CWI.[10]

51. This story might have ended here if not for an extraordinary event. On Friday, March 6, 2015, months after the baseplate work had been completed, a former River City employee notified NASA that he had essentially sabotaged three welds by placing a filler material (in this case bolts) in the welds, which is known as "slugging" the welds. The obvious result of this is that it weakens the weld and potentially threatens the integrity of the structure. NASA met with HPA, Quality Iron, and River City the following Monday to discuss the allegation. (Tr. 6/23, 7/240; R4, tab 55j) After the meeting, HPA informed Quality Iron that it had agreed with NASA "that further testing, either by x-ray or some other method, needed to be performed . . . ." (R4, tab 55j).

52. On March 9, 2015, HPA also issued a stop work order (Non-Compliance Notice No. 11) to Quality Iron for "improper welds and failure to provide proper Quality Control of the welding . . . ." The Non-Compliance Notice required Quality Iron to submit a written corrective action by close of business the following day. (R4, tab 47r) On March 10, 2015, HPA notified Quality Iron that if the slugging allegation proved to be true HPA intended to hold Quality Iron responsible for all costs of investigating and correcting deficient work (R4, tab 55j).

53. On March 18, 2015, HPA wrote to Quality Iron stating:

> Based upon the performance of RCE to date and the recent discovery of MPTA base plate welds being intentionally improperly performed it is apparent that QIF's subcontractor, RCE, does not have supervisory or quality control personnel on the project that can ensure that work is performed according to the requirements of the contract. If RCE's current on site management and quality control are allowed to

[10] S-505, Note 4 also provided that "[t]he base plate thickening process requires full time inspection by NASA" (R4, tab 4 at 17). NASA performed this inspection by a combination of spot inspections by welding inspectors who worked for a separate contractor and construction managers who walked the site (tr. 9/169-70).

> continue HPA has no reason to believe the situation will change.

HPA concluded the letter by demanding the removal of Brian Ditty and another River City employee. (R4, tab 54a)

54. On March 19, 2015, HPA notified NASA by email that it intended to submit a corrective action plan that would include the reinstatement of UT testing. The plan would "include completely removing and replacing the reinforcing plates and welds on the columns which are considered to have major defects" and "removal and replacement of weld [sic] with minor defects as identified by UT inspection and recommended by CWI" (R4, tab 55o).

55. On March 24, 2015, Quality Iron submitted to HPA a corrective action plan. The plan included a provision for UT inspection to determine which welds needed to be repaired (R4, tab 47v at 14-15). As a result of the inspections, the parties agree that HPA ultimately found two slugged welds and lesser defects at a number of baseplates (app. br. at 20) (PFF 64); app. reply at 8; gov't br. at 49-50 (PFF 7)).

56. HPA now contends that NASA forced HPA to do the UT inspections and that "everyone knew" the welds would not pass UT inspections due to the fillet welds that had remained in place (app. reply at 2, 17). But there is no contemporaneous documentation demonstrating that NASA forced this procedure on HPA or that HPA or its subcontractors contended that another procedure was more appropriate.

57. Also in March of 2015, John Phillips became Quality Iron's senior project manager (tr. 2/125). Mr. Phillips soon became aware of problems with the welds. He could not understand why River City had left the fillet welds in place because they prevented successful completion of a CJP weld. (Tr. 2/142-43) He asked Mr. Ditty, River City's project manager, about this. Mr. Ditty stated that he had left the welds in place because NASA had instructed him to leave them in place. (*Id.* at 145) This seems to be the origin of the story that NASA barred removal of the existing welds.

58. Mr. Phillips agreed that the project had been designed correctly and that the problem was the alleged direction not to remove the existing welds (tr. 3/16-17). HPA fixed plates that failed UT inspections (discovered while implementing the corrective action plan) by ripping out the work and performing it per the original design on Drawing S-505, including partial removal of the existing welds (*id.* at 29-31).

