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INDEPENDENT STATE AUDITOR'S
REPORT ON CERTAIN ACTIVITIES OF
DISTRICT TWO OF THE MASSACHUSETTS
HIGHWAY DEPARTMENT

OFFICIAL AUDIT
REPORT
NOVEMBER 19, 2001

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The Massachusetts Highway Department (MHD) is within the purview of the Executive Office of Transportation and Construction (EOTC). The MHD is composed of a five-member Board of Commissioners, chaired by the Commissioner, and is staffed with 2,135 employees. The MHD's primary mission is to plan, design, construct, operate, and maintain 12,600 lane-miles of state highway and 2,900 bridges. In addition, the MHD supervises over \$600 million of statewide construction projects, exclusive of the Central Artery/Third Harbor Tunnel Project. The MHD received approximately \$143.4 million in state funds and approximately \$500 million in federal reimbursements for fiscal year 2000. In addition, the MHD generated revenue of approximately \$7.4 million for fiscal year 2000 from sources such as outdoor advertising, reimbursable fuel, signs, access permit fees, load permits, highway inspections, and rents.

The MHD operates from a central office in Boston and five district offices, which are located in Lenox, Northampton, Worcester, Arlington, and Taunton. The District Highway Director (DHD) of each district office reports directly to the Chief Engineer, who is responsible for all operational activities including construction projects, environmental compliance activities, highway operations, highway engineering, and supervision of the five district offices. Within its respective jurisdiction, each district office is responsible for supervising all state highway-related construction projects, performing onsite engineering, implementing maintenance and preventive maintenance programs, generating proposals for maintenance and construction work, and providing engineering support to cities and towns.

Our audit focused on the MHD District Two Office. District Two comprises 56 cities and towns in Western Massachusetts, exclusive of Berkshire County, and its main office is located at 811 North King Street, Northampton.

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1. IMPROVEMENTS NEEDED IN THE INTERNAL CONTROLS OVER AND USE OF STATE-LEASED AND CONTRACTUALLY PROVIDED VEHICLES

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Our audit indicated that a lack of proper internal controls exposed MHD - District Two to the risk of misuse of state-leased and contractually provided vehicles. Specifically, District Two inefficiently incurred lease costs on state vehicles while those vehicles were out of service for long periods of time, monitoring controls over fuel consumption were weak, and fuel reports maintained by District Two did not reconcile with the central office's fuel reports. We also noted that the District did not comply with a memorandum from the Executive Office for Administration and Finance with respect to Office of Motor Vehicle Management Internal Revenue Service (IRS) forms, which are used to document fringe benefit tax reporting information for employees that utilize Commonwealth-provided vehicles. The District cannot ensure that these forms were completed consistently or accurately,

and it did not distribute forms to those employees who had access to contract vehicles.

Our audit also determined that the District did not comply with the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges, Section 746.6, pertaining to the use and regulation of contract vehicles. According to the specifications, contract vehicles are to be used exclusively by resident engineers and their assistants. However, we found numerous instances in which other employees used contract vehicles. We also noted that the District exposed itself to unnecessarily expensive contract vehicles due to the vagueness of vehicle specifications listed in the contracts managed by the District. Our audit also noted that, of the 24 contracts having vehicles, 16 or 67% had cost overruns totaling \$183,970; the District inefficiently retained contract vehicles while little or no contract work was being performed; and monthly vehicle costs on 23 of 24 contracts were more expensive than the most expensive vehicle leased from the Commonwealth's Office of Motor Vehicle Management (OVM). Had the District leased additional OVM vehicles as opposed to contract vehicles, we estimate that the potential contract vehicle lease savings would have been between \$189,987 and \$269,324.

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Our audit noted that District Two had deficiencies regarding the administration and management of its contracts. Specifically, District Two did not properly maintain contract cellular telephone records; properly monitor payments of certain contract items; submit necessary forms to initiate cost recovery procedures; charge appropriate contracts and line items for work performed; and include contractually provided computer equipment on the District Two Information Technology (IT) inventory.

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Our audit found that District Two did not complete a physical review of its stockroom inventory and its office furniture and equipment during the period July 1, 1998 to June 30, 2001. Additionally, the District did not properly tag and record certain contractually provided pieces of information technology equipment into inventory. We also found that the District was not complying with the Office of the State Comptroller's Memorandum No. 290, which requires departments to properly account for all fixed-asset transactions, including the proper recording and reconciliation of a periodic inventory of their Non-GAAP Fixed Assets, and to complete a physical reconciliation of inventory as of June 30 of each fiscal year.

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INTRODUCTION

Background

The Massachusetts Highway Department (MHD) is within the purview of the Executive Office of Transportation and Construction (EOTC). The MHD is composed of a five-member Board of Commissioners, chaired by the Commissioner, and is staffed with 2,135 employees. The Board of Commissioners, which is appointed by the Governor, reviews and approves all MHD contracts and major initiatives. Other sections, including Public Affairs and Chief Counsel, report directly to the Deputy Commissioner.

