

ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of --)
)
Contel Advanced Systems, Inc.) ASBCA No. 49075
)
Under Contract No. N60530-90-D-0023)

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OPINION BY ADMINISTRATIVE JUDGE HARTY

This appeal arises from Contract No. N60530-90-C-0023 (redesignated N60530-90-D-0023 in January 1996), awarded by the Navy's Air Warfare Center Weapons Division (NWC), China Lake, California, in September 1990 to Contel Advanced Systems, Inc. (CASI) for the design, installation and maintenance of a new, state-of-the-art digital switching system known as the Center Telecommunications System (CTS). Performance was divided into two major phases: (1) an implementation phase; and (2) an operation, maintenance and administration phase (OM&A).

The present appeal² involves a CASI claim for delay, disruption and acceleration. CASI maintains that it was delayed 122 days from 10 December 1991 to 10 April 1992 in

¹ At the hearing and during briefing of this appeal, the appellant was represented by Thomas F. Williamson, Esq., *et al.*, of Morgan, Lewis & Bockius LLP.

² This appeal is one of several arising from the project. The Board has previously issued decisions in the following: *Contel Advanced Systems, Inc.*, ASBCA Nos. 49071, 49164, 49772, 01-2 BCA ¶ 31,576 (ISP claims); *Contel Advanced Systems, Inc.*, ASBCA No. 49072, 02-1 BCA ¶ 31,808 (additional MSB construction cost

achieving “cutover, ” which involved the transfer of telephone service from the existing system to the newly installed CTS (SR4, tab 1, attach. 5-Glossary at 12, ¶ 51; tr. 1/209-10). Its claim focuses on alleged government-caused delays in connection with the design and construction of the main switch building (MSB).

The Navy disagrees, pointing to CASI’s own internal problems and those of its subcontractors as the cause of delay. The Navy argues that any delay that may have been its fault was concurrent with CASI-caused delay, thereby precluding recovery.

We are to decide entitlement only, including the number of days of delay, if any. We deny the appeal because CASI has failed to carry its burden of establishing that the Navy was responsible for any days of delay, once CASI’s own concurrent delays are taken into account, and has failed to establish that the Navy expressly or impliedly ordered an acceleration in connection with any of the matters before us.

FINDINGS OF FACT

The Solicitation

The solicitation called for delivery of the CTS (CLIN 0001) to take place within “18 months from date of award or less” (which in this case was 24 September 1990) and the following milestones were specified:

Item	Delivery (time after award)
System Requirements Review	30 days
Preliminary Design Review	60 days
Critical Design Review	120 days
Build Design Review	Concurrent with Acceptance of Critical Design Review
Cutover Plan Review	60 days prior to first cutover

claims); *Contel Advanced Systems, Inc.*, ASBCA No. 49073, 02-1 BCA ¶ 31,809 (OSP claims); *Contel Advanced Systems, Inc.*, ASBCA No. 49076, 03-1 BCA ¶ 32,110 (OM&A claim); *Contel Advanced Systems, Inc.*, ASBCA No. 49074, 03-1 BCA ¶ 32,155 (TAS claim); and *Contel Advanced Systems, Inc.*, ASBCA Nos. 50648, 50649, 51048, 51049, 03-2 BCA ¶ 32,277, *appeal docketed*, No. 04-1006 (Fed. Cir. Oct. 3, 2003) (LTOP claims). The appeal in ASBCA No. 49603 was dismissed as duplicative in a 10 February 2003 unpublished Order Confirming Jurisdiction in this appeal, ASBCA No. 49075.

System Acceptance Test Plan	90 days before testing
Cutover	15 months after award
System Acceptance Testing	within 60 days after cutover
System Acceptance	within 90 days after cutover

(SR4, tab 1 at 19, § F-6)

All the design and installation work to support an operating CTS would have to be completed before cutover (tr. 1/206-07). Following cutover, the only remaining implementation phase obligation was to perform system acceptance testing in accordance with Section E of the contract, “INSPECTION AND ACCEPTANCE.” This involved subjecting the installed and operating CTS to a consecutive 30-day performance test initiated anytime within 60 days after cutover. If any system failure occurred during the 30-day period, testing would halt and then recommence. (SR4, tab 1 at 15, § E-3; tr. 1/211) Upon completion of successful testing, the Navy would accept the CTS (SR4, tab 1 at 15-16, 19).

Project Scheduling

The solicitation required offerors to submit a proposed program schedule:

. . . [U]sing PERT/CPM [Project Evaluation and Review Technique/Critical Path Method³] methodologies for the overall CTS effort including the Production, Implementation, and Post-Acceptance phases. Describe how you intend to complete all system tasks and acceptance testing within 18 months after contract initiation. Identify major milestones such as the System Requirements Review (SRR), Preliminary Design Review (PDR), Critical Design Review (CDR), Build tests, equipment installations, availability of GFE, cutover, etc.

(SR4, tab 2, attach. 11-Instructions for Proposal Preparation (IPP) at 21, § 2.4)

³ PERT is a statistical treatment of uncertain performance time, estimating the probability of meeting specified completion dates. PERT was not developed to plan a project, but evaluate the progress of an existing Polaris missile program. “Nonetheless, PERT analyzes the event times in a manner similar to the calculation of critical path for a CPM schedule.” CALLAHAN, MICHAEL T. & HOHNS, H. MURRAY, CONSTRUCTION SCHEDULES § 2-5 (2nd ed. 1998).

Telecommunications System Engineering Plan (TSEP)

The contract required that the contractor complete the system definition and fully develop the system design required to satisfy the system requirements specification (SRS) and document this task in the TSEP (SR4, tab 1, attach. 1-Statement of Work (SOW) at 21, § 3.3). A draft TSEP was due at the PDR, which was required 60 days after the effective date of the contract—24 September 1990—and the final TSEP was due at the CDR, 120 days after the effective date of the contract (SR4, tab 1, attach. 1-SOW at 12, 21-26, tab 2, ex. A, Contract Data Requirements Lists (CDRL) A00A). Construction was not authorized to begin until the TSEP was approved by the Navy (SR4, tab 1, attach. 1-SOW at 35, § 3.7).

Master Program Schedule (MPS)

The solicitation required that a MPS be submitted no later than 30 days after the effective date of the contract and that it be updated on a monthly basis to reflect overall job progress. It was expected that during the monthly program reviews the Navy would be informed of schedule slips and events impacting the project. (SR4, tab 1, attach. 1-SOW at 10-11, § 3.1.6.1, tab 2, ex. A, CDRL, A003, A007)

Navy Review

The Navy was required to review all deliverables within 15 calendar days with the following exceptions:

1. Station Design Plan – within 45 calendar days,
2. Telecommunications System Engineering Plan – within 30 calendar days,
3. Configuration Management Plan – within 45 calendar days,
4. Site Preparation Requirements Equipment Installation Plan – within 45 calendar days,
5. Transition Plan – within 45 calendar days,
6. Cutover Test Procedures – within 30 calendar days,
7. Engineering Drawings, As-Built – within 45 calendar days,
8. Engineering Drawings, TAS Operator Interface – within 30 calendar days,

9. Engineering Drawings, Newly Developed Hardware – within 30 calendar days,
10. TAS Operator’s Manual – within 30 calendar days.

(SR4, tab 1, attach. 1-SOW at 3-4, § 1.4, ¶ D.)

Building Requirements

Separate approval requirements applied to any proposed buildings or building modifications. The solicitation required offerors to propose any new buildings and modifications to existing buildings required to meet the performance requirements of the contract. With respect to government review, it provided that:

The Government shall review all submittals and approve all plans and specifications for final construction. Final acceptance shall be subject to approval by the Western Division Naval Facilities Engineering Command. These reviews require approximately 2 to 5 weeks. Any modifications to the design, schedule, or cost of the proposed facility resulting from these reviews shall be the Contractor’s responsibility.

(SR4, tab 1, attach. 2-SRS at 73, § 4.2, ¶ B.) It also required that all new buildings and modifications conform to the uniform Building Code and “Zone 4 earthquake protection requirements specified in TR-EOP-000063” (*id.*, at 74, ¶ C.9.).

