



Memorandum



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To: Harpal S. Kapoor, Director, Miami-Dade Transit

From: Christopher Mazzella, Inspector General

Cc: George M. Burgess, County Manager

Date: October 29, 2010

Subject: OIG Review of Miami-Dade Transit's Credit Card Payment Security Features, Ref. IG10-40

As you know, the Office of the Inspector General (OIG) has been investigating certain deficiencies in the Miami-Dade Transit (MDT) Fare Collection System (FCS), which allows riders to purchase an "Easy Card" to pay for transit fare when using Metrorail, Metro Buses, and STS vehicles. The OIG initiated its review of this matter based on concerns brought to our attention by an MDT patron who observed two men offering to sell Easy Card passes at a discounted amount to other MDT patrons.

We determined that Cubic Transportation System, Inc. failed to install anti-fraud features into Ticket Vending Machines (TVMs) that were contractually required, thus allowing credit card thieves to routinely purchase Easy Cards and sell them at a discount. We also determined that MDT failed to fully monitor and oversee Cubic's installation efforts, including failing to conduct a final inspection of the FCS to insure contractual compliance and operational security. MDT also failed to take other available measures within its control to minimize its losses (see footnote 2).

Cubic is now working with MDT to install the required security features, which allow for the identification of suspicious credit card activity. Although Cubic has agreed to perform the repairs at no cost to MDT, we note that MDT has already incurred significant losses which could have been prevented. Table 1 of this memorandum provides data for losses totaling over \$250,000 incurred by MDT between September 1, 2009 and August 5, 2010, in part as a result of the use of stolen credit cards at TVMs. Accordingly, we recommend that MDT refer this matter to the County Attorney's Office to seek recoupment of its monetary losses and other associated costs caused by the failure to implement contractually required credit card security features, and seek liquidated damages for untimely performance of its contractual obligations.

Cubic's Failure to Properly Install the FCS

By way of background, in May 2008, the Miami-Dade Board of County Commissioners approved the final contract with Cubic, No. 8481-2/22, for the installation of the FCS. By October 1, 2009, Cubic completed the installation and the FCS became completely operational.¹ The FCS utilizes TVMs to sell and dispense the Easy Card, which can also be purchased at sales outlets or through MDT's website. The Easy Cards may be purchased by using cash or credit and debit cards.

During the course of the review, OIG Special Agents determined that address verification features, which are commonly used throughout the credit card industry, were never installed by Cubic in the TVMs. The absence of these anti-fraud measures left MDT vulnerable to ongoing and systematic criminal activity.

As part of the review, OIG Special Agents determined that the installation of anti-fraud features were an essential part of the system and were included in the original technical specifications. Specifically, the sections related to the use of credit cards and debit cards revealed the following contractual requirements:

Section 7.6.3.4.J - Provide the ability and functionality for the system to utilize address verification as a component of the authorization request process.

Section 7.6.3.5.I – Provide functionality where patron is requested to enter the Zip code associated with the card being used prior to requesting bank authorization. The entered Zip code shall be transmitted to the financial clearing house as part of the authorization request.²

The OIG's independent review of the pertinent portions of the contract's technical specifications, provided by both MDT and Cubic, revealed that they were identical in numeration and content, despite the claim made by a Cubic official that these items were deleted in final negotiations.

The Identification of Credit Card Charge Backs

In November 2009, one month after the new FCS was implemented, the Elavon Corporation—which receives and processes credit and debit card payments between MDT and various banking institutions—notification the Miami-Dade County Finance Department of an unusual number of charge backs occurring with respect to the use of credit cards used to acquire Easy Cards at the TVMs. The Finance Department, in turn, immediately notified MDT of the

¹ The loss amounts reflected in OIG Table 1, below, include amounts for September 2009, because MDT initiated a "soft launch" of the FCS approximately two weeks prior to the official implementation date of October 1, 2009.

² The "AVS" software that enables this function requires a customer to enter a zip code that corresponds with the one already programmed in to the card.

charge back concerns. MDT originally concluded that the charge backs were the result of duplicate charges related to a system failure, which was eventually corrected by MDT. However, in the months that followed, the charge backs were identified as the result of the fraudulent use of credit cards at TVMs, which increased in frequency until they reached a peak in July 2010.³

The Imposition of Fines and Charge Back Fees

As a result of the continued imposition of charge back fees, MDT was assessed a \$50 fine via Elavon and was placed on a fraudulent activity watch list.⁴ In addition, MDT has been assessed a \$20 fee for each charge back. Finally, MDT is now facing additional fines that could reach into the thousands of dollars. The following table depicts the total dollar losses related to charge backs from September 1, 2009 through August 5, 2010.⁵

Table 1: Charge Back Amounts (September 1, 2009 through August 5, 2010)

Name of Credit Card Company	Amount of Loss
American Express	\$14,303
MasterCard	\$66,229
Visa	\$180,492
Total Loss	\$261,024
Average Monthly Loss	\$23,729

*Source: MDT

In accordance with Section 2-1076(d)(2) of the Code of Miami-Dade County, we request that MDT provide us with a status report addressing areas of concern relative to all the credit card security features for the Fare Collection System and our recommendation that MDT pursue legal remedies. The OIG requests that we receive this report in 90 days, on or before January 26, 2011.

³ Due to the number of charge backs designated as being fraud-related (154) that occurred in July 2010, Elavon, acting on its own initiative, set "Velocity" anti-fraud software parameters, intended to limit the number of daily purchases on a single credit card, at two purchases per credit card within a 24-hour period. Elavon security personnel have stated that the Velocity software was continuously available to MDT through Elavon, which routinely includes Velocity as part of its business agreement with merchants. However, the setting of parameters of the software—which is customarily set by the merchant, according to its particular needs—was never requested by MDT. At the request of MDT, those parameters have now been re-set at three purchases per credit card within a 24-hour period.

⁴ The fine was for a violation of industry standards set by the Payment Card Industry, whose members include Visa, MasterCard, and American Express.

⁵ It should be noted that not all charge backs are the result of fraudulent activity.