

ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of --)
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ADT Construction Group, Inc.) ASBCA No. 55307
)
Under Contract No. DACA09-03-C-0009)

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OPINION BY ADMINISTRATIVE JUDGE SHACKLEFORD

This is an appeal from a contracting officer’s final decision denying a claim for \$826,725.16 and a 278-day time extension for pre-construction delays arising out of a contract for the design and construction of a munitions maintenance facility at Nellis Air Force Base, Nevada. Although the contract in question was ultimately terminated for default and appealed to this Board (ASBCA No. 55358), the termination appeal is suspended pending the outcome of the subject appeal.

A five-day trial was held in Las Vegas, Nevada. The record in this appeal includes the transcript of the trial (tr.), the Rule 4 file submitted by the government in seven volumes (volumes 1A, 1B, and 2 through 6) (R4, tabs 1-80), a supplemental appeal file consisting of deposition exhibits submitted by the appellant in three volumes (supp. R4, tabs 1-113), an eight volume supplemental appeal file submitted by appellant (supp. R4, tabs 2001 to 2015), appellant exhibits submitted at trial (ex. 2016 to 2041), and government exhibits submitted at trial (ex. 1001 to 1012).

While only entitlement is before us, it was understood that the number of days of delay is an element of entitlement (tr. 1/7). The parties have filed sequential briefs - appellant filed the first brief which included a volume with proposed findings of fact and a separate volume of legal argument. The government replied with a volume of

proposed findings of fact which included responses to appellant's proposed facts and a separate volume with legal argument. Appellant made the third and final submission in three volumes - responses to government objections to ADT proposed findings, objections to government proposed findings, and reply legal argument.

FINDINGS OF FACT

1. ADT Construction Group, Inc. (ADT or appellant) is a Las Vegas-based general contractor and an 8(a) business enterprise (R4, tab 4 at 01041-43; tr. 1/45). ADT's project manager (PM) was Jess J. Franco (Franco), P.E., a retired U.S. Army colonel and a former district engineer with the U.S. Army Corps of Engineers (Corps) (tr. 1/66-68). Franco's responsibilities included identifying the project as an opportunity, preparing the proposal, putting together the project team, selecting and managing the efforts of the design team, and responsibility for the execution and closeout of the project (tr. 1/69-71).

2. ADT assembled a team of design firms in order to pursue the project, including URS Corporation as its primary subcontractor along with other engineering firms in various design disciplines (tr. 1/72-76). The URS project manager was Paul McMullin (McMullin), who is a retired Air Force officer with experience in military construction (tr. 3/179-80).

3. The project was awarded and administered by the Corps acting on behalf of the Air Combat Command (ACC) of the United States Air Force (AF) (tr. 5/82). The Los Angeles District of the Corps, which includes offices in Los Angeles, California, Phoenix, Arizona and Las Vegas, Nevada, administered the contract (gov't br. at 4, ¶ 16). The Corps' Sacramento District provided engineering support and was primarily responsible for the technical review of ADT's design submissions (tr. 1/73, 2/190, 2/228).

4. The Corps' project manager was Douglas Tillman (Tillman) who was located in Phoenix (tr. 2/182). Tillman was responsible for the project from concept development with the AF client through construction and project closeout (tr. 2/184).

5. Dennis Long (Long) was project manager for the ACC (tr. 5/81, 83). Roger Riddick (Riddick) was the administrative contracting officer for the Corps beginning in October 2003 and was located in Las Vegas (tr. 5/203-04). Michael Weber (Weber) was the contracting officer's representative (COR) from the start of the project until early 2004. He was located in Las Vegas. (Tr. 3/54-55)

6. Ron Musgrave (Musgrave) replaced Webber as COR during the project and was also located in Las Vegas (tr. 3/69). Tina Frazier (Frazier) was the contracting officer on the project and she was located in Los Angeles (tr. 5/168-69).

7. The End User of the project was the Air Force's 57th Equipment Maintenance Squadron. Master Sergeant Richard Egan (Egan) was the contractor's point of contact with the End User. (Tr. 1/120-21)

8. The RFP was under development by the government as early as March 2002 (supp. R4, tabs 71-72). From at least that date, the government planned to use the design/build method of project delivery (*id.*; tr. 2/207).

9. Early in the development of the RFP, at least as early as March 2002, Corps project manager Tillman and ACC project manager Long learned that the Department of Defense Explosives Safety Board (DDESB) would have to approve the project (tr. 2/195-96; supp. R4, tab 71). As of March 2002, both Tillman and Long understood that the DDESB would have to approve the project before even the issuance of the solicitation for the design and construction of the facility (tr. 3/30-31; supp. R4, tab 71).

10. Early drafts of the RFP allowed the project to be performed according to a "fast track" approach (supp. R4, tabs 75, 76). Under this approach, construction can start on those portions of the work for which the design is complete while other portions are still under design (tr. 2/187, 3/36, 62-63, 5/109, 181).

11. In August 2002, Tillman and Long learned that the DDESB would base its approval of the project on the final design of the entire facility (tr. 2/201-02, 2/206, 5/11-15; supp. R4, tab 74). With that information, the government, including Long and Tillman, recognized that certain modifications had to be made to the draft RFP (tr. 2/200-02, 5/112-15; supp. R4, tabs 72, 74). Changes were made to the draft RFP concerning project duration and language was added about DDESB's involvement in the process (tr. 2/202-05; supp. R4, tab 75).

12. In August 2002, Long advised Tillman internally that in hindsight, the project should have been delivered as an Invitation for Bids procurement based upon 100% complete design rather than as a negotiated procurement for design and construction services (tr. 2/206-07, 5/120-21; supp R4, tab 73, 74). However, at that time Tillman agreed that the government had gone so far down the road of a negotiated procurement for design and construction that it was too late to switch (tr. 2/207).

13. After learning that the DDESB would base its approval of the project on the final design of the entire facility, the government (including Tillman and Long) recognized that a fast track approach could not be utilized by the contractor (tr. 2/206, 5/117-19, 5/122; supp. R4, tabs 73, 74; ex. 2038).

14. Accordingly the government sought to delete references in the draft RFP to the permissibility of a fast track approach (tr. 2/206, 5/117-19, 5/122; supp. R4, tabs 73-74, ex. 2038).

15. In October 2002 the first COR, Weber, reviewed the draft RFP in advance of the solicitation in order to eliminate inconsistencies in the proposed contract documents (tr. 3/59-60; supp. R4, tab 76). Weber had learned about the nature of the DDESB's involvement from Long (tr. 3/6-7, 3/81) and in October 2002, Weber identified an inconsistency in the RFP between the fact that DDESB approval would be based on the final design of the entire facility on the one hand, and references to the permissibility of fast track, on the other (tr. 3/61-64; supp. R4, tab 76).

16. Weber suggested that the language regarding the permissibility of fast track be deleted from the draft RFP (tr. 3/63-64) and some of the language was taken out of the draft RFP, but other language was left in the RFP by mistake (tr. 2/209-214; supp. R4, tab 1).

17. On 21 April 2003, the U.S. Army Engineer District, Los Angeles, issued Solicitation No. DACA09-03-R-0004, requesting proposals for the negotiated procurement of an F-22 Munitions Maintenance Facility on Nellis AFB, Nevada (the project). The procurement was a 100% 8(a) competitive procurement. (R4, tab 1A at 00011)

18. The work was a design-build project described generally as follows:

The work consists of utilizing the design and as-built drawings of the existing Munitions Maintenance Facility (located on Nellis AFB) and design and construct the new F-22 Facility; the design includes one additional maintenance bay, demolition of a building...and all utilities for the new F-22 Maintenance Facility.

(Id.)

19. The solicitation included the clause prescribed at FAR 52.211-10, COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984), as follows:

The Contractor shall be required to (a) commence work under this contract within ten (10) calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than the number of calendar days set out in the Awarded Pricing Schedule (Schedule A is 510 calendar days and Schedule B is 450 calendar days[]).

The Contract[or] shall not commence the Construction Phase for 180 calendar days after the Government has accepted the final desing [sic]. This period is to allow for review and acceptance of the design facilaity [sic] by the Department of Defense Explosive Safety Board (DDESB)

(R4, tab 1A at 18 of 30) The solicitation also included FAR 52.249-10, DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984) as well as FAR 52.243-4, CHANGES (AUG 1987) (*id.* at 2 of 30).

20. The solicitation included Special Contract Requirements said to be applicable to fixed price design-build construction contracts. SCR 7, Sequence of Design-Construction – AUG 1997 provided that:

After receipt of the Contract Notice to Proceed (NTP), the Contractor shall initiate design, comply with all design submission requirements as covered under Division 01 General Requirements, and obtain Government review of each submission. No...construction may be started until the Government reviews the Final Design submission and determines it satisfactory for purposes of beginning construction. The ACO or COR will notify the Contractor when the design is cleared for construction.

(R4, tab 1A at 00128)

21. The solicitation also included SCR 8, Sequence of Design-Construction (Fast Track) which provided that:

After receipt of the Contract Notice to Proceed (NTP), the Contractor shall initiate design, comply with all design submission requirements as covered under Division 01 General Requirements, and obtain Government review of each submission. The Contractor may begin construction on portions of the work for which the Government has reviewed the final design submission and has determined satisfactory for purposes of beginning construction. The ACO or COR will notify the Contractor when the design is cleared for construction.

(*Id.*)

22. Specification § 01012, entitled Design After Award, included paragraph 1.10, Design and Construction Schedule and Design Submittal Requirements, which provided in part as follows:

1.10.1 This project shall follow the “construction starts after design is complete” method for design-build. Construction shall not begin for 180 days after the Government has accepted the final design....

1.10.2 Every feature of the project must be fully designed prior to the start of the construction process for that feature....

1.10.2.1 The following design grouping table describes the areas of design to be submitted. The Foundations track may be submitted concurrently with the site, Utilities & Communications Duct System track upon approval of the Contracting Officer to maximize efficiency of the D-B contract.

(R4, tab 1A at 00518)

23. In addition SCR 9, Constructor’s Role During Design – Jun 1998, provided that the key personnel of the contractor should be actively involved during the design process so as to effectively integrate the design and construction requirements. In addition to typical required construction activities, the contractor’s activities were to include, *inter alia*, “integrating the design schedule into the Master Schedule to maximize the effectiveness of fast-tracking design and construction.” (*Id.* at 00129) Finally, SCR 12, Design Conferences – Aug 1997, included “construction activities (fast tracking)” as one element to be discussed as part of the pre-work conference (*id.* at 00130).

24. Each of the foregoing references to fast tracking was left in the solicitation by mistake (tr. 2/209-14, 5/123-24).

25. The RFP included 10% conceptual drawings which were based on the existing 1998 Conventional Munitions Maintenance Facility at Nellis AFB (1998 CMMF) and the successful offeror was to design the project based upon the existing facility as modified by the 10% drawings which were furnished, and other provisions of the contract (R4, tab 1A at 00011, 00256, tab 1B). The solicitation required a Design Charette as follows:

After award of the contract, the Contractor shall visit the site and conduct extensive interviews, and problem solving discussions with the individual users, base personnel, Corps of Engineers personnel to acquire all necessary site

information, review user options, and discuss user needs. The Contractor shall document all discussions. The design shall be finalized as direct results [sic] of these meetings.

