



# Progress Report: The MTA Capital Security Program

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In the wake of the events of September 11, 2001, the Metropolitan Transportation Authority (MTA) initiated intense planning efforts to determine how to best protect its customers and key assets from any future terrorist incident. These efforts culminated in a multifaceted strategy that included operational initiatives and 57 security-related projects funded through the capital program to harden and control access to vulnerable facilities.

The MTA's 2000-2004 capital program allocated \$591 million to fund the 24 highest-priority projects of the capital security program (i.e., Phase 1). These were subsequently reconfigured (primarily for contracting purposes) into 16 construction projects, which now entail 38 separate security improvements.

The projects in Phase 1 target the MTA's most vulnerable and most heavily used assets, such as stations, transit hubs, bridges, and tunnels. Security improvements include perimeter protection; structural hardening; fire, life, safety, and evacuation enhancements; and electronic security and surveillance. Each project involves one or more facilities and security improvements. To maintain security, this report does not reveal the details of individual security projects.

This report is the sixth in a series of progress reports on the MTA's capital security program. As in our previous reports, our findings were developed with the cooperation of the MTA and are based on a review of MTA documents and interviews with MTA officials. We have not audited the accuracy of the documents or independently verified the statements of MTA officials.

Our first report, issued in March 2006, found that while Phase 1 of the program got off to a fast start, it quickly fell behind schedule. Still, the report concluded that the transit system was more secure than it was before September 11, 2001, because the MTA had implemented—often with the cooperation of other stakeholders—a number of

operational and other initiatives that mitigated inherent security risks.

The next two reports found that despite growing delays and \$250 million in unplanned costs, the transit system was becoming incrementally more secure as security improvements were completed. The fourth report found that the pace at which improvements were completed—particularly improvements involving facility hardening—had accelerated during 2007.

Our last report, issued in November 2008, showed that progress had slowed and that the integrated electronic security program, which was expected to be completed in August 2008, had encountered serious problems.

On April 24, 2009, Lockheed Martin, the primary contractor for the electronic security system, filed a complaint in federal court seeking to terminate its contract with the MTA. Lockheed claims that the MTA breached the contract by “unnecessarily or unreasonably” delaying its performance. The MTA has denied the allegations, filed a counterclaim, and terminated Lockheed's contract.

While the MTA has hired other contractors to continue work on the electronic security program, it acknowledges that the remaining resources for this project are insufficient to achieve the full functionality that was contemplated under the original contract. Instead, the MTA has begun pursuing a short-term goal of achieving the maximum operational capability with the remaining funds. Two MTA agencies are now benefiting from the electronic security program, but three others are lagging far behind and there is no target date to complete the project.

The other elements of the capital security program are also behind schedule and over budget, but a number of important security improvements have been completed. The MTA, however, does not expect to complete the remaining Phase 1 projects before June 2012—nearly four years later than the contractual completion dates.

## Adherence to Project Schedules

As of December 2009, Phase 1 of the MTA’s capital security program encompassed 16 projects, divided into 38 construction tasks.<sup>1</sup> We track the progress of the capital security program by using the three quantitative measures discussed below.

### Project Phase

In August 2005, the MTA began providing us with monthly reports on the status of the capital security program. As of December 2009, the MTA had completed only 7 of the 16 capital security projects (see Figure 1). In 2009, the MTA completed three projects—a faster pace than in prior years. The last remaining project in the design phase moved to the construction phase during 2009.

**Figure 1**  
**Construction Projects by Phase**

Phase	Dec. 2005	Dec. 2006	Dec. 2007	Dec. 2008	Dec. 2009
Completed	1	2	3	4	7
Construction	5	8	9	11	9
Design	<u>10</u>	<u>6</u>	<u>4</u>	<u>1</u>	<u>0</u>
<b>Total</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>

Sources: Metropolitan Transportation Authority; OSC analysis

### Progress Toward Completion Date

Each of the seven projects that were completed as of December 2009 took much longer to complete than the MTA had initially expected. Three projects took between 8 months and 12 months longer than expected according to the baseline schedules set by the MTA in late 2003 and early 2004. For the remaining four projects, the delays ranged from 22 months to 38 months.

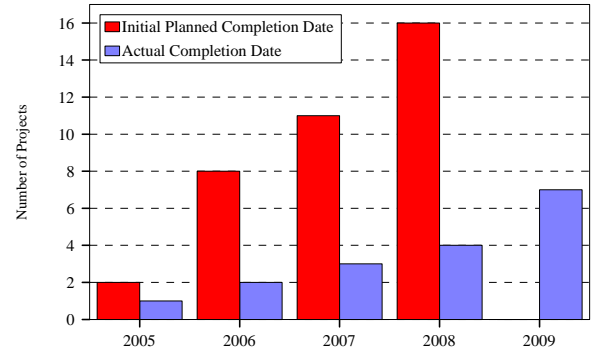
The nine projects still in construction as of December 2009 were also far behind the MTA’s baseline schedules. Six projects were between 19 months and 38 months behind schedule, and three projects were more than 50 months behind schedule, including two projects that were more than six years behind schedule.