59. On December 19, 2018, HPA submitted a certified claim for $1,127,909.37 and a 29-day time extension for what is referred to as the REA 9 work (the work

emanating from the alleged NASA direction to leave the existing fillet welds in place) based on theories of defective specifications, constructive changes, differing site conditions, breach of the duty not to delay, hinder or interfere with the contractor, and cardinal change (R4, tab 49 at 3-11)

60. On this same date, December 19, 2018, HPA submitted a certified claim for $4,281,841.69 and a 39-day time extension for what is referred to as the REA 10 work (ripping out the original work after the slugged welds were discovered and reinstalling per the original design) due to defective design, inadequate inspections, constructive changes, inadequate inspections, and breach of the duty not to delay, hinder or interfere with the contractor, and cardinal change (R4, tab 50 at 3-13).

61. CO Edge denied both claims in decisions dated March 27, 2019 (R4, tabs 54-55). HPA thereafter filed timely appeals. The Board docketed the REA 9 appeal as No. 62039 and the REA 10 appeal as No. 62040.

DECISION - *ASBCA Nos. 62039 AND 62040*

When the language of a contract is unambiguous, it must be given its "plain and ordinary" meaning and the Board may not look to extrinsic evidence to interpret its provisions. *TEG-Paradigm Envtl., Inc. v. United States*, 465 F.3d 1329, 1338 (Fed. Cir. 2006) (citing *Coast Federal Bank, FSB v. United States*, 323 F.3d 1035, 1040 (Fed. Cir. 2003) (*en banc*)). The Board must interpret the contract as a whole so as to harmonize and give reasonable meaning to all of its parts. *NVT Techs., Inc. v. United States*, 370 F.3d 1153, 1159 (Fed. Cir. 2004). Contract provisions should not "be construed as being in conflict with [one] another unless no other reasonable interpretation is possible." *Hol-Gar Mfg. Corp. v. United States*, 351 F.2d 972, 979 (Ct. Cl. 1965).

As stated above, HPA contends that Drawing S-505 is contradictory because Flag Note 3 provides for the contractor to "bevel around existing . . . fillet welds" while Note 6 provided that "parts of some welds will need to be partially removed . . . to allow proper fit up and welding" (finding 40). The Board disagrees because it is possible to reconcile the two notes. The Board concludes that reasonable meaning can be given to both notes by interpreting them to mean that the fillet welds generally would remain but that HPA could partially remove them as necessary to allow proper fit up and welding.

Even if the Board were to consider extrinsic evidence, HPA fares no better. As we have found, the back and forth between HPA and the base plate fabricator prior to the commencement of work demonstrates that HPA was well aware of Note 6 and did not express any confusion about partial removal of welds. HPA also did not inquire about it prior to bid. (Findings 40-41).

But this issue is not entirely resolved by these rules of construction. HPA's principal contention is that River City did raise this issue and sought clarification from NASA. HPA has failed to convince the Board that this occurred due to both the lack of contemporaneous documentation and the lack of any other witness from NASA, HPA, Quality Iron, or River City who was present at the meeting where the unnamed NASA employee gave the direction to leave the welds in place, and the absence of any benefit to NASA in doing so (findings 42-43). But even if the Board assumed that this conversation did take place, HPA does not contend that it was the CO who gave the direction. Given how clearly Note 6 authorizes partial weld removal, and HPA's contention that rescinding this authority resulted in more than $1 million in extra costs, this was not an appropriate topic for discussion with a lower level NASA employee at a meeting, at least without confirming the direction with the CO. As we have already explained, only the CO has the authority to change the contract.

HPA's claim for REA 9 work fails because everything followed from River City's decision not to remove the existing fillet welds. HPA's REA 9 claim confirms that if River City had removed parts of the fillet welds "then none of this extra work would have been required" (R4, tab 49 at 3). While the record is not crystal clear as to why River City did this, the most likely explanation is that River City thought that it would be quicker and less expensive to leave them in place (finding 44). When John Phillips became senior project manager in March 2015 (after the base plate work had been completed), he realized that this had been an unwise decision (finding 57). NASA bears no responsibility for any of this.