(R4, tab 1A at 00130)

26. At the time ADT prepared its proposal, it was aware of § 01012, Design After Award, and that portion of paragraph 1.10.1 which states that the “project shall follow the ‘construction starts after design is complete’ method for design build,” and understood that this language was inconsistent with the fast track approach because it described an approach to the job where construction would not commence unless the design of the entire facility had been completed (tr. 1/87-88).

27. We find as a fact that the solicitation included several clauses consistent with fast track and several clauses inconsistent with that design-build approach.

28. Franco testified that it was the intention of ADT to use the fast track approach because it was an alternative in the solicitation and the plan was to complete certain features of the design and start construction on those features while other features continued to be designed (tr. 1/78-80).

29. On 21 May 2003, ADT submitted a pricing and technical proposal to the contracting officer in response to the solicitation. The Table of Contents included an entry “Fast-Track Design Approach” (R4, tab 4 at 01056) and in describing the design/build approach the proposal provided:

The ADT Team will *Fast-Track* both the design and construction, similar to performance contracted design build projects.

(R4, tab 4 at 01085)

30. In that same proposal, ADT stated:

At the completion of the design phase of the project, the ADT design team will provide the Government with a complete set of new F-22 MMF drawings and specifications which will be forwarded to the DOD Explosive Safety Review Board for their review and approval prior to the start of construction.

(*Id.* at 01087)

31. Tillman was chair of the Technical Evaluation Team in charge of reviewing the technical proposals (tr. 3/44-45). Tillman, Long and others conducted in-depth reviews of each technical proposal including that of ADT (tr. 3/44-46; supp. R4, tab 81, § 3.2.1, tab 82).

32. A final price proposal was submitted on 11 June 2003 with the cost and pricing remaining unchanged (R4, tab 6).

33. On 17 June 2003, the project (Pricing Schedule B, Line Items 1-3 and Option Items 4 and 5) was awarded to ADT as Contract No. DACA09-03-C-0009 in the amount of \$2,691,475.00 (R4, tab 7 at 01121). ADT's proposal was incorporated into the contract. Notice to Proceed was issued by the government and received by appellant on 9 July 2003 (R4, tab 8) and since Pricing Schedule B allowed 450 calendar days for completion, the contract completion date of 1 October 2004 was established. Neither the award document nor the notice to proceed included any language acknowledging or challenging the ADT plan in its proposal to use the fast-track method of design/build. Nor is there any evidence that the issue was raised in any way by the government prior to award.

34. Section 01012 of the contract specifications, Design After Award, provided procedures for submission of designs for review and approval (R4, tab 1A at 00516 *et seq.*). Pertinent portions of that section follow:

1.10.3.1 The contractor shall include on the schedule a 21 calendar day period for the government to conduct a compliance review for each submittal. The compliance review conference shall follow the compliance review period. The contractor shall include on the schedule a 7 calendar day period for the government to conduct a backcheck review for design backcheck submittals.

1.10.3.2 The contractor shall include on the schedule a 3 calendar day period...for a compliance review conference related to each submittal; no meeting is required for backcheck submittals....

1.10.4 Each submittal shall be completed to the state/level commensurate with the stage of completion, i.e., 60%/100%, etc. The 100% or final submittal for review shall be a required submittal. Each design submittal shall have all

disciplines designed to a similar design completion level, i.e., all disciplines at 60% complete.

(R4, tab 1A at 00519)

35. Specification § 01012 also provided in ¶ 1.3 that deviations from the technical requirements were to be identified in the cover letter transmitting the respective submittal, that deviations should not be assumed approved unless specifically approved in writing by the contracting officer, and further, that:

Such deviations, when not specifically approved by the Contracting Officer or when subsequently found at any time during the contract, shall be corrected by the Contractor at no additional time or cost to the Government. It is the Contractor's responsibility to clearly note features/aspects in his design or construction that are deviations to the contract requirements. The Contractor shall not assume silence on these issues by the Government to be a sign of acceptance.

(R4, tab 1A at 00516)

36. The parties used a system call "DrChecks" to enter and track comments on ADT's design submissions. DrChecks is an automated system by which government reviewers had the ability to enter comments on design submissions and ADT's design team had the ability to respond (tr. 1/118-19). Section 01012 of the specifications described the procedure as follows:

1.11.2 Automated review management system: All review comments shall be processed via the Government program called DrChecks. Copies of comments will be made available to all parties before or during the review conference. Unresolved comments/issues at the conference shall be resolved by immediate follow-on action. Valid comments shall be incorporated. The Contractor shall annotate the DrChecks file prior to the next design submittal.

....

1.11.4 The design documents will not be considered 100% complete and ready for construction, until all comments for correction have been incorporated to the Government's satisfaction and further back check reviews are deemed no

longer necessary. Review comments for correction will be based on compliance with the RFP document requirements.

(R4, tab 1A at 00520)

37. Based upon the foregoing, we find that ADT had to resolve comments in DrChecks before moving on to the next phase of design. Only the government could close out DrChecks comments (tr. 2/18, 3/165, 4/46).

38. After receiving the award and notice to proceed, ADT began to design the project (tr. 1/94).

39. The contract contained mandatory language concerning visiting the site and meeting with a number of parties, including the End User (R4, tab 1A at 00516, ¶ 1.6). However, the cited paragraph limited the impact of those meetings as follows:

The Contractor has the responsibility to establish the design of the project in accordance with the contract. The meeting(s) is intended to allow the Contractor an opportunity to discuss, clarify, and obtain an understanding, in a face-to-face setting, on issues, opportunities, or mission restraints still in question. The spirit of this meeting is not intended to adjust the contract in any manner but rather to allow the Contractor/Customer relationship to begin and grow. This meeting can be associated with a partnering session or can be a stand-alone meeting but needs to occur early in the design phase of the contract.

(*Id.*) To some extent this provision conflicted with the Design Charette provision (*see* finding 25) which required the contractor to consult with the users, *et al.*, and finalize the design as a result of those meetings.

40. Partnering was proposed by SCR 14 in order to develop a cohesive building team between the contractor and the government. By its terms, participation was voluntary. (R4, tab 1A at 00131)

41. On 17 July 2003, ADT conducted a pre-design visit of the 1998 CMMF facility and met multiple government representatives, including the AF Base Civil Engineer, the End User and the Corps of Engineers (tr. 1/97-98; R4, tab 38 at 02258-60).

42. In July 2003, the End User expressed a desire to have full access from the road to the facility (tr. 1/185-86). The contract called for an access driveway connecting the adjacent road (First Street) and the new parking area. The driveway merely had to be

adequate to allow a garbage truck to access the new dumpster enclosure. (R4, tab 1A at 00259, ¶ 2.1.1) The End User wanted full access to the facility such that a vehicle with a trailer could come in on a driveway, have the ability to turn with as much freedom as possible, pull into a bay, unload the trailer, pull out of the bay and exit in the other direction (tr. 1/177). There was no specific contract requirement for the width of the access from the adjacent road to the facility.

43. The combination of steep topography, the need to compact a large amount of fill material, the End User's request for full access, the various fixed points around the site (including the road and parking lot), and the contract requirement that the site have positive drainage slopes between 2% and 5% away from the facility created a challenge for the civil design (tr. 1/167-99).

44. The contract design criteria provided in part in ¶ 2.1.3, § 01011, as follows:

Design shall take into consideration topography and natural characteristics of the area, including climatic conditions, prevailing winds, etc. It shall be the Contractor's responsibility to protect existing features. Site work and utility designs shall provide a functional design solution requiring only routine maintenance through its design life. Emphasis shall be placed on positive drainage away from the structure. Site planning, development and the Contractor's operations shall at all times take into consideration that other facilities bordering the site must remain fully operational during the performance of the work. Innovative, creative and/or cost saving proposals, which fulfill these criteria, are encouraged and will be evaluated accordingly.

(R4, tab 1A at 00260)

45. As part of its design work ADT needed to establish where the building would sit, the finish floor elevation or vertical location of the building, which would determine "how much earth [has] to be haul[ed] in" and which also determines what the drainage slopes are going to be (tr. 1/170-71).¹

46. On 30 July 2003, Franco of ADT sent an email to Weber stating it was looking to expedite some actions in order to "Fast Track the project" (R4, tab 12 at

¹ The horizontal location, according to Franco, is set by the Explosive Safety office (tr. 1/173).

01227). ADT was seeking to expedite permission for its geotechnical engineering firm to get on the site (tr. 1/109-10).

47. On 30 July 2003, ADT submitted 25 Requests for Information (RFI) to the government (R4, tab 10). RFI 11 asked the question:

Please provide finish floor elevation required or do we use the Clark County standard?

(R4, tab 18 at 01618)

48. ADT phrased the question in reference to Clark County because Nellis AFB is in Clark County, Nevada and in ADT's experience, Clark County requirements are frequently used on projects there (tr. 1/168-69).

49. Weber responded on 16 September 2003:

Per Verbal guidance from Nellis AFB, Mr. Don Brown, on 31 JUL 2003, Compliance with Clark County Standards concerning finish floor elevation is acceptable.

(R4, tab 18 at 01617) The Clark County standard requires any structure to be at least 18 inches above the center line of the road adjacent to the structure (supp. R4, tab 7 at 8; tr. 1/170-71).

50. On 31 July 2003, ADT conducted the Design Charette conference. It was attended by the Corps (with representatives of the Las Vegas Resident Office, the Phoenix office and the Sacramento District attending), the AF including the End User (57th Weapons Squadron) and ADT's design team (R4, tab 16 at 01279-82; tr. 1/98-99).

51. On 31 July 2003, ADT submitted its initial design schedule (R4, tab 16 at 01279-82; tr. 1/113). The schedule showed most of the design work starting on 1 August 2003. The 100% site/civil design was scheduled for completion on 18 September 2003. The 60% structural, the 60% architectural, 60% mechanical, 60% electrical and 60% fire suppression were all scheduled for completion on 11 September 2003. The total design was scheduled for completion on 12 December 2003. (R4, tab 16 at 01282)

52. ADT proposes a finding that the schedule reflects ADT's intent to pursue the fast track by depicting a plan of having certain design work 100% complete in advance of other design work (*see* ADT proposed finding 103). The Corps, on the other hand proposes a finding that the schedule was merely in keeping with the contract requirement to sequence some of the design tracks in advance of other design tracks (*see* government proposed finding 86).

53. We find that the contract requirement for sequencing design tracks (§ 1.10.2.1 of § 01012 of the specifications) on which the government relies, was evidence that the contractor was allowed to fast track the design, and appellant appropriately relied on that language and reflected its intent to pursue fast track by following the tracking sequence in the specification (*see* tr. 1/113-14).

54. Weber became aware in July 2003 in connection with the Design Charette meeting that ADT intended to pursue a fast track approach to the project and admitted that the government should have then told ADT that it could not pursue a fast track approach (tr. 3/75-76).

55. The schedule did not show any activity beyond design work (R4, tab 16 at 01282) and the government provided no feedback to or criticisms of the schedule (tr. 1/114).

