

# CASE STUDY: CONSTRUCTION LITIGATION FOR THE U.S. NAVAL FACILITIES ENGINEERING COMMAND, 1995-2004

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**ABSTRACT:** Evaluation of construction claims history can provide insights to improvement opportunities in a capital project portfolio. This study analyzed construction litigation claims extracted from the U.S. Court of Federal Claims (COFC) history involving the U.S. Naval Facilities Engineering Command (NAVFAC) from 1995-2004. Twenty-four total cases were examined over this period. Both “primary” causes and “root” causes were identified and compared to 666 litigation cases reviewed by the Armed Services Board of Contract Appeals (ASBCA). Based on the analysis, strategies for resolving future disputes are recommend using a ‘hybrid’ process prior to litigation.

*Key words: Dispute Resolution, Litigation, Claims, Project Management, Communication*

## 1. PURPOSE OF STUDY

When left unaddressed, construction disputes can escalate into costly litigation that consumes valuable time, money and human resources in the process. To maximize capital efficiency in the construction process, it is important to identify the causes of construction disputes and develop prevention strategies.

This paper presents an analysis of litigation and underlying dispute causes for NAVFAC from 1995-2004. A previous study undertaken by Jeffrey J. Kilian (Kilian, 2003) evaluated NAVFAC litigation data based on “first time” disputes heard before the ASBCA. This paper will use a similar methodology to survey NAVFAC litigation pursued in the U.S. Court of Federal Claims (COFC). These two sources are the first level of judicial review by which a contractor can seek legal relief for a claim denial on part of government (Keating, 2003).

The findings of this paper can provide insight to the nature of litigation cases in COFC and be used to draw comparisons among previous research. In addition, common factors presented in the court cases from both the ASBCA and the COFC can identify areas of concern and possible improvements for NAVFAC operations and policies.

## 2. SCOPE OF STUDY

This study explores two characteristics of NAVFAC claims from the last ten fiscal years (1995-2004) – “primary” and “root” causes of litigation. The “primary” cause of litigation is subjectively identified both from the legal issue in question and from the holdings of the case. The “root” cause analysis centers on a subjective analysis of the details of the case. The basic approach incorporates a detailed examination of the underlying factors that drove

the dispute to litigation, whether from contractor or government actions. All cases examined for this research were electronically obtained from Westlaw Federal Government Contracts – Court of Federal Claims Cases (COFC) database (Westlaw, 2004).

## 3. OVERVIEW OF U.S. NAVAL FACILITIES ENGINEERING COMMAND

The U.S. Naval Facilities Engineering Command is headquartered in Washington D.C. and is responsible for global shore infrastructure construction, maintenance, and management for the United States Navy and Marine Corps. NAVFAC manages a construction volume exceeding \$3.7 billion dollars per annum (Kilian, 2003).

The award and management of construction contracts is handled regionally by an Engineering Field Divisions (EFD) or Field Activities (EFA). Contracts are typically awarded by a Contracting Officer, who is also responsible for issuing final approval for contract modifications.

Claims during project execution are initially pursued at the project level by government project representatives consisting of a project manager and a contract specialist. If a remedy is not agreed upon, the contractor can submit its claim to the Contracting Officer for resolution or final decision.

The contracting officer represents the last level of dispute resolution before a claim is forwarded to litigation. If the contractor is not satisfied with the Contracting Officer’s final decision, it can appeal to the Armed Services Board of Contract Appeals (ASBCA) or the U.S. Court of Federal Claims (COFC). Appeals from decisions of the ASBCA and the COFC go to the U.S. Court of Appeals for the Federal Circuit and then to the U.S. Supreme Court if necessary (Keating, 2003).

## 4. BACKGROUND

Construction, a complex and technical field, is frequently categorized as an adversarial industry where business relationships often take a back seat to bottom lines and profit margins. This adversarial nature is often inherent in the contracts and design document interpretation where disputes between owners, designers, and contractors frequently originate. Construction claims frequently arise during project execution when a contractor assumes rights against an owner to recover additional costs, extend project schedule, or both. Some of the driving factors for construction claims include (McMullan, 2003):

1. Owner caused delays,
2. Performing extra work not detailed in the design,
3. Deficiencies in design, plans, and specifications,
4. Performing work that was more difficult than described in the contract,
5. Differing site conditions, or
6. Owner initiated change orders (additive or deductive).

