

ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of --)
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RLB Contracting, Inc.) ASBCA No. 57638
)
Under Contract No. W912P8-07-C-0102)

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OPINION BY ADMINISTRATIVE JUDGE THRASHER

This appeal involves a Corps of Engineers (Corps) contract with RLB Contracting, Inc., (RLB) to enlarge a levee in southwest Louisiana using borrow material excavated from an adjacent ditch and the resulting claim arising from the realignment of the adjacent ditch. We have jurisdiction under the Contract Disputes Act of 1978 (CDA), 41 U.S.C. §§ 7101-7109. The government concedes entitlement and this decision only addresses quantum.

FINDINGS OF FACT

The Project Solicitation

1. The Corps issued Solicitation No. W912P9-07-B-0019 (solicitation) on 2 July 2007 to enlarge the Gordy Levee, part of the Atchafalaya Basin, Levees West of Berwick, West Bayou Sale (Bayou Sale project) located in southwest Louisiana¹ (supp. R4, tab 1). The location of the levee and the adjacent borrow ditch was in close proximity to the Gulf of Mexico and East Cote Blanche Bay (supp. R4, tab 43, Drawing No. 8) The solicited work consisted of clearing and grubbing, excavating the borrow ditch, trimming outfall drainage pipes in the existing ditch, constructing compacted fill levee embankment, removing and replacing culverts under ramps, placing surfacing

¹ The solicitation was for a sealed bid 100% HUBZone set-aside fixed-price construction contract.

material on the levee crown and ramps, fertilizing, seeding and mulching, installation of a new gas line, and other incidental work (supp. R4, tab 1). The largest single performance requirement of the solicitation, and the work at issue here, was the excavation and embankment work requiring the contractor to excavate soil from an adjacent ditch and use that soil to enlarge an existing levee (supp. R4, tab 1 at 02318-a, § 02332). As originally designed, the levee was required to be constructed to a grade of elevation +12.5' (supp. R4, tab 43, Drawing No. 8).

2. The excavation and embankment work was addressed in the bid schedule as a work item for "Embankment, Compacted Fill" at contract line item number (CLIN) 0004 (embankment work), with an estimated quantity of 197,200 cubic yards (CYs) of material to be placed (supp. R4, tab 1 at 00010-3). The bid schedule contained no separate line item for the contractor's work in excavating the embankment material from the borrow source, nor for processing the material prior to placement. Instead, the cost and payment for this part of the job was included within the embankment work line item. In addition, Section 02332 provided that the contractor would only be paid for the embankment work for the amount of cubic yards of material measured and placed on the levee. (Supp. R4, tab 1 at 02318-1, 02332-3). The specifications did allow for payment of embankment placed that was the subject of settlement, but only if the contractor installed settlement gages in accordance with the terms of the contract. The contract provided that the contractor will forfeit payment for settlement if settlement gages (settlement plates) are not installed "in strict accordance" with the specifications and drawings (supp. R4, tab 1 at 02332-4, ¶ 1.4.3). RLB elected not to install settlement plates (tr. 1/68-70).

3. The solicitation contained the standard contract plans and specifications found in most levee construction projects but additionally imposed special requirements on the project that increased the complexity of the scheduling on the contract (app. 2nd supp. R4, tab 23 at 2). Section No. 02332 of the contract, "Embankment", included the following requirements:

a. The specifications provided that the embankment and berms were to be constructed from the earth obtained from the borrow areas described in Section 02318, "EXCAVATION," and as shown on the drawings (supp. R4, tab 1 at 02332-8, ¶ 1.7.1).

b. The "borrow area" of the contract was a drainage ditch located to the east of the levee. Although the distance varied, it was approximately forty (40) feet from the toe of the levee. The borrow area included a mandatory excavation area between Sta. 501+00 and Sta. 738+00. (Supp. R4, tab 1 at 02318-1, ¶ 1.1) However, levee construction was not required for the entire length of the borrow area. Levee construction was only required from Sta. 462+22 to Sta. 596+00. This meant the contractor would construct approximately 13,400 feet of levee, but the adjacent ditch from which the mandatory borrow would be excavated was some 23,700 feet in length. (Supp. R4, tab 43, Drawing No. 8) The levee reach from station 464+00 to station 474+00 (1,000 linear feet) did

have additional adjacent borrow, but excavation of that borrow was not mandatory. Also, as depicted in the contract drawings, there was no adjacent borrow along the levee from station 474+00 to station 501+00 (2,700 linear feet). (Supp. R4, tab 43, Drawing No. 2)

c. The contract also mandated specific requirements to control the moisture content of the embankment material. The specifications required the contractor to perform the “necessary work in moisture control to bring the material” within the specified moisture content range providing that “[i]f the material is too wet, it shall either be stockpiled and allowed to drain and/or the wet material shall be processed by disking and harrowing, if necessary, until the moisture content is reduced sufficiently.” The contract only allowed placement of borrow material in the levee if it was within +/- 10% of the optimal moisture content, as established by testing.² The contract required that RLB perform testing to establish the optimal moisture content of the material to be placed in the levee. (Supp. R4, tab 1 at 02332-8, ¶ 1.7.3, at 02332-5, ¶ 1.5.1(10); tr. 1/160-61)

d. The contract drawings identified available processing and stockpiling areas along the levee reach, but also included certain prohibitions. Drawing 8, Note 1, states that processing of material on the protected side of the levee was allowed (except within identified ranges) but subject to certain restrictions. Processing of material could not exceed 2 feet in height and could be placed no closer than 10 feet from the natural bank line of the ditch. Drawing 8, Note 4, states “PROCESSED MATERIAL AND TEMPORARY STOCKPILES IN THIS AREA TO BE NO CLOSER THAN 10 FT FROM TOP OF CUT AT ALL TIMES.” Drawing 8, Note 5, states “TEMPORARY STOCKPILES AND PROCESSING MATERIAL SHALL NOT BE ALLOWED OR PERMITTED IN OR ON ANY CONSTRUCTED LEVEE FILL.” (Supp. R4, tab 43, Drawing No. 8)

e. There were also restrictions on the method used to place material. The contract required the embankment to be placed in layers and specification Section 02332, ¶ 3.2.1, states in relevant part “Layers shall be started full out to the slope stakes and shall be carried substantially horizontal and parallel to the levee centerline with sufficient crown or slope to provide satisfactory drainage during construction.” This latter provision

² Mr. Boyd explained the concept of optimal moisture content during the hearing (tr. 1/41-42). It is our understanding that the concept can be summarized as follows: Any sample of soil will retain water. For any sample there is a percentage of moisture, as a proportion of the weight of the solid material, at which it is at its maximum compactibility, as determined by a standard compaction test. The point of maximum compactibility is expressed as a figure known as the “optimum moisture content.” This figure will vary with different types of soil. The concept of optimal moisture content and how it was to be measured under the contract are not at issue.

effectively placed the toe of the levee 10 feet from the top of the ditch excavation. (Supp. R4, tab 1 at 02332-10)

f. The specifications also specifically limited the work area under construction at any given time. The specifications required only 2,500 Linear Feet (LF) could be dewatered at one time and only 4000 LF of levee could be under construction at one time, which was reduced to 2,000 LF during hurricane season. (Supp. R4, tab 1 at 02332-10, -11, ¶ 3.2.2)

RLB's Bid

4. RLB was formed in 2000 by its president, Mr. Randy Boyd, specifically to provide Corps dredging support of the intercoastal waterway dredging, levees and shore protection or, as Mr. Boyd stated in his testimony, specializing in wet dirt work (tr. 1/34). However, prior to this job, RLB had no experience with construction of a flood control levee or with the optimal moisture content requirements that were included in this contract (tr. 1/52, 149). Although Mr. Boyd formed RLB in 2000, during his testimony he described in detail his extensive personal experience working on dredging and levee construction projects dating back to 1976 (tr. 1/35-38). Mr. Boyd prepared RLB's bid on the Bayou Sale project beginning with a review of the plans and specifications to develop a preliminary estimate (tr. 1/38-39). After developing a preliminary estimate, based upon the solicitation documentation, he visited the site to develop an approach to the job – the method of operations to perform the required excavation and levee construction (tr. 1/39-40). Mr. Boyd concluded that the soil to be excavated was some of the best soil that he had ever encountered in southern Louisiana. (Tr. 1/40) Mr. Boyd roughly estimated that 75% of the material would be sufficiently dry while the remaining 25% would be wetter material coming from the bottom of the ditch (tr. 1/41). When determining how the work would be performed and the associated costs, Mr. Boyd believed there were two primary restricting parameters that had to be followed: (1) optimal moisture content of levee fill material; and (2) incremental areas of the levee that could be worked on at one time (tr. 1/53).

Estimate of Optimum Moisture Content

5. Mr. Boyd explained in his testimony that the moisture level of the excavated material was critical to the success of this project because it directly determined the amount of work required to achieve the project's optimal moisture content (tr. 1/53). He estimated the optimal moisture content of the excavated soil to be between 20% and 22%. The soil sample moisture contents provided in the plans implied the average moisture content of excavated material to be between 20%-30%. (Tr. 1/167-68) However, the material could not be placed upon the levee unless it was within 10% of the optimum moisture content (supp. R4, tab 1 at 02332-8, -9, ¶ 1.7.3). Mr. Boyd also testified he reviewed the drawings included in the solicitation plans and specifications as

part of preparation of RLB's bid (tr. 1/44-45). The drawings included core volumes and samplings taken at the project site showing the moisture content of the soil at the location of the individual samples. Although the drawings were prepared in October 2006, the dates associated with the samples indicate they were taken in the 1987-88 time frame (supp. R4, tab 43).