56. During various meetings with the End User, ADT learned of a number of End User preferences (tr. 1/99-104). Particularly on 17 July 2003, ADT met with the End User and developed a list of “Pre-Design Discussion Items” that had been covered in that meeting. With respect to air conditioning, the entry stated:

There was great concern raised about the adequacy of the HVAC system in the Conventional MMF.

With respect to that concern, ADT added a comment as follows:

As part of the overall design effort, and as related to Spirit/Leed energy conservation approaches, the HVAC system will be looked at hard. Especially if humidity becomes an impacting factor, may look at a heat-pump system instead of the configuration currently in the specs. [emphasis in original]

(R4, tab 38 at 02258-60)

57. Franco testified that the discussion about the HVAC system was the most important item considered. The existing HVAC was improperly designed and improperly constructed. It utilized the evaporative cooling system which required a vent for air to flow through, but there was no vent in the existing facility, so the only way they would work was to open up the bay doors which essentially air conditioned the outside. And thus, while the End User wanted an air conditioning system “that would better meet their needs” (tr. 1/103-04), there is no credible evidence that the End User expressed a

preference for a water source heat pump cooling system rather than an evaporative cooling system or some other system.

58. The water source heat pump had a number of advantages as compared to an evaporative cooling system, including greater efficiency, compatibility with force protection requirements, compatibility with base design standards, lower humidity and better cooling (tr. 1/126-29). On 12 August 2003, ADT sent RFI No. 18, which asked:

Based on the test equipment which will be used in the bays, what is the maximum allowable humidity levels for these areas and/or minimums?

(R4, tab 16 at 01403-04)

59. ADT sent this RFI to obtain additional information concerning the type of cooling system to design for the maintenance bays in light of the End User's stated concerns regarding humidity levels, which were especially high in the existing facility (70 to 80 percent) and which they wanted reduced to about 40% humidity (tr. 1/115-17). ADT never received an answer to RFI 18 although there was some discussion about the issue and it was discussed within the DrChecks system (tr. 1/118).

60. On 29 August 2003, ADT submitted RFI No. 38 to Weber of the Corps, stating:

Due to the newly identified requirement for the bay relative humidity target to be 40%, we will design the bay HVAC system based upon a "water source heat pump". The HVAC units can be wall mounted, hung from the roof trusses, or floor mounted. Wall mounted units set above the overhead crane apparatus will provide maximum floor space. Is this application acceptable?

(R4, tab 16 at 01593, 01596)

61. The government did not respond to RFI No. 38 until the design review conference in October 2003 (tr. 1/129; *see* finding 79).

62. On 22 September 2003, ADT submitted a revised design schedule for the F-22 MMF. ADT stated that the changes were necessary "based upon requests for the incorporation of differing design requirements and [ADT's] initial internal quality control review." This revised design schedule extended the completion date for most of the Phase 1 design elements by seven to ten days. This amended schedule changed the completion date for the 100% site/civil design from 18 September to 29 September 2003. The 60% structural and 60% fire suppression remained 11 September. The 60%

architectural, 60% mechanical and 60% electrical were changed from a scheduled completion of 11 September to 25 September 2003. The scheduled completion of the total design was changed from 12 December to 24 December 2003. (Supp. R4, tab 59) This revised design schedule continued to reflect appellant's intent to pursue fast track by following the tracking sequence in the specifications.

63. The government provided no feedback or other input concerning ADT's 22 September design schedule revision (tr. 1/141).

64. On 1 October 2003, ADT submitted the 60% design documents as required by the contract. ADT represented in that submission that it included 100% site/civil, 100% lightning protection and 60% of the remainder of the design (R4, tab 30; tr. 1/143). ADT labeled its 1 October 2003 design submission as a 60% submission because the contract only provided for a 60% and a 100% submission. The design was in fact further along than 60%. (Tr. 2/12-13)

65. At the time ADT submitted its site/civil design on 1 October 2003, it was aware of the contract language specifying a maximum drainage slope of 5% (tr. 1/174). However, ADT submitted a site grading and paving plan wherein the positive drainage slope away from the facility in some areas exceeded the 5% maximum – around the edges of the property, the slope in one place was 25% and at one place in front of the facility, the slope was 10.37% (R4, tab 31 at 01958). These drainage slopes were apparent on the face of the submission (ex. 2017; tr. 1/179-81). In its narrative accompanying the design submission, ADT stated with respect to drainage, as follows:

ADT will ensure that existing drainage patterns will be maintained. Specifically, ADT's design will provide positive drainage away from the facility in all directions. The maximum slope of the drainage will be 5% and the minimum slope will be 2%. ADT is also aware that to the north side of the building, there is a very sudden change in elevation, which we will be accounted [sic] for. In some cases, drop inlets may be needed to ensure positive drainage away from the project site.

(*Id.* at 01831)

66. Franco defended the design of slopes outside the contract maximums explaining that drainage is determined by what you have to tie into and where you are located. In this case, the building had a fixed location which could not be moved, ADT had to tie into an existing road to the south in front of the facility and an existing paved parking area to the east of the building. With these fixed tie-ins, the drainage comes out to be whatever it has to be, and there is no choice. In addition, according to Franco, the

End User wanted full access from the road to the facility, but it was a very steep road. He concluded by stating that due to the foregoing factors, it was physically impossible to do the 5% maximum without taking away some of the full access the End User wanted. (Tr. 1/174-78)

67. In the period of time just before submission of the 1 October 2003 design, ADT learned from the End User that the DDESB was particularly interested in two things, lightning protection design and the exact position of the building so they could determine the munitions explosive radii. Thus ADT determined it should submit the lightning protection and the site plan designs at 100%. (Tr. 1/139-40)

68. ADT's 1 October 2003 design submission had a traditional building mounted lightning protection system with air terminals mounted on the roof and down conductors coming down off the roof into the grid system underground (tr. 4/9-10). This system deviated from the contract requirement for a catenary or overhead wire lightning protection system because ADT's electrical engineer designer overlooked that portion of the specification (tr. 4/11).

69. The fact that the original lightning protection design was a rooftop rather than a catenary system was apparent on the face of the drawing submission (tr. 4/11-14; ex. 2033), but ADT affirmatively stated in the narrative portion of the submission that it would provide a catenary lightning protection system (LPS) (R4, tab 30 at 01839).

70. The 1 October 2003 design submission included a statement outlining the design of the mechanical features, in part as follows:

The ADT design team realizes that the CMMF contract documents are provided for guidance only. As such, ADT will carefully consider all of the mechanical features of the CMMF to determine whether or not they will be required for the F-22 MMF. Along the same line, the ADT design team will incorporate the new force protection requirements for the F-22 MMF. For example, ADT will provide water sourced heat pumps as HVAC systems, due to the humidity requirements of the missile test equipment, and will conform to requirements per UFC 4-010-01 DOD Minimum Antiterrorism Standards for Buildings.

(R4, tab 30 at 01835)

71. As the subsequent findings indicate, the contract may have required evaporative cooling and if it did, the above quote adequately gave notice to the government that a substitution was proposed.

72. The contract incorporated by reference Military Handbook 1190, Facility Planning and Design Guide (Handbook) (R4, tab 1A at 00229-30). Chapter 10(F) of the Handbook specified the “ELIGIBILITY OF FACILITIES FOR AIR CONDITIONING, DEHUMIDIFICATION, EVAPORATIVE COOLING, HEATING, OR MECHANICAL VENTILATION” (ex. 2040 at 10-9). The government relies on the entries for active warehouses and aircraft maintenance shops for requiring evaporative cooling. For active warehouses, the Handbook states that “[e]vaporative cooling may be provided where the effective temperature control can be maintained” and for aircraft maintenance shops the Handbook says that “[e]vaporative cooling is appropriate where effective.” (*Id.* at 10-11) However, the facility was neither clearly a warehouse nor an aircraft maintenance facility – it was a munitions maintenance facility and the government has not shown that the requirements of Handbook 1190 on which it relies do in fact apply to the facility in question.

73. Long, initially and internally, approved the water source heat pump on 1 October 2003 (*id.*; tr. 5/144-45). Long testified that his internal approval was incorrect after he learned more about the subject (tr. 5/145). He testified that evaporative coolers are associated with high levels of humidity and air conditioning is associated with lower levels of humidity (tr. 5/144).

74. Long discussed the issue with Egan, who represented the End User and Egan advised Long that as part of his mission requirements, he needed a water source heat pump system as opposed to an evaporative cooling system (tr. 5/147).

75. In connection with considering whether to allow the water source heat pump as opposed to evaporative cooling, Long consulted with Horace Stepp (Stepp), a mechanical engineer with the USAF (tr. 5/150-53; supp. R4, tab 11). Stepp ultimately referred Long to Military Handbook 1190 and the requirement for evaporative cooling in warehouse and aircraft maintenance facilities. On 15 October 2003, Weber advised Egan with a copy to Long, that the contract was to proceed with evaporative cooling (tr. 5/152; supp. R4, tab 11). From receipt of the e-mail from Weber on 15 October 2003, Long knew that evaporative cooling would be required in the facility (tr. 5/153).

76. A design review conference was held on 23 October 2003 for the 100% site/civil design track, the 100% lightning protection system design track and the 60% review of the remaining design tracks (R4, tab 39). The conference was attended by representatives of the Corps, including Tillman from Phoenix, Weber from the Sacramento district (Las Vegas Resident office), Long from ACC and Egan representing

the End User, ADT representatives (including Franco) and a number of ADT design subcontractors (*id.* at 02261).

77. Franco discussed the responsibilities of ADT as general contractor and suggested that the project be started as soon as the 100% site/civil and lightning drawings were approved, then as each design package is approved the work could be started rather than starting construction after all the drawings are approved. Thus if the site/civil and lightning drawings are approved by the DDESB, Franco believed the earthwork could begin in November (*id.* at 02262). Franco clearly reiterated ADT's plan to pursue a fast track approach to the design-build project (tr. 1/154-55). No government representative (including Long, Tillman and Weber) stated during the meeting that ADT was not permitted to pursue a fast track approach (tr. 1/156-57). Only one government representative, Mike Orisco (Orisco), of the Base Civil Engineer office, voiced any concern about the fast track approach to the project articulated by ADT. Orisco stated that nothing in his area, which was communications, would begin until all the drawings are approved. (R4, tab 39 at 02261-62; tr. 5/69)

78. This comment by Orisco did not cause ADT concern about the fast track approach since the communications portion of the job would be constructed at the end of the job in any event. No one else from the government spoke up then or ever and said fast track was not permitted. (Tr. 1/159-61)

79. At the meeting ADT representatives discussed the use of a more efficient HVAC system and Long stated that evaporative cooling (swamp coolers) would continue to be used and that no variation would be allowed. Responding:

Mr. Franco stated that in accordance with the Contract requirements and the SPiRiT Program,^[2] the ADT Design Team was completing a life-cycle cost and energy savings analysis of both the Evaporative Cooling and Water Source Heat Pump HVAC systems. He further stated that an excessive amount of water could be saved by using the water source heat pump system. Mr. Franco then stated that he would forward the final analysis, upon its completion, to the

² SPiRiT is the Sustainable Project Rating Tool which was included in the contract and, among other things, required the contractor to optimize energy performance by reducing energy usage of building systems including HVAC. In connection with evaluating energy usage of competing systems, the contractor was to perform Life-Cycle costing in accordance with 10 CFR 436 (R4, tab 1A at 00193, 00203). Life Cycle costing was also called for in Military Handbook 1190 which was incorporated by reference (see ex. 2040, Ch. 8, ¶¶ B.2, B.4 and Ch. 10, ¶ A.1.b).