Many empirical studies have examined the causes and sources of construction disputes (Kumaraswamy 1996; Fenn et al. 1997). Table 1 summarizes these studies.

**Table 1.** Literature and the Sources of Disputes (adapted from Fenn et al. 1997)

Research	Source of disputes
Bristow and Vasilopoulous (1995)	Five areas: unrealistic expectations; contract documents; communications; lack of team spirit; and changes
Conlin et al. (1996)	Six areas: payment; performance; delay; negligence; quality; and administration
Diekmann et al. (1994)	Three areas: people; process; and product
Heath et al. (1994)	Seven areas: contract terms; payment; variations; time; nomination; re-nomination; and information
Hewit (1991)	Six areas: change of scope; change conditions; delay; disruption; acceleration; and termination
Kumaraswamy (1996)	Two areas: root causes; and proximate causes
Rhys Jones (1994)	Ten areas: management; culture; communications; design; economics; tendering pressures; law; unrealistic expectations; contracts; and workmanship
Semple et al. (1994)	Four areas: acceleration; access; weather; and changes
Sykes (1996)	Two areas: misunderstandings; and unpredictability

While the literature covers a wide spectrum of issues, there are distinct similarities between many of the docu-

mented sources of construction disputes. Failure to perform and interpretation of contracts are among the most frequently identified sources of adversarial relationships in the industry as discussed later in this paper.

## 5. CASE IDENTIFICATION AND SELECTION

The case data gathered in this study were taken solely from the COFC decision history. All of the cases presented in this study were litigated in front of the COFC and resulted in a rendered decision within the timeframe (1995-2004). Caution was taken to rule out appealed cases and reduce the risk for a double count in the total population.

In order to make cross-comparisons meaningful, the authors used similar analysis techniques to that Kilian (2003) employed. Kilian categorized NAVFAC construction-related cases into three basic types of contracts or projects which are illustrated in Table 2. The classification of contract types was a preliminary decision used to facilitate the extraction of applicable cases from the Westlaw database.

Kilian considered these divisions to be Construction, Construction Maintenance, and Service contracts. Construction and Construction Maintenance cases were included in the final count for analysis. Service contracts were not included because the intent of this study was to focus solely on contracts for capital projects. Construction and Construction Maintenance contracts were not segregated and analyzed separately, rather they were treated as the same when evaluating and assigning causes of litigation.

**Table 2.** Contract-Project Descriptions

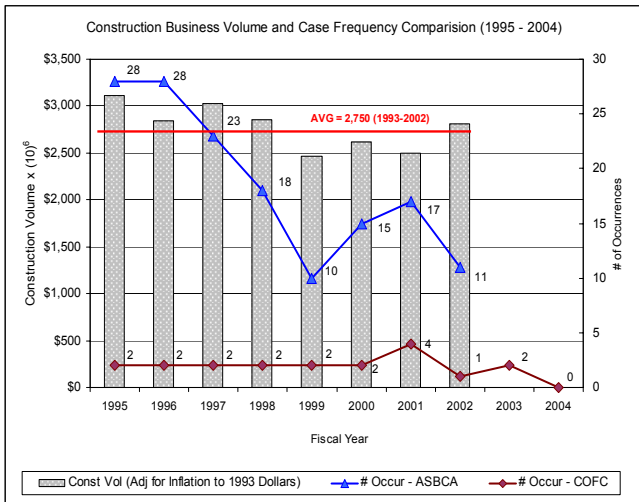
Contract	Applicable Projects
Construction	New structures, roads, utilities, etc.
Construction Maintenance	Repair or replacement of utility systems, remodeling, etc.
Service	Janitorial, grounds maintenance, base housing maintenance, etc.

