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**INDEPENDENT STATE AUDITOR'S REPORT
ON CERTAIN ACTIVITIES OF THE
MASSACHUSETTS TURNPIKE AUTHORITY'S
CENTRAL ARTERY/THIRD HARBOR TUNNEL
FORCE ACCOUNTS
FEBRUARY 17, 1995 THROUGH MARCH 31, 2002**

**OFFICIAL AUDIT
REPORT
JUNE 26, 2002**

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The Central Artery/Third Harbor Tunnel (CA/T) Project is a major 7.5-mile interstate highway project designed to significantly reduce traffic congestion in downtown Boston through the construction of an eight- to 10-lane underground Central Artery, a four-lane underwater tunnel that crosses Boston Harbor, and a commercial traffic bypass road through South Boston. CA/T Project construction, which began in 1991, is currently about 79% complete. Construction extends from the I-93 Massachusetts Avenue Interchange on the south to beyond the Leonard P. Zakim Bunker Hill Bridge over the Charles River on the north, and from the Turnpike interchange by the Fort Point Channel on the west under Boston Harbor via the Ted Williams Tunnel to Logan International Airport and Route 1A in East Boston.

This interim report is part of our review of the CA/T Project Force Account activities, the estimated cost of which totals about \$600 million. Under a Force Account agreement, because of the need for particular skills, the affected party, such as a utility company, public agency, or railroad, performs the necessary work with its own in-house or contracted labor force. The CA/T Project then reimburses the Force Account entity for the actual costs incurred.

To date, the OSA's 15 interim reports have identified \$458 million in unnecessary, excessive, and avoidable project costs as well as available savings opportunities.

AUDIT RESULTS

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UNUSED FUNDS OF APPROXIMATELY \$1 MILLION AVAILABLE TO THE CA/T PROJECT

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During our review of the CA/T Project's Force Account activities we found that Force Account DMB09, for the design of the temporary ramp that branches off the Central Artery (I-93) above Causeway Street and runs southbound for a portion of the alignment, showed no financial activity for more than seven years. Project design funds of \$1,037,176 were budgeted for this activity and were included in the project's annual financial plan. Unused funds had been retained in the Project Force Account for the design of this temporary ramp even though the Massachusetts Bay Transportation Authority had agreed to pay for the design costs.

Project management's belated confirmation that the design costs of this temporary ramp was not their financial responsibility resulted in the identification of approximately \$1 million in unused funds for future Project use.

A draft of this report was provided to the CA/T Project Director at the conclusion of our audit. On June 10, 2002, the Deputy Project Director responded to the draft report and her comments are discussed at the conclusion of the report.

INTRODUCTION

Background

The Central Artery/Third Harbor Tunnel (CA/T) Project is a major 7.5-mile interstate highway project designed to significantly reduce traffic congestion in downtown Boston through the construction of an eight- to 10-lane underground Central Artery, a four-lane underwater tunnel that crosses Boston Harbor, and a commercial traffic bypass road through South Boston. CA/T Project construction, which began in 1991, is currently about 79% complete. Construction extends from the I-93 Massachusetts Avenue Interchange on the south to beyond the Leonard P. Zakim Bunker Hill Bridge over the Charles River on the north, and from the Turnpike interchange by the Fort Point Channel on the west under Boston Harbor via the Ted Williams Tunnel to Logan International Airport and Route 1A in East Boston.

In 1984, the Massachusetts Highway Department (MHD) awarded a management consultant contract to the joint venture of Bechtel/Parsons Brinkerhoff (B/PB) to manage Project design and construction activities. The management consultant has responsibility for project management, preliminary design, final design management, procurement, construction management and environmental services. The Massachusetts Turnpike Authority (MTA) assumed ownership and management of the CA/T Project under state law enacted in March 1997.

In 1987, the United States Congress passed the Surface Transportation and Uniform Relocation and Assistance Act, which made the CA/T Project eligible for a maximum of 90% federal reimbursement, depending upon the roadway classification and the availability of funds, with the Commonwealth bearing the remaining costs. In 1991, Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA), which extended the federal government's financial support of the Project through 1997. In January 1998, Congress passed the Transportation Equity Act for the 21st Century (TEA-21). Under this legislation, Massachusetts will receive federal funding through fiscal year 2003. Subsequently, fiscal year 2001 federal legislation capped federal funding for the Project at \$8.549 billion.

In 1989, CA/T Project management estimated that the Project, as then configured, would cost \$4.4 billion and would be completed in 1998. The project's cost estimate and completion date has been the subject of some controversy over the years due to the number of revisions made to these estimates. Most recently, in the October 1, 2001 Finance Plan, CA/T Project officials revised the total estimated cost of the project to \$14.475 billion based upon a comprehensive cost schedule update known as CSU 8. In March 2002, Project officials announced that the Federal Department of Transportation's Inspector General's Office had mandated an accounting adjustment of \$150 million. Although it reportedly requires no additional funding, its effect was to increase the total estimated Project costs to \$14.625 billion.