Similarly, REA 10 also fails, at least in part, because it stems from the initial decision not to remove the fillet welds. As Mr. Phillips testified, HPA eventually did the work as provided on Drawing S-505, but it had to first rip out much of the work that it had done (finding 58). HPA confirms in its REA 10 claim that if the fillet welds had been removed when it first did the work "all of the welds would have passed except for the two (2) where a bolt was placed in the weld . . . ." (R4, tab 50 at 7). Thus, if River City had simply done the work as designed from the start, none of this additional work would have been necessary.

REA 10 also fails because it was River City that hired the welder who slugged the welds (finding 51). It was HPA, Quality Iron, and River City that failed to supervise him properly so that he could not slug the welds. But for the slugged welds, the problems with the other welds likely would not even have been discovered (findings 51-55).

The Board rejects HPA's contention that NASA bears some responsibility because if it had provided the CWI it supposedly agreed to provide in its response to RFI 146A, then the slugged welds would never have occurred. The Board disagrees. While the

phrase in HPA's RFI, "NASA's CWI or designated representative," is ambiguous, context is important. Specifically, as we have found: (1) the contract required only HPA to provide a CWI; (2) HPA retained Robert Mader (through a subcontractor) as its CWI; (3) NASA did not state in its response to RFI 146 that it would provide its own CWI; (4) no one at the time questioned why there was no NASA CWI at the project; (5) NASA had no incentive to hire a CWI because the contract did not require it to hire a CWI and HPA did not offer NASA any credit to offset the costs of hiring a CWI; (6) an RFI is not the proper way to change the contract; and (7) the COR who responded to the RFI did not have the authority to change the contract (findings 16, 49-50). In these circumstances, the Board concludes that the most reasonable interpretation of "NASA's CWI or designated representative" is that it simply referred to Robert Mader. Finally, the Board also observes that because Mr. Mader was unable to prevent the slugged welds or welds with lesser deficiencies, the effect, if any, of NASA adding its own CWI is speculative.

The contract included FAR 52.246-12, Inspection of Construction (finding 1). This is a lengthy clause that repeatedly provides that the contractor is responsible for inspecting the work, that it is responsible for remedying defective work, and that to the extent that NASA performs its own inspections, those inspections are for its own benefit, not to protect the contractor from its mistakes (or in this case, intentional destructive acts). We highlight several relevant provisions of this clause:

> (b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. . . .
>
> (c) Government inspections and tests are for the sole benefit of the Government and do not—
>
> (1) Relieve the Contractor of responsibility for providing adequate quality control measures;
>
> (2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;
>
> (3) Constitute or imply acceptance; or
>
> (4) Affect the continuing rights of the Government after acceptance of the completed work . . . .

> (d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement . . . .
>
> (e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. . . .
>
> (f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

FAR 52.246-12; *Granite Const. Co. v. United States*, 962 F.2d 998, 1003 (Fed. Cir. 1992) ("The lack of government inspection does not relieve the contractor of the burden of providing conforming materials under the contract.").

Finally, HPA also contends that NASA violated the duty of good faith and fair dealing by first agreeing to omit the UT test requirement only to re-impose it later when "everyone knew" that the welds would not pass (app. reply at 2, 17). The Board disagrees. There is no evidence that NASA imposed the UT test requirement after the slugged welds were discovered or that "everyone" knew that this was not an appropriate reaction to the sabotaged welds. In fact, the evidence indicates that, as the prime contractor, HPA shared the same sense of consternation or betrayal as NASA after it learned that an employee of a sub-subcontractor had done this. HPA reacted immediately to hold Quality Iron responsible and require it to inspect all the welds and fix those found to be flawed. Part of this inspection and repair process involved UT inspections, but there is no indication that NASA forced it on HPA. (Findings 51, 54-56) HPA has not shown that there was a better, faster, or cheaper response to the problem once the slugged welds were disclosed.

Appeal Nos. 62039 and 62040 are denied.