The Chief Engineer is responsible for all operational activities of MHD, including construction projects, environmental compliance activities, highway operations, highway engineering, and supervision of the five district offices. Administrative Services, including the Information Technology (IT) Section, provides administrative, financial, and technological support to MHD operations. MHD also contracts with third-party contractors and vendors to provide outsourced professional services, such as software development, computer operations, road plowing, and design and construction.

The MHD's primary mission is to plan, design, construct, operate, and maintain 12,600 lane-miles of state highway and 2,900 bridges. In addition, the MHD supervises over \$600 million of statewide construction projects, exclusive of the Central Artery/Third Harbor Tunnel Project. The MHD received approximately \$143.4 million in state funds and approximately \$500 million in federal reimbursements for fiscal year 2000. In addition, the MHD generated revenue of approximately \$7.4 million for fiscal year 2000 from sources such as outdoor advertising, reimbursable fuel, signs, access permit fees, load permits, highway inspections, and rents. MHD processes and reports expenditures using the Massachusetts Management Accounting and Reporting System (MMARS). In addition, MHD reports Generally Accepted Accounting Principles (GAAP) fixed assets, including those of the Central Artery/Third Harbor Tunnel Project, to the Office of the State Comptroller for inclusion in the Commonwealth's Comprehensive Annual Financial Report.

The MHD operates from a central office in Boston and five district offices, which are located in Lenox, Northampton, Worcester, Arlington, and Taunton. The District Highway Director (DHD) of each district office reports directly to the Chief Engineer, who is responsible for all operational activities of MHD, including construction projects, environmental compliance activities, highway operations, highway engineering, and supervision of the five district offices. Within its respective jurisdiction, each district office is responsible for supervising all state highway-related construction projects, performing onsite engineering, implementing maintenance and preventive maintenance programs, generating proposals for maintenance and construction work, and providing engineering support to cities and towns.

Our audit focused on the MHD District Two Office. District Two comprises 56 cities and towns in Western Massachusetts, exclusive of Berkshire County, and its main office is located at 811 North King Street, Northampton.

Audit Scope, Objectives, and Methodology

In accordance with Chapter 11, Section 12, of the General Laws, we have conducted a review of the management and administrative controls over construction contracts and related expenses in the MHD - District Two construction section. We have also reviewed the management controls over the District's light fleet vehicles and the IT, office furniture / equipment and stockroom / small stores inventories.

In conjunction with our audit, we reviewed 29 contracts valued at \$18,438,344 out of a total of 96 contracts valued at \$91,296,714 during the period July 1, 1998 to June 30, 2000. We also reviewed the adequacy of formal policies and procedures developed and implemented by the MHD central office regarding fixed-asset management. The physical security of the district stockroom and the small stores inventories at the West Springfield and Deerfield depots were also reviewed.

Our audit methodology included interviewing District Two personnel, observing transaction processing, examining and tracing financial data and documentation through the District's various internal systems, conducting physical inspections and reviews of MHD's fixed-asset

inventory, assembling various agency documentation, and performing other audit procedures as deemed necessary.

During our audit, we reviewed issues that came to our attention with appropriate auditee staff. In addition, at the completion of our audit, we met with District Two's District Highway Director, Construction Engineer, and Administrative Manager and reviewed with them in complete detail the results of our audit. During this meeting, the DHD indicated that he would initiate corrective action to address the issues raised in this report.

Our audit indicated that, except as noted in the Audit Results section of this report, for the areas tested, MHD District Two has maintained adequate management and administrative controls over its construction contracts and inventories in accordance with prescribed requirements and has complied with applicable laws, rules, and regulations for the areas reviewed.

AUDIT RESULTS

1. IMPROVEMENTS NEEDED IN THE INTERNAL CONTROLS OVER AND USE OF STATE-LEASED AND CONTRACTUALLY PROVIDED VEHICLES

District Two of the Massachusetts Highway Department (MHD) pays for light fleet vehicles in two ways: vehicles are either leased from the Commonwealth's Office of Vehicle Management (OVM) or provided as part of a contract between the MHD and a pre-approved private contractor. District Two incurs annual costs of approximately \$255,000 for its state-leased vehicles and expended approximately \$409,000 during our audit period for contractually provided vehicles. Our review focused solely on those vehicles considered part of the District's light fleet, including pickup trucks, sedans, and vans.

a. State-Leased Vehicles

We noted the following areas involving OVM leased vehicles where District Two could improve its monitoring controls:

- District Two lacked the controls necessary to adequately monitor its use of state-owned vehicles;
- District Two inefficiently expended state funds by continuing to pay for vehicle leases while those vehicles were out of service for extended periods awaiting repairs;
- District Two did not properly review manually prepared vehicle logs to ensure that they reconciled with the central office's computerized fuel consumption records;
- District Two did not review completed OVM IRS forms to ensure consistent and accurate completion.