Government for a final decision on which HVAC system would be incorporated into the F22 MMF.

(R4, tab 39 at 02262)

80. As of the 23 October 2003 conference, ADT believed that the government had not yet made a decision about evaporative cooling versus water source heat pump and would base its decision concerning the type of cooling system to be used on the outcome of the life cycle cost analysis which had not been completed (tr. 1/205-07).³

81. Tillman heard the comments of Franco at the 23 October 2003 Design Review Conference concerning starting the project construction as early as November, as soon as the 100% civil and lightning protection drawings were approved, and believed Franco's statements were unrealistic in view of what Tillman knew about DDESB approval of the project. However, he did not state his view to ADT at the time or at any time during the project. (Tr. 3/26-27; supp R4, tab 33)

82. Tillman admitted that someone from the government should have told ADT at the October conference that ADT could not pursue a fast track approach (tr. 2/220-21).

83. Weber, the COR, also attended the 23 October 2003 Design Review Conference. He acknowledged that at the conference, Franco described pursuing a fast track approach. At the hearing, Weber admitted that the government should have told ADT during the conference that a fast track approach was not allowed. (Tr. 3/77-78)

84. At the 23 October 2003 Design Review Conference, it was reported that no one had as of that date sent ADT's design submissions to the DDESB (tr. 1/161-62). It was decided at the conference that Don Brown (Brown) of the base civil engineering office would forward the 100% site/civil and lightning drawings to the DDESB upon receipt of same from ADT. As agreed, the 100% drawings were to include all revisions discussed during the meeting. (R4, tab 39 at 02263)

85. On 4 November 2003, ADT transmitted the 100% site/civil and 100% lightning protection designs to Brown for transmission to the DDESB. In the letter, Franco reiterated ADT's intent to follow the fast track design approach stating that "achieving the DDESB's approval for the initiation of Construction is critical to our starting the site civil construction portion of the Project." A copy of the letter was sent to Weber, the contracting officer's representative. On 5 November 2003 Brown advised

³ While the government proposes a finding in its brief (No. 113) that it agreed to wait for the analysis before making a decision on the type of cooling system to be required, on cross examination Long seems to say they were always going to require evaporative cooling, notwithstanding the outcome of the analysis (tr. 5/152-54).

that he would “take the complete package to [the]...Safety Office to be forwarded to the DDESB for approval.” (R4, tab 36 at 02208-12; tr. 1/162-63)

86. Weber admitted at the hearing that at the time he received ADT’s 4 November 2003 letter, the government should have notified ADT that a fast track approach was not permissible (tr. 3/79-80).

87. The contract documents included in the RFP (the 10% drawings) showed glass in all the bay doors as well as the administrative doors (R4, tab 1B at 00956; tr. 1/243). On 17 July 2003, at the Pre-Design meeting, the explosive safety person for the base advised ADT that they had performed a glass safety analysis which they submitted to the DDESB and the requirement had changed so that glass should no longer be provided in any of the bay doors. Thus, ADT modified the drawings to show no glass in the bay doors, with glass only in the administrative doors. That is what was submitted in the 1 October 2003 60% drawings. (Tr. 1/246-47) The minutes of the 23 October 2003 Design Review Conference do not reflect any discussion about glass in the doors (R4, tab 39 at 02261-63).

88. On 13 November 2003, the Chief of Weapons Safety, ACC, transmitted the design drawings for the lightning protection system to headquarters for transmittal to the DDESB, requesting final approval and priority processing. The letter stated that DDESB had previously provided preliminary approval of previously submitted data and final approval was contingent upon submission of lightning protection system drawings. It was indicated that ACC/SEW concurred with the design drawings which utilized air terminals to mitigate hazard potentials, not a catenary system. (Supp. R4, tab 23; tr. 5/134-35)

89. The contract included several provisions related to energy conservation. The findings proposed by the parties differ primarily over the degree to which such provisions were requirements or mere goals. Our findings with respect to those provisions follow.

90. Section 01010 of the Technical Specifications, General Project Description and General Design Requirements, provided in part as follows:

2. DESIGN

The project shall be designed and constructed in accordance with the criteria contained herein and using industry standard materials and efficient practices. The building design and materials selected shall be energy efficient, durable, and easily maintained. The Contractor shall be responsible for the professional quality, technical accuracy and coordination of

all designs, drawings, specifications and other documents or publications upon which construction is based.

The objective of this contract is to design and construct the required facility as described in this document. The F-22 Munitions Maintenance Facility shall be based on the Conventional Munitions Maintenance Facility, Nellis AFB, FY-98, project as modified by the F-22 Munitions Maintenance Facility 10% drawings (see drawings in attachments) with revisions noted in Specification Section 01011. The project shall be compatible with the surrounding environment, and shall conform to the Nellis Installation Design Guide.

(R4, tab 1A at 00224)

91. Paragraph 6 of § 01010 of the technical specifications, SUSTAINABLE DESIGN CONSIDERATIONS, provided in pertinent part as follows:

6.1 Sustainable Design Techniques

Sustainable Design techniques shall be considered as they relate to site design, site engineering, building design, and building engineering. Techniques which conserve energy, improve livability, and can be justified by life cycle cost analysis as cost effective are encouraged....The following paragraphs define the goals and general objectives for inclusion of Sustainable Design Considerations in this project....

6.2 Goals and Objectives of Sustainable Design.

6.2.1 The overall USACE goal of Sustainable Design is to be environmentally responsible in the delivery of facilities....

....

6.3 Sustainable Design and Construction of the Built Environment. Design and construction of sustainable buildings should be in accordance with the following concepts:

....

6.3.6 Water--Site design strategies that maximize natural filtration of rainwater and consideration [sic]. Water conservation is enhanced by low flow plumbing fixtures, water appropriate landscaping and HVAC and plumbing system design;

....

6.4 Documentation of Sustainable Design. The Contractor shall analyze the project using the Sustainable Project Rating Tool (SPiRiT v.1.4), dated April 2001, of the U. S. Army Corps of Engineers and report the finding to the Contracting Officer, who shall notify headquarters....The goal (though not a requirement) is to meet a bronze rating.

(*Id.* at 00251-52)

92. SPiRiT “is derived from The U. S. Green Building Council LEED 2.0 (Leadership in Energy and Environmental Design) Green Building Rating System.” A bronze rating is the lowest of the SPiRiT ratings. (R4, tab 1A at 00196)

93. While the water source heat pump system designed by ADT complied with the End User’s request, met force protection requirements, and complied with the base design standards (tr. 1/205-07), it did not comply with the Military Handbook 1190 requirement for an evaporative cooling system if the munitions maintenance facility is indeed an active warehouse or an aircraft maintenance shop.

94. A consultant to ADT, Celtic Energy, Inc., conducted a life cycle cost analysis of the water source heat pumps versus an evaporative cooling system (tr. 3/218-230; supp. R4, tab 56). The analysis was conducted by Christopher Halpin (Halpin), an engineer who was also president and founder of Celtic. Halpin was a certified energy procurement professional, was an accredited LEED professional, a registered professional engineer and had performed energy efficiency analyses for various government agencies (tr. 3/207-12).

95. Halpin has been working exclusively in the field of energy efficiency consulting for 22 years focusing on energy efficiency, sustainable design, SPiRiT and LEED (tr. 3/208-09).

96. On 25 November 2003, Celtic Energy provided ADT with a life cycle cost analysis of the water source heat pumps versus evaporative cooling system which concluded that the lifecycle costs for a water source heat pump were lower than for an evaporative cooler (R4, tab 38). On 20 January 2004, ADT sent the analysis to the

government and it was received in the Corps Las Vegas Resident office on 23 January 2004 (R4, tab 38 at 02240). In that submission ADT requested that the Government make its decision as soon as possible so that it could complete the 100% design documents (*id.* at 02242). Franco testified that ADT held onto the analysis from 25 November 2003 until 20 January 2004 because of two things that were occurring at the time. First, they were double checking the Celtic analysis to make sure the expected life times of the equipment were appropriate in the industry and in Southern Nevada. (Tr. 1/211-12) Second, the End User was trying to get an exception from the requirement for evaporative cooling to allow the water source heat pumps and ADT was “looking to dove-tail [its] analysis that said water source heat pump is the best selection by life-cycle analysis, to the efforts” the End User was exerting and did not want to undercut them (tr. 1/212-13).

97. Franco further testified that as of 20 January 2004, ADT still believed that this was a fast track job and the fact ADT was fast tracking the project design and construction made him more comfortable in waiting to dove-tail the life-cycle cost analysis with the End User’s efforts to secure an exception since the initial effort is earthwork and foundations, and the HVAC can be dealt with later (tr. 1/214).

98. Franco testified that if he had known in November 2003 that the government was not going to allow ADT to pursue fast track, he would have immediately given the analysis to the government and insisted upon a short decision time. Had that decision been to not shift to water source heat pumps, he would have immediately designed the job for evaporative cooling. (Tr. 1/215)

99. The End User (Egan) did not give up on the water source heat pump and continued to pursue it for months through other channels (tr. 5/153-54).

100. On 28 January 2004, Long raised a question with several government personnel associated with the project including Tillman, concerning the required distance the lightning rods should be from the edge of the roof. Tillman responded that same day stating:

Interesting question since we aren’t supposed to have light[n]ing rods (air terminals) on the ... roof. RFP, section 01011, page 250, paragraph 2.10.3.8, Grounding and Light[n]ing Protection, requires a catenary lightning protection system, i.e., not attached to the building. Catenary [sic] system is suspended over the facility.

(R4, tab 40 at 02285)

101. On 3 February 2004, the government notified ADT that its original lightning protection design was rejected because it was out of compliance with the contract documents since it was a conventional rooftop system and not a catenary system (tr. 1/230-31). After receiving this notification, ADT designed a catenary lightning protection system (tr. 1/231).

102. On or about 2 February 2004, Albert Villano, a Nellis mechanical engineer, advised Brown that he concurred with ACC's recommendation to install evaporative coolers in the maintenance bays. Brown in turn forwarded a statement from Ramesh Patel challenging some of the costs in ADT's life cycle analysis and recommending the use of evaporative cooling as specified in the design. (R4, tab 43 at 02310-12) The Patel analysis was included in an internal email and was not forwarded to ADT (*id.*). Patel was not called to testify. We do not find the Patel analysis to be credible and find as fact that the water source heat pumps would have been a more cost effective alternative over the life of the system.

103. On 6 February 2004, the government impliedly rejected ADT's design of a water source heat pump when Weber directed ADT to "Design and provide HVAC system in accordance with the contract; use an evaporative cooling system" (R4, tab 41 at 02306). At no time did the government ever tell ADT why it believed the life cycle cost analysis did not support the selection of a water source heat pump (tr. 1/218-19).