As shown in Figure 2, the MTA had planned to complete all 16 projects by September 2008. Based on the current schedule, Phase 1 is expected to be completed by the end of June 2012—nearly

<sup>1</sup> The MTA cancelled two of the original 40 construction tasks after New York State cancelled the Statewide Wireless Network project.

four years later than the original estimate. The completion date is likely to be even later in light of problems with the electronic security program.

**Figure 2**  
**Program Progress**



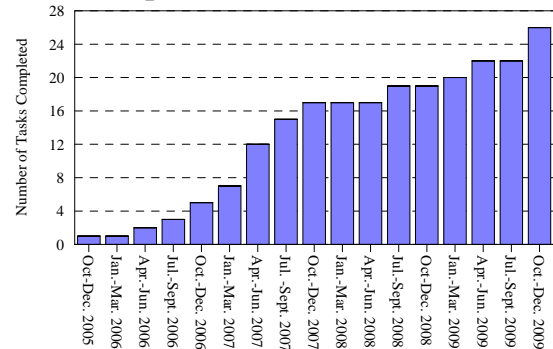
Sources: Metropolitan Transportation Authority; OSC analysis

### Construction Task Status

When construction contracts are awarded, the MTA and the contractor agree on a schedule to complete the specified work. Each construction task has its own contractually specified end date. (Some contracts involve more than one task.) If a contractor fails to fulfill its obligations, it can incur financial penalties. Alternatively, the MTA risks incurring additional costs if it is unable to fulfill its obligations under the contract.

In total, the capital security program consists of 38 planned construction tasks. As of December 2009, the MTA had completed 26 tasks; 10 tasks were still in construction; and 2 tasks remained in the design phase. Seven construction tasks were completed in 2009, with most of the completions occurring in the last quarter (see Figure 3). Nearly two-thirds of the construction tasks (23 of 36) that were completed or in construction were behind the schedules established at the time the contracts were signed (see Figure 4), including 14 tasks that were behind schedule by at least seven months.

**Figure 3**  
**Completed Construction Tasks**



Sources: Metropolitan Transportation Authority; OSC analysis

**Figure 4**  
**Progress of Construction Tasks**

On or Ahead of Schedule	1 to 3 Months Behind Schedule	4 to 6 Months Behind Schedule	7 Months or More Behind Schedule
13 Tasks	5 Tasks	4 Tasks	14 Tasks

Sources: Metropolitan Transportation Authority; OSC analysis

### Status of Program Elements

The MTA originally estimated that Phase 1 of the capital security program would cost \$591 million, but as of December 2009 the cost had grown to \$743 million, or \$152 million more than planned. Moreover, this estimate excludes the cost of renovating two high-priority facilities that were planned as part of Phase 1 but have since been deferred to Phase 2. When the cost of these two facilities is included, the cost of Phase 1 has effectively grown to \$833 million, an increase of \$242 million or 41 percent. MTA officials have stated that costs have grown because the original budget was based on project plans that were very conceptual, and because the scope of some security improvements has been broadened.

The status of each major type of remediation in the MTA capital security program is discussed below.

**Structural Hardening:** The MTA intends to spend \$243.1 million to harden bridges, tunnels, stations, and other structures to make them better able to withstand the impact of explosive devices. The allocation of resources is 29 percent of the total value of Phase 1, and is \$22.1 million more than initially planned, even though the MTA cancelled a number of planned structural improvements. As of December 2009, the MTA had hardened 13 critical infrastructure facilities (with 93 percent of all facility hardening completed). The remaining facility is currently undergoing construction, but is not expected to be completed until the third quarter of 2010.

**Perimeter Protection:** Perimeter protection entails the installation of bollards (i.e., metal or concrete posts) and other devices that are designed to expand the security perimeter around a facility. The perimeter protection element of the capital security program entails five projects that include six separate facilities. The cost of these projects is expected to total \$37 million, which is 47 percent more than originally planned.

Perimeter protection has been installed around three major transportation facilities, and installation is underway at another facility. This facility—which at the time of our last report had just begun construction after a five-year delay because of a stalemate between property owners and MTA officials—now faces further delays because the property owners have decided to renovate their facility. This project will not be completed until March 2012, six years later than originally planned in 2003.

The remaining facility is still in the design phase. This project has been repeatedly delayed, and is now scheduled to begin in the second quarter of 2010. It is not expected to be completed until June 2012, seven years later than originally planned.