According to the Massachusetts Highway State Vehicles Driver's Handbook, which was jointly created by the MHD and OVM, state vehicles are to be used solely for business-related purposes. The District's Fleet Administrator stated that a number of individuals are allowed to use these vehicles for travel between their work sites and homes in order to be available for incident/emergency response purposes. He also stated that the District does not monitor the minimum monthly usage requirement. Because there is nothing to indicate that the District reviews vehicle logs, the District cannot ensure that these vehicles are

strictly used for business-related purposes. According to conversations with OVM personnel, vehicle logs are reviewed as submitted by the MHD. Since District Two vehicles meet the minimum business usage monthly mileage requirement, there is no further review of vehicle use by OVM.

Our review of the usage of the District's light fleet for the month of May 2000 revealed that four vehicles were listed as "out of service." One of the four vehicles, registration number 816B, was a 1989 Chevrolet owned by District Two, and the other three vehicles, registration numbers 117G, 778E, and 791E, were leased by the District. Vehicle 117G was totaled in an accident on January 14, 2000, and sent to auction on November 8, 2000. According to the Central MHD Office, the vehicle was never returned to service, and the insurer of the at-fault driver, who was not the state vehicle operator, paid for the vehicle. However, the MHD did pay for the vehicle lease for the five-month period January 14, 2000 to June 8, 2000, at a total cost of \$1,335. Vehicle 778E was damaged in an accident on January 20, 2000, and was returned to service on April 25, 2001. We were provided with the vehicle's preliminary repair estimate of \$2,796. This vehicle was out of service for 15 months, and the District paid a total of \$5,700 for the vehicle's lease. Vehicle 791E was damaged in an accident on April 1, 2000, and was returned to service on January 29, 2001, after having \$2,366 in repairs. The vehicle was out of service for 10 months and the District paid a total of \$3,800 for the vehicle's lease. Therefore, we concluded that the District inefficiently spent Commonwealth funds by paying \$10,835 for leases on vehicles that were out of service for extended periods of time.

We also found that controls used to monitor vehicle fuel usage needed improvement. Our test month of May 2000 revealed that the vehicle logs indicated gasoline usage of 5,722 gallons. However, the Central MHD Office's manually prepared May 2000 fuel usage report for District Two vehicles indicated a total usage of 6,388 gallons, a discrepancy of 666 gallons. Assuming an estimated gasoline cost of \$1.30 per gallon, we calculated a monthly cost differential of approximately \$866, or \$10,392 annually between the District and Central MHD Office reports. Individual vehicle fuel usage variances between the two reports greater than 5% were also reviewed. Eight of the 67 vehicles logs reviewed indicated variances

greater than or equal to 5%. These variances accounted for 53% of the total differential between the Central MHD Office and District Two records. District Two's Fleet Administrator explained that the Central MHD Office's numbers were higher than the District's numbers because of insufficient recordkeeping by the vehicles' drivers. We found four instances in May 2000 where no refueling entries were listed on the District Two vehicle logs. These missing entries contributed to the gasoline usage variances between the Central MHD Office and the District. When we spoke with the Fleet Administrator about this, he again indicated that this was the result of insufficient recordkeeping on behalf of the vehicles' operators. The number of refueling omissions and the large variances between District Two records and those records kept by the Central MHD Office indicate that these records are not properly reconciled and that the controls necessary to monitor fuel usage need improvement.

Our audit also determined that the District was not in compliance with a November 15, 2000 memorandum from the Executive Office for Administration and Finance entitled, "Required Fringe Benefit Tax Reporting for Employee Use of Commonwealth Provided Vehicles." Specifically, although District Two distributed and collected OVM Internal Revenue Service (IRS) forms from each employee that had access to a state-leased vehicle, the District's Fleet Administrator informed us that the District made no attempt to review the completed forms for accuracy.

Our review of the completed OVM IRS forms for tax years 1999 and 2000 found little or no consistency from year to year or employee to employee. Our audit noted that 66 individuals completed and returned forms in 1999, while 72 individuals completed and returned forms in 2000. In both years, every individual that was given a form also returned a form. In 1999, eight employees stated that all of their one-way commutes were exempt from fringe benefit tax reporting requirements, and six employees claimed exemption in 2000. Upon closer inspection of the forms submitted by these employees, we could find no justification for such exemptions. The employees claimed the vehicles were used for emergency snow and ice removal and were therefore exempt from any tax implications; however, the IRS compliance memorandum from the Executive Office for Administration and Finance does

not allow for such exemptions. Although IRS rules provide exemptions for commutes in vehicles unsuitable for personal use, such as garbage trucks, tractors, and flatbed trucks, these regulations specifically state that pickup trucks and vans are not exempt and that cab lights, two-way radios, and custom painting do not modify a vehicle beyond personal use.

When asked to explain the reasons for such inconsistencies, the DHD, Fleet Administrator, and District Administrator all stated that it was not the responsibility of the District to review the completed forms for accuracy. Furthermore, each stated that it was the responsibility of the individual employee to properly complete the forms, since this tax issue is between the individual employee and the IRS.