Information was recorded for each case during the initial review. The COFC law report usually begins with a major holding, outlining plaintiff's original cause of action, highlights of the litigation, and rulings. Westlaw Headnotes followed the summary and continued with opinion, facts, discussion, and conclusion. The following information was recorded for each case:

- Westlaw citation
- Plaintiff
- Decision Date
- NAVFAC Contract No.
- Nature of Case
- Contract Description
- Contract Award Amount
- Contract Award Date
- Litigation issue(s)

## 6. TOTAL CASES LITIGATED

A total of 24 NAVFAC litigation cases fit the selection criteria for the period from 1995-2004. Of the 24 cases identified, five cases were filed by disappointed bidders who protested the bid award. Therefore, nineteen total cases surveyed involved disputes from work on capital projects. Figure 1 depicts a year-by-year frequency graph showing the trend of litigation occurrences originally presented by Kilian (2003). The frequency of COFC cases were added by the authors for comparison purposes. The figure indicates that the majority of NAVFAC disputes were litigated in the Arms Services Board of Contract Appeals while cases in the COFC consistently remained at a low volume. It also shows the decreasing level of litigated cases during that period.



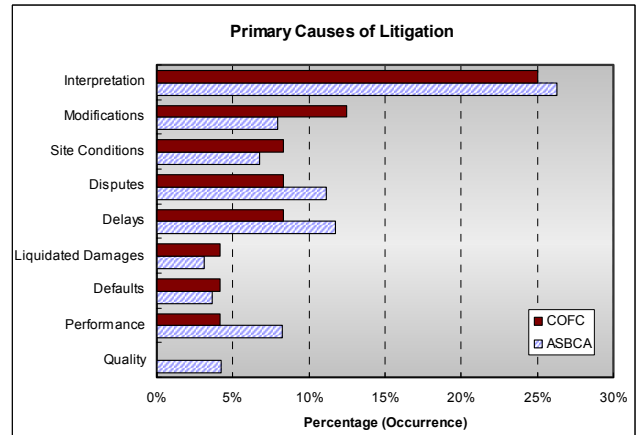
**Figure 1.** Construction Business Volume & Case Frequency Comparison (1995-2004)

The average disposition period of COFC cases is 6.33 years. The length of the disposition period is defined as the total amount of time between contract award and a rendered final decision. The average disposition period of ASBCA cases is 5.29 years for the period between 1982 and 2003 (Kilian, 2003). It is observed that the average disposition period is longer for COFC cases compared to cases litigated in ASBCA. However, due to a limited sample of cases in the COFC, the comparison failed to show a statistically significant difference.

## 7. PRIMARY CAUSES

“Primary” cause is subjectively identified from the most important legal issue or major holdings identified in the COFC cases. To obtain alignment in classification of primary causes, the authors use a comprehensive listing for all causes identified by research conducted by Kilian (2003). For each primary cause, the percentage occurrence is defined by dividing the number of occurrences by the total number of cases within that procedural court. Figure 2 shows a comparison of the percentage occurrence for primary causes in COFC and ASBCA.

Analysis results are depicted in Figure 2. Results show that interpretation of the contract is the top-ranked cause, followed by modifications, site conditions, disputes, and delays. Similarity exists between the distribution of these primary causes appealed to the COFC and the ASBCA. These five causes combined accounts for more than 60 percent of all primary causes in 685 cases. It is interesting to note that three of these five most significant causes (interpretation, modifications, and disputes) listed are caused by subjective disagreements over issues.



**Figure 2.** Comparison of Primary Causes for COFC & ASBCA litigation

## 8. ROOT CAUSE ANALYSIS

A subjective analysis is applied to the cases in order to determine the “root” causes of litigation at COFC. “Root” causes are defined as those causes fundamentally responsible for the escalation of a difference of opinion, between one or more parties, to dispute that is litigated (Kilian, 2003). It is important to note, under this definition, a possibility exists for certain cases to have several “root” causes. Moreover, these causes may originate from more than one party. To summarize, a total of fifty-eight root causes are identified from twenty-four COFC cases.