This interim report reviewed the CA/T Project's Force Account activities, the estimated cost of which totals about \$600 million. To date, the OSA's 15 interim reports have identified \$458 million in unnecessary, excessive, and avoidable project costs as well as available savings opportunities.

Project Force Account Activity

Construction on the CA/T Project affects numerous utilities, government agencies, and abutters and necessitates the relocation of sewer, water, electrical, telephone, telegraph, and steam services, railroad lines, and postal facilities. To address the needs of properties impacted by the CA/T Project, the Massachusetts Highway Department (MHD) has entered into a number of "Force Accounts" agreements with the affected parties. This interim report is part of our review of the CA/T Project Force Account activities.

In most cases, the Force Account entities perform the necessary work with their own in-house forces or a contracted workforce hired by the entity. Force Accounts are essentially cost-reimbursement type contracts, a characteristic that distinguishes them from the project's usual competitively bid construction contracts. Since the work performed under Force Account agreements is often unique to the Force Account entity, the arrangement oftentimes provides for the use of specially qualified workers. Reportedly, the project benefits from the agreement through work schedule improvements and savings from payments for only actual labor and material costs used.

Title 23, Code of Federal Regulations (CFR) provides for federal reimbursement for design and construction work performed by the affected Force Account activities based on actual labor and material costs incurred.

Of the approximately 264 design and construction Force Accounts at the CA/T Project totaling about \$600 million, \$455 million relate to construction and \$154 million to design, representing approximately 4% of the total project cost.

Audit Scope, Objectives, and Methodology

Our audit, which is ongoing, included an evaluation of Force Account activities to determine whether CA/T Project expenditures of approximately \$600 million were reasonable. The objectives of our audit were to determine whether the CA/T Project's management activities (a) complied with applicable laws and regulations and (b) resulted in effective, economical, and efficient utilization of resources. In order to accomplish these objectives, we employed several audit tests and procedures during our examination. We reviewed applicable laws, regulations, and internal operating policies and procedures and interviewed project personnel. In addition, we reviewed contracts, cost records, correspondence files, and other documents, as determined necessary. Our examination was made in accordance with applicable generally accepted government auditing standards for performance audits.

AUDIT RESULTS**UNUSED FUNDS OF APPROXIMATELY \$1 MILLION AVAILABLE TO THE CA/T PROJECT**

Project management's belated confirmation that the design costs of a temporary ramp was not their financial responsibility resulted in the identification of about \$1 million in unused funds for future Project use.

In February 1995, the Massachusetts Highway Department (MHD) entered into an agreement with the Massachusetts Bay Transportation Authority (MBTA) that required MHD to pay for the design of a temporary ramp that branches off the Central Artery (I-93) above Causeway Street and runs southbound for a portion of the alignment. According to minutes of an MBTA/MHD Policy Issues Meeting held on March 25, 1996, the MBTA funded construction of the Central Artery/Third Harbor Tunnel (CA/T) Project ramp as part of the Greenline North Station Project. At that meeting, MHD requested the MBTA to also fund the ramp design costs.

During our review of the CA/T Project's Force Account activities we found that Force Account DMB09, for the design of the temporary ramp in question, showed no financial activity for more than seven years. Project design funds of \$1,037,176 were budgeted for this activity and were included in the project's annual financial plan. We also noted that federal obligational authority in the amount of \$829,741 had been approved for this ramp and is still outstanding.

The Office of the State Auditor questioned project officials as to whether the MBTA agreed to fund the ramp design costs. After researching the issue, project management stated that the MBTA had, in fact, accepted responsibility for the design costs. Unfortunately, unused funds had been retained unnecessarily in the Project Force Account for the design of a temporary ramp even though another party has agreed to pay for the design costs. Project management's acknowledgement that the design costs of a temporary ramp was not the project's financial responsibility resulted in the identification of approximately \$1 million in unused funds for future project use.

Recommendation

CA/T, with FHWA approval, should reassign the unused funds in account #DMB09 to another project activity eligible for federal funding.

Auditee's Response

In response to our recommendation, the Deputy Project Director stated that:

The CA/T Project was aware that the MBTA verbally agreed they would not seek reimbursement from the Project for these design costs. It was our intent to allow the Force Account to expire on June 30, 2002 and recognize the savings. In preparing our 2002 cost and schedule update (CSUR9) additional MBTA Force Account costs were identified. The majority for the unused funds from DMB09 (\$700,000) will be reallocated to cover these additional costs identified for MBTA construction Force Account CMB17 (Russia Wharf). The remainder will be put into an allowance for future Project costs related to the MBTA, if necessary.

Auditor's Reply

We are satisfied that project officials have resolved this issue and with FHWA approval, plan to use these funds to satisfy other project needs.