The Switch

The solicitation required the contractor to provide and install switching subsystems, one of which was to be located at the Michelson Laboratory complex at the main site (SR4, tab 1, attach. 2-SRS at 15, ¶ B).

All switches were to be tested, along with their associated equipment, before shipment, in order to demonstrate compliance with specified functional requirements. There also was an obligation to notify the Navy at least 10 working days prior to the start of any factory test because the Navy had the right to witness the tests at all levels of activity and development. (*Id.*, at 110-115)

Telecommunications Administration System (TAS)

The CTS required a TAS, defined as a computer “external to the switching control processors which provides data collection, report generation, configuration management, and an administrative interface to the CTS” (SR4, tab 1, attach. 2-SRS at 40, § 3.4;

tr. 3/8-9). In order for users at NWC to receive a dial tone (*i.e.*, phone service), certain subscriber information had to be entered into the TAS (tr. 3/43-44). For a more extensive explanation of the TAS and its functions, *see Contel Advanced Systems, Inc.*, ASBCA No. 49074, 03-1 BCA ¶ 32,155 at 158,965-66.

Design and Installation of Cable

The solicitation required installation of cable to the inside of buildings—the inside plant cable (ISP)—and cable running from the switches to the buildings—the outside plant cable (OSP) (SR 4, tab 1, attach. 1-SOW at 34, ¶¶ B, C; tr. 1/57-58). Offerors were to submit prices on the basis of Attachment 8, a list of buildings. Attachment 8 specifically warned on its face that the information depicted thereon was not accurate, stating:

The Building/Telephone Line Inventory contains the most current information available to the Government. The Government cannot guarantee the complete accuracy of the information.

(SR4, tab 2, attach. 8-Building/Telephone Line Inventory at 2, ¶ 4; AR4 tab 3 at 9, tab 545 at 3; tr. 7/72, 120-21)

The statement of work expressly warned that “increased outside cable facilities” above those currently on the center were required (SR4, tab 1, attach. 1-SOW at 1, § 1.2).

The successful awardee was to conduct a site survey at the center, in coordination with the Navy. From this survey, the contractor was to:

Prepare a Station Design Plan which includes initiating and conducting an office-by-office telephone equipment and line survey with a Government representative. The Station Design Plan shall also reflect all changes required in the Trunk, Distribution, and Wiring Plan from contract award.

(SR4, tab 1, attach. 1-SOW at 23, ¶ 2.b.)

The draft station design plan was to be submitted to the Navy 120 days after the contract’s effective date (SR4, tab 2, ex. A, CDRL A009). The Navy had to approve the design before the contractor could commence construction (tr. 7/162-65, 9/122-23).

CASI’s Proposal

CASI’s parent company, Contel of California (Contel), had been providing telecommunications service at the NWC for more that 20 years at the time of the CTS

solicitation and stressed this experience in its proposal (SR4, tab 3 at I.1-2, tab 4 at II.1-2).

As part of its proposal, CASI submitted a schedule, in which it projected achieving cutover within 15 months after contract award and system acceptance 18 months after contract award (SR4, tab 4 at II.1-15, II.1-16, II.2-1, II.2-34, II.2-144, II.2-149-50, II.2-151-52, II.2-153-54). In its proposal, CASI stated it would monitor the progress throughout the life of the program “[u]sing the work breakdown structure Critical Path Method (CPM), and Project Evaluation and Review Technique (PERT) charts” (SR4, tab 4 at II.1-15). CASI declared it would use CPM to monitor the program and asserted:

. . . Basic to CPM is the PERT chart listing all of the tasks for a particular activity, like a component Build. The PERT chart shows the interrelationships, interdependencies, and sequence of the tasks.

(SR4, tab 4 at II.2-144)

Mr. Jeff Babaie, CASI’s proposal and implementation manager, oversaw the development of the schedule. He relied upon the input of various team leaders, each of whom had an area of responsibility, such as “overall engineering” and “ISP.” (Tr. 1/192, 221-22) According to Mr. Babaie, some of these individuals had concerns that CASI could not achieve cutover within a 15-month time frame (tr. 1/192, 221-22, 2/129-131). Mr. Babaie testified that CASI was fully aware that it would have to add additional manpower and extra crews in order to maintain the 15-month cutover milestone.

Q And that was part of CASI’s plan from the beginning, that CASI would add crews as necessary in order to maintain the completion date when there were added building[s] found in the site survey - - up to a certain quantity of buildings, that is.

A Not only was that part of the CASI’s plan, that was our achieved objective as well -- that the record will speak for itself.

(Tr. 2/128)

Further, in its proposal, CASI represented that it would assume responsibility for time associated with all modifications to any of its building designs resulting from the Navy’s approval process:

Contel acknowledges that proposals for all building construction . . . are subject to approval . . . and that an interval of two to five weeks for approval may be

experienced. Contel will assume responsibility for all modifications to the submitted design, and the associated costs, that may result from the approval process.

(SR4, tab 3 at I.4-26)

Contract Award

The Navy awarded the contract to CASI with an effective date of 24 September 1990. The contract included the following pertinent Federal Acquisition Regulation (FAR) clauses: FAR 52.212-12, SUSPENSION OF WORK (APR 1984); FAR 52.215-33, ORDER OF PRECEDENCE (JAN 1986); FAR 52.233-1, DISPUTES (APR 1984) ALTERNATE I (APR 1984); FAR 52.236-15, SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984); FAR 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (APR 1984); FAR 52.243-1, CHANGES FIXED-PRICE (AUG 1987) ALTERNATE II (APR 1984). No provision was made for liquidated damages if either cutover or system acceptance was delayed.

The Navy chose to purchase the implementation phase of the contract under the Lease to Ownership Pricing (LTOP) method of procurement, to be paid over a period of 60 months. The 60-month payment period was to begin upon system acceptance. (SR4, tab 1 at 5-6, 19, 35) Therefore, CASI would not receive any money from the Navy until the CTS was completed and accepted (SR4, tab 1 at 19). During the implementation phase of the contract, CASI spent in excess of \$20 million to design and install the CTS at China Lake. CASI funded these expenditures with a loan from its parent corporation, Contel. Contel agreed to underwrite CASI's costs, with the understanding that it would be repaid at system acceptance when CASI secured bank financing. (Tr. 4/153, 251-54) For a more extensive treatment of the project financing and its ramifications, *see Contel Advanced Systems, Inc.*, ASBCA Nos. 50648, 50649, 51048, 51049, 03-2 BCA ¶ 32,277 at 159,687, *appeal docketed*, No. 04-1006 (Fed. Cir. Oct. 3, 2003).

CASI's Baseline Schedule

Since the contract effective date was 24 September 1990, the contractually established date for cutover was 24 December 1991, 15 months after award. System acceptance, which was required within 90 days after cutover, was expected to occur by 24 March 1992, at the latest.

CASI submitted its MPS on 1 October 1990, in accordance with CDRL A003. The submission included (1) a Figure 1-1, a Gantt⁴ chart entitled, "Master Program

⁴ Gantt charts are bar charts, named after the individual who is recognized as the inventor of this chart style. Gantt charts are the traditional method for scheduling construction projects but do not show dependencies among activities. CALLAHAN & HOHNS, *id.* at 36.

