

DRBF Forum

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Analysis of Construction Dispute Review Boards

By Duzgun Agdas, Ph.D., P.E., M.ASCE and Ralph D. Ellis, Ph.D., P.E., M.ASCE

This paper presents the results of a research project undertaken to assess the impact of DRBs on the construction program of a large-scale highway agency. Three dimensions of DRB impact were assessed: (1) influence on project cost and schedule performance, (2) effectiveness of DRBs in preventing and resolving construction disputes, and (3) costs of DRB implementation. The analyses encompass data from approximately 3,000 projects extending over a 10-year period (2000-2009).

Introduction

Construction disputes can arise from many factors: inadequate planning, changes in commodity prices, unexpected conditions at the work site, differing interpretations of contract language, and lack of communication among parties involved in the project; these can affect project performance and ultimately lead to litigation. Although there have been many studies elaborating on the cost of construction litigation (Gebken and Gibson 2006), a comprehensive assessment of the actual costs of construction litigation is an elusive goal. Immediate damages consist of legal expenses, and increased project costs can provide an assessment of the short-term damages; however, they fail to capture the true long-term impacts of litigation on overall construction processes. Opportunities lost because of invested capital and time, reduced employee morale, and decreased repeated work are some of the important

adverse effects of escalated adversarial disputes and litigation that cannot be directly measured. Perhaps one of the best summarizing quotes about the costs of settling disputes at courts, as originally cited by Harmon (2003b), comes from 15th Chief Justice of the US Warren E. Burger: “I was trained, as many of you were, with that a generation of lawyers taught that the best service a lawyer can render a client was to keep away from the courts” (Burger 1982).

Dispute Resolution in Construction

Alternative dispute resolution (ADR) procedures have emerged as the alternative mechanisms to resolve construction disputes outside courts (Gebken and Gibson 2006). The basic premise of ADR approaches such as arbitration and mediation has been the timely and cheap solution of disputes when compared to

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President's Page

DRBF Members, Supporters & Friends,

This will be my last opportunity to speak to all of you on the second page of the Forum. We had a lot to accomplish on our agenda at the beginning of October last year and certainly did not get everything on our wish list done but wanted to review some of the more important items.

First was to find a replacement for the Treasurer position that Jim Donaldson had filled for many years. Tom Peterson, also from the Seattle area, has volunteered and working with Jim and Steve Fox has comfortably transitioned into that role. Next was to prepare for the retirement of Steve Fox this coming spring. How do you fill the shoes of someone who had been the only full time Administration Manager from inception of the Foundation? I knew the answer but was almost afraid to ask in case the reply would be no. After a few months of discussions and persuasion I received a yes answer and Ann McGough has agreed to become a fulltime employee of the DRBF as General Manager effective October 1, 2013. In addition to taking over Steve's duties Ann will also be active with our outreach efforts for new users and new industries. All of you are going to be hearing more from her this coming year.

Next was to develop a comprehensive "Policies and Administrative Procedures Handbook." I am pleased to say that the initial draft has been submitted to the Executive Board for comments and approval. A special thanks to all who have worked diligently collecting and summarizing the various elements of this document that has been desperately needed for many years. I have also created some new "Standing Committees" and absolved some of the original. Currently these committees and their chairs are:

Finance – Doug Holen
Training – Kurt Dettman

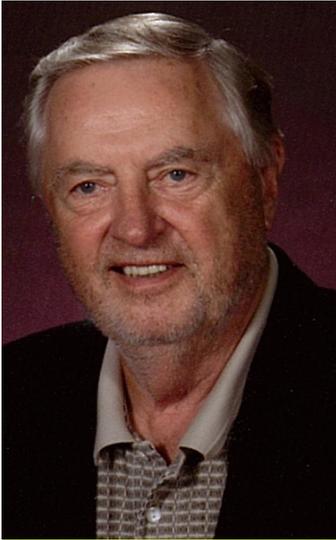
Publications – Dan Meyer
Strategic Planning – Harold McKittrick

All of these committees are at the Executive Board Level and will have regional representatives on them to ensure that all regions' ideas and unique differences are recognized and coordinated to fill the overall goals of the DRBF.

Also we have continued the outreach efforts to expand DRB users. Thanks to the efforts of many of our members we have been able to speak or sit on panels at various construction related organizations' meetings to explain the benefits of the DRB process. In addition, special programs focused on specific geographical areas worldwide are being given where presently DRBs are not being utilized. We continually try to increase membership in the DRBF but must realize that more importantly is to increase the utilization of the DRB process. Doing that will require more trained Board members and will automatically increase the membership applications from owners, contractors and potential Board members.

As discussed in the last *Forum* we are focusing on Dispute Prevention throughout the world as the primary benefit of a DRB. I hear more and more from owners and contractors that this is what they want.

In closing I want to thank all of you that I have met and had the opportunity to work with during this last year as your Executive Board President. Your continued



Roger Brown
President
DRBF Executive
Board of Directors

"A consensus means that everyone agrees to say collectively what no one believes individually."

– Abba Eban
(1915–2002)

support to assist with our efforts to grow and improve the Foundation's goals does not go unnoticed. For those of you who have not been involved in the Foundation's activities, I encourage you to join committees, assist with outreach efforts, write articles and white papers or run for offices in the various regions. For the organization and DRB process to continue to grow we need your help.

I have met several times with your incoming president, Graham Easton, and I assure you under his leadership the DRBF will continue to serve the construction community with renewed energy and ideas.



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- Tom Peterson, Treasurer
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- James Perry, Director and President, Region 2 Board
- Doug Jones, Director and President, Region 3 Board
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- John Norton, Past President
- Gwyn Owen, Past President
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Summaries of the Executive Board meetings are available to all DRBF members on the web site. To access, go to www.drb.org. Click on the Member Login button, and then click on DRBF Board of Directors.

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- Donald Charrett
- William (Tim) Sullivan
- Barry Tozer
- Spencer Flay



Executive Board of Directors

Meeting Schedule

September 19
 October 21
 November 18
 December 16

The Board of Directors for each region meet on a regular basis. Questions or ideas for the Boards should be submitted to the Board President directly or to Ann McGough at amcgough@drb.org.

Is it Appropriate for Dispute Board Members to act as Arbitrators on the Same Project?



By Jonathan Cope

In summary Lend Lease was engaged by the UK's Secretary of State for Defence to redevelop residential units for service personnel and families under a "target cost" form of contract. Lend Lease in turn employed Mi-Space as the primary sub-contractor to carry out most of the work. The Sub-Contract was a cost plus arrangement with "pain/gain" provisions which were intended to incentivise Mi-Space to minimise costs incurred delivering the works. There were delays to the completion of the works and issues arose as to various financial entitlements. The resulting dispute found its way to Mr. Justice Akenhead at the Technology and Construction Court (TCC) in London.

In the TCC, Mi-Space applied for pre-action disclosure. Lend Lease argued that because the parties' bespoke contract contained an arbitration agreement, the court did not have the power to order pre-action disclosure. Akenhead agreed with Lend Lease and therefore dismissed Mi-Space's application. However, it is not the outcome I want to talk about; rather I think the interesting part of the case is the contract's "dispute procedure" and Akenhead's comments on that procedure.

The contract's dispute procedure

The contract's dispute procedure contained five steps:

- Defining the dispute.
- Negotiation.
- Dispute Review Board (DRB) initial meeting.
- Consensual resolution (mediation).
- Non-consensual resolution.

