



Office of the
Inspector General
Commonwealth of Massachusetts

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Inspector General

**A Big Dig Cost Recovery
Referral:**

Poor Contract Oversight by Bechtel/Parsons
Brinckerhoff May Have Led to Cost Increases

February 2004

Executive Summary

Since the mid-1990's, the Office of the Inspector General (the Office) has been investigating the cost recovery efforts of the Central Artery/Tunnel (CA/T) Project. "Cost recovery" is the process by which "public and private owners file claims against design and construction management professionals for the costs claimed to be attributable to errors, omissions, or other "deficient" or unsatisfactory performance ("cost recovery claims").¹ This report is the latest in a series of cost recovery related reports that this Office has released since 1998.

This Office issued a highly critical report of the CA/T Project's cost recovery efforts in December 2000.² This report identified for the first time that no cost recovery had been pursued against Bechtel/Parsons Brinckerhoff (B/PB) and that the cost recovery program had, at the time, collected only \$30,000 from over \$83 million in claims that had been referred for cost recovery review. The recent design firm cost settlement for \$3.5 million represents significant progress for the Massachusetts Turnpike Authority's (MTA) cost recovery efforts. This Office strongly believes that the MTA should continue to pursue cost recovery against B/PB. This Office believes that work released previously by this Office concerning B/PB management practices may assist the MTA's efforts.

In a two-part report issued in May 1995 and May 1996 this Office found that B/PB used sub-standard contract management practices and that there existed systemic procedural lapses with respect to record keeping practices. This Office believes that the problems identified in the report have not been sufficiently reviewed for cost recovery purposes. Therefore, this Office strongly recommends that the MTA evaluate B/PB's contract management practices for potential cost recovery action.

¹ "Errors/Omissions Cost Recovery Claims against Design and Construction Management Professionals." The CA/T Professional Liability Reporter 1.4 (1996): 1.

² A Review of the Central Artery/Tunnel Project Cost Recovery Program, December 2000.

Issue

Cost recovery claims may stem from two places; a design or construction contractor, or the project manager (in the case of the CA/T Project, B/PB). Under its contract with the Commonwealth, B/PB is responsible for project management for the CA/T Project. As a result, B/PB has responsibility to detect and prevent design and construction errors. However, if B/PB made management errors, these might go undetected. Detected or not, B/PB remains liable for its own errors.

In many reports, this Office has made the case that B/PB has contributed to CA/T Project cost increases. Some of these cost increases can be tied directly to contract mismanagement by B/PB. This mismanagement has been documented in reports issued by this Office, including a two-part report issued in May 1995 and May 1996.³ In May 1995 (Part One), this Office addressed the adequacy of Bechtel Corporation's review of alleged construction contract mismanagement on the Porter Street Outfall Sewer Relocation contract (C07B1). In May 1996 (Part Two), this Office focused on B/PB's construction management practices generally. Part One concluded that two Bechtel audits performed in 1994 failed to adequately address the allegations that prompted the audits and failed to address Massachusetts Highway Department's (MassHighway) concerns regarding construction management. Part Two determined that B/PB had performed poorly in key aspects of its construction management responsibilities.

Specifically, this two-part report found the following:

- Bechtel Corporation's auditors did not respond to MassHighway's concerns regarding project management.
- Bechtel Corporation's auditors identified systemic procedural lapses in contract management, but labeled these problems insignificant.
- B/PB failed to correct deficiencies in construction management identified by its own internal audit.

³ See Appendix B for the full text of the technical assistance report.

- B/PB failed to improve the training program for field personnel.
- B/PB staff did not follow their own procedures.
 - Construction contract field offices did not maintain resident engineer drawings according to procedure.
 - Some resident engineers did not follow procedure pertaining to the preparation of their office diaries.
 - B/PB did not follow procedure regarding Construction Management Directives.
 - B/PB staff did not prepare adequate meeting minutes.
 - B/PB did not perform claims avoidance reviews.
- B/PB has not provided the Commonwealth with an adequate record of construction issues and activity.
 - B/PB did not adequately document the contract change order negotiation process.
 - Contract field staff did not adequately maintain Project photographs.
 - Staff did not produce and review Field Engineer Daily Reports in a timely manner.
 - The deficiency reporting process needed improvement.