Direct Placement Strategy

6. Mr. Boyd determined the worksite would have to relocate at various times during performance because of the contract requirements that construction of the levee could only be performed in 4,000 foot sections during non-hurricane season and only 2,000 foot sections the remainder of the year (tr. 1/53-54). Given these two parameters and other information, Mr. Boyd developed a plan of operation upon which RLB's bid was based, referred to as "direct placement." By using the design templates of the borrow pit and levee construction, Mr. Boyd was able to determine where he had to excavate and how much material would be excavated. As to the location, he explained that his review of the plans and specifications indicated that the levee ran from approximately Sta. 464 to Sta. 596 but the borrow excavation was mandatory between Sta. 501 and Sta. 741. His review also revealed the borrow was parallel to the levee between Sta. 501-596. As a result, he determined the most economical and efficient way to complete the job would be to take borrow material directly from the borrow and directly place it on the levee within these locations and then haul material to the levee between Sta. 596-741 where this would not be possible. He concluded that the best method of operation was to utilize a long reach (100 foot boom), large bucket 88-B dragline to excavate the drier material on the far bank of the ditch and place it directly on top of the existing levee in incremental lifts. Mr. Boyd planned to excavate the remaining wet material with excavators and process it as needed on the existing levee berm. (Tr. 1/51-54)

7. The plans and solicitation stated that the excavated material would yield approximately 197,200 CYs of compacted, in-place material. Mr. Boyd concluded that approximately 232,000 CYs of material would be excavated to yield the government's estimated 197,200 CYs of compacted levee fill material. By calculating the average moisture content of that excavated material utilizing the Corps moisture reports contained on Sheet 15 of the plans and specifications he calculated a pit-to-fill ratio of 1.18.³ (Tr. 1/217-18)

³ The pit-to-fill ratio is the ratio of excavated dirt required to place one cubic yard of dirt on the levee. The wetter the dirt, the higher the ratio, and more dirt required to be excavated to place the same amount of dirt.

Bid Price

8. RLB's total bid was \$3,348,141.80. RLB's bid preparation documents show that RLB calculated a unit price of \$10.04 per CY to perform the embankment work. (Supp. R4, tab 38 at 10, Bid Item 4) The bid component for CLIN 0004, Embankment, Compacted Fill was \$1,774,800.00 based upon a government estimate of 197,200 CYs at a unit price of \$9 CY (R4, tab 7). Mr. Boyd acknowledged that, while he computed RLB's price per CY for the embankment work to be \$10.04, he only bid that line item at \$9.00 per CY. He testified that it was his practice to "shop monies around" through the bid schedule, in ways that were best for the company, for cash flow reasons (tr. 1/81-83, 194-97).

Independent Government Estimate

9. RLB was the apparent low bidder at \$3,343,000 (app. 2nd supp. R4, tabs 41-47). The independent government estimate (IGE) for the project was \$4,824,244, including a unit price of \$17.90 per CY for the work under CLIN 0004, "Embankment, Compacted Fill" (R4, tab 8). Due to the discrepancy between the IGE and the contractor's bid price, on 10 August 2007 the contracting officer (CO) sent a letter to RLB requesting that it review and verify its bid "in order to prevent an unconscionable award" (R4, tab 9). By letter of 14 August 2007 RLB informed the CO that it had reviewed its bid and found it to be free of errors and valid as submitted (R4, tab 10).

Contract Performance

10. On 30 August 2007 the Corps awarded Contract No. W912P8-07-C-0102 (contract) to RLB in the amount of \$3,343,000 and the specified time of performance was 397 calendar days from receipt of a Notice to Proceed (NTP) (R4, tab 11).⁴ Shortly thereafter the NTP was issued on 11 September 2007 (R4, tab 12). Ms. Sheila Enclade was the CO that participated in the bid evaluation and awarded the contract (tr. 1/93). Contract administration was delegated to Mr. Ted Eilts, as administrative contracting officer (ACO) (supp. R4, tab 45). Although responsible for administration of the contract, Mr. Eilts only visited the site twice during the project (tr. 3/5-6). Mr. Larry Hayes was the project engineer on the project (app. 2nd R4, tab 49 at 17; tr. 3/6).⁵ Although responsible for the day-to-day, on-site, oversight of the project, he was absent

⁴ Modification No. A00002 increased the time of performance due to weather by 93 calendar days and \$59,500 and Modification No. P00001 by 82 calendar days due to added scope of work and \$290,000 (R4, tabs 3, 5, 6).

⁵ Mr. Hayes died shortly before the hearing. His testimony is derived from his deposition included in the Rule 4 file (tr. 3/139-40).

for the first nine months of the project (app. 2nd supp. R4, tab 49 at 33).⁶ As a result, Mr. Chaisson, the quality assurance representative, was the only Corps representative on the job site and involved with performance of the contract on a daily basis (*id.* at 18, 33).

11. On 20 September 2007, a preconstruction conference was held at the Corps' Lafayette Area Office. The record of that meeting states Mr. Boyd "explained that he planned on bringing in a large dragline and excavating the borrow area first, starting at Sta. 501+00 and continuing to Sta. 741+00. He would then drop back and start processing the material and constructing the levee." (R4, tab 13 at 2) On 19 October 2007, RLB prepared and submitted to the government a construction schedule showing that it planned for the embankment work, including excavation, to commence on 27 November 2007 and to end on 4 October 2008, a stated duration of 300 days (supp. R4, tab 29 at 3).

Realignment of the Center Line

12. In December of 2007, before excavation work commenced, Mr. Hayes, provided verbal direction to realign the center line of the existing drainage ditch (R4, tab 18).⁷ Rather than excavate the borrow ditch according to the excavation template included in the contract drawings, Mr. Hayes advised RLB to excavate through the center line of the same, existing drainage ditch, to 15 feet on each side of the center line of the ditch. (Tr. 2/240-41) This realignment shifted the center line of the ditch in a westerly direction, moving it closer to the center line of the levee. As the original specifications and plans provided that the contractor would use borrow material from the ditch to build the levee embankment, this change reduced the quantity of borrow material available to complete the levee. (Supp. R4, tab 66 at 13-16) The realignment order was not formally reduced to writing at that time and, in fact, was not formally addressed by the Corps until issuance of a unilateral modification three years later after RLB's claim was filed (R4, tab 14)⁸.

⁶ Mr. Hayes was involved in a car accident in January 2008 and did not return to the project until March 2008. Upon his return he was detailed to assist in Corps emergency projects in other geographic locations until the end of September. (App. 2nd supp. R4, tab 49 at 29-31)

⁷ It is uncertain from the record exactly why the Corps realigned the ditch. The reason for the realignment is not relevant for purposes of this appeal; it is undisputed Mr. Hayes gave the order during this time period.

⁸ The Corps orally ordered the realignment in December 2007. RLB's REA was filed 29 September 2009 and converted into a claim on 17 November 2009 (R4, tabs 3, 5). Modification No. P00002 was not issued until 8 December 2010 (R4, tab 14).

Deletion of the Drawings Borrow Template: CIN-001

13. Shortly after the realignment order, Mr. Hayes realized that the template on the drawing cross sections did not match the typical of the excavation. As a result, he forwarded CIN-001 to Mr. Boyd for his signature on 3 December 2007. CIN-001 was a bilateral modification that deleted the borrow template shown on the cross-sections of the existing levee in drawings 22 through 26 and stated that the contract time and price would not be affected by the change. (App. 2nd supp. R4, tab 6) Having not heard from Mr. Boyd by late January, Mr. Hayes called him on 25 January 2008. Mr. Boyd stated that having begun excavation he would wait and see if any impacts result from the change before he would sign the modification. (App. 2nd supp. R4, tab 7) Mr. Eilts testified that the purpose of CIN-001 was to correct mistakes in the drawings provided in the contract (tr. 2/263-65). He further testified that CIN-001 had nothing to do with the realignment of the ditch and the contractor would still be able to perform the required work because necessary information remained in the typical section drawings (tr. 2/265-66). In contrast, Mr. Boyd testified the impact of the realignment, when combined with this change, was: (1) loss of approximately half of dry dirt that was supposed to be excavated; (2) addition of considerably more wet dirt; (3) loss of processing area to dry the new, wetter dirt; and (4) overlap of the newly aligned excavation pit with the toe of the newly constructed levee, meaning the excavation pit would undercut where RLB was supposed to construct the new levee. (Tr. 1/102-06) Summing up the impact he stated, “[T]he difference in this job and the change that was made in this job, is we were traded our dry dirt for that wetter dirt, and then asked to do it for no change. And it is an extreme difference.” (Tr. 1/112)

Excavation

14. RLB executed an agreement with a subcontractor, Weeks Marine, Inc., to perform the excavation work (supp. R4, tabs 20, 21). The subcontractor commenced excavation operations at Station 501+00 as planned (findings 6, 11), using a long boom, large bucket dragline (88-B) on 5 February 2008 (supp. R4, tab 22, Daily Log 2/5/08). The same day, RLB also began the direct placement operation, placing excavated borrow material on the levee (supp. R4, tab 19, Contractor Quality Control Report (QCR) No. 132, Block 3, “Work performed today”).