As part of step three, the DRB would "use its best endeavours to assist the parties to settle and resolve disputes". If a

settlement could not be achieved then the DRB would recommend either mediation (with the consent of both parties) or arbitration. While the dispute procedure envisaged the appointment of a separate mediator, the DRB members would act as the three-person arbitral tribunal.

DRB members acting as arbitrators

Akenhead made the point that it is somewhat unusual for dispute board members to be arbitrators as well, but went on to say that: "...there is no reason in principle or, so far as I am aware in policy, why they could not be arbitrators in relation to the same project. In one practical sense at least there is an advantage, which is that the members of the DRB might well have acquired a good working and practical knowledge of the project and all the disputed problems which have arisen as the project has proceeded."

In the context of this particular dispute procedure, Akenhead's points appear to make a great deal of sense. Prior to an arbitration, the DRB members are not required to decide the dispute; rather they are simply required to use their "best endeavours" to resolve it. If settlement does not result, they are to recommend either mediation or arbitration.

So why not take advantage of the DRB's knowledge of the project and dispute(s) and appoint them as arbitrators? Some might argue that there are disadvantages. The DRB members having knowledge of the project is all well and good, but surely an arbitration should be decided on the parties' submissions and evidence in the arbitration, and not what the DRB members have learnt over the course of the project? What if one or both parties



don't want to rely on certain information or events that the arbitrators might consider relevant to the dispute. Will the arbitrators realistically be able to put it out of their minds?

In more traditional dispute board arrangements where the dispute board has given decisions or recommendations, there seems to be little point in having the same people acting as dispute board members and arbitrators; surely they are likely to reach the same conclusion? Certainly FIDIC takes the view that, unless the parties and all dispute board members agree, no member of a dispute board shall act as arbitrator under the contract (clause 5 of the General Conditions of Dispute Board Agreement). In their book "Dispute Boards: Procedure and Practice", Gwyn Owen and the late Brian Totterdill state that: "This is a logical restriction. The DB has given its decision and the information on which the decision was based is already known to both parties, who can submit any relevant information to the arbitration tribunal."

What appears to be more certain is that the same person should not act as mediator and arbitrator (Gao Haiyan v Kee-neye Holdings Ltd HCCT 41/2010) or adjudicator (Glencot Development & Design v Ben Barrett & Son) due to the risk of a finding of apparent bias. Perhaps that's why "med-arb" has never really taken off in the UK.

What lessons can be learnt?

Another point that is clear from Akenhead J's judgment is that the parties never appointed the DRB. I have previously blogged about the benefits of dispute boards and, while the DRB would have

been an extra cost to Mi-Space and Lend Lease, I can't help feeling that if they had been in place the dispute may have been avoided and/or limited, and the parties would have saved in the long run. However, I doubt the parties need me to tell them that. Indeed, they would probably adopt the immortal words of Basil Fawlty by suggesting that I went on the TV show Mastermind with my Specialist Subject being, "the bleeding obvious".

Jonathan Cope is Director, MCMS Limited; Adjudicator, Arbitrator and Dispute Board Member. He can be reached by email at jonathan.cope@mcms.co.uk.

This article was first published on the *Practi-*

DRBF Calendar of Events

September 20-21, 2013
17th Annual Meeting & Conference

September 18 - Golf Tournament
September 19 - Training Workshops
September 20 & 21 - Conference
Miami, Florida

February 27-28, 2014
DRBF Regional Conference
Johannesburg, South Africa

March (tentative)
UK Member's Meeting
London, UK

May 15-17, 2014
International Conference
Singapore

Visit www.drb.org for complete event details and registration.

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Dispute Resolution Board Foundation

Ethics in Today's World of DRBs:

DRB Members Sitting on a Board for Three Years Learns that the Contractor Intends to File Chapter 7 Bankruptcy and Plans to Abuse DRB Process

By James Phillips Ph.D.

This column in the *Forum* will be published at the same time as the DRB Foundation's Annual Meeting and Conference being held this year in Miami, FL on September 20-21, 2013. Each year the conference schedule includes a presentation on ethics in DRB practice. This year our program is entitled "To Disclose or Not to Disclose: That is the Question!!" With a title like that, I am confident we will have a lively discussion! Please plan to attend this year's Conference and Annual Meeting and see old friends and make a few new ones. As an added feature, your conference organizers have planned the 1st Annual DRBF Golf Outing. Come on out and join us as I spend the morning looking for my ball in the woods!

The question posed at the end of the last column was how should you, as a DRB member respond to the knowledge that the Board has learned that the contractor intends to file a Chapter 7 Bankruptcy (Liquidation) and therefore plans to abuse the process by filing potentially fraudulent pay requests to "finance" the completion of the project.

On its face, it appears that this is a complex problem. The threshold question I would want to ask is: How reliable is the information about the bankruptcy action? Did the Board receive this from a reliable source, and if not, can the Board rely on the information? I would also question the motivation of a party, and presumably the owner did not advise the Board of this, who knows that a DRB

sits on the project and "leaks" to the Board that the contractor is on the verge of bankruptcy.

Assuming that the Board thinks the source is reliable, and by that I mean the source has credibility, the question becomes is the information reliable? What duty does the Board have to investigate further? Should it check to see if the contractor has actually filed etc.? My thought here is, based on the question as posed, the Board learned that the contractor "intended" to file, not that it had actually already filed. This is a distinction because parties intend to do many things; we all do, and never in fact do so. So, in my opinion, because the Board has heard that a contractor is intending to do anything, until the act occurs, there is not much the Board can or should do.

This question puts a completely different spin on the dictate of Canon 1 of the Code of Ethics, that Board members should at all times be impartial and avoid the appearance of impropriety. Would the Board be impartial if it reviewed every contractor request as if it were fraudulent and intended to "game" the process? Would it be providing what Canon 4 requires, "a fair and impartial hearing"? Another question might be, should the Board advise the owner of what it has heard? Why or why not?

This brings me to a discussion of another Canon of Ethics, Canon 2. Canon 2 provides that the conduct of Board members should be above reproach and that even



Jim Phillips Ph.D.
Chair
DRBF Ethics
Committee



an appearance of a conflict of interest should be avoided. Usually we think of conflicts of interest as financial interests or stakes that would have an impact on a DRB member's neutrality. Does the knowledge of such information as discussed here rise to the level of affecting the Board's neutrality? It's a tough question and should, in my opinion, be carefully discussed among the Board.

Barring any official notice that the contractor has in fact filed for Chapter 7 Bankruptcy, I believe what the Board can and should do is carefully review, as always, any disputes that request additional payments with its usual care and diligence and hold the contractor's feet to the fire to prove to the Board its requests for time or money. If the Board does this, the issue of a possible bankruptcy should have no relevance. If the contractor has a legitimate request for payment under the contract documents, it has a right to bring the dispute to a hearing, formal or informal, and the DRB has the duty to issue its recommendation.

What the DRB should do if the owner of the project does receive an official notification from the court regarding the contractor's bankruptcy is beyond the scope of this discussion. If any of you have experience in this area, please write in and share your knowledge with us. I would be interested in hearing from a reader on this question. This is a good example of a "sticky wicket" that does not fit into a neat category that can easily be analyzed and answered.

This raises the purpose for this column and the Foundation's commitment to providing a forum for discussions about ethical issues that we all come into con-

tact with from time to time. I would encourage all readers who are faced with an ethical challenge to take advantage of the opportunity of contacting experienced colleagues or to write in or call me with a question. The Foundation has established a protocol whereby we can confidentially discuss an ethical dilemma that is posed and provide a consensus-based answer to those in this business who might need some advice. The DRBF's commitment to providing an opportunity for discussion of ethical challenges is a large component of the DRBF's mission to ensure that the DRB process continues to grow and be respected in the industry.