Because District Two made no attempt to review the completed OVM IRS forms, it cannot state with any degree of assurance that it is in compliance with either the memorandum from the Executive Office for Administration and Finance or IRS regulations. Furthermore, our review of the OVM IRS forms indicates that many of the employees claimed exemptions to which they were not entitled.

b. Contract Vehicles

Our audit included a review of 29 contracts between District Two and various private contractors. While 25 of the 29 reviewed contracts had provisions for a vehicle, District Two opted not to accept the vehicle funded on contract No. 97142. We therefore focused on the 24 contracts where a vehicle was obtained and utilized by District Two. The cumulative vehicle cost of these 24 contracts amounted to \$409,247¹ During our audit, we noted the following areas pertaining to the administration of contract vehicles that need improvement:

- District Two did not require that vehicle logs be maintained for contract vehicles;
- The Construction Division did not provide OVM IRS forms to those employees who had access to contract vehicles;

¹ See Appendix A for an analysis of contract vehicle lease costs versus OVM vehicle lease costs.

- District Two did not comply with the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges, Section 746.6, which defines who shall be allowed to operate a contract vehicle;
- Contract vehicle specifications were extremely vague;
- District Two neither returned contract vehicles timely nor used them in a cost-efficient manner, which resulted in vehicle cost overruns and unreasonably high contract costs associated with the vehicles.

Our audit noted significant deficiencies regarding the documentation and oversight of contract vehicle usage. Our review found nothing to suggest that contract vehicle usage is reviewed by anyone within District Two. Unlike state-leased vehicles, operators of contract vehicles are not required to maintain vehicle logs. Our review of contract vehicles noted that the District was unable to accurately provide us names of contract vehicle operators, vehicle types, the dates that vehicles were received from and returned to contractors, and vehicle mileages. Without adequate records to document who operated contract vehicles and for what length of time, the District is incapable of complying with the Executive Office for Administration and Finance's memorandum pertaining to fringe benefit tax reporting for employee use of Commonwealth-provided vehicles.

Although the District distributes OVM IRS forms to individuals that have access to state-leased vehicles, it does not distribute these forms to employees who have access to contract vehicles. Our review of the OVM IRS forms submitted by three construction division employees who operated both state-leased and contract vehicles found that all three did not report any commutes in 2000, even though our review of the District "Sign In/ Out Logs" revealed these three employees collectively made a total of 184 one-way commutes during the months of February, March, and April 2000.

The Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges, Section 746.6, states that "vehicles will be for the exclusive use of the Resident Engineer and his assistants to accommodate their official transportation requirements on and off the project site, including portal-to-portal travel between the project site and the assigned personnel's residence." However, our audit determined that the

District did not comply with section 746.6 on four separate contracts. Three construction department managers operated contract vehicles on contract numbers 30112, 97331, 99015, and 99021. Since these three individuals were not assigned to the aforementioned contracts as either resident engineers (RE) or assistants to REs, their use of the contract vehicles was not in compliance with MHD policy.

The Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges, Section 746.6, contains the basic specifications for contract vehicles; however, we found no written policies pertaining to the regulation of such vehicles. We further noted that these standard specifications were written in 1988 and, as a result, are now outdated.

Our examination of the 24 vehicle contracts revealed that the contract specifications for vehicles were extremely vague. For example, our review found that the vehicle's make, model, and year were never specified. According to the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges, Section 746.4, the vehicle "may be any medium size, air conditioned, six cylinder, four door sedan, van, or other type vehicle capable of transporting four persons in comfort and protected against the elements." As a result of these ambiguous specifications, both the MHD and District Two are potentially exposed to unnecessarily expensive vehicles.

Our audit determined that vehicles were utilized on 24 of the 29 contracts that we reviewed. Of these 24, 16 or 67%, had cost overruns totaling \$183,970². Individual overruns ranged from \$1,950 on contract No. 98199, to \$25,000 on contract No. 97331. Only five, or 21%, had actual vehicle payments meeting the preliminary estimate for vehicle usage and, therefore, did not incur vehicle-associated cost overruns. Three contracts, or 12%, had cost underruns totaling \$3,804: \$4 on contract No. 98450, \$1,200 on contract No. 99064, and \$2,600 on contract No. 98348. These underruns were the result of either the contracts finishing early or the vehicles being turned in early.

²See Appendix B for a detailed table of vehicle cost overruns, listed by contract number.

Our audit also revealed that the District inefficiently retained contract vehicles while little or no contract work was being performed, such as contract numbers 96465 and 99015. Our review of contract No. 96465 found that the District retained the contract vehicle for 12 months while little or no contract work was performed. During the months of August 1997 through July 1998, the District continued to pay the vehicle lease at a rate of \$1,130 per month, incurring lease costs of \$13,560. Moreover, our review of contract No. 99015 revealed that the District retained the contract vehicle for 11 months while little or no contract work was performed. During the months of December 1999 through October 2000, the District continued to pay the vehicle lease at a rate of \$900 per month, incurring lease costs of \$9,900. While we are aware that under the standard contract specifications the District is allowed to retain vehicles up to 45 days after a contract's completion date, we question whether the District efficiently spent \$23,460 of the Commonwealth's funds by paying for and retaining contract vehicles during prolonged periods of little or no work.