The fifty-eight “root” causes identified are considered the “1st tier” causes, or those that are defined the most narrowly. These 1st tier causes were combined into fourteen 2nd tier subcategories. Finally, the grouped causes were assigned to eight 3rd tier categorical classification groups. The authors use categorical grouping similar to Kilian’s research (2003) for alignment and comparison purposes. The percentage occurrence of each root cause (total no. of occurrences / total no. of cases) is calculated based on the frequency of occurrence of each classification group. The comparison of the frequency of occurrence for each categorical classification group for the COFC and ASBCA cases is depicted as follows.

Contractor root causes accounts for 56.9 percent or 33 of the 58 total identified “root” causes. These root causes reveal similar trends in both COFC and ASBCA. Contracting is identified as the most frequent category (Avg. 71 percent – average frequency of COFC and ASBCA root cause), followed by project management (Avg. 52 percent), and then bid development errors (Avg. 18 percent). Results are depicted below in Figure 3; Table 3 provides a summary of the root causes category and sub-categories.

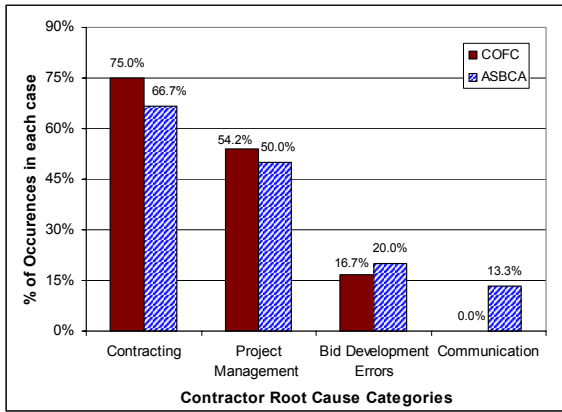


Figure 3. Comparison of Contractor Root Cause Categories

Table 3. Contractor Root Causes (COFC & ASBCA)

Root Cause Category	Sub-category
Contracting	Familiarity of Contract
	Client Contracting Procedures
	Negotiation Procedures
Project Management	Procedure Scheduling
	Financial Practices
	Quality Control
Bid Development Errors	Estimating Procedure
Communication	Internal
	Post Award

Government root causes accounts for 43.1 percent or 25 of the 58 total causes. Faulty project management procedure top the frequency percentage in COFC and ASBCA (Avg. 55 percent), followed by communication (Avg. 40 percent). Bid awarding errors consists of 30 percent of the total “root” cause identified, as COFC is the sole source for unsuccessful bidders to seek legal relief if protests were denied at the contracting officer level.

Root causes resulting from contracting officer actions and design errors are not observed at a similar level between COFC and ASBCA. Figure 4 provides a graphical summary of the root cause category; Table 4 provides a detailed summary of government root causes.

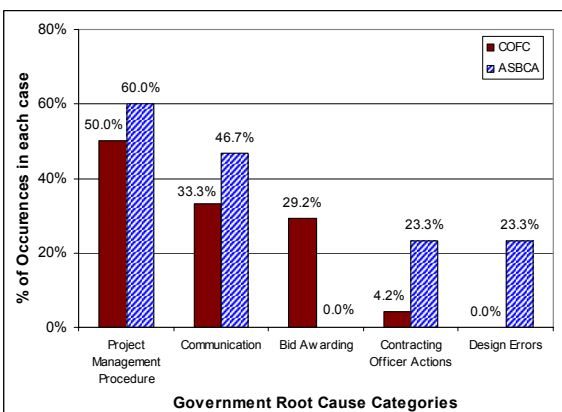


Figure 4. Comparison of Government Root Cause Categories

Table 4. Government Root Causes (COFC & ASBCA)

Root Cause Category	Sub-category
Project Management Procedure	Quality Assurance
	Change Orders
	Pre-Award Design Review
	Pre-Con Conference Procedures
Communication	Pre-Award
	Post-Award (Construction Phase)
	Internal
Bid Awarding	Solicitation Procedure
	Evaluation
Contracting Officer Actions	Award Scheduling
	Bid Review
	Negotiation Procedures
	Knowledge of Local Statutes
	Payment
Design Errors	Drawings
	Specifications