Finally, a member, Bob Biffel of Acampo, California, who read the last column raising the question about the DRB not being empanelled for over a year after the notice to proceed, called me and shared his similar experience on a recent DRB project. Thanks for calling, Bob, and I will use your example in the next Ethics column.

FOR NEXT TIME

I will review and sum up the discussion we have at the Ethics Panel at the Annual Meeting and Conference both for those members who could not attend and for those that wish to have some closure on our discussion.

**Ethics Commentary
or Question?**

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 DRBF Ethics Committee
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 Al Mathews Corporation
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litigation at courts (Harmon 2003b). Unlike court cases, ADR procedures are exclusive to professionals with significant technical capacity and experience to assist in settling the adversarial disputes between project participants. The proposed benefits of ADR procedures over litigation have been cited as reduced process costs, the possibility to maintain reasonable relationships among disputing parties, and greater flexibility in the design of the ADR procedure to better fit the projects (Cheung 1999).

However, there is also literature that cites the negative perceptions and impacts of traditional ADR solutions. Harmon (2003b) discussed that the impact of timing of the ADR solutions can negate the proposed benefits. The author argued that ADR solutions are generally put into place well after the projects are completed. Thompson et al. (2000) described ADR procedures as time consuming and rather costly to implement, in addition to the apparent problems concerning the timing of these solutions.¹

Dispute Review Boards

There are some variations to the structure and functionality of dispute review boards (DRBs); however, a three-member impartial board is the most common structure. Typically, the three-person committee of industry experts, collectively determined by the owner and the contractor, assists the owner and the contractor in addressing construction-related disputes (Menassa and Pena Mora 2010). Each party, the owner and the contractor, designates an impartial member. Later, in tandem, they decide on the third member that generally serves as the chairperson [Dispute Resolution Board

Foundation (DRBF) 2007]. One of the more unique properties of a DRB is the neutral stance of the members, regardless of the source of their appointment. The neutral nature of the DRB process should foster improved communication among parties, which may be the key to successfully settle disputes and to create a psychological edge to prevent most disputes from becoming adversarial in nature (Groton 2009).

DRBs should be constituted following the contract execution and as early as possible through the construction process (DRBF 2007). DRB members attend project meetings and visit sites to familiarize themselves with the project, because the functionality of DRBs is not dependent on the actual occurrence of disputes and either party (owner or contractor) may refer a dispute to the DRB. Upon receipt of a hearing request, the DRB schedules an informal hearing in which both parties are given the opportunity to present their positions. The DRB provides a nonbinding recommendation based upon a determination of fact and the applicable contract provisions.

Where DRBs fit within the larger ADR umbrella is not clear. Menassa and Pena Mora (2010), Yates and Duran (2006), and McMillan (2000) suggested that DRBs are a subset of the greater ADR family. On the other hand, Harmon (2003a, b) and Thompson et al. (2000) did not consider DRBs to be ADR solutions and focused on the early constitution and preventive nature of the DRBs compared to traditional ADRs. It is debatable whether there is a line between the traditional ADR solutions and DRB procedures; however, there are substantial fundamental differences between



approaches. The timing of the constitution, the composition of the expert committees, and the obligatory stance of outcomes are some of the major differences. Perhaps the most important promise made by DRB implementation is the possibility of preventing issues from turning into adversarial disputes by resolving emerging disagreements before the effects are substantiated (Thompson et al. 2000).

Effectiveness of DRBs

The effectiveness of DRB implementation, which can be defined as its success in resolving or preventing further escalation of disputes when implemented, has been the primary focus of literature pertaining to DRBs. Yates and Duran (2006) presented a successful DRB application in a metro tunnel project; however, the authors also discussed the possible skew in the assessment caused by the lack of focus on possible problems associated with DRB implementation. Harmon (2003a) conducted a survey to measure the level of satisfaction of construction professionals in terms of DRB success, which indicated almost unanimous agreement about the beneficial nature of DRBs. The author argued that there might be an inherent bias in the perception, because the surveys were distributed during the DRBF annual meeting. Menassa and Pena Mora (2010) provided a quantitative assessment of the effectiveness of DRB implementation in preventing disputes and resolving adversarial disputes by using the number of disputes heard per project and the number of disputes settled per project/number of disputes heard per project. The authors analyzed a comprehensive data set and determined DRBs to be effective in preventing disputes from becoming

adversarial and as dispute settlement mechanisms with an almost perfect success rate for a variety of project types.

On a different note, Harmon (2009) conducted an effectiveness study of DRBs on a central artery/tunnel project (i.e. Big Dig), which portrays a different story than the rest of the literature. Not only were DRBs found to not have performed well in addressing the disputes, they were also found to not improve the bid cost savings (negative deviations from the original owner estimates of project costs), which has been one of the proposed advantages of DRBs (DRBF 2007). The details of the findings of the study are not contained within this article: however, overutilization of DRBs (total DRB/nonDRB project budget totals were \$8.4/\$0.5 billion) and deviations from some of the best practices in DRB implementation, e.g., early formation of the committee, might have contributed to the undesired outcomes. Harmon published another paper on DRBs in 2011, in which the author supported the argument that DRB costs can be substantial and impact project success, and thus should be an important consideration before adoption (Harmon 2011).

DRBs in the US and Regional Differences in Dispute Boards

According to the DRBF (2007) the first implementation of DRBs in the US dates back to 1975; since then, they have become increasingly popular. Currently, DRBs are utilized by many owner organizations: state highway agencies, public transit authorities, and higher education institutes. DRB is a common term used in the US and Canada, and there are some international variants to DRB that are designed to serve similar purposes.

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DRBF cites dispute resolution boards and dispute adjudication boards as two of these variants: their use is advocated by the International Federation Consulting Engineers (FIDIC), the International Chamber of Commerce (ICC), the World Bank, and the UK Institution of Civil Engineers.

Research Motivation and Significance

Although the recent literature has provided insight into the effectiveness of DRB implementation, there is a research gap in the analysis and understanding of the overall effects of DRB implementation on construction projects. A critical analysis of the dynamics of DRBs suggests that there are three primary research questions to be simultaneously answered to truly justify the use of DRBs in construction projects:

1. How does the presence of a DRB affect the performance of a project in terms of cost and schedule?
2. How effective are DRBs in avoiding and resolving disputes?
3. What are the costs of DRBs?

Disputes are recognized as having negative effects on the working relationship between the owner and contractor project personnel. Harmon (2003a) briefly elaborated the possible positive impacts of successful DRBs on projects to include reduced costs and increased morale. How does the presence of a DRB influence project performance metrics such as time and cost growth? Time and cost growth can be defined as additional time required to complete the projects from the original schedule and approved additional payments made to the contractor from the quantity of the winning bid, respectively.

Do DRBs contribute to dispute prevention in addition to assisting in resolving disagreements? The basic premise of DRBs is to provide unbiased, timely, and merit-based recommendations when disagreements take place. Thus, as suggested by Menassa and Pena Mora (2010), an alternative DRB effectiveness criterion (preventive effectiveness), in addition to effectiveness in settling disputes, can provide more insight into the overall advantages of DRBs on construction work programs. Issues will occur in almost any project, regardless of the scope and size; however, not all disputes become highly problematic and necessitate the use of DRB hearings or any other form of ADR methods. The true benefit of DRBs will, perhaps, be not only resolving disputes that became problematic, but also improving the culture and preventing issues from becoming disputes and affecting project performance.