104. Long testified that the water source heat pump was rejected due to the Military Handbook and that he had known since at least 15 October 2003 that the Handbook prohibited the use of water source heat pumps at the F-22 facility (tr. 5/152-53). In fact, Long so advised ADT at the 23 October 2003 60% Design Review meeting (*see* finding 79).

105. After the rejection of the water source heat pump, ADT designed an evaporative cooling system. In order to design an evaporative cooling system, ADT needed the government's input with respect to the resolution of conflicting contractual requirements (tr. 1/221-24, 3/182-84, 187-89).

106. Section 01011 of the contract specifications, Specific Engineering and Design Criteria, required the HVAC design to conform to anti-terrorism standards and force protection requirements (R4, tab 1A at 00258 (¶ 1.5.1.14), 00261 (¶ 2.1.8), 00304 (¶ 2.9.1)). To ensure the safety of personnel, the force protection requirements called for the evaporative cooling system (which unlike a water source heat pump, had to be outside the building) to be placed on a 10-foot stand since it had to be 10 feet above finished floor levels. In addition, force protection and space appearance standards required the installation of a screen wall around the entire HVAC system. The screen wall had to be a certain distance from the unit so as to permit air to be drawn, which created a conflict with the doors. (Tr. 1/221-23, 3/184)

107. With the wall in place, trucks could no longer drive safely through the access doors of the maintenance facility or make a turn (tr. 3/185-86).

108. In mid- to late February 2004, during the investigation of an issue relating to a proposed communication vault, the government first became aware that the ADT site/civil design did not comply with the contractually required drainage slope requirements (R4, tab 77 at 03356-57). On 27 February 2004, during discussions with ADT, the Corps informed it that the Clark County standard for the finished floor elevation would no longer be used for the design (R4, tab 46). Thus ADT had to change the finish floor elevation and revise the 100% site/civil design package to reflect this change (*id.*).

109. On 3 March 2004, the government and ADT's design team met to discuss various design issues, including revisions to the site/civil design (R4, tab 48 at 02404-07). In that meeting ADT's design team project manager, McMullin, stated that if evaporative coolers are required for the maintenance bays the force protection regulations would require the air intakes to be at least 10 feet above the ground elevation, which presented a design challenge. The government agreed to check with their mechanical engineers to determine the appropriate force protection requirements. (*Id.* at 02405-06)

110. On 9 March 2004, ADT transmitted the 100% lightning protection design package which incorporated a catenary system to the contracting officer, stating:

This Design Package is being provided in order that the Compliance Review can be completed and to allow for immediate submission to the Department of Defense Explosive Safety Board (DDESB). Per the DDESB's previous correspondence, it is our understanding that upon approval of this Design package and the previously submitted Site Plans the DDESB would provide authorization for construction (at least the Site earthwork portions) to begin.

As previously stated, it is ADT's intent to follow the 'Fast-Track Design Approach', as described in the Contract documents. Therefore, the Government's expediting of the processing of the 100% Lightning Protection Design Package is greatly appreciated.

There are no deviations or betterments involved in this Design Package.

(Supp. R4, tab 25; tr.1/231-32)

111. No one from the government told ADT it was mistaken in its assumption that upon approval by the DDESB of the lightning protection design and the previously submitted site plan, the DDESB would authorize construction to begin. Nor did anyone from the government tell ADT it was wrong in assuming it could fast track the project. (Tr. 1/232-33)

112. On 18 March 2004, ADT submitted a revised 100% site/civil design, stating that it was based upon the change in floor elevation as requested by the government on 27 February 2004. ADT stated:

This Design Package is being provided in order that the Compliance Review can be completed and to allow for immediate submission to the Department of Defense Explosive Safety Board (DDESB). Per the DDESB's previous correspondence, it is our understanding that upon approval of the Lightning Design Package and this revision to the Civil Design, the DDESB would provide authorization for construction (at least for the Site earthwork portions) to begin. The changes to the Civil design (elevations) does not affect the previously submitted Site Plan or the physical location of the F22 MMF (in relation to the other Buildings in Area 2).

As previously stated, it is ADT's intent to follow the 'Fast-Track Design Approach', as described in the Contract documents. Therefore, the Government's expediting of the processing of the 100% Civil Design Package and Site Plan is greatly appreciated.

(R4, tab 44 at 02377-78)

113. Franco compared the site/civil design submitted on 1 October 2003 with the design submitted on 18 March 2004 and concluded, based upon his judgment as a civil engineer, that the earlier design was superior to the later one. To attempt to get to the 5% slope requirement, they had to create a drainage structure immediately adjacent to First Street on the southeast edge of the asphalt surface which took away around 50% of the direct access from the road to the facility. Even with these changes one dimension still exceeded the 5% maximum slope requirement. A design review conference was held on 27 April 2004, and ADT requested a waiver for that one area. Later that day in an email chain, ADT explained that in order to reduce the excessive slopes they would have to add another structure coming from the west which would have choked off all but a very limited access to the facility. On 28 April 2004 the government initially granted the

waiver and allowed the slope to exceed 5%, however, a few hours later, Long admitted to having erred in approving the waiver, stating “per Paul Price, the user can’t operate on a slope greater than 5%.” (Tr. 1/186-93; R4, tab 50 at 02613-15, 02638-40; supp. R4, tab 37 at 02628-32)

114. On 5 April 2004, the government informed ADT’s design team that the government would eliminate the block walls and doors around the evaporative coolers but would require the coolers to be put on a stand. This was the design solution ultimately arrived at to balance the conflicting contractual requirements. (R4, tab 50 at 02515; tr. 3/191-92)

115. On 27 April 2004, ACC project manager Long sent the following e-mail to ADT:

When will the remainder of the drawings (Arch/mech/elec) be submitted? Reason for comment is that the AF Safety board/DDESB requested the complete set of final plans.

(R4, tab 50 at 02580)

116. Contrary to the finding suggested by the government (No. 142) we do not read this message as informing ADT that the government had made a decision to wait for 100% design submissions for all tracks before allowing the 100% civil and 100% lightning track submittals through the DDESB process. In fact, we find as fact that nothing in this email explicitly informed ADT that it did not have a right to pursue fast track (tr. 1/202).

117. In the 27 April 2004 design review conference, the parties also discussed the 100% lighting protection system design wherein the government requested additional information and modifications to the drawings (tr. 4/20-23; R4, tab 50 at 02611-14). None of the government comments presented in the 27 April 2004 conference pointed out a deficiency or lack of compliance with the contract documents of the lightning protection system design (tr. 4/23-45; R4, tab 50 at 02611-27). In certain cases, ADT’s electrical engineer made the request to change in order to accommodate the owner and facilitate completion and approval of the design. In other cases, ADT’s electrical engineer persuaded the government that no change was required. (Tr. 4/40-41; R4, tab 50 at 02611-27).

118. The government did not provide its compliance review comments to ADT’s second site/civil design within 21 days of the 18 March 2004 submission (by 8 April 2004); it took 40 days (tr. 1/195).

119. On 6 May 2004, ADT submitted its 100% design for the entire facility, which included the site/civil design, the revised lightning protection design, the revised HVAC design (including evaporative cooling in the maintenance bays). More generally, the submission included the architectural/interior/structural design track and the mechanical/electrical design track. (R4, tab 51 at 02688; supp. R4, tab 2001B at ADT10253-54) In the cover letter transmitting the 6 May 2004 design submission, ADT's Franco stated:

This Design Package is being provided in order that the Compliance Review can be completed and to allow for immediate submission to the Department of Defense Explosive Safety Board (DDESB). Per the DDESB's previous correspondence, it was our understanding that upon approval of the Lightning Design Package and the revision to the Civil Design, the DDESB would provide authorization for construction (at least for the Site earthwork portions) to begin. It is now our understanding that the DDESB desires to review the entire design. Therefore, we would appreciate it very much if the Full 100% Design Package can be forwarded from them as quickly as possible. It is still ADT's intent to follow the 'Fast-Track Design Approach', as described in the Contract documents. Therefore, the Government's expediting of the processing of this 100% Design Package is greatly appreciated.

(Supp. R4, tab 2001B at ADT10253-54)

120. The 100% design review conference for the remaining design tracks was set for 20 May 2004 (R4, tab 52 at 02755-56).

121. On 24 May 2004, the government approved the 5.49% positive drainage slope in the 100% site civil design based upon ADT's request to waive the 5% requirement in that one location rather than reduce access to the site (R4, tab 52 at 02806; supp. R4, tab 39 at 2748-49).

122. ADT's 1 October 2003 and 6 May 2004 design submissions conformed to the government's requirements in the RFP drawings and as stated in the 17 July 2003 Pre-Design meeting, to have no glass in the maintenance bay doors but to have glass in the administration doors. On 18 June 2004, the government advised ADT that for door glass to be permitted in the administration doors, a glass hazard analysis would have to be conducted. ADT's design manager suggested that the most expedient thing to do would be to remove the glass from the administration doors. On 23 June 2004, the government instructed ADT to modify its design to remove all door glass. On 27 June 2004, ADT

submitted modified drawings to show no door glass. (Tr. 1/243-48; ADT ex. 2023; R4, tab 53 at 02847-49, 02869, 02882-83)

123. In connection with its design submissions of 6 May 2004 and 9 July 2004, ADT made a decision to proceed to the next stage of design even though there were still open DrChecks comments (tr. 2/16-19).

124. In its 9 July 2004 letter, ADT stated:

It is our intent to facilitate a rapid transition into our construction phase, but we need your help to ensure that we have address [sic] any and all major design items that may yet be on the table.

(ADT ex. 2027) ADT made this request because the government continued to raise new issues about the design which was preventing design approval (tr. 2/16-17).

125. On 9 July 2004, ADT (Franco) sent an e-mail to the government (Musgrave) again inquiring about the status of the review of ADT's design. ADT noted that "nothing on the table effects [sic] the site work or foundation" (R4, tab 55 at 3050, tr. 2/21-22). On that same day in a separate email, Franco asked for a meeting with COR Musgrave to address any open design issues (R4, tab 55 at 2979). Also on 9 July 2004 ADT submitted a revised 100% design submission of the entire facility incorporating additional government comments (ex. 2027; tr. 2/15-16).

126. In July 2004, the government raised additional questions regarding the lightning protection system design and again requested that ADT's submitted drawings be modified. None of the design comments raised by the government pointed out a deficiency or a way in which ADT's lightning protection system design failed to comply with the contract documents. As an example, one of the 15 July 2004 comments requested that the drawings depict scale dimensions. ADT's electrical engineer made the change as an accommodation to the owner. The scaling of the drawings to depict actual dimensions was not necessary because the design intent was called out by the dimensions set forth in the drawings which take precedence over any measurements an electrical construction contractor might make based on the drawings. (Tr. 4/47-53; R4, tab 55 at 03035-45, ex. 2031) In any event, by 19 July 2004, ADT had clarified the questions raised by the government about the lightning protection system calculations (R4, tab 6 at 0388-98).

127. On 16 July 2004, ADT inquired about the status on "starting," stating that "nothing on the table effects [sic] site work or foundation" (R4, tab 55 at 03050).