## 9. IMPLEMENTATION OF ADR STRATEGIES

This research provides insight to the escalation of disputes within the NAVFAC organization with the hope of reducing future occurrences. The majority of the cases analyzed within this research have been driven to litigation by misinterpretation and modifications to contract requirements. Development of a “new contractor” orientation program at the field level across NAVFAC may have an impact to reduce misinterpretation by contractors and government officials alike. The program should be designed for contractors who have not performed previous work for NAVFAC and for that are not subject to performance based selection criteria. Minimum requirements for the program should be mandated by NAVFAC headquarters and tailored to meet local requirements. Program topics could include (Kilian, 2003):

1. Overview of a typical NAVFAC Project Management Team;
2. Introduction and Overview of the Federal Acquisition Regulation;
3. Common Contract Clauses (Liquidated Damages, Bonding Requirements, etc.);
4. Site Specific Operating Procedures (Payment, Modifications, etc.); and an
5. Overview of the Contracts Claims Process

In addition to the adoption of orientation programs, the development of other dispute resolution and prevention procedures must be extended. Examples of current programs that should be expanded upon include the adoption of partnering and the increased utilization of design-build contracting (Killian, 2003). Partnering, a well-received concept in the construction industry, is an effective process that brings contracting parties together to build consensus

and develop alignment in order to achieve business objectives (CII 1996). Design-build, a delivery method using a contractual agreement between an owner and a single entity that has design and construction capabilities, helps contractors be more involved in early processes of project execution and can reduce disputes caused by design errors (CII 1997). These two initiatives help establish a culture of dispute prevention and avoidance; however, more work needs to be accomplished. It appears that partnering and design-build practices have coincided with a reduction in litigation within NAVFAC over the past 10 years.

Developing a 'hybrid' process that encourages the use of ADR methods before proceeding with litigation can also be beneficial for both government and contractor entities (Harmon, 1997; Keil, 1999; Pappas 2004). Mediation is becoming more popular in the construction industry and should be incorporated into the NAVFAC operational plan. One advantage of using mediation in construction disputes is that it is a very flexible process. Mediators facilitate negotiations between disputing parties and help them understand the issues in dispute rather than the positions of the opposing party. Existing literature and personal anecdotes alike point to a high success rate of mediation, close to 85%, and could serve an effective first strike in resolving disputes when they do occur (Harmon 2003).

Another area where mediators may be of help is in the negotiation of contracts. It is believed that 95% or more of the effort going into contractual negotiations is performed in an adversarial setting (Keil, 1999). The existence of the adversarial nature is the reason for the escalation of disputes. Experienced mediators may help the parties focus on the issues of contract and create win-win solutions for both parties.

A final area where disputes can be minimized occurs during the bidding evaluation and award phase of the project. This study has shown that five out of twenty-four (approximately 20 percent) litigations in the COFC were originated by disappointed bidders who protested the bid awarding process. Ambiguous solicitation requirements and complications in bid evaluation are common sources of disputes that can be addressed from simple procedural changes. It is suggested that NAVFAC should provide a simple, consistent process for performance based bid evaluations including special attention to both timely responses of bid inquires and bid opening procedures.

## 10. CONCLUSION

Despite the popular, though unsubstantiated, belief that construction litigation is on the rise, it is evident that litigation claims involving NAVFAC contracts has been decreasing in the last ten years, at least in terms of the number of claims appealed to the ASBCA. The COFC remains a valid avenue for judicial relief; however, this study found out that majority of the NAVFAC contract disputes are litigated in ASBCA. A plausible reason for the difference may be the complexity of litigating in a Federal Court and a longer disposition period on average.

However, the COFC is still the sole recourse for unsuccessful bidders to seek legal relief. Five out of twenty-four (approximately 20%) of the cases selected in the period between 1995 and 2004 involved post-award bid protests.

Similarities exist between the comparisons of primary causes of dispute occurrences for both ASBCA and COFC. Both analyses reveal that the largest driver behind litigation can be traced to the interpretation of contracts (Avg. 25.6 percent), followed by modifications (Avg. 10.2 percent), delays (Avg. 10 percent), disputes (Avg. 9.7 percent), and site conditions (Avg. 7.6 percent). Results indicate a majority of the primary causes for litigation originate from subjective disagreements over issues. These findings are similar to past studies.