Irrespective of the substantial potential benefits, DRBs add costs to projects and an adequate analysis is necessary to analyze and justify the additional spending. How do DRB costs compare to the overall project budget? Is it feasible to quantify possible savings when DRBs are used?

Research Outline

To answer the identified research questions, a study was designed around a Florida Department of Transportation (FDOT) construction work program. The FDOT work program is a good candidate because the number of projects completed each year is relatively consistent, there are substantial data available for analysis, DRBs have been implemented for over a decade, and the agency has one of the largest DRB programs in the US (DRBF 2007).



FDOT DRB Program

The FDOT DRB specifications are similar to the universal descriptions of DRB implementations, with significant emphasis on the impartiality of the board and the nonbinding, informal nature of DRB recommendations.² One critical aspect of the FDOT process is the differentiation between issues and adversarial disputes, and the encouragement to address issues to the full extent of the project partnering process before referral to the DRB. In the case of adversarial disputes that cannot be resolved through partnering efforts, FDOT contractors are required to seek resolution of these through the DRB process before seeking any other resolution option. Subsequent to the DRB hearing, contracts may refer disputes to the State Arbitration Board, a condition precedent to litigation for most disputes.

FDOT introduced DRBs to its construction program in 1994 on a trial basis for select projects.³ Generally, DRBs were assigned to larger projects of \$10 million in contract size as a common threshold. This selective assignment of DRBs to projects continues today; not all projects are assigned a project DRB (currently, a threshold of \$15 million is in effect in most cases). However, in 2002, regional DRBs were formed. The regional DRBs are not assigned to specific projects, but are available to hear disputes for any project without a project DRB, essentially providing DRB access to all FDOT construction projects. In 2004, the agency formed the Statewide Board for warranties and material acceptance issues following project completion. This board is available to almost all projects undertaken by the agency.

Analysis

DRB Influence on Project Performance

During the years 1999, 2000, and 2001, DRBs were introduced into the FDOT work program. This provides a time frame in which projects with DRBs and projects without DRBs were performed in a similar project environment, permitting valid comparison. Although there were projects with DRBs in 1999, none were reported to have been completed in that year. Since 2002, following the implementation of the regional DRB concept, DRBs were made available to all projects. Project performance was analyzed to determine the difference, if any, between the projects with DRBs and the projects without DRBs. Project cost growth and project time growth from the initial contract values were examined as indicators of the impacts on project performance.

Table 1 provides the results of the cost growth comparison. The average project cost growth during the 1999 to 2001 period for projects without DRBs was 11.92%. The average project cost growth during the 2000 to 2001 period for projects with DRBs was 8.05%. On average, the DRB projects had less cost growth. Although attributing the reduced additional payment to DRB implementation is premature, it is evident that DRB implementations have not inflated the overall project expenditures. These classifications were made on the basis of the start time of the projects, i.e., projects that have started in 2000 with DRB hearings had a cost growth of 6.88%, whereas the projects that were initiated in 2000 that were not assigned DRBs had a cost growth of 11.53%. After 2002, DRBs were made available to virtually any

Table 1. Cost Growth on FDOT Projects

Year	DRB Projects	Non-DRB Projects
1999	NA	12.35%
2000	6.88%	11.53%
2001	9.22%	11.89%
Average (1999-2001)	8.05%	11.92%
2002	6.16%	

Table 2. Time Growth on FDOT Projects

Year	DRB Projects	Non-DRB Projects
1999	NA	27.92
2000	9.25	27.27
2001	16.58	31.68
Average (1999-2001)	12.92	28.96
2002	15.92	

project the agency has undertaken. Table 2 provides the results of the time growth comparison. Similar to cost growth observations, DRB projects seemed to have less time growth than nonDRB projects. The average project time growth during the 1999 to 2001 period for projects without DRBs was 28.96%. The average project time growth during the 2000 to 2001 period for project with DRBs was 12.92%.

Additionally, the improved performance in terms of both time and cost in 2002 is not completely attributable to DRBs (i.e., DRB projects constitute a relatively small component of the overall program, approximately 9% for the data set analyzed) because it is safe to assume that the agency employed additional proactive measures to improve the project performance in addition to adopting DRBs.

DRB Effectiveness in Avoiding and Resolving Disputes

To address the question of effectiveness of DRBs in avoiding and resolving disputes, the number of projects with DRB costs and the number of disputes heard at the State Arbitration Board were used. DRBs are praised for their contribution in improving the dynamics of the traditionally adversarial owner-contractor

relationship, in addition to settling adversarial disputes (Groton 2009). FDOT construction contracts make the DRB hearing a condition precedent to access to any further dispute resolution alternatives. Similarly, the State Arbitration Board is a condition precedent to access to litigation for most contract disputes. Therefore, the analysis of the number of cases submitted to the FDOT State Arbitration Board over a period of time is an indicator of the effectiveness of the DRBs in both dispute avoidance and resolution.

Fig. 1 presents the number of State Arbitration Board cases per year from 1998 to 2008.⁴ No arbitration case information was found after 2007, and to be conservative, 2009-2011 were excluded from the analysis. The number of disputes heard by the FDOT State Arbitration Board significantly reduced after the implementation of the DRBs in the FDOT program. A simple linear regression analysis was run to analyze the trend in reduced arbitration cases. The resulting coefficients were 8.3 (intercept) and -0.9 (slope)($R^2 = 0.66$, $p_{model} = 0.002$, and both p_{int} and $p_{slope} < 0.05$. indicating a relatively good fit), implying that nearly one less arbitration case, on average, was to be expected with every passing year.⁵

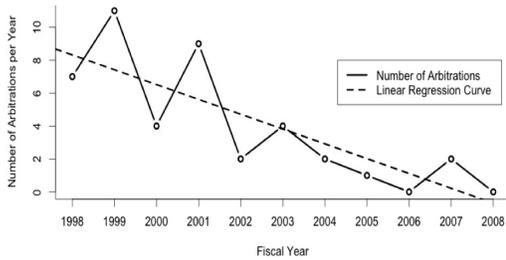


Fig. 1 FDOT State Arbitration Board cases (1998-2008)

Although the model is susceptible to sample size concerns, the trend is a clear indicator of reduced arbitration cases and adversarial disputes.

While assessing the effectiveness of DRBs in resolving the existing disputes, the number of projects with DRBs was compared to the number of arbitration hearings. The data used in the analysis showed that 259 projects with completion dates between 2003 and early 2010 used DRBs. Assuming no lag between project completion date and arbitration hearings in the case of escalated disputes, a total of nine arbitration orders were processed from 2003-2010. Comparing the nine escalated disputes to 259 projects that have used DRBs indicates a success rate of 97%. This is an approximate figure because the arbitration hearing timing can vary substantially. There is a time lag between project initiation and arbitration hearing for the escalated disputes. Before disputes can be referred to the arbitration board, DRBs and other administrative processes need to be completed. This lag, coupled with the time elapsed for disputes to arise, will induce a time gap between the project initiation and arbitration hearing. Another assumption was made, and disputes and disagreements were not differentiated. Two hundred fifty-nine is the number of projects that have used DRBs (i.e., part

of the budget was spent on DRBs), not necessarily projects that have had adversarial disputes or a number of DRB hearings. This is an alternative effectiveness measure to that proposed by Menassa and Pena Mora (2010), because their analysis focused on the number of resolved disputes after being heard in front of the DRB committees.