Our review also noted large variances in monthly vehicle lease costs. For example, the monthly vehicle lease costs ranged from a low of \$1 on contract No. 98450 to a high of \$6,000 on contract No. 30112. A review of state-leased OVM vehicles reveals lease costs ranging from \$267 for a Ford Ranger to \$380 for a Ford F-150 pick-up truck. As previously discussed, the contract specifications for vehicles were extremely vague in that the make, model, and year were never specified. We determined that the monthly vehicle lease costs on 23 of 24 contracts were far more expensive than the most expensive OVM-leased vehicle. While we are aware that additional items, such as a laptop computer, cell phone, metric ruler, strobe light, and gasoline are often provided under the contract vehicle line item, we believe that the expense of this equipment is not enough to account for the cost discrepancies between contractually provided and state-leased vehicles.

We performed an analysis to document the potential cost savings available to District Two, had it chosen to lease additional OVM vehicles as opposed to contract vehicles. Our analysis assumed the following:

- The District leased the most expensive currently available OVM leased vehicle, a Ford F-150, at a cost of \$380 per month.

- We then doubled the monthly OVM vehicle lease cost to \$760 to account for the additional items noted above often provided with a contract vehicle. We are confident that the additional \$380 more than compensates for the extra items often provided for under the contract vehicle line item.
- We also used the OVM leased Ford Taurus, at a cost of \$325 per month, as a comparison.
- Rather than doubling the lease cost of the Ford Taurus, we attempted to more accurately assess the additional costs. We determined the average monthly mileage of an OVM-leased District vehicle to be 1,487 miles. Assuming the Taurus gets 20 miles to the gallon, and gasoline cost \$1.30 per gallon in 2000, we added \$96.65, $(1,487 / 20) \times \$1.30$, to the OVM lease cost. In addition, we estimated that a laptop computer costs \$2,000, a cell phone costs \$75, and the other incidentals totaled an additional \$200. Amortizing these items over three years adds an additional \$63.19 $(\$2,000 + \$75 + \$200) / 36$ months to the Taurus' lease cost. Therefore, we arrived at a monthly lease cost, after rounding, of \$485, $(\$325 + \$96.65 + \$63.19)$.

Using the above assumptions, we computed the potential vehicle lease savings that could have been achieved to be between \$189,987 and \$269,324 had the District chosen to lease additional OVM vehicles as opposed to contract vehicles³

Recommendation

- District Two's senior management should improve its monitoring of vehicle logs by reviewing more closely both the use of state-leased vehicles and the fuel consumption reported on those logs. By periodically reviewing the vehicle logs, the District will be better able to provide reasonable assurance that the vehicles are being used solely for business-related purposes. Also, periodic reconciliation of the District's vehicle logs to the Central MHD Office's fuel consumption reports will help to ensure better monitoring of fuel usage by the District.
- The District also needs to improve its processes of returning damaged vehicles to service. District Two should work with the MHD and OVM to establish streamlined policies and procedures that expedite the vehicles return to service. The current practice of incurring both lengthy lease payments and repair bills should cease. If vehicles are damaged beyond repair, the District should immediately terminate lease payments and work out a settlement in conjunction with OVM.
- The District should initiate a process for reviewing completed IRS OVM forms. While we agree that the District is not responsible for enforcing individual tax compliance, the District should ensure that employees are filling out the forms in a

³ See Appendix A, for a detailed analysis on potential vehicle lease savings.

consistent and accurate manner. This will help ensure that no Federal and State Income taxes are evaded.

- The District should require that monthly vehicle logs be maintained for all contract and state-leased vehicles. By requiring contract vehicle logs, the District will have the following important information available: vehicle operator, vehicle type, the date the vehicle is received from and returned to the contractor, and vehicle mileage. The implementation of contract vehicle logs will also enable the District to better monitor whether the vehicles are used for non-business-related purposes and to accurately distribute OVM IRS forms to those individuals operating contract vehicles.
- District Two should comply with the requirements of the Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges, Section 746.6. The District Highway Director and/or the District Construction Engineer should more strictly regulate who operates a contract vehicle to ensure that only the authorized resident engineer and his assistants use contract vehicles.
- The Massachusetts Highway Department should update and expand upon the 1988 Commonwealth of Massachusetts Department of Public Works Standard Specifications for Highways and Bridges, Section 746.
- District Two personnel should ensure that vehicle overruns, whenever possible, are kept to a minimum. To accomplish this, the District should first attempt to properly identify the estimated days of contractual work required to complete the project and ensure that the contractor remains on schedule. Second, the District should consider returning vehicles during lengthy idle work periods, thereby eliminating unnecessary vehicle payments when the vehicle is not being used.