Schedule,” and (2) a set of seven intermediate Gantt charts providing further detail for the following implementation phase activities: station site survey and database; engineering/design; OSP engineering/construction; ISP installation; facility construction; switch subsystem installation; and main distribution frame (MDF) installation. All eight of these Gantt charts indicated cutover on 9 December 1991, and system acceptance on 14 February 1992, instead of 24 March 1992. CASI had moved the cutover date forward to earlier in December because Mr. Babaie and his team decided it would not be a “good thing” to cutover on Christmas Eve. (AR4, tab 22; tr. 1/231-32)

The Gantt charts did not indicate the relationships between activities, schedule float or a critical path. After reviewing the submission, the Navy asked CASI to resubmit a program schedule in PERT/CPM format showing the relationships and interdependency between CASI’s scheduled activities. (SR4, tab 100 at R03521; tr. 2/172, 233-34)

CASI resubmitted a program schedule dated 26 October 1990, which included the same eight Gantt charts, Figures 1-1 to 1-8, and two additional charts, Figure 1-9 entitled “production phase,” and Figure 1-10, “implementation phase” (AR4, tab 31). Figures 1-1 through 1-8 show the same dates for cutover, 9 December 1991, as those submitted on 1 October 1990. However, the eight Gantt charts now indicated system acceptance on 10 January 1992. (AR4, tab 31, Figures 1-1 through 1-8)

On these eight charts, CASI had moved the system acceptance date forward to 10 January 1992, 74 days earlier than the 24 March 1992 date indicated in its proposal schedule, and 35 days earlier than the 14 February 1992 date indicated on the schedules it submitted on 1 October 1990. The 26 October 1990 schedule allowed only one thirty-day period from cutover to system acceptance, making no provision for testing failure and restarts. (*Id.*) The Navy made no objection to the system acceptance testing schedule and, as indicated *infra*, concurred in the overall schedule (SR4, tab 132). From our understanding of the pre-cutover testing contemplated, planning a minimal test period was not unreasonable. Moreover, when CASI did reach cutover on 10 April 1992, the Navy, in fact, accepted the system after the initial 30-day testing period, on 11 May 1992, 31 days after cutover (SR4, tab 2027, Modification No. P00040 at 2; AR4, tab 695).

In the 26 October 1990 submission, CASI indicated Figures 1-9 and 1-10 illustrated the sequence of events between activities and ensured “the ‘Critical Path’ of activities is reviewed, showing the effect of any change in the schedule on the other tasks” (AR4, tab 31 at 15; tr. 2/233-35). Figure 1-9, the production phase, reflected timing for certain CDRLS, contract deliverables, preparing test plans, etc., and tracks the time from the date the contract was signed (AR4, tab 31, Figure 1-9; tr. 2/239-40). Figure 1-10 starts at the critical design review and runs through cutover and system acceptance. However, the cutover date on Figure 1-10 is shown as 11 March 1992, 78 days later than the contractual milestone date of 24 December 1991, with system acceptance on 18 May 1992, 55 days later than the contractual milestone of 24 March 1992, and 129 days later than the date indicated in the Gantt charts (AR4, tab 31, Figure 1-10; tr. 2/240-44). This discrepancy in dates was never explained.

CASI's Mr. Babaie testified that Figures 1-9 and 1-10 were included because the Navy asked for a schedule depicting interdependencies and the critical path. Figures 1-9 and 1-10 met that request, while Figures 1-1 through 1-8 did not depict an as-planned critical path. He stated that CASI's baseline schedule depicted a critical path running through the following activities: design review, facilities, installation of the switches, cutover testing, cutover, acceptance testing and system acceptance. He further testified that CASI did not use Figures 1-9 and 1-10 and there is no evidence that CASI used a CPM analysis. (Tr. 2/233-35, 239-42)

On 9 November 1990, Mr. Jim Field, the contracting officer's technical representative (COTR), informed the contract specialist that he had reviewed CDRL A003-2, the 26 October 1990 submission, and "concur[red]" with it (SR4, tab 132; tr. 1/243). Figures 1-1 through 1-8 of CASI's 26 October 1990 schedule, subject to some refinements, were subsequently relied on by CASI and its expert as its "as-planned schedule" (tr. 3/219-34; ex. A-28 at 2, ex. A-32). Figures 1-9 and 1-10 were ignored in this regard.

CASI's As-Built Schedule

CASI provided schedule updates in monthly project status reviews (PSRs) with the Navy (SR4, tab 1, attach. 1-SOW at 10, § 3.1.6.1; tr. 1/245-46). In advance of each PSR, CASI submitted a project status report, as required by the contract. The purpose of the report was to compare the progress achieved on the CTS program against its baseline schedule. (SR4, tab 2, ex. A, CDRL A0007; AR4, tabs 32, 55, 178, 229) The last schedule update located by CASI's expert was a schedule dated 12 March 1992 prepared for the March 1992 review (SR4, tab 1275). For purposes of CASI's appeal, it was used by CASI and its expert and also by the Navy and its expert as the project's "as-built" schedule and we use it for that purpose as well (tr. 3/220; ex. A-28, annex B, ex. G-5 at 11).

Delay Analysis

We have divided the implementation portion of the contract into three phases for purposes of analysis: (1) a preliminary design and station survey phase, originally scheduled from 24 September 1990 through 23 November 1990, that is, from the contract's effective date through the contractual milestone for PDR (although we note CASI scheduled PDR for 21 November 1990); (2) the final design and review phase, originally scheduled from 24 November 1990 through 22 January 1991, the contractually mandated date for the CDR and the submission of the TSEP; and (3) the construction phase, originally scheduled by CASI to start on 14 January 1991 (before CDR) to 9 December 1991. In the project as-built, the preliminary design phase runs from 24 September 1990 through 22 January 1991, when the draft TSEP was submitted pursuant to a contract modification sought by CASI; the final design and review phase runs from 23 January 1991 through 15 May 1991; and the construction phase runs from

16 May 1991 to the 10 April 1992 cutover, with 11 May 1992 as the date of system acceptance.

Preliminary Design and Station Survey

The preliminary design phase addresses the time from the contract's effective date through the completion of the preliminary design and submission of the draft TSEP, required by the contract no later than 60 days after the effective date of the award, or 23 November 1990. CASI's schedule indicates it planned for the PDR to occur a few days earlier and the minutes from the PDR indicate it occurred on 15 November 1990. (SR4, tab 2, ex. A, CDRL A00A, tab 142; AR4, tab 31)

CASI experienced significant delay during this period, however, particularly with its station survey (SR4, tab 95). While Attachment 8 had provided a baseline for bidders in the solicitation phase, according to the contract, the actual requirements for OSP were to be determined by an office-by-office telephone line and station survey that CASI was to conduct (SR4, tab 1, attach. 1-SOW at 23, ¶ 2.b; tr. 7/72, 120-21). CASI subcontracted with Splice Co., Inc. (Splice Co.) to provide personnel to conduct the site survey, which was to commence on 9 October 1990 and be completed within five weeks (SR4, tabs 87, 90, 138). Once the survey started, the Navy received feedback as to how it was progressing in informal meetings with CASI and Splice Co. personnel (tr. 6/180-84, 7/100-03).

Early on Splice Co. realized it had incorrectly recorded the number of telephone jacks within buildings that had been surveyed and had to send people back to resurvey sites (tr. 6/180-85, 7/110-114). Mr. Ralph Corbin, a Navy employee who served as an escort to CASI's survey subcontractor, testified that he escorted the subcontractors back to many buildings that had previously been surveyed because of inconsistencies in the way the jacks were counted and subsequently a second survey was conducted (tr. 6/232-35). Mr. Corbin also testified that there were numerous "inefficiencies" in the way the survey was conducted (SR4, tab 95; tr. 6/237-39).

The survey was complicated by the difficulty in ascertaining the exact number of buildings requiring service, as the Board found in an earlier appeal:

. . . CASI's survey revealed numerous discrepancies between the buildings on the base and the buildings identified by Attachment 8 (*see, e.g.*, ex. A-13 (graphic); AR4, tabs 44, 68, 78; tr. 2/258-59, 6/184-86, 8/275-79). CASI required additional information and clarification from the Navy on both the need for service and the scope of service requirements because, at the time of survey, some buildings listed on Attachment 8 were no longer in existence, some were identified incorrectly, some were not in the location indicated, and some had been totally or partially vacated (*see,*

e.g., ex. A-13 (graphic); AR4, tabs 23, 35, 44, 47, 56, 68, 78, 81, 91, 97, 216 at 2, 271, 339; tr. 7/118-19).

(*Contel Advanced Systems, Inc.*, *supra*, 02-1 BCA at 157,142.)