128. Also on 16 July 2004, a new government reviewer, who “was just informed that there are live missiles in the bay,” raised a question about ADT’s fire sprinkler design (supp. R4, tab 63 at 03102-03). The new reviewer had apparently not been informed about previous discussions and was not aware of the status of the design effort (tr. 2/23-24). On 26 July 2004, after several days of email discussion, the government agreed to accept ADT’s fire sprinkler design as proposed (supp. R4, tab 63 at 03100-03).

129. On 27 July 2004, the Chief of the Weapons Safety Division, Air Force Safety Center, Kirtland AFB, NM submitted the “Final Explosive Site Plan Request” for the project to the DDESB for “review and approval” (supp. R4, tab 26).

130. By memorandum dated 5 August 2004 to the Headquarters Air Force Safety Center, the DDESB granted “final safety approval for” the project (supp. R4, tab 68 at 4458).

131. On 9 August 2004, the government sent a show cause letter to ADT, which stated:

Since you have failed to perform within the time required by the terms of the Contract, the Government is considering terminating said contract pursuant to the Clause titled “Default” of the contract clauses.

ADT was given ten days within which to show in writing whether the failure to perform arose out of causes beyond ADT’s control and without its fault or negligence. (Supp. R4, tab 28)

132. On 19 August 2004, ADT responded to the show cause letter contending that it had not failed to pursue the project in a timely manner and stating in part:

Since the beginning of the Project design, ADT has communicated to the Government its desire to pursue an expedited design/build approach; in accordance with Special Contract Requirement clause SCR 8[,] Sequence of Design-Construction (Fast Track), which enables beginning portions of the work for which the Government has reviewed the final design submission of a specific feature and has determined it satisfactory for the purpose of beginning construction.

(R4, tab 57 at 3129)

133. Also on 19 August 2004, the Corps (Riddick) notified ADT (Franco) via email that “final approval has been received from the DDESB” and attached the

DDESB's 5 August 2004 memorandum (supp. R4, tab 68 at 4455). ADT's design team manager learned independently of the DDESB approval on 19 August 2004 as well (R4, tab 58 at 03139). During the period 5 August to 19 August, ACC was experiencing email problems which delayed the notice (supp. R4, tab 68 at 4456). Riddick's email to Franco noted that the government had not yet received certain documents necessary for construction to begin, including a detailed construction schedule, a contractor's quality control plan, an accident prevention plan, an SF1413 for subcontractors, and current insurance information for prime and subcontractors (supp. R4, tab 68 at 4455; tr. 5/215-16).

134. The contract (§ 01012, ¶ 1.10.10), provides for a lead time of at least 90 days from the submission of the construction schedule until construction, including site work, could start. The contract contemplates that the 90 days could take place within the 180 day period after final design acceptance (R4, tab 1A at 00519).

135. After learning of the DDESB final safety approval of the project, ADT requested that the government grant approval of ADT's design. ADT sought this approval so that it could finalize negotiations with subcontractors and lock in subcontractor prices. (Tr. 2/35-36; R4, tab 57 at 3134)

136. By August 2004, Long was aware that ADT would be submitting a request for equitable adjustment or a claim to cover cost escalation (tr. 5/162-63).

137. In August and September 2004, both Long and Tillman understood that in order to modify the contract in the amount ADT was proposing, the programmed amount for the project (the amount approved by Congress) would have to be changed and they both knew that to change the programmed amount required Congressional action (tr. 2/235-38, 5/162-63). The programmed amount has not been changed (tr. 2/235-37).

138. On 7 September 2004, a meeting was held at Nellis AFB between several representatives of the Corps offices, representatives of ADT and its design subcontractor URS (tr. 1/52-54; R4, tab 64 at 03194-95, 03199). At that meeting, ADT's president, Ruben Vasquez (Vasquez) explained that he was concerned about the government delays to the design phase of the job, the progress of the job and cost escalation. A representative of the Corps told ADT to "suck it up or default" (tr. 1/54-55). At that meeting, ADT also advised the government that ADT anticipated cost escalation due to government delays in the range of \$1 million (tr. 1/54-56).

139. Government representatives working on the project including Tillman and Weber were aware of construction cost escalation in Southern Nevada and were aware that the Corps had to make changes to some of its projects in that region, including reductions in scope due to construction cost escalation (tr. 2/230-31, 3/109-11).

140. In September 2004, after the DDESB had granted its safety approval, the government was considering terminating ADT for default (tr. 2/231). At that time, the government was also aware that ADT had raised concerns about cost escalation and that as a small business it might not have the financial wherewithal to absorb the cost escalation that had occurred (tr. 2/232).

141. On 7 September 2004, ADT submitted its CQC plan. It was rejected on 21 September 2004 as incomplete. Musgrave, the project engineer, stated that the rejected plan was “missing several attachments that are referenced in the body of the document and information referred to in those attachments are requirements of the specifications.” ADT was directed to resubmit a complete quality control plan. (R4, tab 59)

142. As of 14 September 2004, the Corps was considering terminating ADT for default (tr. 2/231), was looking at all its options and among those options were to allow ADT to continue to perform or to terminate their right to perform (tr. 2/234). A couple of weeks later, the decision was made to allow ADT to continue to perform even though they were eventually terminated on 2 February 2006⁴ (tr. 2/234; ASBCA No. 55358, compl. and answer ¶ 19).

143. On 22 September 2004, the government advised ADT that its design had been reviewed by the designated authorities and was accepted for construction. ADT was told to make the appropriate distribution of plans and specifications as set forth in the request for proposals. (R4, tab 60) Franco testified that this approval of ADT’s design was a significant event:

Sir, this was hallelujah. This was finally after all this time we had approval of design. I can now start closing out subcontractor proposals, issuing letters of intent, and actually going forward with subcontractor bids, I mean, closing out subcontractor bids.

(Tr. 2/36-37)

144. On 23 September 2004, ADT submitted a revised CQC plan which was rejected on or about 24 September 2004 by Musgrave of the Corps as project engineer (R4, tab 61). On that same date in a separate letter, Musgrave, as COR, advised ADT that the government considered ADT responsible for project delays and that liquidated damages would be assessed starting on 2 October 2004 (R4, tab 62). ADT took issue with that position in a response on 29 September 2004 asserting that the government was

⁴ The testimony erroneously says termination for default was in December 2005.

responsible for the delays, including the government's disallowance of ADT's plan to fast track the project, and requested a 125-day time extension (R4, tab 63 at 03183).

145. On 1 October 2004, ADT requested, based upon the design acceptance, that the Corps issue a notice-to-proceed with the construction phase (R4, tab 65 at 03260; tr. 2/42). Riddick, the ACO, responded on 1 October 2004 stating that he was "not aware of any contract requirement that requires the Government to grant approval to the contractor to initiate the construction phase" since the notice to proceed for the contract had been issued and the design had been accepted (ex. 2028). ADT made this request even though the contract did not specifically call for a separate notice to proceed with construction because ADT continued to be concerned that the Corps was contemplating termination (tr. 2/40-42).

146. Based on the 1 October 2004 email from Riddick, ADT believed it had sufficient information and assurances to initiate construction and begin mobilizing (tr. 2/45-46). In order to proceed with construction, ADT needed an excavation permit from Nellis Air Force Base (tr. 2/47). ADT applied for that permit on 5 October 2004 by submitting the request on the appropriate form and hand carried the form to the appropriate government representative, the Base Civil Engineer, Brown (supp. R4, tab 32, tr. 2/47-48).

147. On or about 8 October 2004, ADT submitted another revised CQC plan. The Corps rejected it on or about 25 October 2004 due to a lack of information. In the cover letter, the Corps referred ADT to the portion of the contract that described what should be in the CQC plan, referred it to Engineering Pamphlet EP 715-1-2, entitled "A Guide to Effective Quality Control (CQC)" and offered to meet with ADT's CQC manager about improving ADT's CQC plan. (R4, tab 69)

148. On 17 November 2004, the Base Civil Engineer issued the digging permit for the project site (supp. R4, tab 32). The issuance of a digging permit typically takes 14 days (tr. 5/236). The reason for the excessive amount of time for issuance of the digging permit is a matter of dispute. Franco testified he inquired as to the delay and was told by Brown, Base Civil Engineer and Gene Rogers, Deputy Base Civil Engineer, that it had been lost at one of the utility people's desk (tr. 5/361-62). Riddick testified that he learned that the digging permit was delayed due to a request to use borrowed material from Nellis AFB (tr. 5/230). Tillman testified that he learned that the digging permit was delayed due to an issue related to earth removal (tr. 3/28). We find Franco more credible on this issue as his testimony is more specific and is based on conversations he had with persons responsible for issuing the permit. Thus, we find as a fact that the reason for the delay in issuing the digging permit was government caused.

149. At the time the digging permit was issued, ADT still did not have an approved CQC plan (R4, tab 77 at 03360).

150. On 22 November 2004, the Corps gave partial approval for ADT's revised CQC plan so as to allow the start of earthwork under the terms of the contract. The Corps specifically noted that no other work would be allowed to start until a complete CQC plan had been submitted and approved. (R4, tab 77 at 03360) An approved CQC plan is required by Paragraph 3.2 of section 01451A of the contract specifications before construction can commence (R4, tab 5 at 01103).

151. On 12 July 2005, ADT submitted a certified claim for relief based on pre-construction delays. ADT sought a time extension of 278 days, corresponding relief from liquidated damages and an increase to the contract price in the amount of \$826,725.16. (R4, tab 73) The claim is generally based upon what appellant refers to as four critical delay events and they are summarized below:

- A. Finish Floor Elevation - 208 days⁵
- B. 100% Design as Prerequisite as opposed to only 100% Site/Civil and 100% Lightning Protection – 45 days
- C. Late Notice of Design Approval – 44 days
- D. Late Issued Excavation Permit – 43

The sum of the four critical delays is 340 days and appellant deducts what it terms overlapping delays, 44 days attributable to earthwork concurrent delays and 18 days attributable to earthwork float in ADT's baseline schedule resulting in a 278 day delay to the job. (R4, tab 73 at 03331-32)

152. Frazier, the contracting officer, understands that one of the claims made by ADT was that it was not allowed to pursue a fast track approach (tr. 5/180-81). Tillman was a member of the group of government employees who would have been expected to give input on the contracting officer's final decision, but Frazier does not recall receiving any input from Tillman about the ADT claim or about the contracting officer's final decision. She remembers getting input primarily from counsel and some from Riddick (tr. 5/178-80).

153. No one ever told Frazier that SCR 8 was included in the contract by mistake, and she cannot verify one way or the other whether SCR 8 was included in the contract by mistake (tr. 5/182-83). On 29 December 2005, Frazier issued her contracting officer's final decision on ADT's claim. The contracting officer found merit to ADT's claim related to late notice of design approval and ordered the ACO to determine the appropriate number of days, but directed that the extension be at no cost to the government. In all other respects the claim was denied. (R4, tab 77)

⁵ The claim narrative says 209 days (R4, tab 73 at 03329), but the sum of its parts in appellant's claim summary (*id.* at 03331) totals only 208.