ADDITIONAL FINDINGS OF FACT *APPEAL No. 62042*

62. The claim that is the basis for this appeal was made by HPA on behalf of Quality Iron for what it (Quality Iron) calls excessive movement of the B2 test stand during the erection of the SLS Support Tower and Access Tower steel. According to Quality Iron's John Phillips, the structure was moving more than two inches. He testified

that the structure, which is U-shaped, was expanding and contracting at the open end of the U (tr. 3/50-52). This caused HPA a variety of problems, especially the inability to line up bolt holes (*id.* at 53). HPA contends that standards incorporated in the contract allow the steel to expand or contract approximately 1/8 inch per 100 feet for each change of 15 degrees Fahrenheit (app. supp. R4, tab 3 at 60). HPA offers three types of evidence in support of its contentions: surveys, physical measurements, and expert testimony (app. reply at 25).

63. The Board finds that the surveys are inconclusive. Both parties commissioned surveys but the surveyors produced inconsistent results (tr. 6/154). On March 29, 2016, an HPA vice president, Clyde McCutcheon, wrote to Quality Iron expressing considerable doubt that the surveys showed that the test stand was moving and instead blaming Quality Iron for fabrication errors. He wrote:

> I have not seen anything other than anecdotal evidence that the stand is moving other than in predictable ways from thermal expansion. . . . We have used the same surveyor here since 2012, coming off the same control points that allowed us to lay out and drill the holes for the MPTA base plates [within] thousandths. We have used the same control lines for center line of structure since that time as well. The benchmark set on the structure is certified within thousandths of the theoretical elevation. The location errors for the Forward Thrust Attachments and Aft Thrust attachment were not fabricated in the proper location relative to each other. We have been waiting for weeks for John [Phillips] to produce anything concrete . . . .

(R4, tab 57a at 2)

64. HPA's surveyor did not testify at the hearing. The parties instead filed a stipulation of expected testimony by the surveyor that diminished any support his surveys provided to HPA. He stated:

> In my professional opinion, there are several factors that can affect the accuracy of surveys taken at the same location, but on different dates. By that I mean, there are several factors that can affect the "repeatability" of surveys, thereby calling in question whether a surveyor can definitively state whether a structure has moved when

> multiple surveys of the same location(s), taken on different dates contain different measurements.
>
> . . . .
>
> I am aware that Harry Pepper has used the variations found in several of my surveys, taken at the same locations/elevations on the test stand, but on different dates, to illustrate what they believe is movement of the test stand, and to document specific amounts of movement. I will vouch for the accuracy of the various surveys that I/my company performed; however, as I earlier stated, I have concerns about the "repeatability" of surveys, and I cannot state that any party can establish movement solely by comparing survey results/measurements taken at the same test stand locations, on different dates. As stated during my deposition, I do not have an opinion one way or the other as to whether this particular test stand moved during our survey work.

(Ex. G-16)

65. Next, HPA relies on measurements taken by Quality Iron's John Phillips with a measuring tape. As the Board finds below in the discussion of the testimony from HPA's expert, the dispute devolves down to whether over a distance of approximately 34 feet the two ends of the structure were moving in and out by about one-half inch, which would require a high level of precision for a hand measurement. The photos that HPA has submitted raised questions about the accuracy of the measurements because some photos show twisting of the tape measure and the Board cannot tell if Quality Iron used accurate benchmarking of the tape (same start and endpoints each time) (tr. 4/139; R4, tab 63).

66. HPA's expert, Dr. Thomas Tarpy, agreed that the photos did not demonstrate that Quality Iron had used proper benchmarking in taking the measurements and that the twisting seen in the photos could impact the accuracy (tr. 4/139-43). Because of the small amount of movement at issue, the tape measurements do not have sufficient indicia of reliability for the Board to find that they support the claimed movement.

67. Finally, HPA presented expert testimony from Dr. Tarpy in the field of structural steel engineering and design, and oversight of structural engineering, fabrication, and erection (tr. 4/85). However, Dr. Tarpy's testimony hurt HPA more than it helped. Dr. Tarpy did not believe it was possible that the test stand moved more than

two inches as Quality Iron contends. Rather, he testified that the movement was "up to three eighths, maybe a half inch in some cases" (tr. 4/119). However, as we have already found, neither the surveys, nor the hand measurements support even this amount of movement. And Dr. Tarpy agreed that the work required by a 3/8 to 1/2-inch movement would have been much less than the 2+ inches alleged by Quality Iron. He characterized this as a "night and day" difference and that there was "no comparison" in the amount of work that would be required as a result of movement at these levels. (Tr. 4/150)

68. Dr. Tarpy also opined that when Quality Iron raised the movement issue, NASA's designer should have approved the use of slotted connections for fit up of horizontal members into the sides of the vertical members (tr. 4/102). But there is no evidence that HPA ever asked NASA to approve the use of slotted connections (tr. 9/42, 10/10).