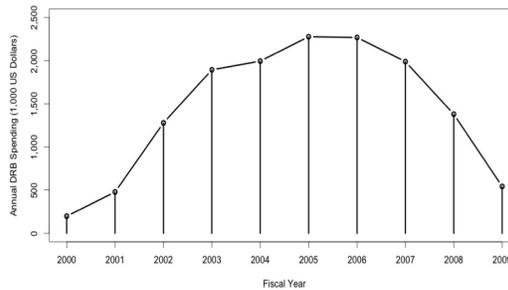


Fig. 2 Total DRB spending per fiscal year

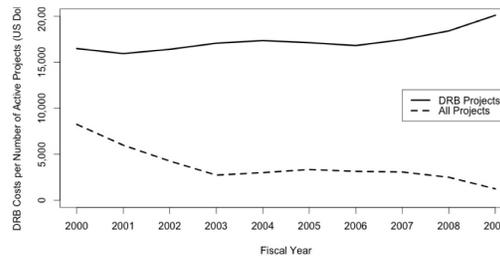


Fig. 3 FDOT DRB costs per project

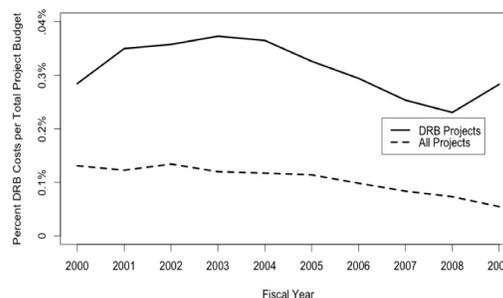


Fig. 4 Percent DRB spending



Cost of DRBs

The viability of DRBs as a dispute resolution and avoidance mechanism is a plausible proposition; however, the question of how much DRBs cost remains a concern. An analysis of the FDOT program provides a clear quantification of their cost experience. Figs. 2-4 depict the cost information related to DRB usage in FDOT work projects from 2000 to 2009. The cost data included projects completed between 2003 and early 2010 and the earliest DRB cost figures were from 1998; however, there were very few projects with DRBs in 1998, 1999, and 2010. Thus, these years were excluded from the cost analyses to not skew the results.

In describing the DRB expenses for a given fiscal year, a similar approach to that of Menassa and Pena Mora (2010) was used and a distribution pattern was assumed to be consistently applicable for DRB and project related expenses. The stored project data can be stratified with respect to many project-related demographics, including the start and end date of the project. However, clustering costs using the start date of the will not provide the actual spending for different fiscal years (i.e., if different work program years have discrepancies in the average length and cost of projects, using the project start date classification will inflate the program budget and DRB costs for the years with higher project budgets and longer durations, because it is more likely to have more substantial DRB spending for large projects). To overcome this issue, a simple yet robust assumption of the linear distribution of project and DRB costs through the active project years was assumed to be accurate. For instance, if a project is con-

structed between 2000 and 2004, with a budget of \$5 million and a DRB cost of \$50,000, the following assumptions were made: (1) the project started on the first day of 2000 and was completed on the last day of 2004, (2) both project budget and DRB expenses were uniformly distributed through 2000-2004. Thus, this project became a row of entry in the study's database with a capital spending of \$1 million/year and DRB spending of \$10,000/year through 2000-2004.

Fig. 2 shows the trend in total annual DRB spending for the overall construction program (mean = \$1.43 million, SD = \$782,173, minimum = \$197,752, maximum = \$2.28 million). Although the numbers seem to be high, they are insignificant when compared to the overall work program; however, not all projects will bear DRB costs. The graphical analysis also suggests an interesting trend: the annual DRB cost appears to decrease toward the later parts of the analysis interval (DRBs were made available to all projects in 2002), despite the probable increases in unit DRB costs (i.e., cost of a hearing). One possible explanation is the reduced number of available project data (the data used in the analysis includes projects completed by early 2010, and it is likely that major projects take longer than a year to complete. Also, the DRB spending was prorated throughout the active project years). Another possible explanation is improved DRB process efficiency. A third consideration may be the FDOT expansion of the regional DRB option. Regional DRBs, which meet only when a hearing is requested, are less expensive than a project-specific DRB, which requires regular meetings of DRB personnel, irrespective of the actual occurrence of the disputes.



Unfortunately, the available data are not conclusive to favor any of these possibilities for the unexpected data trends.

To further clarify the cost picture, DRB costs per active DRB projects and total program portfolio were analyzed. Fig. 3 displays average DRB costs per number of projects that have used DRBs and average DRB costs per total number of active projects in a given fiscal year. The average DRB cost for projects that used DRBs was \$17,308 (SD: = \$1,190, minimum = \$15,931, maximum = \$20,094). The numbers were less significant, which was expected because of the anticipated utilization rate of DRBs, when the DRB spending was averaged over the total number of projects active for a given year (mean = \$3,741, SD = \$1,999, minimum = \$1,230, maximum \$8,240). Both trends are rather stable and the slight increase in the solid line, representing the average DRB costs per number of active DRB projects, can be attributed to the expected increase in unit DRB costs. Interestingly, the dashed curve, representing the average DRB costs per number of active DRB and nonDRB projects, indicates a decrease in DRB spending per total number of active projects. Two possible explanations are reduced DRB utilization rate and improved DRB process efficiency with increased DRB experience.

Fig. 4 depicts the average DRB costs as a percentage of project costs that use DRBs and overall program budget for a given year. On average, DRB costs are 0.3% of the DRB project budgets (SD = 0.05%, minimum = 0.2%, maximum = 0.4%); as expected, the numbers were lower when the total program budget for a fiscal year was used (mean = 0.10%,

SD = 0.03%, minimum = 0.05%, maximum = 0.13%). The dashed curve, representing DRB costs as a percentage DRB and nonDRB projects budget for a fiscal year, is similar to the dashed line in Fig. 3 for similar reasons mentioned previously. However, the solid line, representing DRB costs as percentages of DRB project budgets, has an unexpected decreasing trend except for 2009, a fiscal year that is susceptible to having a smaller number of active DRB projects because of data availability. The decrease in DRB costs as percentages of DRB project budgets can be explained by two distinct factors: increased average project size and budget or improved efficiency of DRBs in dispute resolution.

Conclusions

The FDOT's introduction of DRBs to its construction work program has provided an opportunity to analyze the impacts of DRBs on a large work program. The FDOT work program is one of the largest work programs that utilizes DRBs in virtually all of its projects when needed. The available data allowed a simultaneous assessment of DRB implementation questions: how DRBs affect project cost and schedule, how effective DRBs are in preventing and resolving disputes, and how significant are DRB costs.

The implementation of DRBs and their impacts on project performance (cost and schedule) have not been addressed in adequate detail in recent literature. The unique transition phase witnessed by the FDOT program provided an opportunity to present a realistic assessment of the impact of DRBs on project performance. Projects with DRBs seem to have lower schedule and cost escalations than nonDRB projects. Although



this improvement cannot be directly attributed to the DRB implementation, there is enough evidence to confirm that the implementation of DRBs does not adversely impact the cost and schedule of a project.