154. A timely appeal was made to the Board. At trial each party presented an expert witness to evaluate the claim for delay. Appellant called and the Board accepted Joseph O. Dean (Dean) as an expert witness in scheduling, schedule analysis and delay analysis (tr. 4/63, 67). Dean prepared an expert report which was admitted into evidence at the hearing (ex. 2037). The government called and the Board accepted George McLaughlin (McLaughlin) as an expert witness in scheduling, schedule analysis, purchasing and subcontracting (tr. 5/261). McLaughlin prepared an expert report which is also part of the record in this appeal (R4, tab 81).

155. Dean, for ADT, conducted a detailed review of the contract documents, project schedules, Rule 4 file, and other documents exchanged by the parties as part of discovery, and transcripts of deposition testimony (tr. 4/67-71, 84-85; ex. 2037 at 3-4). He analyzed delays through 22 September 2004, which was the date the government approved and accepted ADT's design (tr. 4/71-72). Although the claim and the proof include a request for time and money associated with issuance of a digging permit after 22 September 2004, the Dean analysis does not include that item.

156. Dean used the as-built collapsed schedule analysis methodology (tr. 4/77-83). Using this methodology Dean identified what actually happened and prepared a detailed as-built schedule. He then removed government delays and used the scheduling program to determine what would have happened but for the government delays. (Tr. 4/128-30)

157. Dean expressed his opinion that the government's approval of ADT's design on 22 September 2004 was delayed 273 days, from 24 December 2003 to 22 September 2004, of which the government was responsible for 245 days which are excusable and compensable⁶. The remaining 28 days of delay he found to be excusable but not compensable because there were concurrent ADT delays. (Tr. 4/71-72, 85-86, ex. 2037 at 5, 26-27)

158. Dean was of the opinion that the government's failure to provide timely and complete review comments on ADT's design submittals was the primary cause of delay (tr. 4/93). He divided his analysis into three time periods: (1) from ADT's original design submittal on 1 October 2003 to ADT's revised design submittal on 6 May 2004; (2) from 6 May 2004 to ADT's further revised design submittal on 9 July 2004, and (3) from 9 July 2004 to the government's approval and acceptance of ADT's design on 22 September 2004. (Tr. 4/102-103)

⁶ In some cases the record refers to 278 days. Since the specified time period is 273 days, and subtracting 28 days results in 245 days, we use 273 days.

159. Dean concluded from his review of the record that during the first time period (1 October 2003 to 6 May 2004), the government's design review periods were longer than the 21 days allowed by the contract, including its reviews of ADT's site/civil, HVAC and lightning protections designs (tr. 5/103-09). He drew a distinction between the lightning protection design which he acknowledged was originally submitted in error and the site/civil design, which was based on the government's response to RFI 11 (tr. 4/104-08, 5/62-64).

160. According to Dean, during the second time period (6 May 2004 to 9 July 2004) there were three causes of delay. First, after the 6 May 2004 submission, the government made late design comments that glass was to be removed from certain doorways as a safety precaution. Second, the government continued to provide new comments to the lightning protection system that had been submitted on 18 March 2004. Third, the government failed to close out DrChecks comments so that ADT could submit a 100% design compliance package. (Tr. 4/109-10)

161. During the third period identified by Dean (9 July 2004 through 22 September 2004), he found that there were several, overlapping causes of delay, including the government raising late questions about the fire protection sprinkler system, and the government's failure to approve ADT's design before sending the design to the DDESB. There were also ongoing problems with the government's late close out of DrChecks comments, some of which were not closed out until after September 17, 2004. During this period, ADT's expert also found that the government delayed approving ADT's design, waiting first for DDESB approval which he thought should have come after the Corp's approval and waiting second while it considered whether to terminate ADT for default. (Tr. 4/110-13)

162. Dean also concluded, based upon his analysis, that if ADT had been allowed to pursue a fast track approach, it would have had an approved site/civil design as early as 23 October 2003, eleven months prior to actual approval (tr. 4/116-25)⁷.

163. McLaughlin, the government's expert, states in his report that he obtained the facts of the case based on a review of the contemporaneous project records, including the Rule 4 file and other project records (R4, tab 81 at II-1). While the report lists broad categories of documents relied upon, it was established that McLaughlin conducted no interviews with witnesses and only talked to government counsel about the underlying facts of the project. He did not read all of the depositions or the entire Rule 4 file or other documents produced by the parties. Rather, he read only documents provided to him by government counsel. (Tr. 5/327-28)

⁷ That plan would have been erroneous however since the initial site/civil design included several slopes exceeding 5%.

164. More particularly, McLaughlin did not look at Tillman's files produced in January 2007 which included the history of the drafting and development of the RFP (tr. 5/328).

165. McLaughlin reports that in order to account for the extended duration of the design, he prepared a Time Impact Analysis for the duration of the project (R4, tab 81 at II-3)⁸ He described the Time Impact Analysis as follows:

A summary as-planned schedule and six adjusted schedules have been prepared to illustrate the events or time impacts that affected start of construction. The adjusted schedules were prepared by starting with the as-planned schedule and chronologically incorporating the time impacts, as they occurred during the project, into this schedule. Once a time impact was identified, the original schedule dates were revised to create an adjusted schedule incorporating the time impact, thereby reflecting the contractor's schedule and the projected completion date at the time each particular impact was resolved. This adjusted schedule was then revised to incorporate the next chronological time impact. In this way, each of the controlling time impacts was incorporated into the schedule as it occurred.

(R4, tab 81 at III-1) McLaughlin's as planned schedule showed the design complete on 12 December 2003 (*see* finding 51), DDESB review complete and construction starting 182 days later on 11 June 2004, and construction complete on 1 October 2004 (*id.*, ex. 13).

166. He identified six events that impacted the critical path. The first event identified was ADT's submission of Phase I design documents said to have been received by the Corps of Engineers on 7 October, 15 days later than planned. McLaughlin concludes that the delay resulted from ADT's slow progress in the design and was its own fault. (R4, tab 81 at III-2) A closer review of that submission reveals it was received no later than 2 October 2003 (R4, tab 30 at 01818), five days earlier than the analysis.

⁸ ADT contends that the analysis is more properly characterized as an Impacted as Planned methodology which ADT contends is a disfavored methodology (*see* ADT Objections to Government's Proposed Findings of Fact at 34). We find it unnecessary to resolve that difference.

167. The second event identified by McLaughlin which had a time impact to ADT's as-planned schedule was a logic change. The report provides:

In accordance with the ADT as-planned schedule as adjusted by Time Impact No. 1, Phase 2 design review completion and the subsequent start of DDESB review were planned to occur on December 27, 2003. ADT chose and the Corp[s] agreed to pursue *SEQUENCE OF DESIGN-CONSTRUCTION (FAST TRACK)* (see Exhibit No. 17). In this case, ADT chose to submit the Phase 1 design package for review with the potential of beginning construction on earthwork. An ADT letter of November 4, 2003 (see Exhibit No.18) and other supporting documents indicate that the Phase 1 design submission was actually submitted on November 4, 2003.

The impact of this logic change was that the critical path changed. The earthwork could begin earlier, thereby removing it from the critical path. The first construction task/activity became foundation and building work (see Exhibit No. 19). This schedule recovery improved the projected project completion date by 48 calendar days to August 29, 2004.

At the end of Time Impact No. 2, ADT was 33 days ahead of a properly adjusted schedule.... This schedule recovery resulted from both parties agreeing to commence DDESB review using the fast track process. The float created (33 calendar days) is available to both parties.

(R4, tab 81 at III-2 to 3; tr. 5/329-32. 5/344)

168. As is clear from our prior findings, the government never allowed and never agreed to allow fast track. Thus the factual basis for the analysis with respect to Time Impact No. 2 is not in accordance with our findings and does not properly form the predicate for the analysis or its conclusions.

169. The third Time Impact cited by McLaughlin was the Late Finish of Develop Phase 2 Design Submission. The analysis states that the late finish of the Phase 2 Design Submission should have been made on 2 December 2003, but did not occur until 6 May 2004, an impact of 156 days to the critical path, concluding that at this point ADT was 123 days behind a properly adjusted schedule. (R4, tab 81 at III-3 to 4) McLaughlin attributed the delay to ADT's slow progress in developing the design work (*id.* at III-4 to 5) yet, there is no analysis of events up to 6 May 2004 in McLaughlin's report and his conclusions are made without discussion of such events.

170. The fourth impact cited by McLaughlin was a logic change. He states:

Based on the May 6, 2004, Phase 2 Design submission and providing for the contractually required 180 day DDESB review period, post-earthwork construction should have started on November 29, 2004. This was due to the logic change in Time Impact No. 2, where the earthwork was to be constructed concurrently with Phase 2 design (see Exhibit No. 15). Instead, the Corp[s] decided to require full design approval by DDESB prior to the start of earthwork.

The resulting logic change placed earthwork construction back on the critical path and extended the construction duration 48 days. The impact of this logic change was to revise the projected completion date to March 21, 2005, 171 calendar days behind schedule....

The schedule delay logic change resulted from ADT's slow progress and defective deliverables relative to the Phase 1 design. Therefore, this delay is to ADT's account.

(R4, tab 81 at III-4)

171. As our prior findings indicate, there was no agreement between the parties that the earthwork was to be conducted concurrently with the Phase 2 design, because the government never agreed that appellant could fast track the project. Thus the conclusions reached by McLaughlin are without merit.

172. McLaughlin found Time Impact 5 was the early finish DDESB review. He states that based on Time Impact 3, Late Finish of Develop Phase 2 Design Submission, the DDESB review should have been finished by 28 November 2004. But since the review was completed on 22 September 2004, the early completion of the review improved the projected completion of the design (as adjusted by Time Impacts 1 through 4) by 67 calendar days. (R4, tab 81 at III-5) The use of the 28 November 2004 date by McLaughlin, means that his analysis presumed the design was submitted to DDESB on or about 1 June 2004. In fact, ADT's design was not sent to DDESB until 27 July 2004 (*see* finding 129) and using McLaughlin's methodology, the review should have been completed by 23 January 2005.

173. McLaughlin deemed the Time Impact 6 to be Late Start to Construction. Because construction could have started on 23 September 2004 based on the administrative contracting officer's 22 September 2004 letter (R4, tab 60), he determined

delays by both parties prevented ADT from starting until 22 November 2004, or 60 days in concurrent delay (R4, tab 81 at III-5).

174. McLaughlin's analysis concludes that ADT was responsible for 104 days of delay and that 60 days of delay were concurrent with government caused delay. The 164 days represent the time period from 11 June 2004, when according to McLaughlin construction should have started, to 22 November 2004 when it did start (*see* finding 165).

175. Based upon the foregoing, except as to Time Impact 6 (finding 173), we find McLaughlin's analysis to form an inadequate basis for determining the extent of delay to the project and causation for same. For the period ending 22 September 2004, the analysis performed by Dean was more credible and we find it to be the more persuasive. However, we adjust Dean's calculations in the quantum part of our decision to reflect our entitlement holdings.