69. Dr. Andrew Martin, the project manager for NASA's structural steel design contractor, testified credibly that while "everything moves," the B2 test stand was "about the beefiest structure" he had ever been associated with and was "nuclear blast resistant." He did not agree that the structure moved in the amount HPA claimed. (Tr. 6/107) Moreover, he testified convincingly that situations do occur where bolt holes in fabricated steel do not line up but skilled ironworkers have a variety of techniques to address this problem (*id.* at 110-12).

70. HPA submitted a certified claim on December 20, 2018, (referred to as REA 12) seeking $4,102,121.47 and a 227-day delay based on theories of defective specifications, breach of the duty not to hinder, delay or interfere with HPA, constructive changes, differing site conditions, and cardinal change (R4, tab 52 at 8-16).

71. CO Edge denied the claim on March 27, 2019 (R4, tab 57). HPA filed a timely appeal that the Board docketed as No. 62042.

DECISION - *APPEAL No. 62042*

Because HPA has not proven that the test stand moved in any meaningful way, this appeal is denied.

OTHER CLAIMS

At pages 44-54 of HPA's opening brief, after its proposed findings of fact on the four appeals, it presents a section entitled "Breach of Contract." HPA states: "In addition to the four discrete claims discussed above, the proof showed that from the outset of the construction NASA breached its contractual duty of good faith and not to hinder, delay or

interfere with HPA's performance by NASA's egregious and continuous delays." (app. br. at 44). HPA does not make a separate money demand for the alleged breach of contract and the section appears to be simply an attempt to buttress HPA's claims by reciting a litany of other supposed bad acts by NASA that largely appear unrelated to the four appeals. For example, it contends that NASA hindered HPA by: delaying shop drawing approval, solving site access issues, issuing change orders when needed, responding to RFIs, providing information concerning government furnished property, and delivering field change requests (app. br. at 50-51).

If HPA had other claims against NASA for delay or hindrance, it could have submitted a claim to the contracting officer. The Board has carefully examined the facts of the four appeals after a two-week hearing. The Board has decided all four appeals on the merits. The other supposed bad acts alleged by HPA do not revive claims that the Board has found to fail on the facts nor does it add anything to the claim that the Board has sustained in part. Accordingly, the Board finds that the contentions on pages 44-54 of HPA's brief do not add anything to the four appeals and that no further action by the Board is necessary.

CONCLUSION

The Board sustains ASBCA No. 62038 in part, and denies ASBCA Nos. 62039, 62040, and 62042.

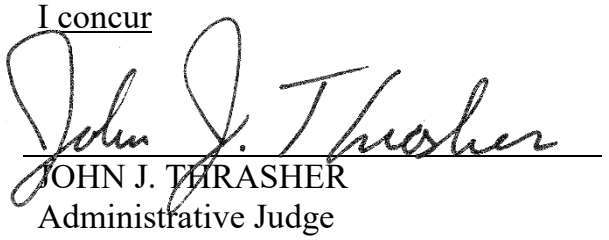
Dated: November 3, 2021

Michael N. O'Connell

MICHAEL N. O'CONNELL
Administrative Judge
Armed Services Board
of Contract Appeals

(Signatures continued)

I concur



JOHN J. THRASHER
Administrative Judge
Chairman
Armed Services Board
of Contract Appeals

I concur

J. REID PROUTY
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. 62038, 62039, 62040, 62042, Appeals of Harry Pepper and Associates, Inc., rendered in conformance with the Board's Charter.

Dated: November 3, 2021

PAULLA K. GATES-LEWIS
Recorder, Armed Services
Board of Contract Appeals