The B/PB failings identified by this Office through a review of six B/PB contract field offices, could explain why the Commonwealth had no choice but to pay many of the cost increases attributable to contractor claims. For example, if B/PB, acting on behalf of the Commonwealth, could not defend against a contractor claim because B/PB had failed to sufficiently document contractor performance, then B/PB should be held responsible for costs associated with the claim. Contractor performance is documented through updated drawings, adequate record keeping, photographs, effective and timely responses to contractor requests, and the general maintenance of evidence to support cost increases. A review of contract change orders may identify the role that B/PB had in causing these change orders and their respective costs. Table One presents the final

contract value and number of change orders for a sample of contracts originally reviewed in Part Two of the technical assistance report issued in May 1996.

Table One: Final Contract Value and Change Orders for Selected CA/T Contracts

Contract	Title	Original Contract Value	Final Contract Value	Percent Growth	Number of Change Orders
C04A2	Boston Marine Industrial Park Tunnel	\$179,149,600	\$248,263,399	39%	197
C05B1	Tunnel Finishes	\$49,495,000	\$78,096,475	58%	136
C07A4	Vent Building 6	\$19,165,637	\$23,529,857	23%	90
C07A5	East Boston Emergency Response Station	\$6,737,000	\$7,959,162	18%	51
C13A1	South Boston Bypass Road	\$19,983,533	\$26,541,747	33%	54
C14C2	Utility Relocation	\$23,457,510	\$28,666,359	22%	79
<i>TOTAL</i>		\$297,988,280	\$413,056,999	39%	607

Source: Chart prepared by Office staff based on CA/T Project data published in November 2003.

Conclusion

This Office's December 2000 review of the CA/T Project's cost recovery program identified a failed effort. However, since late 2002 the MTA has made significant progress with cost recovery. For example, the MTA recently reported a \$3.5 million cost recovery from a design firm. This is in comparison to the mere \$35,000 recovered by the CA/T Project between 1996 and 2002. The MTA's commitment to cost recovery is demonstrated by the hiring of a team of legal and engineering experts. This team has made great strides in identifying potential cost recovery cases that, to date, value more than \$250 million.

A retrospective review of the CA/T Project reporting by this Office, Office of the State Auditor, and other agencies can assist the MTA's cost recovery efforts. The two-part Office report issued in May 1995 and May 1996 concerning B/PB mismanagement is one example of past work that could assist current efforts.

Previous investigations of B/PB's management practices revealed multiple instances of a failure to follow procedures and properly record construction activity. This failure may have led to project cost increases. This Office is concerned with construction cost increases that may be attributable to B/PB mismanagement. Since B/PB is in charge of design and construction management, the MTA should examine B/PB's responsibility for cost increases. If B/PB is found responsible, cost recovery should be pursued.

This Office believes that the attached two-part report will assist in current cost recovery efforts against B/PB. This Office continues to be available to assist the MTA's cost recovery efforts and this Office will continue to pursue cost recovery issues.

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Appendix A:

Cost recovery related reports:

- 1) *A Big Dig Cost Recovery Referral: Contract Mismanagement by Bechtel/Parsons Brinckerhoff May Have Increased Big Dig Costs.* December 2003.
- 2) *Proposal to Pursue Big Dig Cost Recovery: Ceiling Installation in the Ted Williams Tunnel.* October 2003.
- 3) *A Recommendation for Cost Recovery Against the Big Dig's Management Consultant: Grout Heave-Related Contractor Claims on the C11A1 Contract.* February 2003.
- 4) *A History of Central Artery/Tunnel Project Finances 1994-2001: Report to the Treasurer of the Commonwealth.* March 2001.
- 5) *A Review of the Central Artery/Tunnel Project Cost Recovery Program.* December 2000.
- 6) *Statutorily Mandated Reviews of Central Artery/Tunnel Project Building Construction Contracts 1997-1999.* December 1999.
- 7) *A Review of the Central Artery/Tunnel Project's use of Anchor Bolts on the C05B1 Tunnel Finishes Contract.* December 1998.
- 8) *Statutorily Mandated Reviews of Central Artery/Tunnel Project Building Construction Contracts 1994 - 1996.* December 1996.

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Appendix B:

Letter from Massachusetts Highway Department re Allegations and Subsequent B/PB Follow-ups dated August 15, 1994

Technical Assistance Report, Phase One: An evaluation of Bechtel Corporation's "special audits", issued in May 1995

Technical Assistance Report, Phase Two: Review and Evaluation of the CA/T Project's Construction Field Offices, issued in May 1996

Letter from Massachusetts Highway Department, Response to Phase Two: The OIG's Review and Evaluation of the CA/T Project's Construction Field Offices, dated October 7, 1996

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