176. Following termination (*see* finding 142), ADT's surety took over the project (tr. 1/56-58). At time of trial, ADT was reimbursing its surety under a payment plan for the costs incurred by the surety completing the project after the termination for default (tr. 2/14-15). Both before and after the termination, ADT incurred additional costs due to cost escalation. Before the termination, ADT incurred these costs directly in connection with payments to its subcontractors. After the termination, ADT incurred these costs indirectly, in connection with payments to its surety. (Tr. 1/56-58)

DECISION

As submitted on 12 July 2005, appellant claimed a time extension of 278 days and damages of \$826,725.16 for preconstruction delays to this design-build contract. The claim cited four causes of the delay – finish floor elevation, 100% design as prerequisite for DDESB approval (refusing to allow fast track design-build), late notice of design approval and late issued excavation permit.

Following trial the parties submitted briefs. In its legal argument, Appellant asks us to decide four legal questions, as follows:

First, did ADT have the right to pursue a Fast Track approach to the project?

Second, is ADT entitled to a time extension based on untimely government reviews of ADT's design submissions, especially related to the site/civil, lightning protection and HVAC/cooling system designs?

Third, what effect, if any, does the “DDESB/180 Days” clause have on ADT’s claim?

Fourth, what is the appropriate number of days, if any, to which ADT is entitled (which necessarily entails a consideration of the competing expert analyses)?

(ADT Legal Argument at 3) We will consider each question in order.

Right to Pursue Fast Track

After drafting the solicitation the government learned that the DDESB required 100% design of the entire project before it would review the plans. Thus, the drafters sought to modify the solicitation to remove all references to fast track as an option. They failed miserably at that task and several references to fast track as an option remained in the solicitation when it was issued. ADT stated in its proposal that it would use the fast track method for design and construction. The proposal was included in the contract, as was the clause requiring DDESB approval of 100% of the design. The government did not question ADT’s intention to use fast track as stated in its proposal. During the design period, ADT repeatedly reminded the government that it was fast tracking the project. Not once did the government comment in any way to those reminders. Significantly, the government never said fast track was not appropriate or was not allowed. Despite that, the evidence shows that the government had no intention of allowing fast track at any stage of the design process.

Thus, while the government takes the position in its brief that fast track was in fact allowed and that, during the design process, it notified ADT that fast track would not be allowed due to ADT design problems, the evidence as we have found it, does not support that position. To the extent the contract is ambiguous in that regard, appellant repeatedly gave notice when it said it wanted to do fast track and the government repeatedly ignored that notice. The evidence shows that the government never intended to allow fast track, and indeed its actions supported that intention, yet it failed to communicate those intentions to ADT. *See Shemya Constructors, J.V.*, ASBCA No. 34577, 89-3 BCA ¶ 22,201 at 111,680.

To be fair, we observe that ADT’s proposal which was incorporated into the contract was also ambiguous in that it stated that fast track would be used, and at the same time stated that a complete set of drawings would be submitted to the DDESB prior to the start of construction. However, the government’s utter silence when appellant repeatedly raised the issue of fast track squarely put the burden on the government to respond during the design phase – and it did not.

Therefore, we find that appellant had a contract right to pursue fast track.

Untimely Review of Design Submissions

The contract allowed 21 days for the government to conduct a compliance review on each of ADT's design submissions. ADT submitted its original site/civil design on 1 October 2003. The design was based upon the Clark County, Nevada standard. That standard was followed when the government, responding to an RFI, rather than giving a finish floor elevation told ADT the Clark County standard was acceptable. Several slopes in the original design exceeded 5% although ADT represented in the narrative that none did (finding 65). The government first became aware that the representations were incorrect in mid- to late February, and, on 27 February 2004, rejected the design submission as being out of compliance. The basis for the rejection was that the slope exceeded 5%. It was impossible to design the project with no slopes exceeding 5% given the topography, the locations of the adjacent road and parking lot and the expressed needs of the End User for reasonable access. The government argues that the contract required positive slope between 2% and 5% and that areas exceeding 5% amounted to design deficiencies. The government recognizes that ADT took a proactive approach to designing the project rather than wait for the government to make all the decisions. The approach ADT should have taken the government says "was to submit designs according to the contract requirement, and propose for the Government's consideration alternative designs for all the non-conforming features that more fully satisfied end user desires" (gov't br. at 15).

The government correctly points out that deviations from the contract requirements had to be the subject of written contract modifications and that the contract requirement to meet, discuss and to take into consideration the needs and opinions of the End User was modified in another clause to make clear that these meetings were not intended to adjust the contract. ADT failed to explain in its submittal that if it followed the Clark County standard, the design would have to exceed the 5% slope limit imposed by the contract and thus appellant is responsible for the initial delayed review of the original site/civil design, the period from 1 October 2003 to resubmission on 18 March 2004.

Redesign of the Site/Civil Work

Appellant revised the site/civil design and resubmitted it to the government on 18 March 2004. On 28 April 2004, the government approved the second submission and on the same day reversed that decision and disapproved it. This design still had one slope exceeding 5% because it was impossible to meet that requirement given existing site conditions. ADT requested a waiver on 27 April 2004 at the design review conference. On 24 May 2004 the government approved the 100% site civil design with the single slope exceeding 5% (5.49%) in one location. The government should have approved the 100% site civil redesign within 21 days of receipt (by 8 April 2004).

HVAC/Cooling System Design and Redesign

The specifications for the HVAC/Cooling System Design included conflicting requirements such that neither a water source heat pump nor an evaporative cooling system complied with all contract requirements. However, the government relies in large part on Military Handbook 1190 for insisting upon evaporative cooling in categorizing the MMF as a warehouse or aircraft maintenance facility while the evidence does not support that conclusion.

Appellant commissioned a life cycle cost analysis after the 23 October 2003 design review meeting despite knowledge that the government wanted evaporative cooling. The analysis favoring water source heat pumps over evaporative cooling was furnished to ADT on 25 November 2003, but was not submitted to the government until 20 January 2004. It was rejected on 6 February 2004 well within the 21 days allowed and appellant was directed to provide an evaporative cooling system. On 3 March 2004, ADT asked the government to resolve the many conflicting requirements in the specifications and the government provided that information on 5 April 2004. Thereafter ADT submitted the revised design on 6 May 2004. The government was responsible for resolving the conflicting specifications; however, the site/civil design rather than the HVAC design was the critical path.

Lightning Protection Design – Original LPS Design

The original design, a rooftop system, was submitted on 1 October 2003 and was discussed at the 23 October meeting, but it was not rejected until 3 February 2004, 125 days after submission. While the design was not in compliance with the contract as it should have been a catenary system, appellant affirmatively represented that the design was a catenary lightning protection system. Therefore, the government is not responsible for delayed review of this item. The LPS was resubmitted on 9 March 2004 (finding 110). The compliance review should have occurred by 30 March 2004; however, as we discuss below, the LPS was not the critical path. In the 27 April 2004 design review conference, the government made comments about the LPS design and requested additional information, none of which were a result of a deficiency or a lack of compliance with the contract documents. ADT incorporated the comments and submitted a revised 100% LPS design on 6 May 2004.

Other Design Delays

Appellant points to other design delays in which we find merit. First, the government treated DDESB final safety approval as a prerequisite to Corps of Engineers approval of ADT's design, when in fact the contract required the Corps to approve the design prior to submission to DDESB. Second, the government delayed approval of the

design even after DDESB approval from about 14 September 2004 to 22 September 2004 while it considered termination for default (finding 146). Third, approvals of 100% submissions were delayed from 15 July 2004 to 26 July 2004 when the government raised questions late in the game, which had no merit but held up approvals (findings 126, 128). Fourth, the government made a late change to the design removing all door glass which reversed prior decisions and this delay was from 18 June 2004 to 27 June 2004 (finding 122). Fifth, ADT applied for a digging permit on 5 October 2004, it should have been issued by 19 October 2004, but was not issued until 17 November 2004. On the other hand, ADT was responsible for delay in approval of its CQC plan until 22 November 2004. Because the Dean analysis did not go beyond 22 September 2004, on this point we find McLaughlin credible and agree that a delay of 60 days to the project was concurrent.

Impact of 180 Days/DDESB Clause on ADT's Claim

The government's primary defense to the claim for delays is the contract clause which states that the construction phase may not commence until 180 days after government acceptance of the final design to "allow for review and acceptance of the design [of the facility] by the Department of Defense Explosive Safety Board" (finding 19). It seeks to harmonize a requirement that 100% of the design was necessary for DDESB review with fast track sequencing of the work. The attempt at harmonizing the provisions of the contract is based in large part on possible ways of prosecuting the design work and its various parts. None of it is unsupported by any credible evidence and we find they may not be harmonized. The two approaches are distinctly opposite each other. Appellant wanted to get approval of design work covering the beginning of the project such that construction work could begin even while the design of later work, such as lightning protection, continued. Design of the lightning protection system could occur later since construction of that system is performed later. The DDESB review precludes such an approach. DDESB review was conditioned upon completion of 100% of the design of the entire project and its approval was required before any construction could begin.

The contract provides for a period of review by the DDESB "after the Government has accepted the final desing [sic]" (finding 19). Here the DDESB had already accepted the design before the government did so. The clause is not applicable, therefore, because there was no need for a period of review. An interpretation that the contractor was required to wait 180 days for DDESB review before beginning construction, when no further review was to take place, would not be reasonable. The government itself did not require such a delay but, rather, allowed start of the earthwork on 22 November 2004. Furthermore, the clause does not in any event exonerate the government from responsibility for delays to design completion. We conclude that a reasonable interpretation under the circumstances of this appeal is that the government is not responsible for the 10 days taken for DDESB review. In light of this decision, it is

unnecessary to consider appellant's argument that the government should be estopped from taking any position relying on what it learned and failed to disclose about DDESB review and approval.

Quantifying the Delay

Appellant planned to fast track the project and intended to start work on the excavation and foundations even before other designs were completed. In view of this plan we consider the site/civil design to be the critical path of the project and control the schedule until date of acceptance (24 May 2004) rather than the HVAC or lightning protection designs. As we have held, ADT is responsible for delay attributable to its failure to show noncompliance with the slope requirement of the contract. Accordingly, appellant is responsible for delay up to 8 April 2004 and the government is responsible for delay thereafter up to 24 May 2004. The government is also responsible for delay thereafter to 22 September 2004, except that we determine that no delay should be charged to the government due to the period of DDESB review from 27 July 2004 to 5 August 2004. Thereafter, there is concurrent delay until 22 November 2004.

We calculate that in the period of performance ending on 22 November 2004, the government is responsible for a total of 218 days of delay, 60 of which are concurrent. These days represent the periods 8 April 2004 to 27 July 2004 (110 days), 6 August 2004 to 23 September 2004 (48 days) and 23 September to 22 November 2004 (60 days). As adjusted, the contract completion date is 7 May 2005.

The appeal is sustained in part as indicated above and we remand to the parties to negotiate quantum.

Dated: 9 July 2009

RICHARD SHACKLEFORD
Administrative Judge
Armed Services Board
of Contract Appeals

I concur

I concur

MARK N. STEMLER
Administrative Judge
Acting Chairman

EUNICE W. THOMAS
Administrative Judge
Vice Chairman

Armed Services Board
of Contract Appeals

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. 55307, Appeal of ADT Construction Group, Inc., rendered in conformance with the Board's Charter.

Dated:

CATHERINE A. STANTON
Recorder, Armed Services
Board of Contract Appeals