15. On 12 June 2008 a meeting was held between RLB, Mr. Boyd, and the Corps’ Mr. Eilts and Mr. Hayes to discuss RLB’s concerns about the realignment of the centerline of the ditch and the effects that realignment was having on the contract work. RLB stated that there were design conflicts and cost issues that needed to be resolved because the realignment basically took away the area between the ditch and the levee that RLB had intended to use for drying the excavated wet soil. RLB further stated that this, in turn, required the wet material to be hauled two or three miles away from where it had

been excavated, dried and hauled back again to where it had come from to be placed into the levee. (R4, tab 18)

16. RLB also asked for specific direction on the area where it was currently working constructing the levee and excavating the ditch from Sta. 522+00 to Sta. 545+00, as this section, as well as others, had not yet been addressed by the Corps. The Corps advised RLB that, from Sta. 522+00 to Sta. 545+00 the levee should be constructed to full template, steepen the side slope of the ditch, and leave a 5' berm between the top of the ditch excavation and the toe of the levee. However, this direction was only provided for Sta. 522+00 to Sta. 545+00. Mr. Boyd was told the Corps personnel would have to review whether to provide the same direction on the entire levee from Sta. 501+00 to Sta. 596+00 where the levee parallels the ditch and directed RLB to not proceed further until the Corps had time to review the impacts of the realignment. (R4, tab 18) The discussion then shifted to Mr. Boyd's request for direction concerning excavation of the ditch between Sta. 596+00 and Sta. 741+00. The Corps directed RLB not to excavate the ditch between these stations until it could evaluate the impact of the realignment of the ditch on the levee. Mr. Boyd stated excavation of this area was critical because of the need to dry the borrow material, which requires excavation and placing of this material on the berm so it could begin to dry. (*Id.*)

17. On 20 June 2008, Mr. Boyd met with Mr. Hayes and Mr. Chaisson in an attempt to receive direction on how to proceed on the project between Sta. 596+00 and Sta. 741+00 as discussed in the 12 June 2008 meeting. Mr. Hayes stated he had forgotten about getting back to Mr. Boyd with information on the issue. Mr. Boyd offered a non-monetary solution to the realignment issue based upon relaxing some of the restriction in the manner of performance of the contract. Mr. Hayes requested Mr. Boyd submit the idea as a request for information. (R4, tab 18) As requested, Mr. Boyd forwarded a letter to Mr. Hayes dated 23 June 2008, referencing the 20 June meeting stating:

By realigning the ditch, the area between the levee toe and existing top of bank has been reduced substantially. This area is now at a width too small to allow adequate placement of the wet material from within the ditch for processing. To resolve this issue we request that the 2000' working limit of levee construction be waived and that we be allowed to place materials on the levee under construction at their insitu moisture content. This will allow borrow material to be processed on the levee section under construction. By

allowing the levee under construction to be used as a processing area, it will replace the area taken from us by the realignment of the ditch.

(Supp. R4, tab 52)

18. Not having heard from Mr. Hayes, Mr. Boyd followed up on his letter by calling Mr. Hayes on 3 July and then again on 10 July stating he needed to know where to construct the ditch from Sta. 596+00 to Sta.741+00. Mr. Hayes stated that he would call the next day and let Mr. Boyd know where the ditch limits would be located. As of 18 July 2008, there was still no response from Mr. Hayes. (R4, tab 18)

19. On 18 July 2008, RLB sent a letter to Mr. Eilts summarizing the meetings and phone calls attempting to obtain guidance from the Corps on how to proceed on the project and requested guidance on specific outstanding issues:

At this time we are working in other areas between stations 501+00 and 596+00 to keep the ditch excavation progressing. We are proceeding with the same direction as we were given from station 522+00 to 545+00. It is our understanding that you concur with this progression.

...At this time we have not received any direction on how to proceed from station 596+00 to 741+00. This lack of direction is delaying the progress of the project...

....

...To date I have not received a call from Mr. Hayes nor have we received any direction for [sic] the Corps on where they want the limits of the ditch. We must have this information to understand the impacts that have been caused by the realignment of the ditch.

In closing Mr. Boyd requested:

[T]hat you develop a change order that reflects these changes, including what dimensions the ditch is to be excavated from station 501+00 to 596+00 and from station 596+00 to 741+00. The quantities of material that will be excavated will then need to be reviewed. Please evaluate whether this change will affect the quantity of

material available for levee construction increasing or decreasing this construction. Once complete, we request you issue this in the form of a request for proposal so we can then evaluate the impact to our work caused by this change. Be advised that until RLB has an understanding of what work is to be achieved under the contract we cannot address the RFP issued on the project for additional work removing certain pipelines and constructing the levee in areas where these pipelines exist outside our contract.

(R4, tab 19)

20. The Corps responded by letter on 7 August 2008, advising RLB that, for the excavation between Sta. 596+00 and Sta. 738+00, it should use the chart on Drawing No. 8 of 27 to establish the west toe of the borrow ditch and, if necessary, that the bottom width of the borrow ditch could vary to establish the west toe of the borrow ditch. (R4, tab 20)

Reduction in Height of Levee and Overbuilt Direction

21. By letter of 15 August 2008, RLB acknowledged it had received the direction it needed on the excavation of the realigned ditch but informed the Corps that, under the new design criteria, there would not be sufficient soil to construct the levee desired by the Corps. RLB offered to price a proposal for completing the levee with borrow material to be obtained from an offsite source. (R4, tab 21)

22. On September 19, 2008, RLB sent a letter to the ACO stating, “[T]his is to alert you about concerns regarding our ability to complete the construction of the levee on this Project with the remaining materials available in the borrow area furnished by the Government.” That the realignment of the borrow ditch “did impact our performance, not only as a result of the reduction of material, but also reducing our drying area requiring us to haul material further down site for drying.” RLB also asserted the realignment of the borrow ditch had reduced the amount of borrow material available to build the levee. (Supp. R4, tab 13)

23. The Corps did not accept Mr. Boyd’s 15 August 2008 suggestion to obtain additional borrow material offsite but instead, on 15 April 2009, directed RLB to complete the ditch excavation and raise the levee to a minimum elevation of +8', rather than the originally designed elevation of +12.5'. The Corps also directed RLB to remove the embankment on the north end of the levee that had been overbuilt on the side slopes and to use that material on the lower end of the levee to bring the entire levee up to the minimum height of +8'. (R4, tab 22) Mr. Boyd testified that the directive forced him to change his plan of operation. Rather than using the intentional overbuild on the newly

constructed levee's side slopes for the final lifts to create the levee crown, RLB was forced to pick the extra dirt up and haul it several miles down range for utilization elsewhere in the levee. This resulted in excess labor, equipment usage, and a delay in time. (Tr. 1/115-19)

Final Government "As-Built" Survey

24. The embankment work was completed and equipment demobilized by 30 July 2009 (R4, tab 23). The last pay estimate indicates RLB was compensated a total of \$3,037,450.00 for its work. This figure includes \$1,234,800.00 for placement of 137,200 CY of "Embankment, Compacted Fill" under CLIN 0004 (R4, tab 24 at 6, 8, 9). On 5 April 2010, as called for under the contract, the government completed excavation and fill as-built surveys which determined that final quantities excavated and placed by RLB were 234,501 CYs and 140,410 CYs, respectively (R4, tabs 26, 27). However, the survey showed RLB had only placed 116,820 CYs that were eligible pay quantities, and, due to the overpayment, the government advised RLB that it would reduce payment accordingly in the amount of \$183,420.00 (R4, tab 25).⁹ Mr. Boyd testified, at great length and detail, concerning numerous substantial errors in the survey that served as the basis for the government's conclusions (tr. 1/29-137). Mr. Boyd also testified no one knows with certainty how much dirt was placed. We are persuaded by Mr. Boyd's testimony and find that the government's as-built survey is so inaccurate that it is not a useful representation of how many total CYs were placed or where they were placed by RLB.

Request for Equitable Adjustment (REA)

25. RLB filed an REA with the government on 29 September 2009 in the amount of \$2,864,447 for additional costs it claimed it incurred due to the realignment of the drainage ditch (R4, tab 5). The request included a detailed report issued by RLB's consultant, Richard J. Roy, dated 28 August 2009 (R4, tab 4). RLB subsequently submitted a certification of its request on 17 November 2009 (R4, tab 6). The REA asserted that the realignment of the centerline of the ditch seriously impacted the contractor's work, resulting in increased costs and time of performance in three ways.

26. First, that the realignment forced it to excavate soil that was much wetter than originally planned, resulting in increased time and costs for processing and placement, explaining:

In its original location the material to be excavated was to come from both banks of the ditch as well as a minor amount

⁹ There is no evidence in the record the government ever took actions to recoup the asserted overpayment of \$183,420.00.

from the submerged portions of the ditch. The composition of this fill would have contained a large proportion of the drier embankment soil. After the ditch was realigned by the COE, much less embankment soil was available from the east bank of the ditch. The only fill to be excavated came from a smaller than original amount of the west bank fill but predominately from fill material submerged deeper in the center of the ditch. This material was much wetter than the material originally designed to be used in the levee construction.