The Navy responded to CASI's inquiries about the discrepancies from Attachment 8 and buildings were added and deleted, almost until cutover in April 1992 (ex. A-13 (graphic); SR4, tab 1359; AR4, tabs 236, 272, 337, 352 at 2, tabs 385, 448-49, 451, 455-56, 459, 461-62, 489, 495-96, 503, 510, 519 at 13, tab 551 at 10, tab 572 at 10, tab 601 at 14, tab 602 at 5, tab 655; tr. 2/43-46, 279-89). Compensation for additional buildings was provided by several contract modifications. These modifications did not revise the schedule. (SR4, tab 2027, Modification Nos. P00017, P00018, P00019, P00021, P00025, P00026, P00036)

After the initial survey (SR4, tab 138), and preliminary design review (SR4, tab 142), it became clear a verification survey was needed. This survey was conducted through late February and March of 1991. (Tr. 6/234-36)

In addition, by letter dated 18 December 1990, CASI explained that it could not meet the CDRL schedule. The station review data provided the basis for the Station Design Plan, CDRL A009, which in turn was the basis for the Trunk, Distribution and Wiring Plan (the OSP design). The letter stated:

Contract Data Requirements List (CDRL) document A00B – Trunk, Distribution, and Wiring Plan – draft copy is due to the Government 90 days after effective date of contract, or 21 December 1990. Because of the time required to prepare preliminary information for this document, CASI can not submit it as required.

(SR4, tab 198)

Results of CASI's preliminary OSP designs were submitted piecemeal to the Navy in a series of letters. The last, corresponding to the main site area, was submitted on 8 January 1991, although the survey was still going on. (SR4, tabs 177, 201 at G-05871, tab 225; tr. 6/234-36)

On 9 January 1991, CASI proposed changes to the CDRL submittal schedule. The most notable of these changes was a change to the submission of the draft TSEP (CDRL A00A) from 60 days after the contract's effective date to 120 days after the contract's effective date, or 22 January 1991, and a slip in the submission of the draft OSP (Trunk, Distribution, and Wiring Plan, CDRL A00B) from 90 days to 120 days after the contract's effective date. (SR4, tab 232) The Navy agreed to the changes (SR4, tab 233). The parties executed Modification No. P00002, effective 10 January 1991, changing several of the CDRL delivery dates, but leaving all other terms and conditions unchanged. The

modification stated that it was “at no additional cost to the Government.” CASI did not reserve any rights upon signing the modification. (SR4, tab 2027, Modification No. P00002)

CASI submitted the draft TSEP on 22 January 1991, in accordance with the changes agreed to in Modification No. P00002 (SR4, tab 252). Although CASI titled its TSEP submission “final,” it was incomplete and the Navy ultimately rejected it (SR4, tab 315). At this point, CASI was 62 days behind its 26 October 1990 schedule, which called for the preliminary design phase to end on 21 November 1990, with no fault for the slippage being attributed to either party.

The CDR took place on 31 January 1991, during which the Navy informed CASI that it had not met the CDR requirements spelled out in the contract’s SOW (SR4, tab 280 at 3).

The Final Design and Review Phase

Based upon CASI’s submission of what was a draft TSEP amounting to a preliminary design on 22 January 1991, and CASI’s originally scheduled 30-day duration for the final design phase from its 26 October 1990 schedule, and the contractually specified 30-day period for Navy review, the expected completion date for the final design phase and Navy review would now be 23 March 1991. We start with a discussion of the delay in the final design of the MSB.

Final Design of the MSB

As required, CASI’s proposal included a new facility for the MSB. CASI proposed a pre-fabricated stand-alone structure to be located adjacent to the Michelson Laboratory. (SR4, tab 3 at I.4-23) Because the proposed building would be adjacent to the laboratory, it would not require bathroom facilities, and it would be possible for CASI to tap into existing electrical and water lines (AR4, tabs 34 at R-15940, tab 77 at I-1).

Shortly after contract award, the contracting officer became aware that the MSB could not be constructed adjacent to the Michelson Laboratory and notified CASI of this at a post-award meeting (SR4, tab 240; tr. 5/32-33). This notification was followed by a formal letter dated 10 October 1990, asking for CASI to submit a price proposal for relocating the proposed MSB to a new location near Building 00002 at the main site (SR4, tab 92; tr. 5/33). CASI submitted its engineering change proposal (ECP) on 14 November 1990, with two alternate designs for the MSB, one similar to the one in its proposal, but a stand-alone building with bathroom facilities. The other alternative was for a substantially larger building which would permit CASI’s network control center to be housed in it and included space for training, meetings, etc. It also included parking spaces for 10-14 cars. (AR4, tab 34)

CASI and the Navy discussed the proposed new building, with CASI submitting a revised ECP on 9 January 1991 (AR4, tab 77). By letter dated 15 January 1991, the Navy

informed CASI it approved the larger alternative MSB design from CASI's 9 January 1991 ECP (AR4, tab 87).

The Navy and CASI exchanged drawings and correspondence regarding the MSB throughout March 1991, and CASI submitted another revised proposal for the MSB on 22 March 1991 (SR4, tab 363). Contemporaneous documentation, in the form of CASI's updated project schedule and an internal CASI memorandum, shows that CASI's baseline schedule was unaffected by any expansion of the MSB or delay in its design approval as of March 1991 (SR4, tab 335 at G-00252, tab 368 at A-16345).

In an internal memorandum dated 25 March 1991, CASI indicated that "[w]hile the schedule is not in jeopardy, cautionary signals are beginning to surface." The memorandum went on to state that approval delays had "slipped building completion to the point of switch arrival from NTI." The memorandum also indicated the project was "four people below plan. This reduction in staffing levels is expected to continue throughout the life of the program." The memorandum suggested a letter be sent "tactfully" informing the Navy that late approvals could affect the project completion date. (SR4, tab 368 at A-16345)

Subsequently, by letter dated 10 April 1991, CASI stated it was putting the Navy on notice that it had caused substantial delays during performance of the contract, primarily in approving construction of the MSB, and stated that it was reserving its right to seek "additional compensation and/or time extensions relating to this delay and disruption to the CTS project." (SR4, tab 403)

By letter dated 22 April 1991, the Navy denied responsibility for causing delays in the approval of drawings for the MSB, noting that:

Records show that the A&E drawings have had to be returned, corrected and reviewed numerous times due to poor quality.

....

... CASI has submitted fragmented and untimely information that has hindered the ability of the government review team members to perform a comprehensive review. The soils investigation and structural calculations report were not submitted until 2 April 1991, and the corrected mechanical drawings were not provided until 4 April 1991. . . .The Main Site Facility drawings, lacking an adequate CASI QA review, are awaiting corrected calculations by CASI's A&E firm to assure compliance with the Uniform Building code per [contract] requirements. . . .

(SR4, tab 428 at A-03378)

Comments, discussions, and redrawing continued throughout April 1991, particularly when the architectural drawings did not meet the contractually required Zone 4 earthquake protection and CASI tried to charge for an upgrade when the Navy insisted the standard spelled out in the RFP and contract be met (AR4, tab 171 at 7; SR4, tab 3 at I.4-23, I.5-13; tabs 417, 439). Later, in an internal corporate memorandum, CASI admitted its architect was unfamiliar with building codes specified in the contract and delayed CASI's schedule for the MSB as well as the installation of the switch (SR4, tab 1866 at A-04889).

The Public Works Department (Public Works) approved CASI's MSB design on 24 April 1991 (SR4, tab 446). Comments from Public Works on CASI's MSB plumbing drawings were forwarded to CASI on 1 May 1991 (SR4, tab 452). On 6 May 1991, CASI replaced all previously submitted architectural drawings with a revised set correcting an error it had made (SR4, tab 460). CASI submitted additional drawings on 8 May 1991.

On 15 May 1991, the parties executed bilateral Modification No. P00012, a maximum price modification, which authorized MSB construction as stated in a 22 March 1991 ECP from CASI, with the pricing information CASI had submitted on 14 May 1991 (SR4, tabs 363, 491, 2027, Modification No. P00012). When CASI submitted the maximum price data for the modification, by letter dated 14 May 1991, it included the following paragraph:

CASI's execution and acceptance of any resulting change order shall be without waiver of any rights or claims that CASI may have against NWC for additional cost and/or schedule impacts due to delay, disruption, acceleration or similar impact caused by this change order. CASI expressly reserves all rights to seek additional costs and/or time extensions from NWC resulting from any delay, disruption, acceleration or similar impact caused by this change order.

(SR4, tab 491 at 2)

In their discussions leading up to the modification, the contracting officer, Mr. Richard Hackney, stressed to CASI's Mr. Babaie that the ceiling price would be binding and subject only to downward negotiation once CASI agree to it. He testified as follows:

. . . I -- basically, I pointed out to him that the ceiling was a ceiling.