2. IMPROVEMENTS NEEDED IN THE MANAGEMENT AND ADMINISTRATION OF CONTRACTS

The MHD routinely contracts with approved contractors to provide services on a variety of tasks, including snow and ice removal, road improvement, road construction, traffic flow improvement, and bridge repair. With respect to contract management and administration, our audit noted that District Two did not:

- Properly maintain contract cellular telephone records;
- Properly monitor payments of certain contract items;
- Submit necessary forms to initiate cost recovery procedures;

- Charge appropriate contracts and line items for work performed; and
- Include contractually provided computer equipment on the District Two information technology (IT) inventory.

a. Cellular Telephones

Our review of contract cellular telephone bills found issues with contract numbers 98468 and 99015. Under contract No. 98468, District Two was unable to produce the detailed cellular telephone bills for the period of March 24, 1999 to July 23, 1999. Although we made numerous requests of District Two personnel, we were informed that the records were either misplaced or lost. As a result, it could not be accurately determined whether the cellular telephone bills charged under contract No. 98468 and the cellular telephone charges of \$1,861 were reasonable and appropriate. As a result of our inquiry, District Two reduced the cellular telephone charges associated with contract No. 99015 by \$504, although the District did not provide us with an explanation for this adjustment.

b. Monitoring of Payments

Upon reviewing contract No. 99015 for the Greenfield Tourist Information Center, we discovered two instances in which the MHD made payments that exceeded the value of the goods received.

- Extra Work Order (EWO) No. 4 was prepared to supply the Tourist Information Center with an in-floor safe. Although the District originally requested an in floor safe costing \$2,434, this request was later modified to a free-standing safe. According to an in-house memorandum from the Assistant District Construction Engineer (DCE), a free-standing safe would be “substantially less expensive” than an in floor safe. Our review indicated that payment was made for an in-floor safe. DCE stated that a credit had been issued to correct this overpayment, but as of the completion of our audit fieldwork, we have yet to receive a copy of the credit, as requested.
- Line item 799.5 calls for 3,000 deep water duck potato plants at a cost of \$2.50 per plant. While the District paid for 3,000 plants, our review of the contract files revealed that the District only received 2,500 plants, with the contractor agreeing to provide a credit of \$1,250 (\$2.50 x 500). Although the DCE agrees that this appears to be an overpayment, as of the completion of our audit fieldwork, we have not yet received a copy of the credit, as requested.

c. Cost Recovery

MHD's Chief Engineer formally initiated MHD's Cost Recovery Procedures and Implementation Plan in a memorandum dated July 17, 1997. The goal of these procedures is to foster communication between construction personnel and designers resulting in higher-quality designs and a reduction in EWOs. MHD's Cost Recovery Procedures encompass an eight-step process that is initiated once a resident engineer realizes that an EWO is needed.

Our audit disclosed that District Two identified cost recovery issues on contract No. 98428 (Monson-Brimfield Road Resurfacing and Related Work). However, District Two did not follow MHD procedures by completing the necessary cost recovery inquiry form and sending it to MHD's Cost Recovery Administrator. Because the District did not complete the appropriate paperwork, cost recovery procedures were never initiated and the District lost the opportunity to recover a potential \$22,223.

d. Allocation of Costs

Our review noted the following two instances in which the District charged costs to either the wrong line item or contract.

- Upon reviewing contract No. 99124, we determined that the District had improperly charged one line item to pay for work done and materials used on another line item. Specifically, EWO No. 4 for \$3,738 on contract No. 99124 was prepared to properly fund the concrete encasement of a traffic signal conduit that was previously paid for by overstating dense-graded crushed stone.
- We found that contract No. 99159 (Gill kiosk) was charged \$2,977 for work that was done on contract No. 98468 (Holyoke kiosk). While the \$2,977 under contract No. 99159 was earmarked for loam and seeding, this money was used to plant elm trees and repair Plexiglas on contract No. 98468. An EWO was prepared to extend the geographic limits of contract No. 99159.

As a result of our audit, the District prepared EWOs on contract numbers 99124 and 99159 in order to correctly allocate the associated costs.

e. Computer Equipment

Based upon our review of the list of contractually acquired IT equipment provided by the District Construction Engineer (DCE), we determined the following:

- EWO No. 1 on contract No. 97175 provided for two desktop computers with monitors. Although we were able to trace these computers and monitors to the IT inventory list maintained by the District Two Network Administrator, only one of the computers and monitors was reflected on the list provided to us by the DCE.
- Although IT equipment provided under contract No. 99064 was included on the list provided by the DCE, it was not properly tagged or included as part of District Two's fiscal year 2000 year-end IT Inventory.
- The laptop computer supplied under contract No. 30112 was not properly tagged or included as part of District Two's fiscal year 2000 year-end IT inventory. In addition, we found that the computer was not used on this or any other project. According to the DCE, this laptop was kept in the District construction office and was never released to the field staff. The DCE further explained that the work involved under contract No. 30112 did not require use of the laptop. When asked why it was included in the contract's specifications if it was not needed, we were told that it was to be retained by the District for use on future contracts. The DCE reasoned that by owning the laptop, the District would not have to submit specifications for and pay for a laptop on future contracts. We then asked how many contracts subsequent to contract No. 30112 it had been used on and the response was "none," but the DCE was hopeful that the laptop would be used more in the future. In response to our question as to why this equipment was never reported to the District's Network Administrator for inclusion on the District's fiscal year-end inventory, the DCE stated that, "it never occurred to me to do it."

Recommendation

We recommend the following steps be initiated to improve the administration and management of District Two contracts.