....

...Due to the ditch realignment, the material never did meet the specified requirement [in the contract].

(R4, tab 4 at 5, 6)

27. Second, RLB asserts that the wetter soil required to be excavated after the ditch realignment yielded significantly fewer placed CYs of embankment as compared to the yield that would have been realized had it been allowed to excavate the drier material as originally planned. In other words, the pit-to fill ratio was increased. Thus, RLB claims it had to perform much more work than originally anticipated, excavation and drying, to achieve each placed CY of embankment. (R4, tab 4 at 5, 6)

28. Third, RLB also asserted that its work was further impacted by the fact that the ditch realignment reduced available area between the levee and ditch that it had intended to use to dry the soil prior to placement in the levee. RLB asserts that the realignment of the centerline of the ditch effectively removed required area between the ditch and the levee that it had intended to use to dry the material excavated from the ditch. The wet soil therefore had to be trucked to a remote location and dried, then trucked back to the original location. (R4, tab 4 at 5, 6)

Claim Methodology

29. Mr. Roy's original approach to the claim was to isolate the cost of completing the work and then to apply a "measured mile" approach, comparing the as-bid plan to the specific areas impacted by the change. However, he was unable to identify a period when the work was not impacted so he found it impossible to apply the measured mile approach. (R4, tab 4 at 6) Instead he tried to isolate the actual costs of performing the excavation and compacted fill work, stating, "The proper measure of damages is the 'reasonable value' of the work." (*Id.* at 6) His analysis broke those costs into six categories: (1) equipment; (2) labor; (3) subcontract cost; (4) travel cost—hotel only; (5)

engineering and testing; and, (6) per diem cost for labor. From these costs he deducted equipment and labor hours he referred to as “other than embankment and compacted fill” work. Those cost categories included: truck wash; clearing and grubbing; gas line, 60" culverts; surfacing; and CIN-006 Levee Construction, and were compensated by reimbursement under separate CLINs or by modification and are not in dispute. He arrived at a total cost of excavation of \$3,094,193.16. Applying his estimation of home office overhead, profit and bond cost, he calculated a total “value” of the excavation work of \$4,236,259.86. Subtracting the amounts already paid, the total claim amounted to \$2,864,447.01. (App. Claim, vol. 3, tab 19)

Defense Contract Audit Agency (DCAA) Audit of REA

30. The government requested DCAA conduct an audit of RLB’s REA, examining its claimed direct labor rates, home office overhead and other portions of direct costs (field office overhead) portions of the REA on 19 January 2010. The government’s request did not include audit of the claimed profit and bond rates. DCAA’s findings were provided to the government on 10 June 2010 in DCAA Audit No. 3521-2010R17200001 (Audit). (App. supp. R4, tab 3) DCAA found that RLB’s REA provided adequate cost and pricing data in support of its proposed labor rates and other direct costs (ODCs).¹⁰ However, the claimed overhead and ODCs were found not to be prepared in accordance with appropriate provisions of FAR 31 and DFARS but such noncompliance was considered to have a limited impact on the proposal as a whole. Because of the limited impact, DCAA found that the proposal served as an acceptable basis for negotiation of a fair and reasonable price. (*Id.* at 2) The audit’s recommended amount was \$4,078,184 as the total incurred cost of the excavation work (*id.* at 9).¹¹ We find that RLB incurred the direct labor and ODCs claimed for all excavation work and they are allocable to this contract.

31. The Audit did question \$318,999 of the total \$421,060 claimed as indirect expenses based upon unallowable costs included within the total.¹² Their findings were

¹⁰ The Audit did not question that RLB had incurred the claimed direct labor costs (app. supp. R4, tab 3 at 2). Their finding was based upon an examination of a sample of 83% of the total payroll found in RLB’s company Quick Books payroll records between 2 October 2007 and 30 July 2009 (*id.* at 4, 5). Likewise, the Audit did not question any of the claimed incurred ODCs consisting of employee hotel bills, engineering and testing costs and per diem paid to employees based upon an examination of invoices and per diem paid to travelling employees (*id.* at 9, 10).

¹¹ This total includes the claimed amount of 8% profit and 2.50% bond rates which were not examined by the Audit.

¹² Unallowable expenses included: meals and entertainment per FAR 31.205-14; donations, interest expenses, and finance charges per FAR 31.205-8; and contributions or donations per FAR 31.205-20 (app. supp. R4, tab 3 at 5).

based upon an examination of actual cost found in RLB's "Schedule of Operating Expense for the Eleven Months Ended [sic] November 30, 2008." (App. supp. R4, tab 3 at 5, 6) In addition, the claimed home office overhead rate was questioned based upon finding unallowable costs within the indirect cost pool. The REA included a 26.41% overhead rate based upon actual costs incurred between 1 January 2008 and 30 November 2008. The auditors adjusted the indirect cost pool for the identified unallowable costs and calculated a new rate of 21.30%. (*Id.* at 6, 7)

Government's Response to Claim

32. On 17 June 2010 the government informed RLB that its request for an equitable adjustment did have some merit but that the government disagreed with the contractor's total cost approach to pricing the change. The CO requested a meeting for further discussions. (R4, tab 28) A meeting between RLB and the government took place on 13 July 2010 with the parties discussing their positions. The meeting ended with the parties in disagreement over the appropriateness of using the total cost method to price the change and with the government advising it would consider the matters discussed and would get back with the contractor. (R4, tab 29)

33. Subsequently, based upon the government's estimate, the government determined that the realignment of the ditch impacted the contractor in the total amount of \$447,354.40 (exclusive of CDA interest). This consisted of entitlement to \$290,367.00 for an increase in the "Pit-to-Fill" ratio; a credit of \$462.60 for deleted work; and entitlement to \$157,350.00 for the government direction to remove overbuild on the side slopes of the upper end of the levee and haul and place it toward the lower end. (R4, tab 30) The amount for the increased pit-to-fill ratio was based upon estimates of amounts excavated as shown on the cross-sections of the final as-built survey and the original bid estimate pit-to-fill ratio.¹³ A 7.5% settlement factor was subtracted from this total to arrive at 150,940 placed (*id.* at 6). Relying upon the government's determination of entitlement, on 8 December 2010 the government issued a unilateral modification No. P00002 in the amount of \$447,254.40, plus \$5,134.23 in interest, to compensate the contractor for the cost impacts associated with the realignment of the ditch ordered in December of 2007 (R4, tab 31). RLB was informed of this determination and, in response, requested a CO's final decision (COFD) on 12 August 2010 (R4, tab 3).

34. The COFD was issued on 15 March 2011 (R4, tab 2). The COFD conceded entitlement acknowledging that the Corps' actions in realigning the drainage ditch did impact the contractor's cost of performance but disagreed on the nature and extent of those impacts. In addition, the government disagreed with RLB's use of a total cost

¹³ The final as-built survey indicated RLB excavated 234,501 CYs. Using the pit-to-fill ratio used in the government estimates for the bid process (1.28 to 1), the government calculated RLB would have placed 183,203 CYs.

methodology to price the equitable adjustment due (*id.* at 9). The COFD found RLB's claim for \$2,864,447.01 to have partial merit in the amount of \$447,254.40, the amount previously placed on the contract by Modification No. P00002 (*id.* at 17).

35. RLB appealed the COFD to the Board on 2 June 2011 and the appeal was docketed as ASBCA No. 57638. The government conceded entitlement just prior to the scheduled hearing and the parties stipulated that the hearing would only address quantum (tr. 1/6).

Appellant's Expert Witness Analysis: The Mayeux Report

36. Mr. Michael Mayeux was retained by RLB to conduct an expert analysis of the claim. He was qualified and testified at trial as an expert witness in levee construction cost estimation. He prepared two independent estimates: (1) the costs as bid, and (2) the costs as changed. In addition, he reviewed the accuracy of the government's estimate. (App. 2nd supp. R4, tab 23 at 4)

(1) As-Bid Estimate vs. Realignment

37. Mr. Mayeux found that the original specifications and plans were not unusual for those used in levee construction contracts, with the specification being the standard employed since 2005 (app. 2nd supp. R4, tab 23 at 5). However, he found that the work sequence was more complicated than that usually found in similar contracts due to weather and special requirements that made scheduling more difficult.¹⁴ His analysis took a detailed approach to planning the work but he noted his method was not identical to those used by the Corps to build the government estimate or by RLB to prepare its bid. He explained this based upon the fact it is not unusual for different contractors, when bidding on a complicated contract such as this one, to take different approaches to performing the work due to their differing equipment, labor, skill levels, etc. His as-bid estimate for the embankment work was \$1,561,887 or \$8.06/CY and, as changed by the realignment, \$2,924,221. His report noted that bids vary due to market conditions so he did not find RLB's bid rate of \$9.00 unreasonable. (App. 2nd supp. R4, tab 23 at 6-8)

(2) Review of the Independent Government Estimate

¹⁴ The specific impacts on scheduling followed from requirements that no more than 2,500 LF of borrow could be dewatered at one time, only 4,000 LF of borrow could be under construction at one time and this was reduced to 2,000 LF during hurricane season, material with a moisture content above 10% optimum could not be placed on a final levee, and the entire borrow area between Sta. 501+00 and Sta. 738+00 be depleted and material used in levee construction but the contractor was only paid for material placed on the embankment (app. 2nd supp. R4, tab 23 at 5, 6).