A more in-depth analysis of "root" causes reveals that project changes by the government and proper interpretation of drawing and specifications are among the most frequent causes. The COFC found for NAVFAC in nearly 70 percent of the cases. However, in the analysis as part of this study the government still accounts for 43 percent of the "root" causes, showing that NAVFAC shares a responsibility for the elevation of disputes and is victorious at a level higher than their responsibility.

## REFERENCES

- [1] Bristow, D., Vasilopoulos, R. (1995). "The new CCDC 2: facilitating dispute resolution of construction projects." *Construction Law Journal*.
- [2] Construction Industry Institute (CII). (1996). *Model for Partnering Excellence, RS 102-1*, Austin, TX.
- [3] Construction Industry Institute (CII). (1997). *Project Delivery Systems: CM at Risk, Design-Build, Design-Bid-Build, RS 133-1*, Austin, TX.
- [4] Conlin, J., Langford, D., Kennedy, P. (1996). "The relationship between construction procurement strategies and construction contract disputes." *North Meets South*, CIB W92.
- [5] Diekman, J., Girard, M., Abdul-Hadi, N. (1994). *Disputes Potential Index: A Study into the Predictability of Contract Disputes*, Construction Industry Institute, The University of Texas at Austin, Austin, TX.
- [6] Fenn, P., Lowe, D., Speck, C. (1997). "Conflict and dispute in construction." *Construction Management and Economics*, 15(6), 513-518.
- [7] Harmon, K. M. J. (1997). "Conflicts between Owner and Contractors: Proposed Intervention Process." *Journal of Management in Engineering*, 19(3), 121-125.
- [8] Harmon, K. M. J. (2003). "Resolution of Construction Disputes: A Review of Current Methodologies." *Leadership and Management in Engineering*, 3(4), 187-201.
- [9] Heath, B., Hills, B., Berry, M. "The origin of conflict within the construction process." *First Plenary Meeting of TG15*, The Netherlands.
- [10] Hewit, J. (1991). *Winning Construction Disputes - Strategic Planning for Major Litigation*, Ernst and Young, London.

- [11] Keating, G. T. (2003). *Changes and Claims in Government Construction*, Federal Publications Seminars LLC.
- [12] Keil, J. H. (1999). "'Hybrid ADR' in the Construction Industry." *Dispute Resolution Journal*, 54(3), 14-22.
- [13] Kilian, J. J. (2003). "A Forensic Analysis of Construction Litigation and U.S. Naval Facilities Engineering Command," M.S. Thesis, University of Texas, Austin TX.
- [14] Kilian, J. J., Gibson, G. E. (2005). "Construction Litigation for the U.S. Naval Facilities Engineering Command, 1982-2002." Austin, TX.
- [15] Kumaraswamy, M. M. (1997). "Conflicts, claims and disputes in construction." *Eng Const Arch Manage*, 4(2), 95-111.
- [16] McMullan, J. (2003). "Trends in Construction Contract Disputes." *Electronic Construction Law Journal*.
- [17] Pappas, M. P. (2004). "A Flexible Framework for the Prevention and Resolution of Construction Disputes." American Bar Association Section of Dispute Resolution 2004 Boskey Writing Competition, [www.abanet.org/dispute/essaycomp.html](http://www.abanet.org/dispute/essaycomp.html).
- [18] Rhys Jones, S. (1994). "How constructive is construction law?" *Construction Law Journal*, 10(1), 28-38.
- [19] Semple, C., Hartman, F., Jergas, G. (1994). "Construction Claims and Disputes: Causes and Cost/Time Overruns." *Journal of Construction Engineering and Management*, 120(4), 785-795.
- [20] Sykes, J. (1996). "Claims and disputes in construction." *Construction Law Journal*, 12(1), 3-13.
- [21] Westlaw. (1995-2004). "Federal Government Contracts - Court of Federal Claims Cases." Westlaw (R).