You're going to be stuck with it, whatever happens, so make sure that you include in your proposed costs everything—all of the costs that you think you might run into.

And in fact, gave him—gave him the opportunity to reconsider his price. And to make sure that he has covered all the cost elements, he took the price proposal back, and I seem to recall in a week or so—it wasn't too [] long, he came in with a revised price.

And the revised price was slightly higher than the—the initial price, and I—I would assume he was taking into account the fact that it was a ceiling, and he wanted to make sure that he had covered all of his possible costs in this thing.

(Tr. 5/38)

We understand the reservation of rights in connection with Modification No. P00012 to permit CASI to claim government delay, disruption or acceleration in connection with the work covered by the modification. However, there was no indication in any document associated with Modification No. P00012 that CASI sought a specific number of days of delay that it believed it was entitled to because of the change of the MSB's location or scope. And, this would have been an appropriate time to re-baseline the contract. The record does include, however, a 27 February 1991 letter of intent from CASI to its construction subcontractor, Dean Karlberg, showing a start date of 28 February 1991, and a completion date of 27 April 1991, for all contemplated construction, not just the MSB (SR4, tab 321). We conclude from the letter of intent that after CASI was aware of the new building location and scope, CASI's plan called for a 59-day construction period.

CASI's baseline schedule allowed 60 days after the preliminary design phase for CASI to complete and the Navy to review the final design of the MSB. Incorporating the 60 days into a schedule with the changes of Modification No. P00002, the completion date for this phase should have been 23 March 1991. We find Modification No. P00012, dated 15 May 1991, marks the end of the MSB final design period.

The Navy's expert, Mr. Thomas Driscoll of O'Brien-Krietzberg, suggested the resultant 54-day delay from 23 March 1991 to 16 May 1991 could be attributed to the Navy because of the changed location and scope of the MSB (ex. G-5 at 18). However, assuming any delay during the final design phase were attributable to the Navy, the delay was concurrent with and overshadowed by delay to the main switch installation, as explained in connection with the next phase.

Final Design of the OSP

CASI had great difficulty in preparing its OSP design. Even with the extension of the original due date of the TSEP design to 22 January 1991, CASI was still unable to submit a complete package. CASI provided that part of the TSEP dealing with its draft OSP final design to the Navy in piecemeal submittals, terming these submissions “re-engineered . . . drawings.” The last submission was provided to the Navy on 11 February 1991. (SR4, tabs 268, 273, 298)

By letter dated 5 February 1991, the Navy informed CASI that it had a major concern in general with the engineering/design submittals:

In summary, the data submitted and/or partially submitted prior to CDR, and information presented at the CDR, is not considered the final CTS design. Too much emphasis is being placed on those items CASI perceives as necessary to break ground (i.e., start installation) and not enough on the required items that need to commence to assure a quality [OM&A] phase. A major concern is that the Outside Plant design is not [in accordance with] good engineering practices per the CTS specified Rural Electrification Administration requirements.

(SR4, tab 287 at G-38230, ¶ 7)

By letter dated 22 February 1991, the Navy rejected CASI’s 22 January 1991 TSEP submittal, noting that its concerns regarding CASI’s OSP design “ha[d] been and [were] still being addressed under separate letters and in continuing technical discussions with CASI.” The Navy required CASI to resubmit the TSEP and noted that another review cycle would be necessary. (SR4, tab 315) The Navy advised CASI by letter dated 25 February 1991 that its various partial station design plan submittals were also unacceptable and again noted that another review cycle would be necessary upon CASI’s resubmission (SR4, tab 317).

CASI submitted its revised draft OSP final design to the Navy in piecemeal fashion until 4 April 1991 (SR4, tabs 333, 353, 392). On 22 April 1991, the Navy gave CASI approval to proceed with staking activities, a prelude to OSP installation, at all sites (AR4, tab 172). As of 24 April 1991, CASI was ordering material for OSP construction (SR4, tab 422 at G-00268). By letter dated 2 May 1991, the Navy forwarded 24 comments to CASI on its draft OSP final design, identifying some of the problems discovered in the drawings, while making clear the list was not exhaustive (SR4, tab 455; tr. 6/266-68). CASI submitted its revised final design by letters dated 13 May 1991 and 29 May 1991 (SR4, tabs 484, 523, 524). The Navy allowed CASI to begin OSP construction 30 May 1991, after approving OSP drawings (SR4, tab 530).

The Navy did not require, as it could have, that CASI wait for the approval of the station design plan or complete TSEP approval before allowing construction to begin. The station design plan was eventually approved on 8 July 1991, following a series of resubmissions by CASI (SR4, tabs 333, 359, 389, 404, 462, 487, 555, 601, 634; AR4, tab 274). The TSEP was eventually approved on 9 August 1991, following a series of resubmissions by CASI (SR4, tabs 459, 507, 595, 619, 639, 673, 732).

Therefore, we find CASI is responsible for a 69-day delay in the OSP design, from 23 March 1991 through 30 May 1991, which actually was mitigated by the Navy's prompt review of the drawings and submittals of 13 May 1991 and 29 May 1991, and its approval of commencement of OSP construction, without making CASI wait until either the station design plan or the TSEP were approved as it had a right to. Any delay in the OSP decision did not affect CASI's ability to proceed with the MSB work.

The Construction Phase

The construction phase begins after the final design and review and covers the period of time used to actually construct the entire project through cutover. CASI's baseline as-planned schedule indicates CASI planned on completing the actual construction phase in 329 days, from 14 January 1991 to 9 December 1991. Using 16 May 1991, when CASI could have begun construction work at the MSB, as the date when the construction phase begins, and adding the duration of 329 days, brings cutover to 9 April 1992. Actual cutover occurred on 10 April 1992 and system acceptance took place 11 May 1992 (SR4, tabs 1359, 2027, Modification No. P00040; AR4, tab 695 at 1).

From Mr. Babaie's perspective, the only thing CASI considered to be on the critical path was the MSB and installing and testing the main switch. As he explained it,

. . . [I]f the main switch building was not completed, if we were not able to install the SL-100 switch . . . and if CASI was . . . able to complete everything else, nothing would work, you cannot program anything through the remote. Everything had to be done through the main switch.

There was only one critical path: to get the main site building and switch complete.

(Tr. 2/220-21) This was his view both at the time of the creation of the schedule and during the course of the project. We found Mr. Babaie's testimony credible.

MSB Construction

CASI initiated site work activities at the main site on 28 May 1991 (AR4, tab 302 at 8). Because CASI had proceeded with the wrong size MSB vault, its construction subcontractor, Dean Karlberg, had to stop all work at the main site on 6 June 1991. The

vault depth and details were revised by CASI's internal change order on 13 June 1991 and then again on 21 June 1991. The Navy had previously warned CASI on two separate occasions that its projected vault was too small (*see Contel Advanced Systems, Inc.*, ASBCA No. 49072, 02-1 BCA at 157,139). In addition, CASI's subcontractor had failed to properly compact the soil on the finish grade of the MSB pad and it needed to be recompacted. Three tests were required before work could continue, the third taking place on 24 June 1991. (SR4, tabs 635, 644 at G-00169; tr. 6/204-03) This is clearly a CASI-responsible delay from 6 June 1991 through at least 24 June 1991, or 19 days.

Further, CASI had continuous problems during MSB construction. For example, there were problems with cable footings, steel subcontractors were working with the wrong drawings, and some steel, rebar, and plumbing had to be reworked (SR4, tab 688 at A-14340-43). CASI's subcontractors had to correct deficiencies in roof joist construction (SR4, tab 747), relocate a concrete slab poured in the wrong location (SR4, tab 768), correct the location of louvers put in the wrong place, reinforce roof joists after a plumber cut away part of the roof when installing a drain, replace incorrectly used wire (SR4, tab 793), and rework areas where its subcontractor had used outdated plans (SR4, tab 825). Problems arose with the roofing for the MSB (SR4, tabs 888, 901, 911, 912). None of these errors and resulting delays was the fault of the Navy. CASI admitted in an internal corporate memorandum that MSB rework due to the poor quality of work done by its subcontractors, along with its construction subcontractor's lack of familiarity with governmental codes incorporated into the contract caused delay to the MSB, albeit unquantified (SR4, tab 1866 at A-04889).