38. Mr. Mayeux's report identified what he considered flaws in the government's estimate. For example, he found the government made several faulty assumptions. His summary stated:

In short, it appears to me that the estimator put very little thought into how much material was in different reaches of the borrow area and what was actually required to place the material from each reach. Instead they estimated the project as if they [sic] whole project was the worst case scenario, then slowed down the haul trucks to assure the estimate was high enough to justify awarding a fairly high bid. The government estimate does not include profit and an additional 25% is allowed for profit. This would allow for an award of \$23.375 per CY for the uncompacted fill.

(App. 2nd supp. R4, tab 23 at 9)

Government's Expert Exceptions to RLB Damages: The Strickler Report

39. Mr. George Strickler was retained by the government as an expert to analyze and prepare an expert report on RLB's appeal (supp. R4, tab 66).¹⁵ Mr. Strickler's report (Strickler's Report) primarily addresses the effects the ditch realignment had on RLB's work and an analysis of RLB's damage claim, with his opinion on the amount of damages that RLB may have suffered as a result of the realignment of the borrow ditch.

(1) Analysis of RLB's Claim Issues

40. Strickler's Report addressed the issues alleged in RLB's claim. First, Mr. Strickler addressed the effect of realignment on the available work area for stockpiling and processing borrow material and concluded that the shifting of the ditch "did cause a general reduction in the area available along the easterly bank of the ditch." However, he concluded that, based on his review, this shift, by itself, would not have impacted RLB's plan of operations to the extent asserted by RLB. (Supp. R4, tab 66 at 13-14) Second, he addressed the effect of realignment on the availability and wetness of borrow material. He concluded that the realignment of the ditch did result in a net reduction of borrow material but his calculations revealed there was not a significant

¹⁵ His conclusions were based upon his review of the documents included within the Rule 4 file, his discussions with Corps personnel and depositions transcripts for Mr. Boyd, Ms. Boyd, Mr. Sandhop and Mr. Sanders (supp. R4, tab 66 at 3-4). Mr. Strickler was qualified as an expert witness and direct testimony was presented through his expert report and RLB chose not to cross-examine him at the hearing (tr. 3/122).

reduction in volume. (Supp. R4, tab 66 at 15) Additionally, Mr. Strickler examined RLB's assertions that the realignment of the borrow ditch caused RLB to have to excavate wetter material, which in turn reduced the "in place" embankment yield of material from each CY of material excavated from the ditch. His conclusion was that because of the realignment, RLB encountered an increased moisture content of the borrow material to be excavated, i.e., a higher "pit to fill" ratio than expected. However, he noted there is no way to know how much embankment RLB placed, but cannot be paid for, because the contractor failed to install settlement plates, which are the only allowable method of measuring settlement. (Supp. R4, tab 66 at 16) Despite this conclusion, he went on to conclude the CO's final decision included 32,263 cubic yards of material due to an increase in the pit-to-fill ratio, "which would more than account for this increase" (*id.* at 17-18). Third, Mr. Strickler addressed soil placed by RLB that was not measured. He concluded that RLB had placed some embankment quantities that had not been measured because they were not placed directly within the levee boundaries, and thus not paid for, but noted such quantities were also included in the CO's final decision as part of the additional 32,263 cubic yards of embankment placed.¹⁶ (Supp. R4, tab 66 at 18) Finally, Mr. Strickler addressed the Corps' directive to RLB in April 2009 to use the "overbuild" material on the side slopes of the northerly reach of the levee, haul it to the southerly reach of the levee, and place it to bring up the levee to a +8 ft. elevation. Mr. Strickler noted that this issue was addressed in the CO's final decision and that the amounts included therein "more than adequately" compensated RLB for its additional costs in carrying out that directive. (Supp. R4, tab 66 at 19)

(2) *RLB's Incurred Costs for Embankment Work*

41. RLB's initial claim, on 12 August 2010, asserted a total cost of the embankment work of \$3,094,193.16, consisting of the following cost elements: (1) direct equipment; (2) direct labor; (3) direct subcontractor cost; (4) direct travel cost-hotel only; (5) direct engineering and testing; and (6) direct per diem cost for labor (R4, tab 3). With the addition of home office overhead, profit and bond cost, the total cost of excavation work came to \$4,236,259.86. Subtracting the amount already paid for the work, the total amount claimed was \$2,864,447.01. (App. Claim, tab 22) Mr. Strickler's analysis of RLB's damages can be separated into three findings. First, he performed a detailed analysis of RLB's claim noting any discrepancies in Mr. Roy's methodology. Second, he identified items that should have been deducted from the claimed amount. Finally, Mr. Strickler analyzed RLB's bid noting costs that should have been included within RLB's bid but were not and, therefore, should not be compensated now as part of its claim. After analyzing RLB's claim, and identifying its deficiencies, Mr. Strickler

¹⁶ Mr. Strickler calculated that RLB had placed approximately 5,000-5,400 cubic yards of material at the levee ramps and repair sections which had not been measured.

prepared his own detailed damage analysis, Reconciliation of Damages, which is found at exhibit 3 of his report (supp. R4, tab 66, ex. 3). Adjusting the individual claimed cost elements for the defects in RLB's claim, he estimated a total incurred cost, including markups, of \$2,657,315.95 for the embankment work (*id.* at 2, line item 23). Applying the estimated total incurred cost, Mr. Strickler then calculated a unit rate per CY representing the difference in rate due to "realignment and other issues" of \$3.28. He then multiplied the adjusted rate (\$3.28) by the CYs placed in accordance with the COFD (149,083 CY) to arrive at the total additional cost for CYs placed, \$489,389.27. When added to his calculations for other direct placement payments, he arrived at a total possible compensation of \$753,686.27. (*Id.*, ex. 3 at 1)

Analysis of the Parties' Positions on Estimated Individual Cost Elements

42. During his testimony, Mr. Roy revealed that he had revised RLB's total claim downward to \$2,407,775.74 based upon his review of the Strickler Report (tr. 2/60-75). Further adjustments were also made in RLB's claim in its post-hearing reply brief (app. reply br. at 24-26).

(1) Direct Equipment Costs

43. The following summarizes Mr. Strickler's estimate of equipment cost by individual cost element, as stated in his report, and RLB's adjustments to its claim in response:

	<u>Strickler Report</u>	<u>RLB Revised Claim</u>
Total hours of equipment	\$886,737.77	\$1,244,840.21
Deduct for non-bid items (GPS, Water Trucks, Pumps, Grader)	(\$49,501.39)	0
Deduct for distributed equipment (60% Levee/40% Other)	(\$25,914.46)	(7,126.48)
Add additional grader hours and operator¹⁷	\$27,827.48	\$27,827.48
Add rental equipment	\$230,908.45	\$230,908.45
Add for weather included in bid¹⁸	\$78,891.82	\$78,891.82
Net Equipment Cost	\$1,148,949.67	\$1,575,321.48

(Supp. R4, tab 66, ex. 3; app. reply br. at 24) The parties only dispute three equipment cost elements, the total cost of equipment hours, the deduction for non-bid items and the deduction for non-embankment equipment cost. We will address each in turn.

(a) Total Hours of Equipment Used for Excavation and Fill Work Only

44. Although the labor costs were based on actual rates paid to the employees, Mr. Roy calculated equipment costs based on Corps published rates found in the *Construction Equipment Ownership and Operating Expense Schedule*, U.S. Army Corps of Engineers, Pub. No. EP 1110-1-8, Region III (Corps Manual) (supp. R4, tab 66, ex. 8). The equipment costs associated with the embankment work were derived by reviewing the daily reports identifying the pieces of equipment used for that purpose (app. Claim,

¹⁷ Although Mr. Strickler reduced the equipment hours due to the fact he could not find specific dollars within the bid for a grader: 50% of the grader cost, \$27,827.48, was added back to the total in recognition of its use on the haul road effort at $(778.5/2) * (56.82 + 14.67)$ (supp. R4, tab 66, ex. 3 at 2, line item 4). RLB agrees with this amount and also adds this amount to its claimed equipment costs (app. reply br. at 24, line item 4).

¹⁸ Mr. Strickler included a credit for normal weather included in the bid based upon a straight proration of days of normal weather (44%) to unusually severe weather (56%) (supp. R4, tab 66 at ex. 3, note 6). RLB does not dispute this amount and adds the same amount in its revised claim (app. reply br. at 24).

tab 4). He also used the daily reports to establish the hours that these pieces of equipment actually worked on the embankment work and then determined which pieces of identified equipment were owned or leased by RLB (*id.*). An average hourly rate was then established for each piece of owned equipment based upon the rates established in the Corps Manual. Using this rate, he determined that the direct equipment cost was \$1,709,104.52. (App. Claim, tab 11)

45. Mr. Strickler noted that the rates, as calculated by the Corps Manual, include both ownership cost elements and operating cost elements. The ownership portion of the rate includes an allowance for the facilities capital cost of money (FCCM) and depreciation (DEPR). The operating cost elements include: fuel; filters; oil; grease (FOG) to include servicing; repairs to include maintenance and major overhauls; tire wear (replacement); and tire repair (supp. R4, tab 66, ex. 8). Mr. Strickler found any costs associated with these elements, either directly claimed or claimed as a function of overhead, were duplicative. Finally, he also noted any efforts on the part of the equipment operators to provide basic maintenance on their vehicles should also be deducted as duplicative based on the Corps equipment rates. (Supp. R4, tab 66) Mr. Strickler calculated the new cost of equipment for the embankment work, as adjusted by his findings as \$886,737.77 (supp. R4, tab 66, ex. 3).