DRBs in the FDOT program appear to have been effective in resolving adversarial disputes and preventing their occurrence. A conservative analysis indicates a success rate of 97% in addressing disputes. This ratio was computed by using the number of projects that had DRB cost items in their budget and the number of disputes that escalated to arbitration cases that were heard at the FDOT State Arbitration Board. In assessing the preventive effectiveness of DRBs, the number of arbitration cases over an 11-year time frame was used. The number of arbitration hearings has declined steadily following the implementation of DRBs within the work program. Another indicator of the impact of DRBs in reducing adversarial disputes was the reduced normalized DRB spending over time. Both DRB spending per number of active projects in the work program and percent DRB spending per program budget allocated for fiscal years have declined in later parts within the time frame of the research. The reduced DRB utilization rate is a plausible answer to this trend: combined with the reduced arbitration hearings, it is safe to conclude that DRBs encourage the contractor and the owner to settle issues internally, with no external intervention.

Another interesting research question has been the costs of DRBs. The analysis indicated that the DRB costs, both in actual cost and as percentages of the project budget and program portfolio, repre-

sent a small fraction of overall budgets (0.3 and 0.1%, respectively). Although DRB implementation is an additional cost to the projects, the benefits are likely to outweigh the increased spending. The average cost growth differential for DRB projects to nonDRB projects during 2000 and 2001 is approximately 4% in favor of DRB projects, and although the data are not conclusive to suggest that DRBs were the primary factor for the improved performance, the potential contributions of DRBs to cost savings are too substantial to ignore. Also, the potential costs of arbitration and litigation were not included in the analysis. Prorating the legal expenses of additional ADRs, and ultimately, the litigation, are likely to further increase the benefit cost ratio of DRB implementation.

DRBs are proactive approaches to construction disputes; considering the low levels of capitalization of firms and strict schedules, preventing costly escalations is imperative for successful project completion. Although DRBs are not the only dispute avoidance and settling mechanism, they are a viable alternative to effectively settle disputes without adversely affecting project performance.

Acknowledgments

The authors would like to acknowledge the support of FDOT in data acquisition process; however, the opinions expressed are those of authors and do not necessarily reflect the views of FDOT.

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use only. Any other use requires prior permission of the American Society of Civil Engineers. DRBF member and article co-author Ralph D. Ellis can be reached at relli@ce.ufl.edu.

ENDNOTES

¹ Readers are suggested to refer to Harmon (2003b) for further detail regarding ADR methods used in the construction industry.

² FDOT DRB practices are highlighted on their website, see

<http://www.dot.state.fl.us/construction/CONSTADM/drb/DRBMain.shtm>.

³ The brief history of FDOT DRB implementation was derived from a lecture given by Dr. Ralph Ellis and is available at <http://www.dot.state.fl.us/structures/DesignConf2006/Presentations/Session6/Final-6Ellis.pdf>.

⁴ Arbitration data was compiled from FDOT State Arbitration website.

⁵ The statistical analysis and the plots were compiled using R statistical program (R Core Team 2012).

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New DRBF Country Representatives

The DRBF is pleased to welcome the following newly appointed DRBF Country Representatives:

Botswana: Sanjeev S. Miglani

Sanjeev Miglani has 39 years of experience in the field of construction and is a qualified Arbitrator. Apart from being a member of the DRBF, he is a Fellow Member of the Association of Arbitrators (Republic of South Africa), Fellow Member of the Botswana Institute of Arbitrators and a Life Member of the Indian Council of Arbitration.

Mr. Miglani began his career in construction in 1974 and worked up from the position of Junior Engineer to the position of Managing Director of a global construction company based in Botswana. Thereafter he branched out on his own and has worked as a Project Engineer on several construction contracts, claims consulting and arbitrations.

Over the past few years Mr. Miglani has handled projects ranging from design and supervision works, project coordination along with dispute resolution and arbitration related services, the most recent being the Sir Seretse Khama International Airport in Gaborone, Botswana, where he successfully defended the client in the case of a claim of unfair termination of the contract and the claims from the contractor.

Mr. Miglani now specialises in claims consultancy and arbitration matters, although he leans towards dispute resolution as the first step towards differences arising in contractual matters.

Country Profile: Botswana is a rela-

tively sparsely populated country in the Southern African region. The economy is based on tourism and the export of diamonds and beef. The country went through a construction boom in the early 2000s with most of the major global construction giants maintaining a presence. At the moment the construction sector is dominated by Chinese contractors, although the government is pushing a policy of developing citizen contractors and the current emphasis is on training in the field of construction and management of contracts through dispute resolution. Several infrastructure projects are currently in the pipeline for future development.

Tanzania: Ninatubu Mhora Lema

Professor Ninatubu Mhora Lema is a civil engineer and a project and contract management expert specialising in infrastructure project procurement and management of contracts with local and international experience. He holds a BSc. Eng (1st Class) Honours degree from the University of Dar es Salaam, and a MSc and PhD in engineering project management from Loughborough University in the United Kingdom. He has experience of more than 30 years in conducting studies and providing consultancy services in project appraisal, construction project planning, procurement, contract formulation and management, dispute resolution, project performance evaluation and corporate strategic planning.

Prof. Lema is an adjudicator for a number of civil engineering projects in Tanzania. He has organised and conducted more than 30 short courses for construction and related-industry practitioners both in and outside Tanzania more than half



of which are on construction project and contract management. A number of these courses have been tailor-made to address specific requirements. Prof. Lema is an author of more than 30 international and local technical publications, research and study reports. He has been lecturing at both undergraduate and postgraduate level on project and contract management that is inclusive of project procurement. In his capacity as professor at the University of Dar es Salaam, Tanzania, Prof. Lema has supervised to successful completion over 30 Masters Degree dissertations, two Masters Theses and Four PhDs in Tanzania, Uganda, South Africa, and Sweden, all of these in the area of project procurement and contract management. He is also a visiting professor at the University of Botswana teaching Project Risk Management at Postgraduate level. He has further co-authored an ANSTI-sponsored forthcoming book titled: "Fundamentals of Civil Engineering Construction Management."

Prof. Lema is currently a procurement and contracts advisor/consultant to a number of major public projects including the USA Government financed Millennium Challenge Corporation projects. He has been an adjudicator in a number of public construction projects and has recently been appointed a member of Dispute Boards for two major road projects in Tanzania. Prof. Lema is a registered professional and consulting engineer and is the current Chairman of the Engineers Registration Board, Tanzania.

His first task as DRBF country representative will be to create a group of members of DRBF who will form the core cluster to spearhead DRBF activities in Tanzania and within the East African

Community. There are already a number of local experts involved in dispute resolution as DAB members in on-going contracts to form the cluster. The second task will be to create awareness amongst the major public sector clients, consultants and contractors. This task may also involve key tertiary training institutions in the country.

Country Profile: Tanzania, as an emerging economy within the East African community member countries, has experienced a three-fold increase in economic growth over the last decade. This rate of economic growth is expected to increase in the coming decade. Such growth has resulted in unprecedented high levels of investment in construction and industry both in the public and private sectors. Inevitably, such investments requires that there are solid foundations of both project and contract management skills. This also calls for strengthening of the national, if not regional, capacity for dispute resolutions. It is also noted that most public contracts are now utilizing international forms of contracts such as FIDIC and MDB forms of contract that provide for the formation of Dispute Adjudication Boards.

Interested in becoming a Country Representative for the DRBF?

Contact CR Coordinator

Andy Griffiths at

Andy.Griffiths@hatch.co.za

Construction Disputes Prevention



By Roger Ribeiro

BACKGROUND

The purpose of this article is to identify and define prevention measures for construction disputes within FIDIC form of contracts.