The MSB was substantially completed in November 1991 (*Contel Advanced Systems, Inc.*, ASBCA No. 49072, 02-1 BCA at 157,134). The switch room, however, was ready on 1 October 1991, and CASI initiated ironwork activities at this time. Both parties have used 1 October 1991 as the critical MSB date for purposes of their delay analysis since the switch could be installed (SR4, tab 913 at A-02930; tr. 3/238; ex. A-28 at 4, ex. A-32 at ex. # 5, ex. G-5 at 21). As CASI's expert, Mr. Charles Atkins of Atkins & Company, Inc., observed, CASI had gotten the work on the MSB "sufficiently done by October the 1st -- to get off of the critical path" (tr. 3/241).

In summary, but for CASI-caused delays, the MSB construction would have been completed at least 19 days earlier than it was. Moreover, CASI has not established that the Navy was responsible for any delay during this construction period. In addition, although the building was more complex than originally planned, it was not necessary to substantially complete the building before switch installation began.

The Switch

CASI's proposal, incorporated by reference into the contract, explained that Northern Telecom, Inc. (NTI)'s family of MSL-100 host/remote digital switches were at the core of its design (SR4, tab 3 at I.1-3). CASI proposed using a "Host-Remote"

network concept, providing an MSL-100 host at the main site and remotes at the other eight sites making up the Navy's facility at China Lake.

The contract required factory testing of the switching equipment and ten days notice to Navy personnel prior to factory testing. In its proposal, CASI acknowledged these obligations. (SR4, tab 4 at II.3-11 to II.3-16) On 8 March 1991, CASI informed the Navy that it intended to conduct the elevated temperature test on the switch at the NTI plant in Raleigh, North Carolina, on 10 April 1991 (SR4, tab 339). However, during the trip to NTI's plant, Navy personnel observed assembly and testing on switches other than those for the CTS. There was no testing of CTS specific equipment during the visit. (SR4, tabs 408, 416; tr. 7/132-35) This was unacceptable to the Navy and the Navy informed CASI that it was rejecting CASI's test notification of the factory test of the CTS switch. The Navy reminded CASI that all future tests were to be conducted on CTS equipment as required by the contract. (SR4, tab 416; AR4, tab 157) CASI agreed to reimburse the government for its travel and admitted that it "should have clearly stated that the factory test purpose was not the CTS switch, but observation of the methodology process" (SR4, tab 426, ¶ 1).

On 4 June 1991, a meeting took place between representatives of CASI, NTI and Logica Data Architects (Logica), CASI's subcontractor for the TAS, which interfaced with the switch and the TAS software. At the meeting, CASI was advised of problems with the switch CASI had ordered which would delay its delivery.

CASI was notified by NTI that the MSL 100 BCS 32 they had contracted for China Lake was a non-military release, which means it did not have AUTOVON or Scope Dial. Since the ISDN capability is needed, CASI cannot use BCS 31. BCS 33 will not be fully up and tested until possibly January. CASI had some apprehension on whether NTI could meet the delivery dates for BCS 33. NTI has agreed to provide BCS 32 with a patch for AUTOVON and Scope Dial, but the delivery will be delayed until August 1991.

(SR4, tab 550 at A-08503, ¶ 5)

The mistaken order of non-military release switch equipment delayed not just NTI which, as noted above, needed time to work out adding a patch to cover NWC needs, it also impacted Logica's development of the software for the TAS (SR4, tabs 585, 607 at A-17188, tab 625 at A-08363, tab 763).

During the PSR on 12 July 1991, CASI announced that some switching equipment had been shipped from NTI's plant in North Carolina to the NTI facility in Richardson, Texas (SR4, tab 687). By letter dated 30 July 1991, the Navy informed CASI that it viewed the shipping of any switching equipment without providing advance notice of factory testing as a violation of the contract. The Navy repeated its desire to be notified

of all testing in accordance with the contract and noted that CASI's failure to do so "can adversely impact the implementation schedule of the contract." (*Id.*) The Navy repeated its concern in a letter dated 5 August 1991, from the contracting officer to CASI's contracts manager, referencing the contract requirements for equipment testing before shipment and government witnessing of tests (SR4, tab 717). Internal government e-mails reflect the importance of factory testing (SR4, tab 754). The Navy was also concerned that if CASI did not let the Navy know when testing was to take place, it made it difficult for the Navy to actually know when the switch would be ready for shipment (SR4, tab 689).

At a status meeting on 8 August 1991 dealing with switching system implementation, the minutes reflect that a quantity of switch equipment had arrived at China Lake and had been installed at the remote sites, although some equipment had been shipped short of required pieces (SR4, tab 725 at A-18639-40). The problem of missing pieces in the shipments of the switching equipment continued throughout the fall of 1991 (SR4, tab 751 at A-22496, tabs 759, 776 at A-22398, tab 794 at A-22385, tab 812 at G-00680).

At the 8 August 1991 status meeting, CASI again promised to comply with the contractual requirements for factory testing. An annotation on the minutes from the meeting indicates that there was "possibly [a] 10-12 week delay in shipment, largely due to software," although it is unclear which switching equipment or location was being referred to. (SR4, tab 725 at A-18640)

In a letter dated 21 August 1991, NTI informed CASI that the failure to resolve the factory testing issue had adversely impacted its shipping and installation schedule and such adverse impact "may require NTI to submit a proposal for equitable adjustment to CASI." (SR4, tab 770)

On or about 27 August 1991, representatives from CASI, NTI, and the Navy met at NTI's manufacturing facility in North Carolina, and the Navy was again informed of the methodology NTI used in testing the CTS equipment and was given the opportunity to review test documentation and results. However, once again, the Navy did not witness the factory testing of CTS specific equipment. (AR4, tab 393)

In a 30 August 1991 letter following the meeting at NTI, CASI asked the Navy to waive the requirement for 10-day notification prior to any testing, and asked that it also be relieved of the obligation to retest equipment already sent to NTI's Richardson, Texas facility, noting that a factory re-test of this equipment would result in a delay of 8 to 10 weeks. CASI promised to provide the Navy with all existing test results and other data necessary to demonstrate that factory testing had been conducted. (AR4, tab 393)

On or about 16 September 1991, the Navy granted CASI's waiver request in order to "maintain the current implementation schedule" and authorized CASI to ship the equipment (SR4, tabs 809, 841 at G-01357, G-01359). Up until this time, the record

indicates the switch, though ready, was not shipped because it was “on hold pending factory testing” (SR4, tab 704 at A-18642, tab 725 at A-22499, tab 776 at A-22401, tab 794 at A-22388). Absent this waiver, CASI could not have shipped the switch to China Lake until it conducted factory testing in accordance with the contract (tr. 7/135).

Subsequently, CASI admitted in an internal memorandum that due to its mishandling of the factory testing requirements—required by the contract—shipment of the switches had been delayed “FOR 4 WEEKS” until the requirement was waived.

CONTRACT REQUIREMENT FOR FACTORY TESTING,
DOCUMENTED RESULTS AND PROVIDING
GOVERNMENT OPPORTUNITY TO OBSERVE. THIS
STOPPED ALL SHIPMENT OF SWITCHING
EQUIPMENT FOR 4 WEEKS UNTIL RESOLVED.
ENDED UP PAYING TO HAVE GOVERNMENT GO TO
RALEIGH NC TO WITNESS STANDARD NTI TESTING.
FORTUNATELY, GOVERNMENT WAIVED
REQUIREMENT TO WITNESS TESTING OF ALL
SWITCHING EQUIPMENT THAT WAS TO BE USED ON
THIS PROJECT.

(SR4, tab 1866 at A-04889)

The switch for the main site building and all its accompanying equipment was delivered to China Lake by 1 October 1991 (SR4, tab 892 at A-02946).