46. Mr. Roy stated during his testimony that upon reviewing the Strickler Report he realized that RLB's initially claimed direct equipment costs were included in depreciation costs, which was duplicative due to the fact that RLB accounted for equipment depreciation in its home office overhead (tr. 1/291-93). Mr. Roy was unaware of that fact when the initial claim was presented and, therefore, revised the claim to correct that calculation error (tr. 1/56-57, 60-62). The backup data created by Mr. Roy to support his calculation is located at Exhibit A-1, which was introduced and admitted at the hearing. Mr. Roy's final claim adjustment also includes equipment standby costs using rates from the Corps Manual. As explained by Mr. Roy at the hearing, "these are the revisions that were based on what I learned from Mr. Strickler's report" (tr. 2/62). After these adjustments Mr. Roy's final value for the direct equipment cost is \$1,296,846.22.¹⁹

47. The government, in its post-hearing brief, noted that the standby equipment cost in Exhibit A-1 was still inaccurate because it did not account for depreciation costs, which is duplicative as in the case of equipment operating cost (gov't br. at 69). Recognizing this error, RLB chose to concede the claimed standby cost of \$52,026.01 in its entirety rather than attempt to calculate the exact amount of duplicative costs. This reduced the total direct equipment cost from \$1,296,846.22 to \$1,244,820.21. (App.

¹⁹ The total is a \$412,258.30 reduction from the original claimed amount of \$1,709,104.52 but does not include rental equipment cost which is broken out as a separate line item (ex. A-4).

reply br. at 24 n.1) We find RLB's incurred total cost for equipment hours for embankment work was \$1,244,820.21.

(b) Deduction for Non-Bid Items (GPS, Water Trucks, Pumps, Grader)

48. After calculating the total cost for the equipment hours, Mr. Strickler deducted some items from that total and added others. He deducted \$49,501.39 for items that he was unable to find within RLB's bid, such as GPS, water trucks, pumps, and a grader. These were items Mr. Strickler believed were necessary to complete this job but he could not find evidence they were included in RLB's bid and, therefore, RLB should not be reimbursed for these items. (Supp. R4, tab 66, ex. 3 at 1, note 2)

49. RLB does not deduct for these items because Mr. Boyd testified they were factored into the bid even though not separately broken out (app. br. at 24). Specifically addressing the pumps, Mr. Boyd testified he did not breakout a separate line item amount for pumps because there was a pump station on-site to dewater the ditch (tr. 1/64). Concerning the water truck, Mr. Boyd testified he also factored this into his bid but did not separately break the cost out explaining, that given the purpose of a water truck, he did not foresee extensive use of one on this project, i.e., the major challenge on this project was to reduce the soil moisture not increase it (tr. 1/64-66). Likewise he also testified the cost of a grader was also included in the bid but not separately itemized and that there was a separate itemization of the cost of bulldozers that could be used as graders if necessary (tr. 1/198-99). We find Mr. Boyd's testimony persuasive and find that the items identified by Mr. Strickler, and subsequently deducted from his calculations, were included within RLB's bid and should not be deducted from total equipment costs.

(c) Deduction for Distributed Equipment (60% Levee/40% Other)

50. Mr. Strickler deducted \$25,914.46 as the non-levee use of the equipment applying a 60% levee work to 40% non-levee work allocation he derived from the bid documents (supp. R4, tab 66, ex. 3 at 1, note 3). In contrast, Mr. Roy testified that he determined the embankment equipment cost was 79% of the total equipment cost for the project (tr. 1/277-78). We find Mr. Roy's calculations more persuasive and find the proper allocation of equipment costs is 79/21% ratio for a total deduction of \$7,126.48.

51. We find that the total incurred net equipment cost for embankment work was \$1,575,321.48.

(2) Direct Labor Costs

52. Below is a comparison of Mr. Strickler's and RLB's revised direct labor calculations:

	<u>Strickler Report</u>	<u>RLB Revised Claim</u>
Labor Costs for embankment work	\$501,803.22	\$548,933.07
Deduct for Mechanic	(\$53,010.14)	(\$53,010.14) ²⁰
Deduct for distributed labor	(\$77,529.28)	(\$52,332.26)
Add for 6560 – Payroll Expenses Other	\$35,543.58	\$35,543.58
Deduct for daily servicing of equipment	(\$5,838.66)	(\$5,838.66)
Deduct for labor to run pumps	(\$1,181.90)	(\$1,181.90)
Net Labor Cost	\$399,786.82	\$472,113.69

(Supp. R4, tab 66, ex. 3; app. reply br. at 24) We find that the parties only dispute two direct labor cost elements, labor cost for excavation fill work and deduction for non-embankment labor cost work and address each in turn.

(a) Labor Cost for Embankment Work

53. RLB’s claim relied upon the daily reports to determine the number of labor hours each piece of equipment was operated on the job site and RLB’s certified payroll records to determine the total cost direct labor for the entire project (app. Claim, tab 13). Then the costs for hours associated with other work were subtracted from the total cost to arrive at the labor cost to perform the embankment work of \$641,087.53 (*id.*, tab 14). Other work hours included truck wash, clearing and grubbing, gas line, 60" culverts, surfacing and the CIN-006 change order costs (*id.*, tab 12). Based upon his review, Mr. Strickler determined there were discrepancies between the QCRs and the payroll summary in RLB’s claim for manpower. He noted there was not enough information included in the daily reports to determine the hourly effort for laborers on the job site, there were unspecified hours where it was impossible to determine whether the employee was a laborer or operator, and there was a significant mixing of hours within the operator and laborer line items on the QCRs. In addition, he noted discrepancies between the operator hours and equipment hours on the QCRs and between RLB’s job cost report and the payroll. (Supp. R4, tab 66 at 20-21) There was also not enough information for Mr. Strickler to identify or quantify any mobilization and demobilization costs that

²⁰ Mr. Roy included a deduction for a mechanic in his labor cost calculations in this amount. Therefore, this deduction appears to be a duplication already accounted for in the total (*see ex. A-3*).

should be deducted (supp. R4, tab 66, ex. 3 at 2, note 8). Despite the uncertainties in the data, Mr. Strickler estimated \$501,803.22 in labor costs for excavation and fill work. Based upon its review of the Strickler Report, RLB reduced its claimed labor cost from \$641,087.53 to \$548,933.07 (ex. A-4). This revised number includes deductions for the mechanic cost of \$53,010.14, identified by Mr. Strickler, and an adjustment for the salaried labor of \$19,347.16 (ex. A-3). We find RLB's calculations more persuasive and find the Labor Cost for the embankment work to be \$548,933.07.

(b) Deduct for Distributed Labor (60% Levee/40% Other)

54. The ratio applied for this deduction, non-embankment work, is the same as what Mr. Strickler applied above for the equipment costs for a deduction of \$77,529.28 (supp. R4, tab 66 at 2, note 10). In contrast, RLB applied a ratio of 73% Levee to 27% based upon the total number of bid embankment labor hours with the total number of labor hours for the project (tr. 1/278). We find Mr. Roy's calculations more persuasive and find the proper allocation of labor costs is 73/27% ratio and the total amount of deduction to be \$52,332.26.

55. We find the total net incurred direct labor cost for embankment work to be \$472,113.69.

(3) Subcontractor, Prorated Hotel Costs for Traveling Laborers and Prorated Per Diem for Traveling Laborers

56. The parties do not dispute these three cost elements: \$300,413.40 representing the cost to RLB for its subcontractor, Weeks Marine, who performed most of the excavation work;²¹ prorated hotel costs of 96,763.06;²² and, prorated per diem of \$67,842.54.²³

²¹ (Supp. R4, tab 66, ex. 3 at 2 note 15; app. reply br. at 24, item 15)

²² (Supp. R4, tab 66, ex. 3 at 3 note 16; app. reply br. at 24, item 16)

²³ Mr. Strickler's review of the job cost report disclosed that RLB claimed all per diem costs on the job through 6 July 2009 in the amount of \$130,466.43 despite the fact RLB's bid included per diem as a function of the hourly wage rate of employees and was therefore distributed among all items of work within the contract. Therefore, he found that some portion of the per diem costs should be distributed among the other than levee tasks as was done in the RLB bid calculation. As a result, he calculated a prorated portion of these costs that would be associated with levee work with a percentage of 52% levee work to 48% non-levee work for a total amount of \$67,842.54. RLB's revised claim retained the original amount of \$130,466.43 but its post-hearing brief reduced the amount to \$67,842.54. Line item 18 of RLB's calculations indicates a proration

(4) Testing and Engineering

57. RLB claimed \$127,038.48 for the test and engineering costs associated with excavation and fill work invoiced by consultants G&W Engineers, Inc., (app. Claim, tab 17). This amount was reviewed by the DCAA audit and not questioned (app. supp. R4, tab 3 at 4). Subsequently, Mr. Roy reviewed the additional cost records and concluded that the claim for these items should be increased to \$162,322.80 because the original claim was completed before the entire project was completed and therefore did not include a complete accounting of engineering and testing costs. (tr. 2/70). However, there is no documentation within the record to substantiate the additional amounts claimed above the original \$127,038.48.