**Fire, Life, and Safety Improvements:** The MTA plans to spend \$65 million on fire, life, and safety improvements to its tunnels and stations. These include improved lighting, signs, ventilation, and communication equipment, which are critically important to accelerate emergency response times and expedite evacuation. This remediation consists of three projects involving 16 facilities. In the past year, 14 facilities have been completed and the remaining 2 are in construction.

One facility, which encountered difficulties during the construction phase as a result of a stakeholder’s in-house labor issues, is now more than 90 percent complete and is expected to be finished during the second quarter of 2010.

The remaining facility, which had encountered design problems stemming from the size, age, and historical features of the property, has moved out of the design phase; construction began in May 2009, and is expected to take two years.

**Electronic Security:** The MTA announced in August 2005 that it had awarded a \$212 million contract to Lockheed Martin to build a state-of-the-art integrated electronic security program that would enhance security throughout the transportation network. The contract called for the installation of video cameras and electronic sensors, including motion sensors, intrusion detection devices, swipe access devices, and intelligent video. These devices were to be integrated and monitored at command, control, and regional communication centers. In previous reports we found that the program had fallen far behind schedule and had encountered serious problems that could compromise its functionality.

For example, the MTA reported that Lockheed failed 400 of the 1,400 factory acceptance testing requirements; and informed us of breaks in fiber-optic cables that were to be used by the system.

On April 24, 2009, Lockheed Martin filed a lawsuit seeking to terminate its contract with the MTA. Lockheed claims that the MTA breached the contract by “unnecessarily or unreasonably delaying Lockheed Martin’s performance of the contract.” According to Lockheed, the MTA did not fulfill its obligations under the contract; did not provide access to various sites where work was to be performed; and refused to cooperate in scheduling the performance of work, placing Lockheed “in a position of servitude for an indefinite duration.”

Lockheed also alleged that conditions in the communication rooms, where work was to be performed, contributed to delays. According to Lockheed, other contractors had not removed their equipment so Lockheed could perform work; several rooms had water infiltration (creating unsafe working conditions) and inadequate electricity; and none were equipped with needed network access.

The MTA responded on May 26, 2009, by denying the allegations and filing a counterclaim, which states that Lockheed “has breached fundamental and material provisions of the parties’ contract for the provision of a system-wide security system, resulting in substantial delays to the job and monetary damages.”

According to the MTA, Lockheed failed to: perform its design obligations, manage its subcontractors, adhere to contracted scheduling requirements, provide electricity to facilities temporarily until the work was completed and handed over to the MTA, provide software maintenance and updating services, maintain its field offices, provide a training program, and maintain the confidentiality of the project.

Along with the counterclaim, the MTA sent a letter of default to Lockheed, and then terminated the contract. Construction projects are protected by performance bonds in case a contractor is determined to be in default. If Lockheed is found to have defaulted, the MTA could use the bond proceeds to complete the project; however, the insurance companies holding the performance

bonds for the Lockheed contract have been “unable to conclude that Lockheed is, in fact, in material breach” of its contract. Moreover, the insurance companies have suggested that they may no longer have any obligation to the MTA if the courts rule that the MTA breached its contract with Lockheed.

Lockheed is seeking at least \$80 million for wrongful termination or \$138 million for breach of contract. The MTA is seeking at least \$60 million to complete the project, \$28 million in damages, and \$4 million for overpayments. In addition, the litigation itself is expected to be costly.

While the MTA has hired other contractors to continue work on the electronic security program, the MTA has informed us that with the limited funds remaining (about \$59 million) it will be unable to achieve a security system that meets all of the requirements mandated under the original contract with Lockheed. As a cost-saving measure, the MTA plans to defer work on certain tunnels.

OSC staff visited one of the two MTA agencies where the electronic security system has some operational capability. While not all of the planned cameras and intrusion devices had been installed, the system provided intelligent video monitoring and intrusion detection for important transit assets. The system is still undergoing testing, but appears to meet most of the MTA’s operational goals.

OSC staff also visited the central command center, which is situated in a new state-of-the-art building. When completed, the command center will house the MTA Police Department (MTAPD), and will be able to access the electronic security systems of each of the MTA’s four operating agencies. The MTAPD is scheduled to move into the command center in June 2010, but will continue to use its own legacy systems (rather than the new system) for most functions for the foreseeable future because of implementation problems.

The cost of the electronic security program has already grown from \$265 million to \$461 million. Nearly half of the cost increase is due to the inclusion of additional facilities (\$80 million), and most of the balance is due to the upgrade of computer networks (\$33 million) and the purchase and renovation of facilities to house the command and control centers (\$51 million).