With respect to the switch, CASI’s expert’s overall conclusion was that “CASI did a responsible job in communicating with the switch supplier and getting the switch timely ordered, timely sized and available to be delivered . . . so as to not further hold up the project as delayed by the completion of the main switch building” (tr. 3/331). He observed that the MSB was delayed until 1 October “exactly the same date that the switch arrived” (tr. 3/327). In his view, since the MSB was delayed 165 days, by his count, “if everything moved accordingly . . . in the performance of the schedule you would expect the switch to come in one hundred and sixty-five days later as well” but “[i]n fact, CASI brought it in earlier” (tr. 3/327-28). He measured the delay on the MSB from the planned end date of 19 April 1991 to the 1 October 1991 switch availability date, a total of 165 days. He broke this down as a delay of 134 days during the design phase and 31 days during the construction phase. He explained that CASI would have been entitled to a later cutover, but by achieving cutover on 10 April 1992, 122 days later than planned, “what actually happened . . . is they saved . . . [days] by accelerating everything that took place after this October 1st date.” (Tr. 9/25-27, 30-32, 93-94)

Mr. Atkins testified that he did not believe the switch was on the as-built critical path, although it was important within the overall framework of equipment installation. He believed the critical path “flipped” to another set of activities involving completion of

the OSP, although he conceded that it was “very hard to actually come up with an exact flip of when that happens” (tr. 9/54-55). From his perspective the switch was available for delivery earlier than CASI was able to accept it because it had not finished the main switch building in which it would be housed (tr. 9/45). It was his determination that the shipment of the switch was determined solely by the availability of the MSB to house the switch (tr. 9/78). However, he conceded in response to a hypothetical question that if the switch did not arrive in time, it would affect one’s analysis (tr. 4/101-02).

Our findings do not support CASI’s expert’s analysis. We find that installation of the switch was on the critical path and look to Mr. Babaie’s testimony as confirming our assessment of the record. We also find that the switch was delayed due to CASI’s fault in its mistaken original order of a nonmilitary release MSL 100 BCS 32 and the need to wait until at least August 1991 for an NTI patch. Also, CASI had failed to adhere to the test requirements in the contract, resulting in what CASI itself has acknowledged was at least a four-week delay. Our examination of the schedule indicates there was a 121-day delay from the planned 2 June 1991 start of switch installation (as indicated in Figure 1-7 of the 26 October 1990 schedule as the “as-planned” start and putting aside Figure 1-10, which indicated installation would not begin until 13 August) through 1 October 1991 when the switch arrived (SR4, tab 31 at Figures 1-7, 1-10, tab 892 at A02946). CASI bears the responsibility for this delay. Moreover, although in principle we recognize that a delay in the design phase could have prompted an adjustment to the overall switch installation schedule, there is no indication in the record that deferral of the switch was ever contemplated.

In our view, CASI has not established that if the MSB had been completed any earlier than it was, CASI could have delivered and installed the switch earlier than it did. Consequently, any delay that may have been caused by the Navy during the MSB design phase was concurrent with CASI-responsible delay to the installation of the switch—a critical path activity.

The TAS

Mr. Babaie testified that TAS data entry became the next critical activity after the main switch (tr. 2/224-25). The switch interacts with the TAS and TAS equipment was defined as a “stand-alone system that operates on an AT&T 3B2/1000 Model 60 computer” using an Oracle relational database (SR4, tab 3 at I.2-131). The major component that would function as the TAS for the CTS was the Communications Control Center (C3) from Logica (SR4, tab 3 at I.2-18, ¶ C). Information needed to be collected for each subscriber at the CTS and entered into the TAS database. Problems associated with the TAS and loading the CTS database were the subject of an earlier appeal and familiarity with that opinion is assumed. *Contel Advanced Systems, Inc*, ASBCA No. 49074, 03-1 BCA ¶ 32,155.

We denied the earlier appeal because we concluded that CASI had failed to prove that the Navy had breached its duty of cooperation or had forced CASI to relocate the

TAS equipment. CASI's problems with its computer platform and its software programs caused CASI's delay in programming the TAS database (*id.*, at 158,964, 158,975). CASI had problems with the initial TAS installation and was not ready to enter information into the database until 3 June 1991 (*id.*, at 158,967). CASI failed to provide information the Navy needed to compile its database subscriber sheets which it needed before it could provide the database sheets to CASI (*id.*, at 158,968-69). CASI complained that the Navy forced CASI to relocate the TAS during the database loading, but we found that the move was neither directed nor caused by the Navy but was a decision CASI took for its own convenience (*id.*, at 158,971). Further, CASI's inability to provide capability information on some of its lines and its inexperience with programming the switch with these lines resulted in delay in loading the TAS database, not Navy actions (*id.*, at 158,972). We also found that CASI unilaterally decided to use dual entry of data into the TAS and the switch, as opposed to using the system's automatic switch update. This was not done at the Navy's direction, as CASI alleged. The dual entry resulted in inconsistent data between the TAS and switch. When the Navy became aware of this, we found the Navy reasonably requested that CASI provide database verification sheets. (*Id.*, at 158,974)

In summary, we find that there was delay in loading the TAS, but it is not delay for which the Navy is responsible. CASI's difficulties and unfamiliarity with its equipment resulted in significant delay, although unquantified. CASI's expert did not believe the TAS was a controlling factor in defining the completion date of the project. We do not find this opinion persuasive. He acknowledged that one had to have most of the TAS work done before cutover. He also acknowledged that TAS work was "in a crisis mode" and, "[u]ltimately, it was the controlling event that dictated the cut over date that took place . . . on April the 10th." (Tr. 3/346-47)

OSP Construction

CASI's as-planned schedule allotted 221 days for cable installation at all sites, from 25 February to 4 October 1991 (AR4, tab 31, Figures 1-4, 1-10; ex. A-32 at exs. 10, 11; tr. 3/ 274-75). CASI completed the OSP installation in 214 days, 17 June 1991 to 17 January 1992, seven days less than in the as-planned schedule. According to Mr. Babaie, CASI "made [e]very effort and we successfully completed the majority of the [OSP]. . . . The bottleneck ended up being the main site building/main switch. If [any]one studied CASI's performance . . . they would see CASI successfully minimize[d] the impact of outside plant in their schedule." (Tr. 2/126-27)

Based on our consideration of the record, we find that the OSP construction effort did not account for a delay to the overall completion of the project.

Conduct of the Parties

Although it made complaints about delay, CASI never asked for a time extension (SR4, tab 403; AR4, tabs 146, 302 at 8, tab 321; tr. 2/134, 5/97-100). CASI made several

requests for permission to work extended hours for OSP and ISP activities (SR4, tab 434 at R-16009, tabs 592, 606, 615). The Navy authorized CASI's extended hours upon the condition that there would be "no additional cost to the Government" (SR4, tabs 631, 632). No evidence was presented of any government direction to accelerate. The contracting officer testified, "the question never came up" (tr. 5/100). Mr. Babaie acknowledged that CASI did not request a time extension from the government before beginning its claimed acceleration efforts (tr. 2/134). Mr. Babaie testified that CASI was fully aware that it would have to add additional manpower and extra crews in order to maintain the fifteen-month cutover milestone (tr. 2/126-28). To the extent CASI actually accelerated, it did so voluntarily:

Q Did you request a time extension from the Government before you started the accelerated work effort?

A At that time, we didn't see no point asking for schedule impact. Because our objective was to accomplish everything within 15 months as we had promised to the Government.

Q So the answer to my question is no, you did not prior to starting your accelerated work effort, you did not request a time extension from the Government?

A I don't believe we did, no.

(Tr. 2/134)

There were several modifications to the contract dealing with additional OSP work, and we find that CASI did not request a time extension in any of them (SR4, tabs 883, 2027, Modification Nos. P00017, P00018, P00019, P00020, P00021, P00025, P00026, P00027, P00036).

According to the contract, CASI would not receive any payment until after system acceptance (SR4, tab 1 at 19). In a 3 December 1990 letter from Mr. Babaie to the contracting officer, Mr. Babaie indicated that no payments were due CASI until system acceptance and any slippage in its schedule would result in "severe penalties to CASI" (SR4, tab 164 at A-11756). In fact, CASI did not receive any payment for the CTS until after acceptance. The first payment was made in June 1992 (SR4, tab 1465 at G-36827).