- The District needs to safeguard cellular telephone bills and properly account for adjustments when made. While our review did not indicate numerous errors in this respect, recordkeeping needs to be improved.
- The District needs to more closely scrutinize contractor invoices to ensure that it receives what it is paying for. In addition, if the District determines that credits are owed and have not been issued, it should pursue and resolve all contractor credit issues in a timely manner.

- Resident engineers and appropriate Construction Division personnel need to be diligent in their efforts when pursuing cost recovery issues. All proper steps must be taken when cost recovery is identified as an option. The cost recovery procedures established and delineated by the Massachusetts Highway Department need to be strictly adhered to by District Two.
- Management personnel within the Construction Division need to more closely monitor cost allocation. Pay estimates should be reviewed closely to ensure that resident engineers appropriately charge the proper line items and contracts for contractual work. In addition, extra work orders should be processed when the need is discovered rather than retroactively. By doing so, the District would be better able to detect potential line item overruns and areas requiring additional funding.
- District Two should develop inventory controls to ensure that all contract equipment is tagged with state identification numbers and included in the District Two IT inventory report. Furthermore, we recommend that the DCE work with the District Two Network Administrator to ensure that the IT inventory is updated and kept current in the future.

3. IMPROVEMENTS NEEDED OVER INVENTORY CONTROLS RELATED TO STOCKROOM INVENTORIES, OFFICE FURNITURE, AND INFORMATION TECHNOLOGY EQUIPMENT

Our audit found that neither the MHD nor District Two had written policies and procedures related to stockroom and office furniture and equipment inventories. Also, the District did not complete a physical review of its stockroom inventory and its office furniture and equipment during the period July 1, 1998 to June 30, 2001. Additionally, we discovered that the District did not properly tag and record certain contractually provided pieces of IT equipment (See Audit Result No. 2).

According to the Office of the State Comptroller's (OSC) Memorandum No. 290, "Departments are required to properly account for all fixed asset transactions. This includes the proper recording of and reconciliation of a periodic inventory of their Non-GAAP Fixed Assets. This physical reconciliation should be completed as of June 30th of each fiscal year."

Our test of 18 stockroom items totaling \$162,786, or 35% of the June 30, 2000 stockroom inventory value of \$471,670, revealed that 14 of the 18 selected items exhibited no change in the fiscal year-end balance between June 30, 1999 and June 30, 2000. Most notably among the items exhibiting no change in quantity from year to year were unleaded gasoline and

diesel fuel. As a result of our tests, we question the accuracy and reliability of the stockroom inventory records. Currently, District Two has only one person assigned to its stockroom, and it is clear that this person, acting alone, would not possess the resources necessary to conduct an accurate physical year-end inventory, let alone periodic inventories of the stockroom. We also determined that neither the MHD nor District Two had written policies and procedures related to its stockroom inventory. Based upon the fact that numerous stockroom items remained unchanged from year to year and that there is currently only one employee assigned to the stockroom, District Two is not complying with the OSC directives mandating an annual physical reconciliation of inventory.

We also performed a review of office furniture and equipment located at the District Two headquarters. Although office furniture was tagged and maintained on an inventory list, this list did not include required information such as cost, date of acquisition, or date of last update. Also, we learned that the last annual physical inventory of District Two office furniture and equipment was performed in 1997. District Two personnel, after consulting with the MHD Central Office, informed us that there were no MHD inventory policies or procedures, but that such policies and procedures were in the process of being developed.

While District Two has internal controls pertaining to physical security over IT equipment valued at approximately \$361,000, we found significant deficiencies regarding the receipt of, accounting for, and reporting on MHD's District Two IT asset listing. Deficiencies pertaining to asset control practices included, but were not limited to, the fact that District Two did not:

- Develop or operate under formal departmental policies and procedures regarding fixed-asset management, including conducting an annual physical inventory and reconciliation, tagging of computer-related equipment, accounting for and monitoring of laptop computers, and accounting for surplus property;
- Maintain a complete, current, and accurate inventory of IT assets;
- Comply with the State Comptroller's requirements regarding tagging of property and equipment and maintaining consistent tagging procedures;

- Include appropriate fields such as cost or date of acquisition of the IT asset listing;
- Demonstrate that an annual physical inventory and reconciliation of IT assets had been performed.

Our audit disclosed that contrary to Chapter 647 of the Acts of the 1989 and the OSC internal control guidelines for fixed asset management, District Two has neither performed a periodic physical inventory and reconciliation nor complied with all requirements for affixing state identification numbers on computer equipment. Our audit revealed that the same three state identification tags numbers were each assigned to six different pieces of IT equipment and that five IT items acquired through contracts were never tagged or entered onto the District Two fiscal year 2000 inventory report. Although the MHD has developed certain written operating policies and procedures, we could find no such policies and procedures pertaining to the management and control of IT-related equipment.