58. Mr. Strickler found there was no explanation within RLB's claim to account for the claimed cost of \$127,038.48 in the testing and engineering for excavation and fill. In its report, RLB did include invoices for Southern Earth Sciences for soils testing and G&W Engineers for engineering. Mr. Strickler's report noted that RLB failed to account for soils testing in its bid. The only costs he allowed were those for G&W Engineers which may have been incurred for additional engineering due to the realignment. He also noted, the cost of testing should not have changed due to the realignment and, therefore, should not be included within the damages calculation. (Supp. R4, tab 66 at 43-44) As a result, Mr. Strickler excluded any cost for testing & engineering because it was not included within RLB's bid as a separate line item but did include the cost of the line item for G&W Engineers in the amount of \$24,939 (supp. R4, tab 66, ex. 3 at 3, note 17). Mr. Boyd testified he "believes" he included testing costs in his bid but under the wrong line item, line item 24 – "drag line mats" (tr. 1/199). That line item bid is only \$30,000 (supp. R4, tab 38 at 4). Additionally, RLB's claimed amount for testing does not account for non-embankment testing under the contract (R4, vol. II at §§02316-6 ¶3.4, 02731-4¶1.5.1 (6), (7), 02632-4¶2.1.3). We find RLB's embankment additional related testing cost is \$24,939.

(5) Indirect Costs: Home Office Overhead, Profit & Bond Cost

59. The REA included a 26.41% overhead rate based upon actual costs incurred between 1 January 2008 and 30 November 2008 (app. Claim, tab 21). The DCAA adjusted the indirect cost pool for the identified unallowable costs and calculated a new rate of 21.30% (see finding 31). The government and RLB now agree on this percentage (supp. R4, tab 66, ex. 3 at 3 note 20; app. reply br. at 24, item 20). Likewise, RLB now adopts the profit rate (8%) and bond cost (1.044%) stated in the Strickler Report (app. reply br. at 24, items 21, 22). Therefore, we find the appropriate overhead rate to be 21.30%, the profit rate to be 8%, and the bond rate to be 1.044%.

percentage of 68% of \$130,466.43 with no explanation in the associated notes.
(App. reply br. at 24, item 18)

60. We find RLB's total incurred cost for all embankment work to be calculated as follows:

Net Equipment Cost	\$1,575,321.48
Net Labor Cost	\$472,113.69
Subcontract Cost (Weeks Marine)	\$300,413.40
Laborer Travel Costs (Hotels)	\$96,763.06
Testing and Engineering	\$24,939
Per diem for traveling laborers	\$67,842.54
Total direct cost of embankment work	\$2,537,393.17
21.30% Home Office Overhead	\$540,464.75
8% Profit	\$202,991.45
Bond @ 1.044%	\$26,490.38
Total Cost for Embankment Work	\$3,307,339.75

Unquantifiable, Non-Reimbursable Costs

(1) Settlement & Placement Outside Section

61. Mr. Strickler identified additional items that he did not deduct from his estimate but, in his opinion, should not be recovered by RLB because they are not recoverable under the contract and were not deducted from RLB's claim. These items include such things as reimbursement for settlement of dirt placed upon the levee, dirt placed outside the contractual bounds of the contract, dirt not placed within the requirements of the contract, etc. (Supp. R4, tab 66 at 16, 18) The contract is clear that RLB was allowed, but not required, to install settlement plates but if it chose not to do so, it would not be paid for any settlement that occurred in the levee (R4, tab 1 at 02332-2, ¶ 1.3.2, "Settlement"; at 02332-4, ¶ 1.4.3, "Forfeiture of Payment for Settlement of Foundation"). RLB elected not to install settlement plates because Mr. Boyd did not think settlement was an issue on this job (tr. 1/68-69, 2/198). It is undisputed there was settlement of the dirt placed on the levee. However, as Mr. Strickler also points out, there

is no way to know how much settlement occurred since the settlement plates were not used (supp. R4, tab 66 at 16). RLB's total cost claim includes all costs that were incurred placing dirt on the levee, including costs for dirt that later settled that are not reimbursable under the contract. The same issue exists for placing dirt outside of section. (Supp. R4, tab 66 at 17-18) The final as-built survey found RLB had placed dirt outside the contractual boundaries, which was not reimbursable under the contract (R4, tab 25). Mr. Boyd effectively established the inaccuracy of this survey but in doing so did not question the fact that some dirt was placed outside the contractual limits (*see* finding 24). The problem is we have no way of knowing the quantity or its associated cost included in RLB's claim and neither party has attempted to quantify it. As a result, we find these costs are included within RLB's claim, are not readily quantifiable but should not be reimbursed in RLB's claim.

(2) Cost Claimed but Paid Under Other Line Items

62. Mr. Strickler also found RLB should not be reimbursed for items that were bid, and are compensated, in other line items of the contract but are currently included within RLB's total cost claim. One such item is the fact that Mr. Boyd shifted approximately 10% of the bid embankment cost (\$1.04 of the \$10.04 estimated bid cost) into another bid line item (supp. R4, tab 66 at 36). Although the exact costs are unknown, these costs would be reimbursed under RLB's claim methodology despite the fact they have presumably already been paid under another line item. In a similar manner, the contract required RLB to make several repairs ("hurricane cuts") to breaches that had previously been made in the levee (*see* supp. R4, tab 43, Drawing No. 9, "Typical Repair Levee Section"). Mr. Boyd testified that, in RLB's bid, he put the costs to repair the seven levee breaches in CLIN 0005, "Gas Lines," for the pipeline repair work (tr. 1/73-74, 201-02). Mr. Roy testified that his calculation of total embankment costs did not include any deduction for costs for levee repair work that RLB included under CLIN 0005, "Gas Lines." When asked why not, he stated "No, that's embankment work." (Tr. 2/28) Thus, Mr. Strickler asserts that under RLB's claim methodology it is seeking to be paid twice for costs associated with the levee repair work. Similarly, RLB's bid includes mobilization and demobilization costs (CLIN 0001) for various items of work associated with the embankment work. RLB's claim methodology makes no attempt to remove these costs from its embankment-only claim, even though RLB has already been compensated for these costs under CLIN 0001. Similarly, in its "other work" calculations, Mr. Roy has not assigned any mobilization and demobilization costs to any non-embankment work. (Supp. R4, tab 66 at 37-38) We find these costs are not readily quantifiable but should not be reimbursed as part of RLB's claim.

(3) RLB Internal Issues /Inefficiencies

63. Based upon his review of the project documents, Mr. Strickler also found that, "there were multiple RLB internal issues which caused increased costs for which RLB

should not be compensated” including, poor surveying practices, poor construction practices that increased the moisture content of the soil, deviation from contract specifications requiring double-work; out of sequence work; and general poor productivity issues. (Supp. R4, tab 66 at 29-35) His conclusions, for the most part, are based upon a review of the QARs and videos taken on-site during the work (*id.*). The government presented four videos at the hearing in an attempt to demonstrate RLB’s inefficient practices during performance (tr. 3/97-99; supp. R4, tab 14). Based upon Mr. Boyd’s testimony in rebuttal explaining each of the actions in the videos, we are not persuaded these videos establish RLB used inefficient practices on the job (tr. 3/133-36). We find Mr. Strickler’s thorough review of the QARs more persuasive but it does not factor in the possible impact of the government’s actions, or inaction, in contributing to any problems in performing the work. Although not readily quantifiable, we find some costs were the direct result of inefficiencies attributable to appellant and should not be reimbursed.

DECISION

Appellant, as the party claiming the benefit of the adjustment, bears the burden of proving the amount of loss with sufficient certainty so that the determination of the amount of damages will be more than mere speculation. *Wilner v. United States*, 24 F.3d 1397 (Fed. Cir. 1994); *Lisbon Contractors, Inc. v. United States*, 828 F.2d 759, 767 (Fed. Cir. 1987). In order to prevail, appellant must prove three elements: (1) liability— that the government did something that changed the contractor’s costs for which the government is legally liable; (2) causation—that there exists a causal nexus between the basis for liability and the claimed increase in costs; and (3) resultant injury. *Servidone Constr. Corp. v. United States*, 931 F.2d 860, 861 (Fed. Cir. 1991). The government concedes the first two elements as they relate to the realignment (findings 33, 34). The crux of the dispute before the Board is the third element, i.e., the magnitude of the cost impact on appellant’s performance flowing from the realignment of the ditch and how the financial impact should be measured.

Impact of the Realignment

Appellant argues the movement of the centerline of the excavation pit to the west resulted in a loss of dry material which would have been placed directly onto the levee with little or no processing, requiring RLB to utilize wetter material which required additional processing beyond the requirements of its bid. Additionally, the movement of the excavation pit not only increased the moisture content of the dirt requiring more processing, it also reduced the area where wet dirt could be processed as a result of the reduction of the width of the berm between the excavation pit and the levee. The realignment also reduced the volume of dirt produced for construction of the levee, reducing the elevation of the levee from +12.5 feet to +8 feet. (App. br. at 5-7) In summary, appellant argues the realignment resulted in a cascading chain of changes in

the manner of performance, which was exacerbated by the lack of contract administration and guidance by the government, resulting in increased costs of performance.