CASI's Claim

By letter dated 1 February 1994, CASI submitted several claims, one of which was the present claim seeking delay, disruption and acceleration costs of \$1,072,590 in connection with construction of the MSB, OSP installation and TAS database entry (SR4, tabs 2028, 2032). CASI's 1 February 1994 claim did not provide a critical path or any

kind of schedule delay analysis in support of its allegations (SR4, tab 2032). It later supplemented the claim with a bar chart and a short narrative explanation (SR4, tab 1852). When the contracting officer did not issue a timely final decision, CASI filed an appeal to the Board on 17 August 1995, on the basis of a “deemed denial,” and we have confirmed jurisdiction on this basis. *Contel Advanced System, Inc.*, ASBCA No. 49063, 10 February 2003 (unpublished order). The contracting officer subsequently issued a final decision on 12 December 1995 (SR4, tab 2036).

The principal focus of its claim is on alleged government-caused delays in connection with the design and construction of the MSB. It alleges 122 days of government responsible delays—from 10 December 1991 to 10 April 1992—in achieving cutover.

DISCUSSION

Preliminary Matter

We have found that the OSP effort did not account for the overall delay in achieving cutover and completion of the project. However, what remains unresolved is CASI’s entitlement to an equitable adjustment for the alleged extra OSP work it performed. We cannot resolve that issue here, except as it relates to acceleration.

In *Contel Advanced Systems, Inc.*, ASBCA No. 49073, 02-1 BCA ¶ 31,809, the Board found CASI entitled to compensation for providing OSP to eight additional buildings and denied additional OSP compensation for four buildings. However, we were required to conclude that we had no jurisdiction over 39 buildings for which we had taken evidence (*Id.*, at 157,150-51). CASI subsequently filed additional OSP claims with the contracting officer for the additional buildings, but these claims are not presently before us.⁵ Thus, we are not in a position to determine CASI’s entitlement to additional compensation for OSP services provided to the additional buildings covered by CASI’s new claims or, for that matter, to address CASI’s compensation for the eight buildings for

⁵ Consideration of this present appeal had been deferred since the issuance of the OSP decision and the related MSB decision, both issued in March of 2002. Subsequent to the OSP decision, the presiding judge suggested that the parties consider a global settlement and offered to provide an assessment of CASI’s entitlement to additional compensation for the 39 buildings. The parties discussed the matter. At the end of August 2002, the parties declined the Board’s offer. It was decided that consideration of settlement discussions would be deferred pending the Board’s decision in the LTOP appeals and with the understanding that the Board would also proceed with its consideration of the TAS and OM&A appeals. In the meantime, CASI filed certified claims in connection with the additional buildings. After the decision on the LTOP appeals, the parties attempted to reach a global settlement. Their efforts were unsuccessful and in December 2003 a decision on this appeal was requested.

which we found entitlement and remanded for the determination of quantum. If CASI performed work on additional buildings, it would be entitled to an equitable adjustment for extra work performed, without regard to the acceleration issue. We leave this matter to the parties for their consideration in connection with the additional OSP claims that are not before us.

Delay

In order to establish entitlement to delay damages, the contractor bears the burden of demonstrating the extent of the delay, the causal link between the government's wrongful actions and the delay and harm to the contractor resulting from the delay. *E.g.*, *Essex Electro Engineers, Inc. v. Danzig*, 224 F.3d 1283, 1295 (Fed. Cir. 2000); *Commerce International Co. v. United States*, 338 F.2d 81 (Ct. Cl. 1964); *Wilner v. United States*, 24 F.3d 1397, 1401 (Fed. Cir. 1994) (*en banc*). *See also Cox & Palmer Construction Corp.*, ASBCA Nos. 43438 *et al.*, 93-3 BCA ¶ 26,005 at 129,274, and cases cited therein. The contractor must account for any concurrent contractor-caused delay and it also bears the burden of proof in this regard. "Before delay damages can be considered, the contractor has the burden of demonstrating that . . . any Government caused delays were not concurrent with delays within the contractor's control." *Donohoe Construction Company*, ASBCA Nos. 47310, 47312, 99-1 BCA ¶ 30,387 at 150,190, quoting *Technical & Management Services Corp.*, ASBCA No. 39999, 93-2 BCA ¶ 25,681 at 127,753, *aff'd mem. sub nom., Technical & Management Services Corp. v. Kelso*, No. 93-1316, 1993 U.S. App. LEXIS 33425 (Fed. Cir. Dec. 13, 1993) (unpublished). As the Federal Circuit explained, a "contractor generally cannot recover for concurrent delays for the simple reason that no causal link can be shown: A government act that delays part of the contract performance does not delay 'the general progress of the work' when the 'prosecution of the work as a whole' would have been delayed regardless of the government's act." *Essex Electro Engineers, Inc.*, 224 F.3d at 1295, quoting *Coath & Goss*, 101 Ct. Cl. 702, 714-15 (1944).

As a general matter then, the focus is on an overall delay to the project—a delay on the "critical path"—for which the government is responsible. It is not enough for the contractor to show that the government was responsible for delay to a particular segment of the work. It must establish that completion of the entire project was delayed by reason of the delay to the segment. *Donohoe Construction Company*, 99-1 BCA at 150,190, citing *Rivera Construction Co.*, ASBCA Nos. 29391, 30207, 88-2 BCA ¶ 20,750 at 104,856.

Our findings require us to conclude that CASI has failed to meet its burden here. Though we have accepted that Modification No. P00012 reserved CASI's rights to claim "delay, disruption, and acceleration" for which it was not at fault in connection with the revised MSB, CASI, nevertheless, retained the obligation to prove its case.

In any event, in the final analysis, though CASI has focused its claim on delays to the MSB, our findings are that the main switch installation was on the critical path. CASI

has failed to establish that it could have installed the switch earlier than it did, even if the MSB would have finished earlier but for a government-caused design delay and even assuming a 54-day delay. The concurrent contractor-responsible delay in the availability of the switch was controlling. After the switch was installed, loading the TAS database became critical, and CASI had numerous problems in connection with the TAS. As we found, there was no Navy-caused delay to the TAS, but significant delay that is the responsibility of CASI.

Acceleration

To recover for increased costs of acceleration,

. . . a contractor must establish that: (1) any delays giving rise to the order were excusable, (2) the contractor was ordered to accelerate, and (3) the contractor in fact accelerated performance and incurred extra costs. [Citation omitted] A constructive order to accelerate differs from a direct order to accelerate in that a constructive order to accelerate ‘need not be couched in terms of a specific command. A *request* to accelerate, or even an expression of concern about lagging progress, may have the same effect as an order.’ [Emphasis in text]

Phillips National, Inc., ASBCA No. 53241, 04-1 BCA ¶ 32,567 at 161,102, citing and quoting *Norair Engineering Corp. v. United States*, 666 F.2d 546, 548 (Ct. Cl. 1981).

CASI’s expert summed up the general framework for the CASI acceleration claims in the following terms:

. . . CASI was impacted by multiple, concurrent delays imposed upon it by the Navy, such that Acceptance was delayed 122 days until May 10, 1992 [sic May 11], and that all cost impacts of this compensable delay should be fully recoverable from the Navy. Additionally . . . because of the Navy delays, changes and extra work, CASI would have a justifiable right to a time extension of 217 calendar days, deferring required System Acceptance until August 14, 1992. That CASI achieved Cutover on April 10, 1992 and Acceptance on May 10, 1992 [sic May 11], is conclusive evidence of: 1.) the timeliness of CASI’s performance; 2.) CASI’s mitigation of impacts and damages; and 3.) CASI’s acceleration of the impacted project schedule.

(Ex. A-28 at 1-2)

We found this analysis to be theoretical, particularly because it failed to account for any CASI-caused delay, and ultimately unpersuasive—as reflected in our findings. The pressure to complete the project timely was, as Mr. Babaie intimated, driven by CASI’s desire to meet its financial commitments, rather than an express or implied order from the government. CASI has failed to convince us that there was either an actual or constructive acceleration here.

DECISION

The appeal is denied.

Dated: 13 July 2004

(Signatures continued)
I concur

MARTIN J. HARTY
Administrative Judge
Armed Services Board
of Contract Appeals

I concur

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

EUNICE W. THOMAS
Administrative Judge
Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA No. 49075, Appeal of Contel Advanced Systems, Inc., rendered in conformance with the Board's Charter.

Dated:

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