Recommendation

The MHD should design and implement the necessary written policies and procedures to ensure the integrity of the District's stockroom, office furniture, and IT inventories. At a minimum, these policies and procedures should include:

- Supervisory and monitoring procedures that ensure the accuracy and reliability of stockroom, office furniture, and IT inventory.
- A cross-training program so an alternate employee would be able to take over the stockroom supervisor's duties in the event that the current stockroom employee is unable to perform his job due to a prolonged absence.
- Procedures to ensure that the stockroom, office furniture, and equipment are inventoried annually to confirm the year-end inventory as of June 30.
- Procedures to ensure that the receipt and disbursement of stockroom inventory is being properly updated and recorded.
- Procedures to ensure that all computer equipment, including computer equipment acquired through construction contracts, are tagged with state identification numbers and reflected on the District Two IT inventory report.

CONCLUSION

The Massachusetts Highway Department should perform a district by district review of the issues disclosed in this report to determine the extent of their occurrence and to take the appropriate administrative and management initiatives to correct all deficiencies to achieve cost savings, economies, and efficiencies.

APPENDIX A
Savings Potential of OVM Lease Vehicles Versus Contract Vehicles

<u>CONTRACT NUMBER</u>	<u>MONTHS VEHICLES USED</u>	<u>CONTRACT COST PER MONTH</u>	<u>TOTAL COST CONTRACT VEHICLES</u>	<u>MONTHS VEHICLES USED</u>	<u>OVM LEASE COST PER MONTH</u>	<u>TOTAL COST OVM LEASE VEHICLES</u>	<u>POTENTIAL SAVINGS</u>	<u>MONTHS VEHICLES USED</u>	<u>OVM LEASE COST PER MONTH</u>	<u>TOTAL COST OVM LEASE VEHICLES</u>	<u>POTENTIAL SAVINGS</u>
30112	7	\$6,000	\$42,000	7	\$760	\$5,320	\$36,680	7	\$485	\$3,395	\$38,605
30146	13	1,600	20,800	13	760	9,880	10,920	13	485	6,305	14,495
96465	26	1,130	29,380	26	760	19,760	9,620	26	485	12,610	16,770
97292	14	1,700	23,800	14	760	10,640	13,160	14	485	6,790	17,010
97331	37	1,000	37,000	37	760	28,120	8,880	37	485	17,945	19,055
97359	6	2,300	13,800	6	760	4,560	9,240	6	485	2,910	10,890
97498	8	1,100	8,800	8	760	6,080	2,720	8	485	3,880	4,920
98069	3	2,500	7,500	3	760	2,280	5,220	3	485	1,455	6,045
98176	16	900	14,400	16	760	12,160	2,240	16	485	7,760	6,640
98187	11	1,200	13,200	11	760	8,360	4,840	11	485	5,335	7,865
98194	19	1,100	20,900	19	760	14,440	6,460	19	485	9,215	11,685
98199	4.5	1,300	5,850	4.5	760	3,420	2,430	4.5	485	2,183	3,667
98203	3	1,200	3,600	3	760	2,280	1,320	3	485	1,455	2,145
98309	12	1,200	14,400	12	760	9,120	5,280	12	485	5,820	8,580
98348	4	1,300	5,200	4	760	3,040	2,160	4	485	1,940	3,260
98382	18	2,000	36,000	18	760	13,680	22,320	18	485	8,730	27,270
98428	8	1,100	8,800	8	760	6,080	2,720	8	485	3,880	4,920
98437	9	3,385	30,465	9	760	6,840	23,625	9	485	4,365	26,100
98450	2	1	2	2	760	1,520	-1,518	2	485	970	-968
98468	12	1,500	18,000	12	760	9,120	8,880	12	485	5,820	12,180
99015	23	900	20,700	23	760	17,480	3,220	23	485	11,155	9,545
99021	9	1,850	16,650	9	760	6,840	9,810	9	485	4,365	12,285
99064	18	600	10,800	18	760	13,680	-2,880	18	485	8,730	2,070
99124	6	1,200	<u>7,200</u>	6	760	<u>4,560</u>	<u>2,640</u>	6	485	<u>2,910</u>	<u>4,290</u>
			<u>\$409,247</u>			<u>\$219,260</u>	<u>\$189,987</u>			<u>\$139,923</u>	<u>\$269,324</u>

APPENDIX B
Contract Vehicle Cost Overruns

<u>CONTRACT NUMBER</u>	<u>NUMBER OF MONTHS VEHICLE TO BE USED PER CONTRACT</u>		<u>OVERRUN</u>	<u>LEASE COST PER MONTH</u>	<u>TOTAL \$ OVERRUN</u>
	<u>BUDGET</u>	<u>ACTUAL</u>			
30112	6	7	1	\$6,000	\$ 6,000
30146	4	13	9	1,600	14,400
96465	7	26	19	1,130	21,470
97292	4	14	10	1,700	17,000
97331	12	37	25	1,000	25,000
97359	4	6	2	2,300	4,600
98176	6	16	10	900	9,000
98187	6	11	5	1,200	6,000
98194	7	19	12	1,100	13,200
98199	3	4.5	1.5	1,300	1,950
98309	6	12	6	1,200	7,200
98382	6	18	12	2,000	24,000
98428	5	8	3	1,100	3,300
98468	6	12	6	1,500	9,000
99015	9	23	14	900	12,600
99021	4	9	<u>5</u>	1,850	<u>9,250</u>
	TOTALS		<u>140.5</u>		<u>\$183,970</u>