The government concedes the realignment did reduce the amount of borrow material, did cause an increased moisture level (higher pit-to-fill ratio) and reduced the available berm area for drying the dirt resulting in an increase in appellant's cost of performance (findings 33, 34, 40). However, the government argues the impact of the realignment was minimal because RLB did not bid the job with the intent of using a "direct placement" approach, directly placing borrow material onto the adjacent levee and, even if it had intended to do so, the realignment had no impact on appellant's inability or decision, to not use that method because appellant's bid seriously erred in its estimate of the optimal moisture content of the soil and the borrow material in the borrow ditch (gov't br. at 2-3). In addition, the government argues appellant's own inefficiencies and lack of experience in performing this specific type of work contributed to the increased cost of performance (*id.* at 81-93).

Since the government concedes entitlement and, based upon our findings above, we conclude that the realigned borrow pit, when combined with the government's lack of timely contract administration, resulted in a significant impact upon appellant's performance of the work (findings 10, 13, 16-20, 21-23). We now turn to the financial measurement of that impact.

Method of Proof: RLB's Total Cost Claim

The basic method of proving the quantum resulting from an equitable adjustment is the difference between the reasonable cost to perform the work as originally required, and the reasonable cost to perform the work as changed. See *B.R. Servs., Inc.*, ASBCA Nos. 47673, 48249, 99-2 BCA ¶ 30,397; *Buck Indus., Inc.*, ASBCA No. 45321, 94-3 BCA ¶ 7,061. The realignment occurred before the work began. Appellant argues it was impossible to breakout the specific costs resulting from the realignment and the resulting changes that flowed from that action in its claim given the nature of the work and the fact it was only after work began that the parties became aware of the impact the realignment would have (finding 29; app. br. at 33-35). The government does not challenge this assertion. We agree that there is no way to specifically segregate the costs associated with the realignment.

Given it could not segregate the costs associated with the change, appellant chose to employ what it refers to as a Total Cost Claim method asserting it is entitled to the "reasonable value" of the work" as measured by the total cost of excavation and compact fill work minus the amount already paid for the work (finding 29; app. br. at 7). Appellant sometimes refers to its claim as a modified total cost claim because it sought to remove all non-embankment work costs (app. br. at 32-33; app. surreply br. at 10). However, it did not modify its claim by recognizing any costs that resulted from its own

fault and asserts there is no reasonable way to quantify such costs (finding 29; app. br. at 8).

Although often stated, it bears repeating that the total cost method is not preferred because it assumes that all additional costs of performance are solely the government's fault. As a result, courts and boards have developed four factors, as safeguards, that the claimant must prove in order to employ this method of proof: (1) the nature of the particular cost is impossible or highly impracticable to determine with a reasonable degree of certainty; (2) the contractor's bid or estimate was realistic; (3) the contractor's actual incurred costs were reasonable; and (4) the contractor was not responsible for any of the added costs. *Raytheon Co. v. United States*, 305 F.3d 1354, 1365-66 (Fed. Cir. 2002). Appellant argues that it has proven these four factors and, consequently, the total cost method is not only an appropriate method to establish its damages but that it is the only way to calculate its damages (app. br. at 31-49).

The government counters that application of the total cost or modified total cost methodology is not appropriate because, based upon the record, appellant's claim does not meet the requirements for application of those methods (gov't br. at 3). We have a more fundamental problem with appellant's professed use of the total cost method because, in fact, its claim does not apply the total cost method formula. The basic total cost formula is the difference between the bid cost of the contract and the actual total cost of performing the contract as changed. *Raytheon Co. v. White*, 305 F.3d 1354, 1365 (Fed. Cir. 2002). Although both parties refer to appellant's claim as a total cost claim, appellant's claim only seeks payment for the total value of its embankment work minus the amount it has already been paid. Appellant might have intended the amount already paid to represent its cost under the original bid but appellant does not characterize it as such and there is no evidence to support its use as such. Therefore, we conclude appellant's claim does not meet the requirements of a total cost claim.

Even if appellant intended the amount paid to represent the bid amount we would reject it as such given the structure of this contract. The bid cost, as used in the total cost method, serves as a baseline for what the work should have cost absent the factors that caused the overrun. That is the reason courts and boards have imposed a requirement that the bid was realistic. Here, the bid was a dollar amount per CY applied against an estimated number of CYs placed for purposes of the bid competition, with the final payment to be determined by the final amount of CYs of dirt actually placed. Consequently, there was no fixed total dollar bid; the bid price was the dollar amount per CY. The only way to determine an accurate dollar cost estimate for what the work would have cost absent the realignment is to multiply the bid price by the CYs of dirt actually placed. Per our findings, there is no accurate estimate of the CYs actually placed (finding 24). Appellant's brief asserts the only undisputed measurement of CYs placed is the one invoiced and applied in its claim (app. reply br. at 21 n.41). We disagree. The government argues that its final survey contradicts appellant's assertion. Appellant's

own witness, Mr. Boyd, after credibly challenging the accuracy of the government's final survey, stated he does not believe anyone knows how much dirt was excavated or placed (tr. 1/120). We agree with Mr. Boyd. Unfortunately, this leaves us without an accurate measure in the record of the CYs of dirt actually placed. Consequently, there is no way to apply the total cost method because there is no way to calculate the bid cost for purposes of measuring the cost of the work as unchanged.

An alternative method of calculating the bid amount would be to calculate the difference between the bid dollar amount per CY and the incurred dollar amount per CY. In fact, the government's expert, Mr. Strickler, made an attempt to do just that in his report comparing the original bid dollar amount per CY against an estimated dollar amount per CY cost associated with the work as changed to arrive at a total damage calculation based upon the CYs placed used by the CO in the COFD (finding 41). Appellant, applying Mr. Strickler's methodology, presented its alternative calculations in its brief (app. br. at 22). However, appellant went on to correctly point out in its brief that Mr. Strickler's methodology is flawed because any calculation of the dollar amount per CY costs incurred for the work as changed is dependent upon an accurate determination of the amount of dirt actually placed and there is no support in the record for the CY used in Mr. Strickler's calculations (app. br. at 21). We agree.

Appellant has proven its actual incurred costs for the work but has failed to support its claim under the total cost method of proof. We have also found it was impracticable for appellant to segregate its costs resulting from the change (finding 29). The government concedes entitlement and confronted with the government's clear liability we conclude the government's actions had significant cost impact upon appellant. However, the record does not establish whether all of the incurred costs in excess of the bid were solely the fault of the government. Accordingly, we consider whether we may make an award on the basis of a jury verdict. There are three elements required for a jury verdict. *Grumman Aerospace Corp. v. Wynne*, 497 F.3d 1350, 1358-59 (Fed. Cir. 2007). The first is clear proof of injury. Here the government concedes entitlement. Appellant has, therefore, established injury. The second element is that there is no more reliable method for computing damages. Given the change to appellant's manner of performance, it was impracticable to prove actual damages. Our findings establish appellant has also met this element of proof. The third element is that evidence is sufficient for a court to make a fair and reasonable approximation of damages; given the evidence in the record, we can do so. Our findings establish the total incurred costs on the project for the embankment work. As a result, we conclude that the evidence allows us to make a fair and reasonable approximation of the damages incurred.

We believe the evidentiary record here fully supports application of a jury verdict and we would be remiss if we were to deny appellant's recovery here where the evidence indicates the government's actions adversely impacted appellant's manner of performance of the contract. We found appellant proved actual burdened costs of


\$3,307,339.75 for the embankment work (finding 59). However, appellant has not met its burden of proving that the entire amount is attributable to the government and the realignment. Our findings establish there were costs included within appellant's claim for such things as settlement, dirt placed outside contractual boundaries, costs reimbursed under other line items, non embankment mobilization and demobilization costs and inefficiencies during performance that are attributable to appellant but should not be reimbursed. (Findings 61-63) Although these items are not readily quantifiable, we conclude we must account for them within our jury verdict.

In the nature of a jury verdict, we conclude that appellant is entitled to recover 65% of its total embankment costs, \$2,149,770.84, as a result of the government's actions. Subtracting amounts already paid, \$1,234,800, appellant is entitled to \$914,970.84. This amount is inclusive of the amounts granted in the COFD but not yet paid.

CONCLUSION

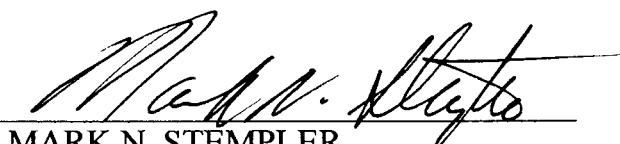
The appeal is sustained in the amount of \$914,970.84 for the reasons stated above. Interest pursuant to 41 U.S.C. § 7109 to run from 17 November 2009.

Dated: 3 January 2014




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

I concur



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

I concur



DIANA S. DICKINSON
Administrative Judge
Acting Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA No. 57638, Appeal of RLB Contracting, Inc., rendered in conformance with the Board's Charter.

Dated:

JEFFREY D. GARDIN
Recorder, Armed Services
Board of Contract Appeals