Department of Education

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# Testimony of Deputy Chancellor Kathleen Grimm

## New York City Council
## Committees on Education and Transportation

## GPS on School Buses
## April 23, 2009

Good morning Chair Liu, Chair Vacca, and members of the Education and Transportation Committees. I am Deputy Chancellor Kathleen Grimm, and I am joined today by Eric Goldstein, our Chief Executive for School Support Services. We are here today to provide you with an update on our Geographic Positioning System (GPS) pilot for our school buses.

Since we last testified before you on this issue at the end of 2005, we have discovered several things about GPS throughout the RFP process. This is an expensive and significant engineering and computer hardware/software undertaking. It is certainly bigger than we originally expected, given the complexity of building a system that links buses, satellites, and a command center, as well as the challenge of scaling the system to fit the size and nature of our bus fleet – and it will take longer than we originally predicted. That said, we support the goals of the proposed legislation you are considering today – that is, ensuring the safe and timely transport of students -- but we have reservations about the specified timeframe.

Before I lay out what has been accomplished to date and next steps, I think it's important to explain what fleet-based GPS/Telematics is and what it isn't. Many of us are familiar with the navigation devices in our cars or even on our blackberries that assist us with driving directions. Garmin, for example, is installed in many vehicles now. This technology enables a driver to enter a destination and will calculate the route based on the car's location. The system will "talk" the driver through the directions until they reach their destination.

This "retail" GPS very different from the GPS system we are building for our school buses, and is not as simple as just putting a Garmin or Tom-Tom device on 7,000 plus buses. This is industrial-scale GPS, where the focus is on systemic management of the fleet and its operations, rather than on driver

accessibility to maps and directions. This includes emergency assistance, managing routing and on-time performance as well as vendor compliance.

GPS/Telematics is a complex performance monitoring system with Automatic Vehicle Location (AVL) for DOE general and special education buses consisting of three components:

1) **Vehicle hardware**. This includes on-board GPS computers and antennae
2) **Communication**. This enables the network between the satellite, the GPS antenna, the GPS computer and the central computers to "talk" to each other
3) **Software and monitoring**. This includes desktop applications to actually see where vehicles are on a map. It will also generate automated alerts in response to "panic button" activation and vehicle movement (if a bus travels outside of a designated zone, for example).

In addition to monitoring the movements of our buses, the system will be able to monitor on-board emergency and non-emergency events as well, such as door, flasher light and stop arm sensors and the driver panic button.

In December 2005, a few months after we testified on this topic, the Department followed through on its testimony to the Transportation Committee by issuing an RFP for an engineering consultant to define and design the telematics system requirements for our school bus fleet. Specifically, this included requirements gathering, industry research, the development of a next stage RFP for the actual telematics system vendor, assistance in the evaluation of proposals, assistance in negotiating a final contract and implementation plan, and finally, assistance in oversight of implementation. The deadline for proposal submission was January 19, 2006, and Macro Corporation of Chalfont Pennsylvania was awarded the consulting

contract on April 6, 2006. The term of the contract was June 1, 2006, through May 31, 2009.

Macro Corp and DOE's work during this research and analysis period included visits and interviews with school districts with large-scale GPS systems. We visited Dallas County Schools -- one of the largest school bus implementations in the country with approximately 1,000 vehicles (but still less than 15% the size of our fleet) -- and Baltimore City Public schools. We also conducted a phone interview with London Public Transit, which was the only implementation we could identify anywhere with a similar fleet size. We found through this research that this proposed project is enormously complex and that it would be the first of this magnitude in the United States. In addition, we have been talking to the Transit Authority, who recently discontinued their telematics project, about GPS since 2005 and have been following their program as they have been following ours. While the programs are different in many fundamental ways, in some ways we face many of the same issues and challenges.

On December 21, 2007, we issued another RFP, this time for a telematics system vendor. The RFP contained more than 150 pages of technical specifications. It called for equipping all of our buses as well as accounting for potential growth in the fleet by the end of the contract with GPS equipment and AVL functionality. It also calls for five year maintenance from the end of installations. The primary goals of our endeavor are to:

- accurately measure on time performance;
- increase efficiency by providing information to manage the fleet by exception reporting (such as which stops are routinely skipped);
- provide tools to identify, analyze and resolve problems;

- support customer service by providing functionality that will allow agents to query the system regarding location and status of a particular child, bus, etc.;
- provide tools to support the investigative process; and
- verify that bus route overtime is being performed as scheduled and paid for.

We received eight proposals by the due date of April 4, 2008. Late August 2008 the Evaluation Committee convened, and during September 2008, the Committee members submitted their evaluation forms.

We have been working very closely with our sister agency DoITT on this project. As the proposals were coming due, we started more protracted discussions with DoITT about using their full-service approach; namely both network and vendor as part of the DOE's telematics solution. When we first started pursuing the RFP the DOITT system did not appear to meet our needs but as the RFP progressed, DOITT convinced us it could work. Both agencies decided a pilot was the best step to take in order to evaluate the system's ability to meet our needs and how to customize it should we decide to use it for rolling it out on our buses. I'll also just note here that during this time, the Office of Pupil Transportation delayed the initial rollout phase of GPS implementation as part of citywide budget reductions. The projected $1.7million rollout was deferred to satisfy a Program to Eliminate the Gap associated with the city's November Financial Plan.

We have been developing the pilot over the last few months, and in the last several weeks, we have begun installing and monitoring AVL equipment on 8 buses. During the next several weeks we will take the necessary steps to mitigate any issues that arise on these 8 buses, and then proceed to install equipment on the remaining 42 buses in the pilot in early May. We expect equipment installation to be completed by mid-May, at which point we invite you to come and see the progress that we have made.

The proposed legislation, Intro 121, reflects the Department's efforts and intent to ensure that children traveling on our buses are transported safely and in a timely fashion. All of our buses have two-way radios, as called for in the bill. We also support the call for installing GPS, as our pilot I have just described is underway. Due to our expansive fleet, we do not believe the timeframe is realistic or prudent. We want to take the time that is needed to make sure we get it right, and to also ensure that the system is as efficient as possible to meet all of our needs, and more importantly, the needs of our students and their families.

Thank you for the opportunity to testify, and we will be happy to answer your questions.

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