The construction disputes found their origin in the claims which have been mainly rejected or left unanswered by the Engineer. It is interesting to note that most of the important claims in construction are the result of delay in the execution of the works. However, an attempt to categorize the causes of dispute is shown below.

Examples from author’s experience have been used in order to explain his point of view. However, due to confidentiality, it’s impossible to disclose relevant information of these projects.

CAUSES OF DISPUTES

First, it is important to point out that the nature of projects is diverse and all construction projects are unique. This makes construction to be a very interesting, vibrant and

particular industry.

It is clear that the specific and unique exercise to identify potential disputes should be done from the beginning of the project because this will allow more effective dispute avoidance.

The following chart defines the causes of disputes from different authors.

My experience with construction disputes (rail, roads, motorways,...) is that both requests for extra time and/or extra money are the most important causes of disputes and/or differences.

In theory, these disputes could be resolved easily but the real world is, of course, quite different. The well known proverb says that the “money is the sinews of war”. It’s clear that the Contractor should be paid on time and the payment certificate should not be withheld by the Engineer or the Employer. During the life of a project, the Contractor

Authors	Causes of Disputes
Bristow and Vasilopoulous ⁽¹⁾	Unrealistic expectation on areas: contract documents, communication, lack of team spirit and change.
Heath et al. ⁽²⁾	Six areas: contract terms, payment, variation, time nomination, re-nomination and information.
Hewit ⁽³⁾	Six areas: change of scope, change conditions, delay, disruption, acceleration and termination.
Madden ⁽⁴⁾	Three categories: legal, technical and quantum.
Rhys Jones ⁽⁵⁾	Ten areas: management, culture, communication, design, economics, tendering pressures, law, unrealistic expectations, contracts and workmanship.
Sykes ⁽⁶⁾	Two areas: misunderstandings and unpredictability.

(1) Bristow, D. and Vasilpoulos, R (1995) The new CCDC 2: facilitating dispute resolution of construction projects, *Construction Law Journal*, 11(4): 95-117.

(2) Heath, B.Hills,B. and Berry M.(1994) The origin of conflict within the construction process, The proceedings of the first Plenary Meeting of TG15, Publication 171, CIB, The Netherlands.

(3) Hewit,J (1991) Winning Construction Disputes – Strategic Planning for Major Litigation, Ernst and Young, London.

(4) Madden,J.P.(2005) To tech or not to tech in selecting a construction third party neutral, *Arbitration*, 71 (4): 300-306.

(5) Rhys Jones, S.(1994) How constructive is construction law?, *Construction Law Journal*,10 (1):28-38.

(6) Sykes,J.(1996) Claims and disputes in construction, *Construction Law Journal*, 12(1): 3-13.



has to be paid whenever he proved that the works were done in due quality and in accordance with technical requirements.

Regarding extra time for completion, the parties may at initial stage realize the reality on site. Losing time in lengthy procedures and irrelevant matters is often counterproductive.

In light of the above, contractors should work on site with due expedition and without delays.

- Employers should have clarity on their objectives.
- Engineers should act fairly and with common sense.

CULTURAL DIFFERENCES

The FIDIC form of contract is reasonably well spread around the world. However, the countries have different jurisdiction law (common, civil, bijuridical and Islamic law) which can interfere with the form of contract.

The FIDIC form of contract has clearly its roots on common law jurisdiction and the parties from other jurisdiction must be aware of it. If FIDIC is silent on some concepts, it does not mean that these concepts could not be applied in a civil law world.

As an example, I saw recently the concept of time at large which is usually applicable in common law jurisdictions invoked by a Contractor working in a civil law jurisdiction.

My experience in large construction projects in Eastern Europe leads me to believe the construction industry is suffering many “cancers”, for example bad quality performance, delays, abnormal increase of contract price, bad design, poor project supervision, inexperienced contractors, lower quality of workmanship... the list could be lengthy.

In 2007, the European Union enlarged to include two ex-communist countries, Bulgaria and Romania. From 2000, funds from differ-

ent sources flooded these two countries in order to improve their infrastructure.

As an example, at present, Romania has just 546 km of completed motorways and Bulgaria has just 618 km. Such low data of completed motorways reveals that “cancers” are definitely active. Moreover, in a lot of recent infrastructure projects, the contractual disputes between the parties (Employer/Contractor) have increased dramatically in these two countries.

A cultural change is needed in order to avoid and resolve disputes. Without this cultural change, the construction industry will probably continue to suffer dramatically. Achieving cultural change is indeed not easy but it is attainable. This has become a real challenge for the leaders and those who want to see real changes.

I find that existing large scale projects showed that there are factors to minimize and avoid disputes as detailed below:

1. Risk allocation on the contract;
2. Early participation of Designer, Head Contractor and the Employer;
3. Selection of Consultants and Contractors based on quality criteria (QBS)
4. Appropriate and fair particular conditions of contract;
5. Appropriate delegation of authority in order to solve the problems quickly.

The following section will present a few directions for construction dispute prevention and avoidance.

PRELIMINARY CONSTRUCTION CONTRACT EVALUATION AND AUDITS OF THE TENDER

The FIDIC General Conditions of Contract are complete, equitable and the allocation of risks is considered to be fair.

Depending on how the particular conditions have been drafted, the entire concept’s philosophy can be changed and also can create imbalance between the parties. Therefore, it



is recommended that an independent third party skilled in contractual and technical matters to perform a preliminary evaluation and one audit of the tender.

Furthermore, the procurement rules will probably have to be adjusted as well, as mentioned previously.

Preliminary construction contract evaluation

From the author's point of view, when a preferred tender procedure for a project has been selected, a contract evaluation is needed in order to determine if the contract can be implemented.

The outcome from this stage includes:

- Ensure the proper selection of the conditions of contract;
- Ensure that the allocation of functions and risks which have to be assumed by the contractual parties is reasonably fair;
- Ensure that the Tender Documents will be properly made;
- Warn and advise the Employer regarding the potential conflicts with governing law;
- Warn and advise the Employer regarding low prices given by the bidders that may mask a lack of understanding of what is required to perform under the contract;
- Advise the Employer regarding the tendered commercial/contractual capability and qualification;
- Advise the Employer regarding the selection of a head Contractor and specialist subcontractors.

Auditing the tender

In a second stage, one adequate audit of the tender is needed in order to provide a review of risks for the project and may help to add flexibility improving the tender documentation.

The outcome from this stage includes:

- For projects financed by banks, it is rec-

ommended that the Employer to permit the bank(s) or persons appointed by the bank(s) to inspect and audit the contract before launching the tender.

- Ensure that dispute prevention clauses are included in the particular conditions. The best prevention contractual clauses are those which have been revised by a suitable contract engineer and/or suitable construction lawyers in order to avoid further discussions and claims during the life of the project.
- Ensure that all information as per clause 4.10 (site data) / Red, Pink and Yellow Book are available for the Contractor.
- Ensure that the Designer prepares a suitable and proper Design (Red and Pink Book).
- Ensure that a suitable design is available for the Contractor in order to avoid under-estimating the works to be performed.
- As a general rule, the more design details and information about the site of the project are made available to potential Contractors, the lower the risk they would face.
- Ensure that problematic issues are sorted out before the tender stage (demining, archaeological sites, expropriations limits, removal of utilities...)
- Ensure that the Employer has financial resources for the project.
- Ensure that the DAB/DB members are included in the tender and their role and responsibilities are clearly defined.

If one of those points has not been fulfilled, it is recommended not to proceed with the Project's implementation.

MISSIONS AND STRATEGIES DEFINED IN DISPUTE PREVENTION

When the contract has been signed between the parties (Employer/Contractor), it is recommended to define the strategies in construction dispute prevention that are to be implemented on the early stage of the project. Obviously, most projects are sufficiently unique to have many of the characteris-



tics of a prototype. Construction projects are indeed dynamic and are passing through several phases.(initiation, evaluation, Design, Procurement, Construction and Maintenance).

It is understood that preventive actions may avoid disputes.

- Prevention actions are related with “elimination “, “precaution”, “anticipation” and “safeguard”.
- Resolution actions are those to be taken when the disputes are already in place.

From my experience, it is important that as soon as the Construction Contract has been signed, the project team (Contractor, Engineer, Employer and DAB/DB) should align common objectives and should have a commitment to avoid disputes and minimize wasted effort.

A continued effort to promote dialogue and work environment is crucial for a real dispute prevention strategy.

I was involved in a road project in a Balkan country where the parties have clear objectives in avoiding disputes. They agreed from the early beginning of the project to minimize time and efforts, to have a constructive communication and reasonable proactive attitude to solve problems. The results in the end were that the road was opened before the time of completion, completed with an acceptable quality and within the budget. The Contractor got a financial bonus as per the conditions of the contract (4th edition of 1987 FIDIC Conditions).

A common framework plan for this project must be developed soon in order to define the orientations and start to establish a positive and constructive relationship between the parties.

An updated prevention project plan for the FIDIC form of contracts 1999 may lay the foundations for cultural change in the area of dispute prevention. A clear vision, mis-

sion and objectives are needed for this change.

The vision: The problems and conflicts have to be presented in a positive and constructive manner.

The mission: A model dispute strategy among the parties has to be implemented.

Examples defined in a plan:

1. Roles, responsibilities and organization in order to have a harmonious project team
2. Finance management in place in order to prevent costs overruns
3. Risk allocation during the life of the project. Reallocate fairly to the party best able to manage the risks
4. Audits from the bank

The Objectives: To avoid disputes or minimize the impact of disputes

1. The dispute prevention initiative is supported at the highest level of each contractual party
2. To create a culture where the team leaders work together for common solutions to problems
3. Determine if possible a time bar timing to solve the problems
4. Increase DAB/DB involvement on the project

EVALUATION OF ANTICIPATED DISPUTES

Unfortunately, in many countries, the public procurement law is constructed in such way that 100% tenders the lowest price is always winning. The situations of high value large scale projects are being managed, designed or constructed not always by the best companies and the right people from the Contractors and the Employers.

However, it is crucial to evaluate the anticipated disputes in order to implement the soonest preventive measures.

This evaluation and the solutions to be implemented may be done mainly by the Engi-



neer who is responsible to administrate the contract and bring out unambiguous contract documentation, to eliminate or minimize the ground for the claims to surface.

Due to the fact that under FIDIC form of contracts 1999 the Engineer is an Employer's agent, these preventive measures may not be seen as neutral. It is important that fairness and common sense prevail. The proposed evaluation may be as follows:

Step 1: Identification and presentation of potential claims with possibility to join and rank them according to their groups and criticality. (Design, Payment certificate...) (Engineer)

Step 2: The Engineer presents the remedial solutions and/or preventive solutions to the Employer prolongation/indirect and directs costs for every potential claims

Step 4: Edition of the analysis and submission to the Employer for approval (Engineer/Employer)

Step 5: Submission to the Contractor of the measures to be implemented (Engineer/Contractor)

DISPUTE PREVENTION CLAUSES IN FIDIC CONTRACTS

The FIDIC form of contracts 1999 edition keeps silent on how to encourage the parties to avoid disputes. However, sub-clause 20.5 (Red, Pink, Yellow, Silver books) encourages avoiding arbitration with an amicable settlement.

There is one exception on the General Conditions of the Gold book. The sub-clause 20.5 suggests indeed how to avoid disputes providing informal assistance and informal information to the parties. It quotes: "if at any time the parties so agree, they may jointly

refer a matter to the DAB in writing with a request to provide assistance and/or informally discuss and attempt to resolve any disagreement that may have arisen between the parties during the performance of the contract. Such informal assistance may take place during any meeting, site visit or otherwise. However, unless the Parties agree otherwise, both Parties must be present at such discussions. The parties are not bound to act upon any advice given during such informal meetings, and the DAB shall not be bound in any future Dispute resolution process and decision by any views given during the informal assistance process, whether provided orally or in writing".

The key of the collaborative approach for dispute resolution is on the sentence "if at any time the parties agree".

First of all, it is important to point out that the duties and obligations of a DAB / DB panel are not to substitute and/or replace the Engineer.

However, the DAB / DB could supervise the claims and flag up if merits are in place or not. Obviously, this could be possible under Red, Pink or Gold books where the form is actually "standing". Ad-Hoc forms should be part of the past....

Reasonably the DAB /DB member(s) could assist during the life of the project as follows:

- To determine from an early stage of the project who are the Employer's and Contractor's representatives
- To give opportunities to the parties to express themselves
- To help the parties to have discussions
- To assist the parties to reach a mutually acceptable settlement agreement before further steps

Unfortunately, DAB/DB members are showing up most of the time at the end of the projects and they do not have the opportunity to supervise and mediate the claims.



In one recent project, I saw a DAB sole member for the first time three years after the commencement of the works in a 5-star hotel far away from site for meetings during three days. An early intervention of the DAB/DB, will certainly allow better understanding of the issues and better preparation in case of disputes.

In conclusion, it looks that under the clause 20.5 of Gold book the claims may be supervised by DAB/DB.

However, to be applicable to the Red and Pink books, it is advisable that additional procedural rules are amended and the punitive character of the clause 20 should be slightly revised.

There is still a long way to go.....

CONCLUSION

Dispute avoidance is better than dispute resolution for both parties. Prevention is a clear ATTITUDE that all the parties should have from the early beginning of a project. An important role in the administration of the contract is held by the Engineer.

An Engineer with a good understanding of contractual and technical issues is probably the best party to deal with construction project daily issues. With proper training, and follow up training, an engineer is able to deal with project contractual issues and dispute prevention.

Therefore, it is crucial for the Engineer to assess all/to evaluate the anticipated claims in order to quickly implement preventive measures.

A good Engineer should have the following qualifications: communication skills, experience, availability, contract knowledge, common sense, and a fair and reasonable approach.

One recent successful experience in a D&B

Contract for an urban motorway project in Eastern Europe allows me to consider a few rules for dispute avoidance to be in place as follows:

- A good Engineer
- Good Feasibility studies and Employer's requirement
- Good Detailed Design Project made by the Contractor
- Good communication between parties
- Fair and Balanced contract
- Payment done and in due time

The DAB/DB could also play the role of peacemaker and supervise the claims done by the Contractor and the Employer. This may require effort to understand also their role in dispute avoidance. They also have to be considered as part of the overall project team defined above.

All in all, it's better to prevent than to cure.....

Roger Ribeiro can be reached by email at rri17@yahoo.com

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Member Additions June 2013 - August 2013



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Event Details:

February 27: Conference

- ➔ Morning session - dispute resolution in Southern Africa and keys to successful DB programs.
- ➔ Afternoon session - local and international views and a panel discussion on fundamentals of DBs and the achievement of objectives in Southern Africa.

February 28: Half-day Workshop

- ➔ First Part - dispute avoidance role of Dispute Boards; Intent and practice
- ➔ Second Part - DB procedures in practice

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